Pyrotek®

LNG AND OFFSHORE SUMMARY

pyroteknc.com

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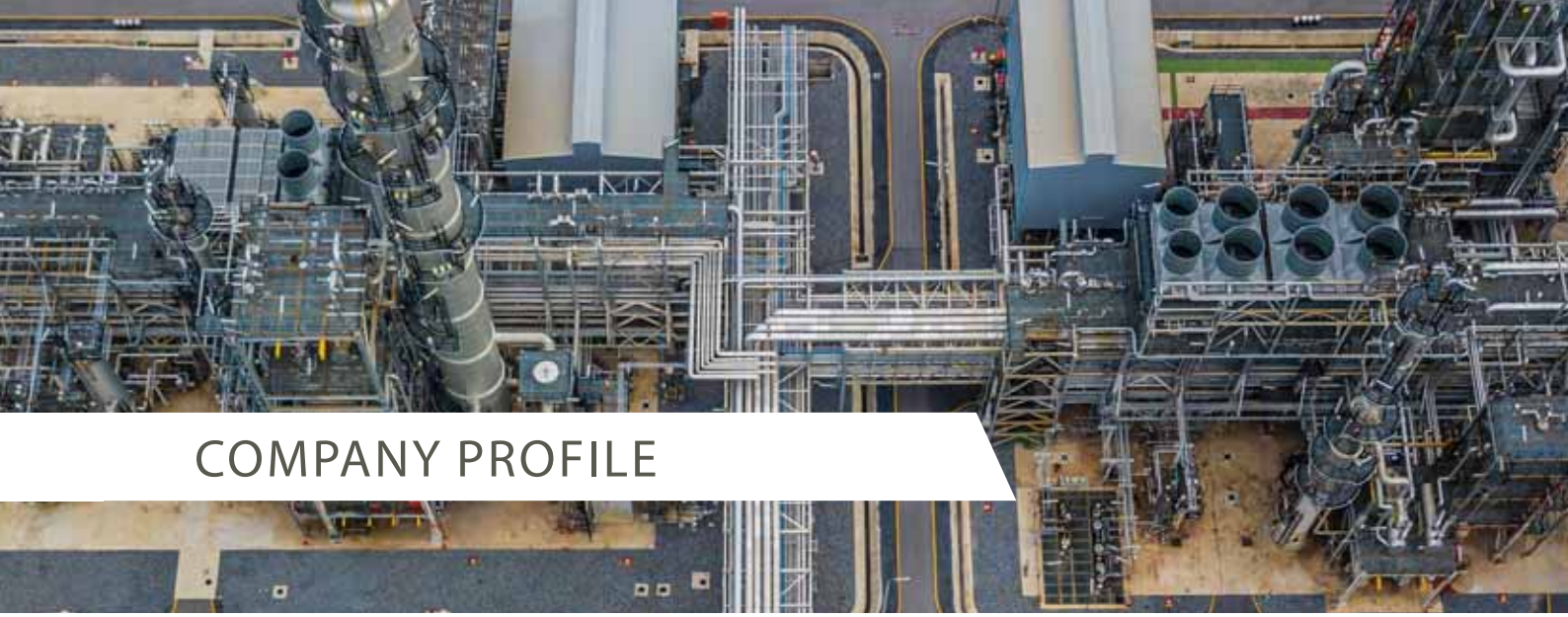
With ISO 9001 quality system certification, our global engineering team design highly specialised products to every specification and performance requirement. Our products are independently certified, time tested and supported by proven results.



COMPANY PROFILE

Pyrotek® is a global engineering leader and innovator of performance-improving technical solutions, integrated systems design and consulting services for customers in the aluminium industry. We are also investing and growing rapidly in areas such as glass, noise control and advanced materials.

We have global resources and dependable local support in more than 35 countries with over 80 locations. Our products and solutions are in use around the world in automotive, aerospace, rail transportation and high-tech manufacturing.

Privately-owned since 1956, our deep-rooted values of integrity and collaborative problem-solving uphold our mission to improve customer performance.

WHO WE ARE

- A global engineering innovator and supplier of complete end-to-end, performance improving technical solutions
- Our Noise Control division began in Australia, bringing over 30 years experience
- We supply complete turn-key solutions for many industries with over 300 Pyrotek application engineers, worldwide

WHY CHOOSE US

- Strong R&D Laboratory Team - ceramic, acoustic & chemical engineers help maximise product performance
- Extensive data analysis and noise predictions
- Design capabilities using CAD and 3D modelling
- Global test laboratories for fire, acoustic and vibration

OUR INDUSTRIES

Building | Industrial | Transportation | Marine | Oil & Gas

SUSTAINABILITY POLICY

Pyrotek is committed to ethical corporate citizenship and to promote sustainability in its activities and environmental responsibility. We will treat the environment as a valued legacy for our grandchildren. While Pyrotek recognizes that its business activities have environmental and social implications, Pyrotek is committed to mitigate any environmental or social impact its business activities may have through the adoption of best practices and policies. Pyrotek will contribute to the development of a sustainable future through the following principles.

PRINCIPLES

1. Practice responsible corporate conduct through adoption of workplace policies and best practices that meet or exceed regulatory and statutory requirements and that develop and maintain an entrepreneurial and collegial environment.
2. Manage risks, including those related to environmental, social and governance aspects.
3. Identify opportunities to contribute to the development of society and future generations.
4. Provide a safe, healthy and enriching working environment for Pyrotek employees.
5. Be a fair and responsible member of the communities in which Pyrotek operates.
6. As employees and as a company, be ethical and responsible citizens.
7. Be a responsible steward of resources.
8. Adhere to Pyrotek's Environmental Policy to limit its carbon footprint.
9. Pyrotek encourages the adoption of similar principles by its supply chain and business partners.

ENVIRONMENTAL PRODUCT STATEMENT

OUR COMMITMENT TO SAFETY, QUALITY AND ENVIRONMENT

Pyrotek is committed to safely produce quality products and services, on-time and at a competitive cost. This enables Pyrotek to build a sustainable business for the benefit of our customers, employees and stakeholders. Our focus is dedicated to developing systems with new, more considered operations and materials, as well as committing to improved technologies to further support long-term goals of safety, quality and environment.

Environmental Consideration

We acknowledge the need for consideration for our manufacturing activities to contribute to the mitigation of global warning via energy savings. We locally commit to reducing environmental impact by the prevention of pollution, minimization of waste and reduction of energy and water we use.

Ozone Depleting Potential

Pyrotek has undertaken an audit of its raw materials supplied and manufactured products barrier referencing to the US EPA List of Ozone Depleting Substances (Class 1 and Class 2). To the best of our knowledge, no ozone depleting substances are involved in either the manufacture or composition of these products.

Volatile Organic Compounds (VOC)

Products supplied by Pyrotek do not contain any significant Volatile Organic Compounds (VOCs) content when evaluated to the differing definitions as applied under the Australia National Pollutant Inventory, The Council of the European Union, Council Directive 1999/13/EC or the USA EPA Regulation 40 CFR 51.100(s). We also test to ASTM D5116 showing low VOC release.

Asbestos free manufacturing

Asbestos is not used during the manufacture of, and not added during any process of during the processing of our products. Please contact Pyrotek for available test reports to AS4964.

Global Warming Potential

Pyrotek's acoustic product range is designed with a reduced carbon footprint in mind, using locally sourced and environmentally-certified materials where possible. We use no CFCs, HCFCs or known high-GWP gases in our manufacturing process.

Recycle and emission care

During the process of manufacture, every care is taken to recycle and reuse material and where possible our plant and equipment has emission cleaners fitted.

Pyrotek has active and ongoing research investment to develop products that reduce environmental impact.

CODE OF BUSINESS ETHICS

POLICY

This Code of Business Conduct and Ethics (the "Code") represents the commitment of Pyrotek Inc. (which, together with all subsidiaries, is referred to as the "Company") to conduct its business with integrity, in accordance with all applicable laws, rules and regulations and with high ethical standards. All employees, officers and general managers of the Company are expected to adhere to the principals and procedures set forth in the Code. However, no code can govern all possible situations. Therefore, those individuals governed by the Code must apply the spirit, as well as the letter, of this Code and request guidance from those identified below in the event of any question of interpretation. In all instances, each individual should strive to uphold the integrity and credibility of the Company. This Code is also supplemented by the rules of business conduct and ethics contained in the Company's other policies and procedures.

Note: This Code is subject to review and modification. The form of the Code made available on the Policies and Procedures Database of the Company supersedes any prior expression of the policy to the extent of any inconsistency.
The following sections highlight key scenarios where the Code will govern individual behavior.

PROCEDURE

CONFLICT OF INTEREST

A "conflict of interest" occurs when an individual's private interests interfere, or appears to interfere, in any way with the interests of the Company. A conflict of interest can arise when an employee, officer or director takes actions or has a personal or non-Company related business interest that may make it difficult to perform his or her Company work objectively and effectively. Conflicts of interest also arise when an employee, officer or director, or a member of his or her family, receives improper personal benefits as a result of his or her position in the Company. Loans to or guarantees of obligations of such persons are of special concern as conflicts of interest. Service to the Company should never be subordinated to personal gain and advantage.

All conflicts of interest as described above are prohibited. Each employee, officer and director should be careful to avoid a conflict of interest by avoiding actions or relationships that may either make it difficult to perform Company work objectively and effectively or affect personal judgment regarding what is in the Company's best interest.

Any individual who has any questions or concerns regarding this policy, or any specific situations, actions or omissions which may relate to or be prohibited by this policy, is encouraged to discuss such questions or concerns with any of the following individuals: the Company's (1) President, (2) Chief Financial Officer or (3) Corporate Counsel.

CORPORATE OBLIGATION

Employees, officers and general managers owe a duty to the Company to advance its legitimate interests when the opportunity to do so arises. Each employee, officer and director is prohibited from:

1. Taking for themselves personal opportunities that are discovered through the use of Company property, information or position;
2. Using Company property, information or position for personal gain; or
3. Competing with the Company.

CONFIDENTIALITY

Employees, officers and general managers should maintain the confidentiality of confidential and proprietary information entrusted to them by the Company and its guests and customers, except when disclosure is authorized or legally mandated. Confidential information includes all nonpublic information that might be of use to competitors of the Company, or harmful to the Company or its guests or customers if disclosed.

Employees, officers and general managers are encouraged to consult the CFO, prior to making any disclosure, with any questions regarding whether a legal obligation to disclose confidential information exists. The obligation to maintain confidentiality extends indefinitely after a person's association with the Company as an employee, officer and director has ended.

FAIR DEALINGS

Each employee, officer and director should endeavor to deal fairly with the Company's customers, suppliers, competitors and employees. No employee, officer or director should take unfair advantage of anyone through manipulation, concealment, abuse of privileged information, misrepresentation of material facts or any other unfair dealing practice. Nothing contained in this paragraph shall in any way alter any existing legal rights and obligations of the Company or its employees, officers or general managers.

PROTECTION AND PROPER USE OF COMPANY ASSETS

Company employees, officers and general managers should protect the Company's assets and ensure their efficient use. Each employee, officer and director should endeavor to prevent misuse, loss, damage, sabotage or theft of Company assets. All Company assets should be used for legitimate business purposes only.

COMPLIANCE WITH LAWS, RULES AND REGULATIONS; REPORTING ILLEGAL OR UNETHICAL BEHAVIOR

The Company is committed to complying with all laws, rules and regulations applicable to it, including, but not limited to, those impacting the obligation of the Company to present all financial information to the public in conformance with generally accepted accounting principles based upon information which accurately reflects all relevant facts.

COMPLIANCE AND REPORTING

Employees, officers and general managers should strive to identify and raise potential issued before they lead to problems, and should ask about application of this Code whenever in doubt. Any employee, officer or general manager who becomes aware of any existing or potential violation of this Code should promptly notify the individual responsible for enforcement identified in the Section entitled "Policies and Procedures for Interpretation and Enforcement of the Code".

POLICIES AND PROCEDURES FOR INTERPRETATION AND ENFORCEMENT OF THE CODE

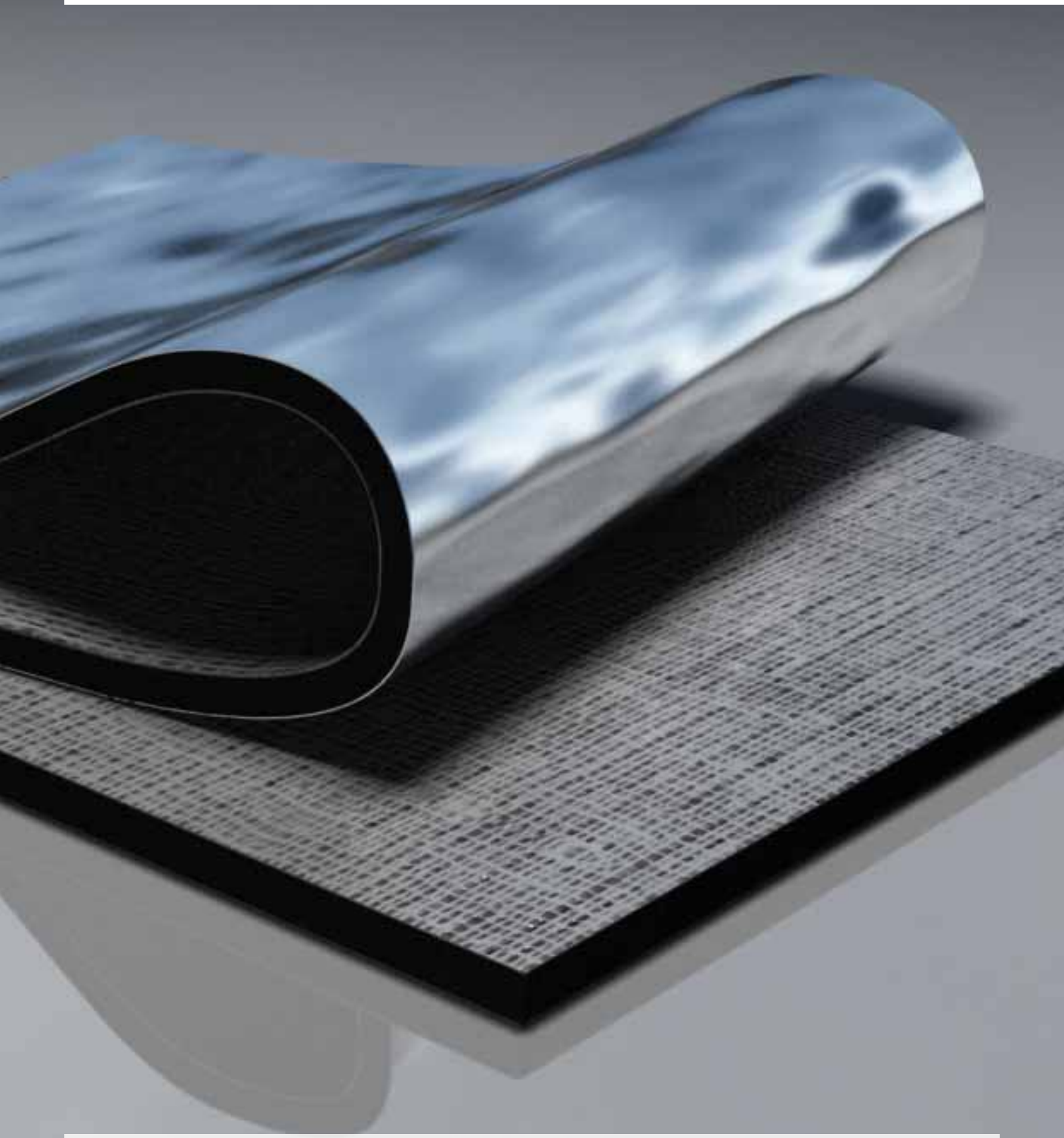
The President, General Counsel and Chief Financial Officer are responsible for applying this Code to specific situations relating to violations of the Code by general managers and executive officers and to specific situations relating to violations of the Code by other employees which have a material adverse effect on the Company's overall operations or financial position.

Company management will handle violations of the Code by individuals other than general managers or executive officers in the same manner that other violations of Company policies are handled and it is expected that most violations occurring in the ordinary course of the Company's business will not be sufficiently material to require report to the Shareholders of the Company or the President.

WAIVERS

From time to time, the Company may waive certain provisions of this Code. Any employee, officer or general manager who believes that a waiver may be appropriate should discuss the matter with the President.

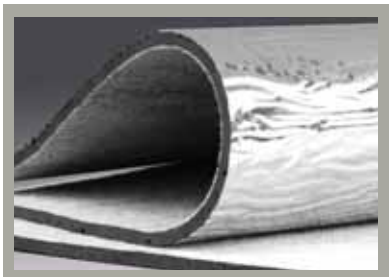
NOISE BARRIER



Pyrotek's mass-loaded vinyl (MLV) noise barriers offer superior acoustic transmission loss. Quadzero™ performs similarly to Wavebar® but with the added fire-resistant foil facing.

QUADZERO™

Quadzero™ is a flame resistant foil faced MLV offering superior acoustic transmission loss with high flame retardant properties. The reflective foil facing provides a low spread of flame surface covering for areas where higher fire specifications are required. Additionally, the dense, thin and strong physical characteristics make Quadzero suitable for building, industrial, transport and OEM sectors. It is also highly suitable for Liquid Natural Gas (LNG) pipe application.



Quadzero™ 1 lb/ft²

Rw	25

Quadzero™ 1.6 lb/ft²

Rw	31

Quadzero™ 2 lb/ft²

Rw	34

Features

- Complies to AS1530.3 & BS 467.6/7 building codes
- Tear resistant with high tensile strength - ability to be suspended at lengths of up to 5 metres
- Available with various laminates such as foams, polyesters and fibreglass

Standard roll size:
4.4 ft x 30 ft (1 lb/ft2)
4.4 ft x 20 ft (1.6 lb/ft2)
4.4 ft x 15 ft (2 lb/ft2)

Custom sizes available depending on MOQ

WAVEBAR®

Wavebar® is a high-performance, flexible mass-loaded vinyl noise barrier, offering superior acoustic transmission loss. Designed to meet market requirements, it has been effectively used to reduce noise in building, commercial, industrial and automotive markets, globally.

The engineering team at Pyrotek® developed Wavebar® to be dense, thin, highly-flexible, tear-resistant and strong. These properties give the product high transmission loss throughout the various weight ranges.

Quadzero™ 1 lb/ft²

Rw	25

Quadzero™ 1.6 lb/ft²

Rw	31

Quadzero™ 2 lb/ft²

Rw	34

Features

- Tear resistant with high tensile strength with the ability to be suspended in lengths of up to 16.4 ft (5 metres)
- Resistant to weather and UV light

Application

Quadzero™ and Wavebar® can be installed around LNG and cryogenic pipelines, inside cavities, over lightweight wall/ceilings, adjoining partition walls or as a noise curtain.

Technical Datasheet

QUADZERO™

foil faced flexible noise barrier

Quadzero™ is a high-performance, foil faced, mass-loaded vinyl noise barrier, offering superior acoustic transmission loss and low spread of flame surface covering.

Quadzero™ was developed to meet market noise reduction requirements in the domestic, commercial, industrial and OEM sectors.

To achieve this high-performance, the Pyrotek® engineering team developed Quadzero™ to be dense, thin, strong, tear-resistant and highly flexible. These properties give the product high transmission loss throughout the various weight ranges. It complies with British and international fire and building codes for low spread of flame.

Stiff lightweight panel constructions, such as plasterboard, drywall, plywood and hollow core walls, typically have coincidence dip resonance which allows noise to transmit through a construction. The coincidence dip is dependent on the material's stiffness and thickness and occurs at the point where the sound transmitted through the structure matches the natural frequency of the panel.

Quadzero™ shifts the coincidence dip to frequencies limiting its impact, thereby maintaining the performance of the product. The thin, dense mass Quadzero™ barrier reflects and absorbs the transmission of sound through walls, ceilings and floors, reducing the critical frequencies generated from mechanical equipment, engine noise and electronic audio devices.

VOC STATEMENT

Quadzero™ products contain no ozone-depleting substances and comply with European and Australian standards for Volatile Organic Compound emissions.

SPECIFICATIONS

Colour	Silver (Aluminium face)
Available	Width: 1350 mm Length (linear m): 5 - 10 m Weight (kg/m^2): 2, 4, 6, 8,10
	Custom depending on MOQ

applications

- Inside cavities or over lightweight wall, ceiling and floor constructions. Ideal for home theatres, office partitions, meeting rooms.
- Over roof joists to reduce aircraft, rail and traffic noise.
- Applied between the plenum chamber of a floor slab, roof and adjoining partition walls.
- Installed around the outside of metal air ducts to reduce noise break-out.
- Wrapped around noisy pipes, valves and fan casings e.g. fluid or gas pulsation in chemical, petrochemical, wastewater treatment plants and oil & gas pipelines.
- Automotive firewalls to reduce engine and road noise transmitting through the structure.
- Rail carriages for under floor insulation to reduce track and braking noise.

features

- Complies to AS1530.3 & BS 467.6/7 building codes
- Free from lead, odour-producing oils and bitumen
- Can be fitted around challenging places
- The foil facing also makes it easy to bond onto other substrates using matching Tape ALR adhesive or equivalent.
- Simple to cut, sew, tape and mechanically fasten
- Resistant to water, oil and natural weather conditions
- Tear resistant with high tensile strength. Ability to be suspended in lengths of up to 5 metres
- Available with various laminates such as foams, polyesters and fibreglass

PRODUCT SPECIFICATIONS

Barrier weight (kg/m²)	Thickness (mm)	'k' value W m⁻¹ K⁻¹	Roll			Ceiling Sound Transmission Test AMA-1-II-1967 (CSTC)	Operating temp. range (ºC)
			Width (mm)	Length (linear m)	Weight (kg)		
2	1.2	0.49 (Report No. 09/1182)	1350	10	27	44 (Report No. A-22104-0228)	-40 to 100 (Continuous) -40 to 120 (Intermittent)
4	2.0			5 or 10	27 - 54	48 (Report No. -22107-0228)	
6	3.0			5	41	-	
8	4.0			5	54	50 (Report No. 22114-0228)	
10	4.9			5	68	-	

Tolerances: Length: -0 /+50mm; Width: - 0 /+5mm; Thickness: +/- 0.5mm; Weight: +/- 10%

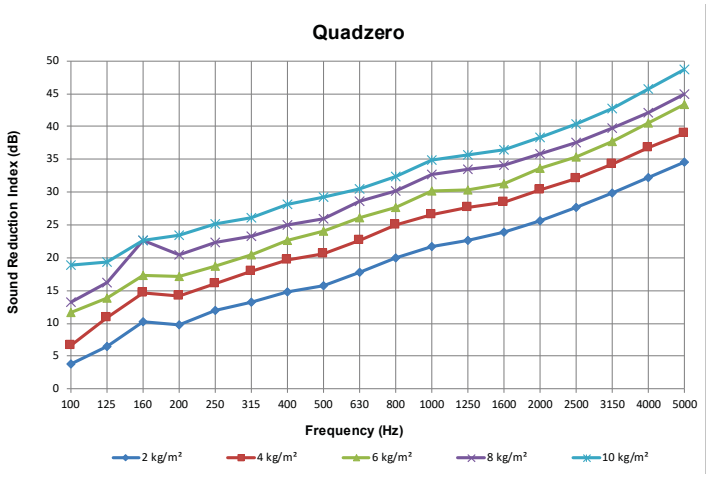
MATERIAL PROPERTIES

Test method	Property	Report no.	Results
AS 1530.3	Ignitability, flame propagation, heat and smoke release	7-530659-CN	0,0,0,0-1
AS 3837 / ISO 5660-1	Fire hazard properties	FT5197-TT	Group 3
BS 6853 Annex B2	Weighted summation of toxic fume	2974/R1	R 0.050
BS 6853 Annex D 8.6	Smoke density	377170	Cat 1b
BS476 part 7	Surface spread of flame	377171	Class 1
FMVSS-302	Flammability of interior materials	02313BD8	Complies to the requirements of US (DOT) Department of transportation for occupant compartments of motor vehicles

ACOUSTIC PERFORMANCE

Frequency (Hz)	2 kg/m²	4 kg/m²	6 kg/m²	8 kg/m²	10 kg/m²
100	3.8	6.7	11.6	13.3	18.9
125	6.4	10.8	13.8	16.2	19.3
160	10.2	14.7	17.3	22.6	22.6
200	9.8	14.1	17.2	20.5	23.4
250	12.0	16.0	18.7	22.3	25.2
315	13.2	17.9	20.4	23.2	26.1
400	14.8	19.7	22.7	25.0	28.1
500	15.8	20.6	24.1	26.0	29.3
630	17.8	22.6	26.1	28.6	30.5
800	20.0	25.0	27.7	30.1	32.3
1000	21.7	26.6	30.2	32.7	34.9
1250	22.7	27.6	30.3	33.4	35.7
1600	23.9	28.5	31.2	34.1	36.4
2000	25.6	30.4	33.6	35.9	38.4
2500	27.7	32.1	35.4	37.6	40.4
3150	29.9	34.3	37.7	39.7	42.7
4000	32.2	36.7	40.6	42.1	45.7
5000	34.6	39.0	43.3	45.0	48.7
Rw	21	25	28	31	34
STC	21	26	28	31	34

Tested to ISO 15186-1:2003 & 10140-4:2010 at University of Canterbury, New Zealand
Report Number: 261c, 262c, 263c, 264c & 265c



ISO 15665 PIPE INSULATION TESTING

Barrier Weight	Test method	System Assembly	Report no.	Results
6 kg/m²	ISO 15665 (Group 2 Pipe Size)	Available on request	A 3041-1E-RA-002	ISO 15665: Class A2 & B2 NORSOK R-004: Class 6 & Class 7
6 kg/m² & 10 kg/m²	ISO 15665 (Group 2 Pipe Size)	Available on request	A 3041-4E-RA-002	ISO 15665: Class B2 & C2 NORSOK R-004: Class 7 & Class 8

Testing was conducted using Wavebar®

For further information and contact details, please visit our website
pyroteknc.com

WAVEBAR®

flexible noise barrier

Wavebar® is a high-performance, flexible mass-loaded vinyl noise barrier, offering superior acoustic transmission loss. Designed to meet market requirements, it has been effectively used to reduce noise in building, commercial, industrial and automotive markets, globally.

The engineering team at Pyrotek® developed Wavebar® to be dense, thin, highly-flexible, tear-resistant and strong. These properties give the product high transmission loss throughout the various weight ranges.

Stiff lightweight panel constructions, such as plasterboard, drywall, plywood and hollow core walls, typically have coincidence dip resonance which allows noise to transmit through a construction. The coincidence dip is dependent on the material's stiffness and thickness and occurs at the point where the sound transmitted through the structure matches the natural frequency of the panel. Wavebar® shifts the coincidence dip to frequencies limiting its impact, thereby maintaining the performance of the product.

The dense core mass layer reflects and absorbs the transmission of sound through walls, ceilings and floors, reducing the critical frequencies generated from mechanical equipment, engine noise and electronic audio technologies such as radio and television.

VOC STATEMENT

Wavebar® does not contain any Volatile Organic Compounds (VOC) when evaluated according to definitions as applied under the Australia National Pollutant Inventory, The Council of the European Union, Council Directive 1999/13/EC or the USA EPA regulation 40 CFR 51.100(s).

SPECIFICATIONS

Colour	Black
Packaging (Standard)	Width: 1380 mm Length (linear m): 5 - 10 m Weight (kg/m^2): 2, 4, 6, 8, 10
	Custom depending on MOQ

applications

- Inside cavities, over lightweight wall and ceilings.
- Ideal for home theatre rooms, office partitions, meeting rooms
- Between the plenum chamber of a floor slab, the roof and adjoining partition walls
- Isolate sound on doors for privacy
- Position as a curtain to separate and create an acoustic barrier for open floor plans.
- Automotive cabin application to reduce engine and road noise transmitting through to passengers
- Laminate to lightweight structures
- Acoustic treatment for oil & gas pipelines

features

- Simple to cut and install through obstructions - providing flexibility around pipes, ducts, cables etc.
- Resistant to most chemicals, solvents and petrol
- Free from lead, odour-producing oils and bitumen
- Resistant to weather and UV light
- Tear resistant with high tensile strength. Ability to be suspended in lengths of up to 5 metres
- Available in various weights, widths , roll lengths and sheet sizes
- Available with various laminates such as foil, metallised film, foams and polyesters

PRODUCT SPECIFICATIONS

Barrier weight (kg/m^2)	Thickness (mm)	Roll			Ceiling sound transmission test AMA-1-II-1967 (CSTC)	Operating temp. range (ºC)
		Width (mm)	Length (linear m)	Weight (kg)		
2	1.2	1380*	10	28	44 (Report No. A-22104-0228)	-40 to 100 (Continuous) -40 to 120 (Intermittent)
4	2.0		5 or 10	28 - 56	48 (Report No. -22107-0228)	
6	3.0		5	42	-	
8	4.0		5	56	50 (Report No. 22114-0228)	
10	4.9		5	70	-	

Tolerances: Length: -0/+50mm; Width: -0/+5mm; Thickness: ± 0.5mm; Barrier Weight: <4.5 kg/m^2 ±0.2 kg/m^2; 4.5-10 kg/m^2 ±0.4 kg/m^2; ≥10 kg/m^2 ±0.5 kg/m^2

**Supplied untrimmed - means some surface coverings such as foils, film or fabric may overhang the ordered useable width*

MATERIAL PROPERTIES

Test method	Property	Report no.	Results
AS 5637.1 (AS 3837 / ISO 5660-1)	Fire hazard properties	PR2/5/6/7	Group 3
FMVSS-302	Flammability of interior materials	00813BD	Complies to the requirements of US (DOT) Department of transportation for occupant compartments of motor vehicles
UL94	Flammability of plastic materials	17592PC	HBF

ACOUSTIC PERFORMANCE

Frequency (Hz)	2 kg/m^2	4 kg/m^2	6 kg/m^2	8 kg/m^2	10 kg/m^2
100	3.8	6.7	11.6	13.3	18.9
125	6.4	10.8	13.8	16.2	19.3
160	10.2	14.7	17.3	22.6	22.6
200	9.8	14.1	17.2	20.5	23.4
250	12.0	16.0	18.7	22.3	25.2
315	13.2	17.9	20.4	23.2	26.1
400	14.8	19.7	22.7	25.0	28.1
500	15.8	20.6	24.1	26.0	29.3
630	17.8	22.6	26.1	28.6	30.5
800	20.0	25.0	27.7	30.1	32.3
1000	21.7	26.6	30.2	32.7	34.9
1250	22.7	27.6	30.3	33.4	35.7
1600	23.9	28.5	31.2	34.1	36.4
2000	25.6	30.4	33.6	35.9	38.4
2500	27.7	32.1	35.4	37.6	40.4
3150	29.9	34.3	37.7	39.7	42.7
4000	32.2	36.7	40.6	42.1	45.7
5000	34.6	39.0	43.3	45.0	48.7
Rw	21	25	28	31	34
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Tested to ISO 15186-1:2003 & 10140-4:2010 at University of Canterbury, New Zealand
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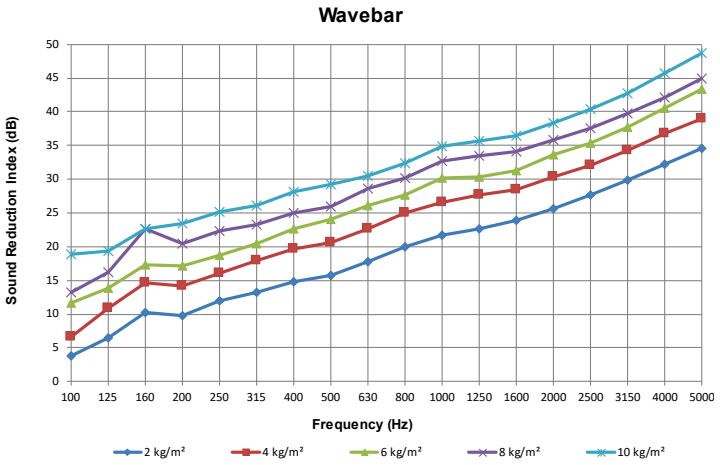
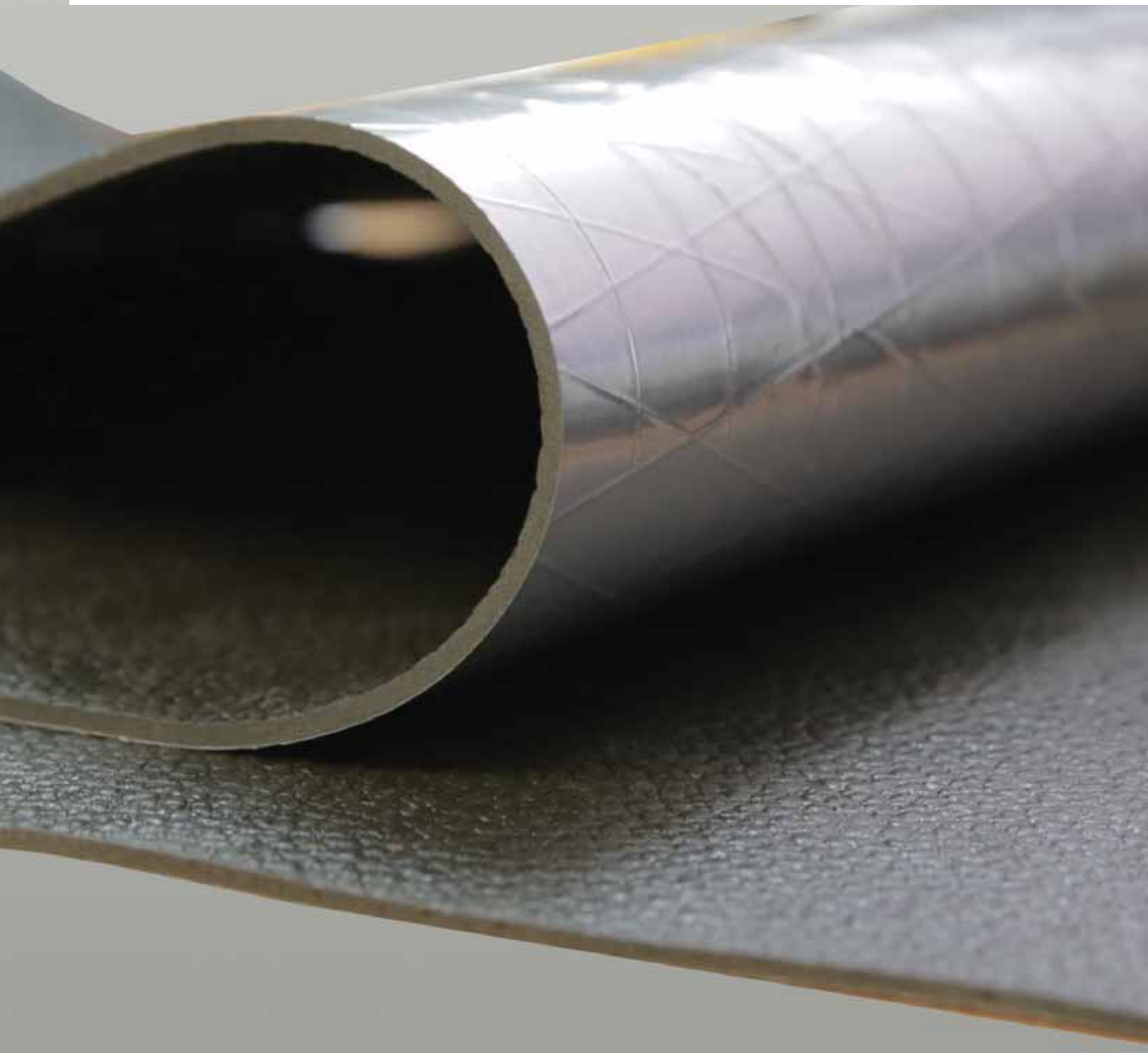


ISO 15665 PIPE INSULATION TESTING

Product	Test method	System Assembly	Report no.	Results
Wavebar 6 kg/m^2	ISO 15665 (Group 2 Pipe Size)	Available on request	A 3041-1E-RA-002	ISO 15665: Class A2 & B2 NORSOK R-004: Class 6 & Class 7
Wavebar 6 kg/m^2 & Wavebar 10 kg/m^2	ISO 15665 (Group 2 Pipe Size)	Available on request	A 3041-4E-RA-002	ISO 15665: Class B2 & C2 NORSOK R-004: Class 7 & Class 8

For further information and contact details, please visit our website pyroteknc.com

NOISE & VAPOR BARRIER



Quadzero™ MVT reduces the impact of unwanted sound, offering a 2-in-1 barrier product to combat noise and vapor transmission.

QUADZERO™ MVT

Quadzero MVT is a foil-faced, mass-loaded vinyl developed to meet moisture vapor transmission (MVT) resistance in liquefied natural gas (LNG) and cryogenic pipelines. It also serves as an acoustic barrier to assist in reducing noise.

Pipeline operating and ambient temperatures can create perfect conditions for moisture buildup inside insulated equipment. The low permeability properties of Quadzero MVT blocks moisture entry into the insulation system, maintaining its thermal performance, and preventing corrosion under insulation (CUI).

Quadzero MVT requires minimal effort to install and has been independently tested for noise and vapor transmission. As a strong vapor and noise barrier layer solution, Quadzero MVT can easily be adjusted to fit around pipe insulation systems. It is flexible, tear-resistant, and is available in various sizes and weights.

Quadzero MVT 1 lb/ft²	
Rw	28
Quadzero MVT 1.5 lb/ft²	
Rw	31
Quadzero MVT 2 lb/ft²	
Rw	34

Features

- Low vapour permeability - maintaining thermal performance of the insulation
- 2-in-1 solution: vapor barrier and noise barrier
- Simple to cut and install, providing flexibility around LNG pipes or other similar applications
- Resistant to weather and UV light
- Tear resistant with high tensile strength
- Available in various weights, widths, roll lengths and sheet sizes
- The foil facing makes it easy to bond onto other substrates using matching Tape ALR adhesive or equivalent

Specifications

Standard roll size: Width: 1370 mm (54 in) Length: 5 m (16 ft, 4 in)
Custom sizes and weights are available (depending on MOQ).

Application

- Liquefied natural gas (LNG) and cryogenic pipes
- Wrapped around other noisy pipes, valves and fan casings e.g. fluid or gas pulsation in chemical, petrochemical and waste water treatment plants
- Compressor jackets where acoustic and thermal treatment is required

Technical Datasheet

QUADZERO™ MVT

flexible foil-faced vapor barrier

Quadzero™ MVT is a foil-faced, mass-loaded vinyl developed to meet moisture vapor transmission (MVT) resistance in liquefied natural gas (LNG) and cryogenic pipelines. It also serves as an acoustic barrier to assist in reducing noise.

Noise generated from pipelines has been subjected to regulations and restrictions. As an acoustic solution, Quadzero™ MVT reduces the impact of unwanted sound, offering a 2-in-1 barrier product to not only combat noise, but also vapor transmission.

Pipeline operating and ambient temperatures can create perfect conditions for moisture buildup inside insulated equipment. The low permeability properties of Quadzero MVT blocks moisture entry into the insulation system, maintaining its thermal performance, and preventing corrosion under insulation (CUI).

Quadzero™ MVT requires minimal effort to install and has been independently tested for noise and vapor transmission. As a strong vapor and noise barrier layer solution, Quadzero™ MVT can easily be adjusted to fit around pipe insulation systems. It is flexible, tear-resistant, and is available in various sizes and weights.

applications

- Liquefied natural gas (LNG) and cryogenic pipes
- Wrapped around other noisy pipes, valves and fan casings e.g. fluid or gas pulsation in chemical, petrochemical and waste water treatment plants
- Compressor jackets where acoustic and thermal treatment is required

features

- Low vapor permeability - maintaining thermal performance of the insulation
- 2-in-1 solution: vapor barrier and noise barrier
- Simple to cut and install, providing flexibility around LNG pipes or other similar applications
- Resistant to weather and UV light
- Tear resistant with high tensile strength
- Available in various weights, widths, roll lengths and sheet sizes
- The foil facing makes it easy to bond onto other substrates using matching Tape ALR adhesive or equivalent

SPECIFICATIONS

Colour	Silver (foil facing), and black
Available	Width: 1370 mm (54 in) Length: 5 m (16 ft, 4 in)
	Various sizes and weights available. MOQ may apply.

PRODUCT SPECIFICATIONS

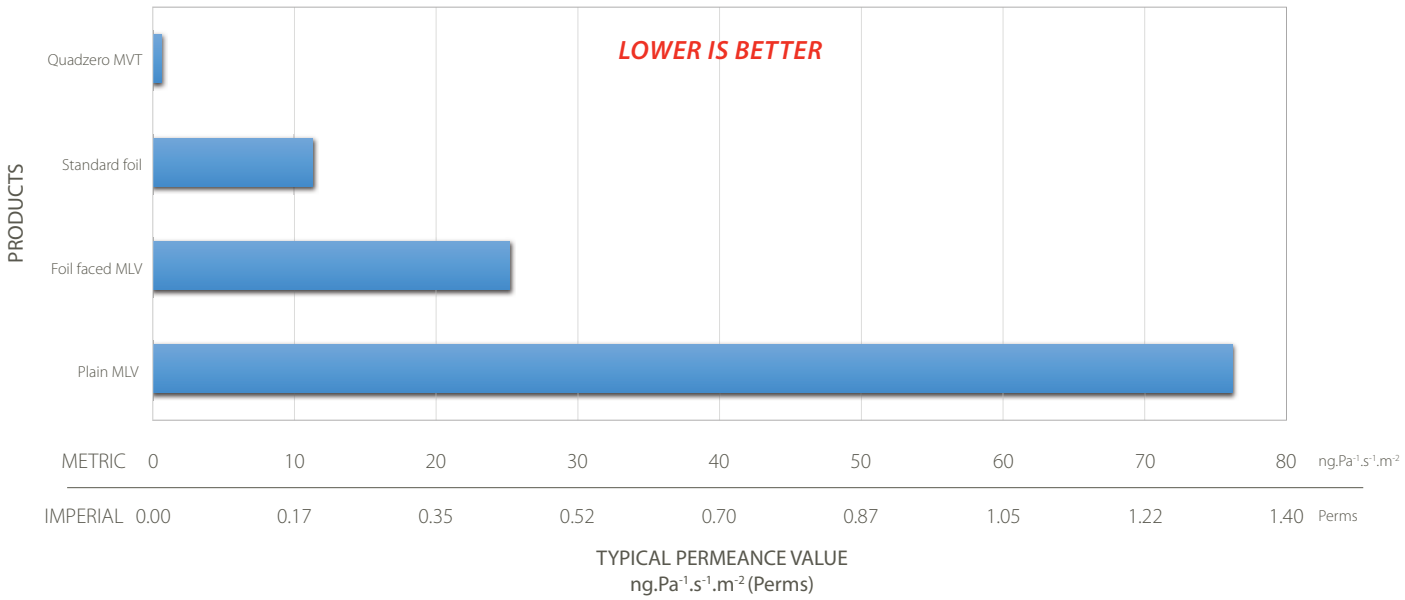
Product	Barrier Weight kg/m²	Standard Thickness mm (in)	Roll Weight kg (lb)	Standard Roll Width mm (in)	Standard Roll Length m (ft)	Operating Temperature Range °C (°F)
Quadzero MVT	5 kg/m²	2.5 mm (0.098 in)	34 kg (75 lb)	1370 mm (54 in)	5 m (16 ft, 4 in)	-40 °C to 100 °C (-40 °F to 212 °F) continuous
	6 kg/m²	3 mm (0.118 in)	41 kg (91 lb)			
	8 kg/m²	4 mm (0.157 in)	55 kg (121 lb)			-40 °C to 120 °C (-40 °F to 248 °F) intermittent
	10 kg/m²	5 mm (0.197 in)	69 kg (152 lb)			

Tolerances: Length: ±1%, Width: -0/+5 mm, Thickness: ±0.5 mm, Weight: ±10%. Barrier weights also available in: 0.5 lb, 1 lb, 1.5 lb, 2 lb. Bulk rolls are available.
Please contact your local Pyrotek office for more information on the product specifications.

MATERIAL PROPERTIES

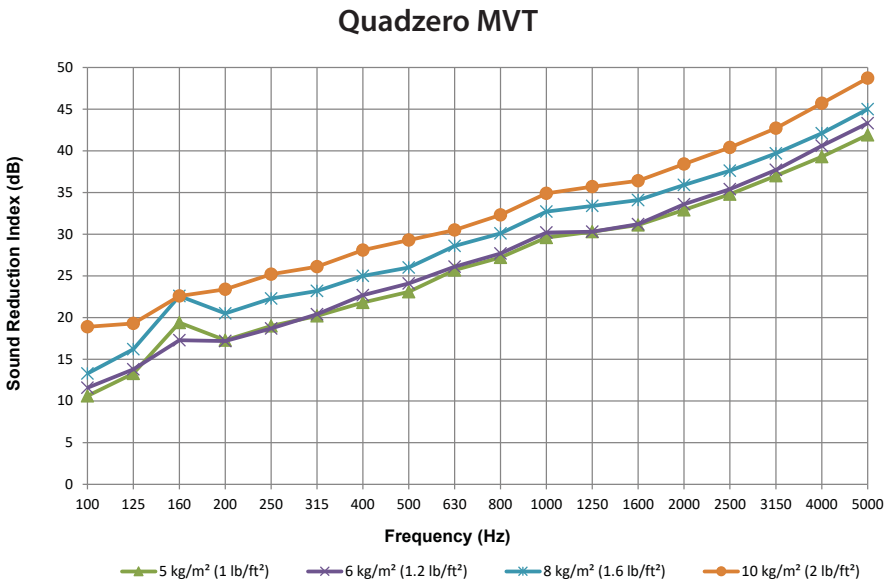
Product	Test method	Property	Report no.	Results
Quadzero MVT	ASTM E 96	Water vapor transmission & permeance	103095355MID-001B	0.65 ng. Pa^{-1}. s^{-1}. m^{-2} (0.011 Perms)
Quadzero MVT Foil	ASTM E 96	Water vapor transmission & permeance	103010480MID-001	0.73 ng. Pa^{-1}. s^{-1}. m^{-2} (0.011 Perms)

COMPARISON WITH OTHER SOLUTIONS



ACOUSTIC PERFORMANCE*

Frequency (Hz)	5 kg/m² (1 lb/ft²)	6 kg/m² (1.2 lb/ft²)	8 kg/m² (1.6 lb/ft²)	10 kg/m² (2 lb/ft²)
100	10.6	11.6	13.3	18.9
125	13.3	13.8	16.2	19.3
160	19.4	17.3	22.6	22.6
200	17.3	17.2	20.5	23.4
250	19.0	18.7	22.3	25.2
315	20.2	20.4	23.2	26.1
400	21.8	22.7	25.0	28.1
500	23.1	24.1	26.0	29.3
630	25.7	26.1	28.6	30.5
800	27.2	27.7	30.1	32.3
1000	29.6	30.2	32.7	34.9
1250	30.3	30.3	33.4	35.7
1600	31.1	31.2	34.1	36.4
2000	32.9	33.6	35.9	38.4
2500	34.8	35.4	37.6	40.4
3150	37.0	37.7	39.7	42.7
4000	39.3	40.6	42.1	45.7
5000	41.9	43.3	45.0	48.7
Rw	28	28	31	34
STC	28	28	31	34



Tested to ISO 15186-1:2003 & 10140-4:2010 at University of Canterbury, New Zealand

Report Number: 263c, 264c, 265c & 189(rev1)c

**Results for Quadzero*

ISO 15665 PIPE INSULATION TESTING

Barrier Weight	Test method	System Assembly	Report no.	Results
6 kg/m² (1.2 lb/ft²)	ISO 15665 (Group 2 Pipe Size)	Available on request	A 3041-1E-RA-002	ISO 15665: Class A2 & B2 NORSOK R-004: Class 6 & Class 7
6 kg/m² (1.2 lb/ft²) & 10 kg/m² (2 lb/ft²)	ISO 15665 (Group 2 Pipe Size)	Available on request	A 3041-4E-RA-002	ISO 15665: Class B2 & C2 NORSOK R-004: Class 7 & Class 8

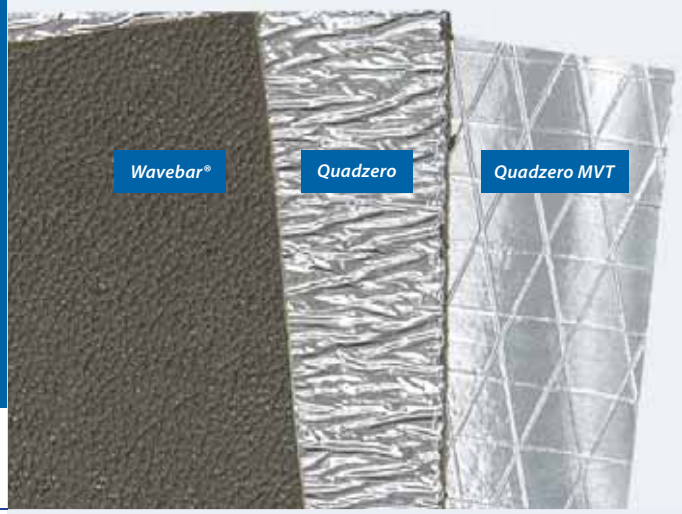
Testing was conducted using Wavebar®

For further information and contact details, please visit our website
pyroteknc.com

Installation Guide

WAVEBAR® | QUADZERO™ RANGE

This installation guide provides recommendations to maximise the service life of Wavebar®, Quadzero and Quadzero MVT for LNG and cryogenic pipe applications.



KEY INSTALLATION REQUIREMENTS

- Attention to detail and good workmanship in cutting, applying and fixing the product on to the pipe is essential.
- Coverage of the pipe insulation being treated must be continuous.
- Coverage will vary depending on the pipe or insulation diameter.
- There should be no gaps at joints or edges.
- The smallest gap at any joint will result in performance loss.
- Fixseal MSP15 is the recommended joint sealant for Wavebar.
- Tape ALR or equivalent tape is recommended for Quadzero and Quadzero MVT.
- Ensure pipe and pipe insulation work surface is clean and dry before installing product.
- It is essential to ensure the material is clean and dry even when stored for an extended period of time. It must also be free from oil, dirt, rips or tears.
- Do not overstretch Tape ALR when applying as this will create buckles and voids in the contact area.

DESCRIPTION

- The Wavebar® and Quadzero range are dense, flexible noise barriers that reflect unwanted sound.
- Quadzero MVT is a 2-in-1 solution offering a noise and vapour barrier.
- Coverage will vary with the pipe diameter.

WORKING HEALTH AND SAFETY

- Personal Protection Equipment (PPE) is recommended.
- Always follow, read and understand any information contained within the product technical datasheets and safety data sheets.
- If unsure, please consult with your local Pyrotek representative regarding the application of the product.

Note: This installation is only suitable for professional and experienced users only.

Pyrotek offers noise barriers and vapour barriers (Quadzero MVT) for liquefied natural gas (LNG) and cryogenic pipelines.

applications

- Liquefied natural gas (LNG) and cryogenic pipes treated with insulation
- Wrapped around other noisy pipes, valves and fan casings e.g. fluid or gas pulsation in chemical, petrochemical and wastewater treatment plants
- Compressor jackets for both acoustic and thermal is required

HOW TO MEASURE AND CUT MATERIAL

For Straight Pipe Sections

Measure the length (L) and outside diameter (OD) of the pipe requiring lagging.

Apply the following formula to calculate and cut the required wrapping width (W):

(The formula allows for a 50 mm overlap)

$W = \pi \times (OD + (2 \times T)) + 50$ mm

OD = outside diameter of the pipe or insulation being treated.

$\pi = 3.14$ (pi)

T = Total thickness of acoustic insulation

Mark the calculated width (W) along the length of the roll and cut material with a retractable utility knife or equivalent.

Always cut from the foil faced side of the material.

GENERAL INSTALLATION OF PIPES

STEP 1

- Roll out the product to an apprioriate length and measure the coverage required to fit around the pipeline insulation.
  Please refer to "**How to measure and cut material"** formula on page 1.
- Once measured, cut the product with an appropriate retractable utility knife or equivalent.
- **It is highly recommended to allow at least a 25 mm to 100 mm overlap** when wrapping around the pipe or insulation being treated. A tight seal around all joints and edges is critical to attain maximum performance.

STEP 2

- Ensure pipe work surface is clean and dry before installing product.
- Line up product towards the pipe area and wrap the product around the pipe.
- Ensure the front of the product is on the exterior.
- Recommended overlap when applied.

STEP 3

- For Wavebar® - it is recommended to use Fixseal MSP15 for the joint sealant. Apply the sealant across the joints and edges to create a tight seal. Hold firmly and apply pressure for maximum bonding.
- For Quadzero and Quadzero MVT - Pyrotek can provide Tape ALR on request. Apply the tape centrally over the sections to be joined and press firmly along the entire tape surface.
- Wipe or rub the tape with firm pressure across the tape with a cloth or equivalent to smooth out any air bubbles or buckles.
- Tape ALR is a high-quality self-adhesive insulation joining tape. The pressure-sensitive reinforced aluminium foil tape is designed to serve as a joining or covering tape for Pyrotek's foiled-faced products. Please refer to Tape ALR technical datasheet for more information.
- **Do not overstretch the tape when applying as this will create buckles and voids in the contact area.**

STEP 4

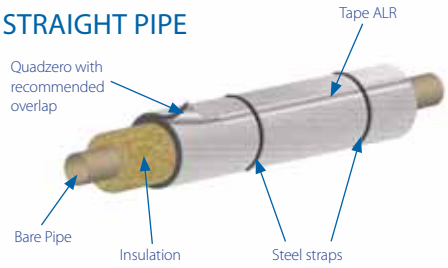
- Mechanically fasten with an approved strap or equivalent after fitting to reinforce the performance of the product.
- All joints along longitudinal pipe sections must be fitted with an overlap for each segment. Continue wrapping with an overlap until the whole section is covered with the joint treatment and mechanical fixing.

NOTE: All information above only serves as a general guideline for installing Wavebar®, Quadzero and Quadzero MVT around pipeline insulation in LNG and Offshore applications. Installation may vary in a case-by-case situation.

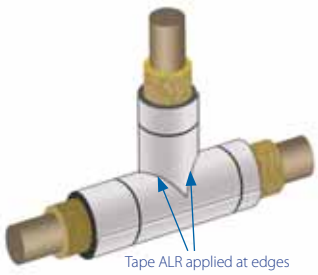
Please contact Pyrotek® for further information or detailed advice on your specific application.

Illustrations are based on Quadzero installation with Tape ALR. Use recommended sealant for Wavebar.

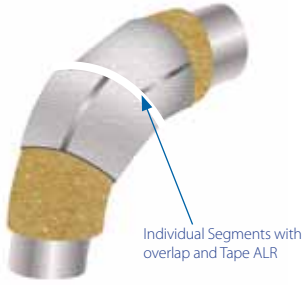
STRAIGHT PIPE



T SECTION

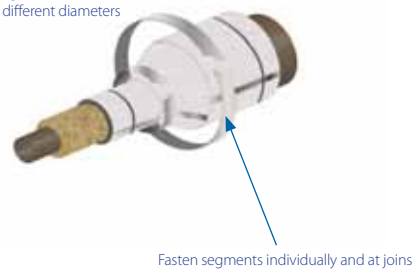


PIPE BENDS



REDUCING SECTIONS

A reducing section connects pipes of different diameters



Brochure

FLEXIBLE ACOUSTIC NOISE BARRIER

WAVEBAR AND QUADZERO RANGE

BUILDING - INDUSTRIAL - TRANSPORT - MARINE - OIL & GAS

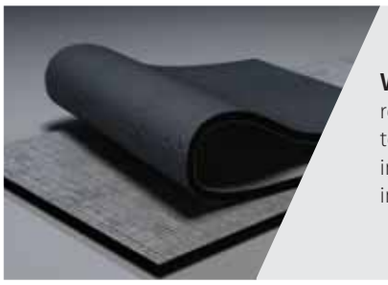
SOUNDPROOFING SOLUTIONS FOR ALL INDUSTRIES

pyroteknc.com

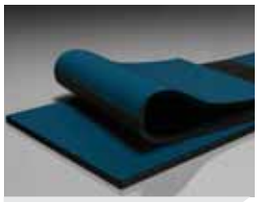
Pyrotek

MASS LOADED VINYL FOR ALL INDUSTRIES

The mass loaded vinyl (MLV) range has been uniquely developed by Pyrotek's world class engineering team. Offering superior acoustic transmission loss - Wavebar® and Quadzero™ are flexible reinforced noise barrier solutions that meet global market requirements in all industries including building, industrial, transport, marine and oil & gas.

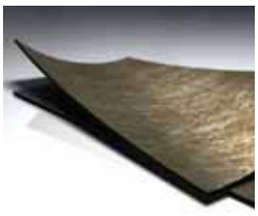


Wavebar® is a reinforced MLV noise barrier designed by Pyrotek to meet market requirements and effectively reduce noise transmission. Due to its flexible and tear resistant properties, Wavebar is suitable for various applications across all industries, such as building, commercial, industrial and transport. Wavebar will help improve performance of a lightweight partition at critical frequencies.



Wavebar® NC

Wavebar® NC is a tear resistant noise barrier curtain with high tensile strength. The tarpaulin base fabric facing is used to withstand tough weather conditions in addition to being UV resistant. Able to withstand exposure to most chemicals and solvents, Wavebar NC is easy to hang or drape in long lengths – being the ideal choice for outdoor use, oil and gas industries and construction sites. It can also be combined with absorption materials, offering versatility in challenging noise environments. The tarpaulin base fabric facing is available in various colours.



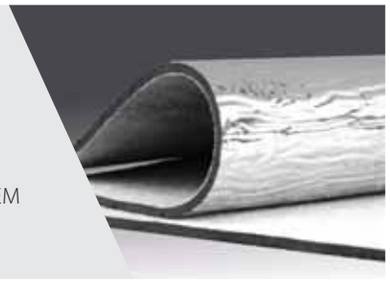
Wavebar® dBX

Wavebar® dBX is the latest alternative in noise barrier technology manufactured from thermoplastic recycled polymers. A self-extinguishing and low smoke emission noise barrier, Wavebar® dBX provides high-performance acoustic insulation that can be vacuum formed and easily moulded. This product is 100% recyclable and recommended for transport, building and industrial applications due to its strong characteristics.

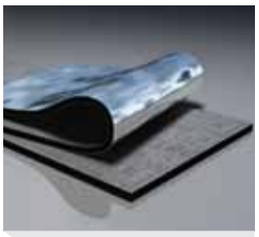
Our Wavebar® and Quadzero™ range perform an important role as high-performance barriers where noise transmission issues need to be addressed. Typically stiff lightweight panels such as plasterboard, drywall, plywood and hollow core walls have a coincidence dip. A coincidence dip is the frequency at which the stiff panel vibrates in unison with the frequency of sound pressure waves. The frequency of the coincidence dip is dependent on the material's stiffness and internal damping properties causing a degradation in transmission loss. The Wavebar® and Quadzero™ range will eliminate the impact of the coincidence dip when installed in a structure, rendering it as a highly effective noise barrier.

BETTER FLEXIBILITY, EASY TO INSTALL

Quadzero™ is a flame resistant foil faced MLV offering superior acoustic transmission loss with high flame retardant properties. The reflective foil facing provides a low spread of flame surface covering for areas where higher fire specifications are required. Additionally, the dense, thin and strong physical characteristics make Quadzero suitable for building, industrial, transport and OEM sectors. It is also highly suitable for Liquid Natural Gas (LNG) pipe application.

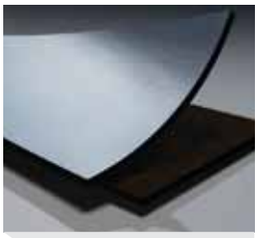


Quadzero™ NL is a foil faced barrier that is formulated to achieve the highest fire rating as an acoustic surface covering. It is durable, flexible and tear resistant, with a strong base fabric. This product offers optimum noise transmission loss with fire testing results that complies with international marine and rail standards. Quadzero NL is suitable for marine and rail carriages in walls, ceilings and under floor insulation, as it contains no ozone depleting substances, lead, unrefined oils or bitumen.



Quadzero™ NL

Quadzero™ dBX is a MLV laminated with reinforced aluminium foil, manufactured from thermoplastic recycled polymers that exhibits superior transmission loss. Meeting international standards for rail, transport and marine, Quadzero dBX has high fire resistant properties, a low spread of flame surface and low smoke development. This product is suitable for marine, transport and rail applications. Quadzero™ dBX is 100% recyclable.

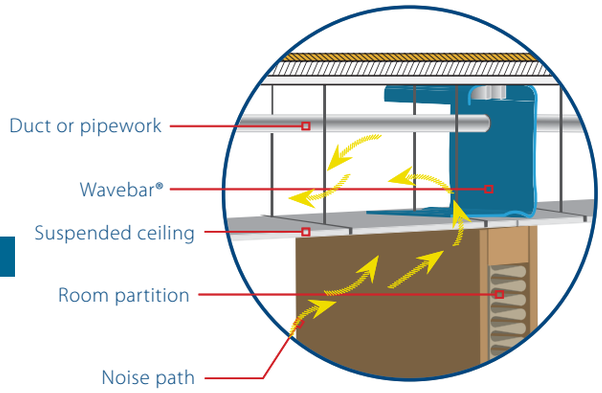


Quadzero™ dBX

TESTED TO A RANGE OF GLOBAL FIRE STANDARDS

Wavebar® is weather resistant, contains no ozone depleting substances and complies with International standards for Volatile Organic Compound (VOC) emissions.

IDEAL NOISE BARRIER SOLUTIONS FOR ALL MARKETS

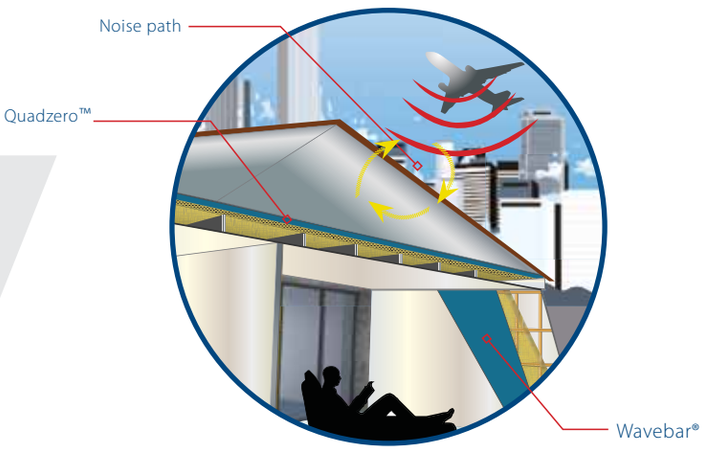


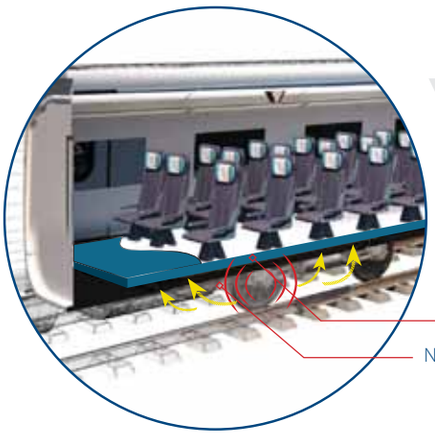
Building and Commercial

Wavebar® and Wavebar® dBX fitted in the plenum space above suspended ceilings and partition walls to avoid flanking noise.

Quadzero™ is suitable for ceiling cavities due to its reflective and low spread of flame surface covering.

Wavebar® fitted between plasterboard walls for greater transmission loss. Improves performance at critical frequencies generated from urban and environmental noise impact.





Transport

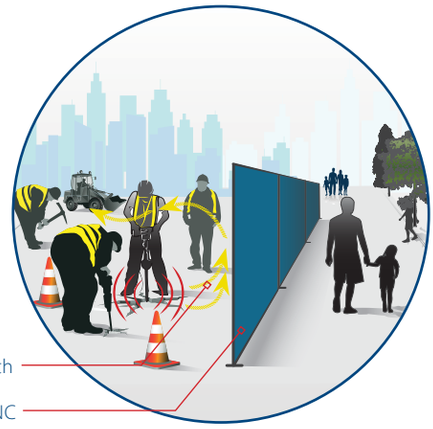
Quadzero™ NL and Quadzero™ dBX will effectively control sound transfer from external track, rail or engine noise into cabins and carriages. This durable product can be used without impacting carriage safety providing additional comfort to passengers.

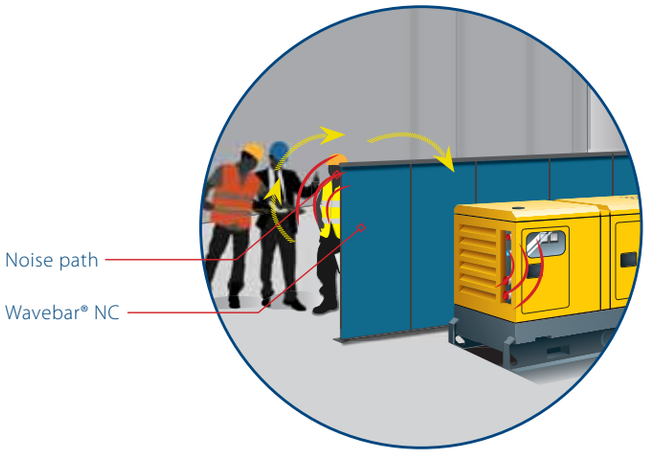
Marine

Quadzero™ NL and Quadzero™ dBX can be installed in the wall linings, deckheads and bulkheads of marine vessels to reduce sound transmission emitting from the vessel engine room.

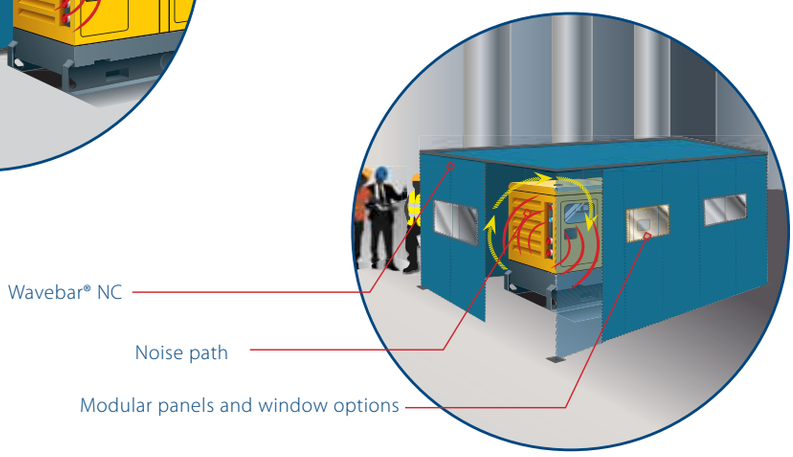
Industrial

Wavebar® NC can be conveniently draped over fencing as an acoustic barrier to reduce noise transmission around construction sites, building sites and mobile equipment.





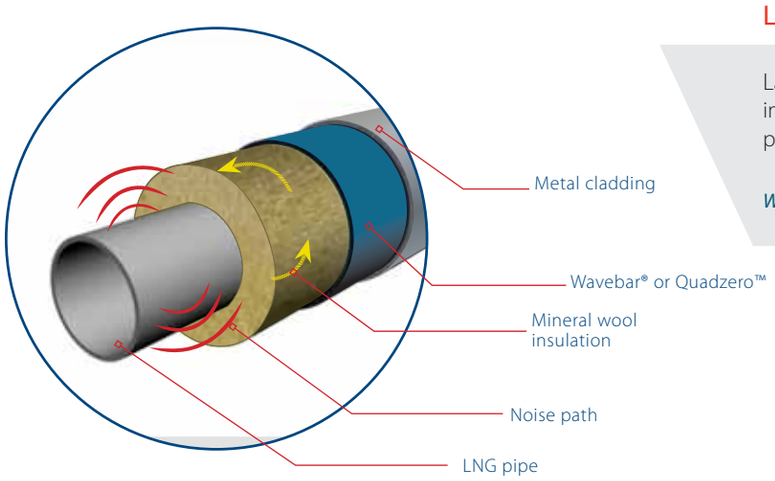
Wavebar® NC can be easily fabricated and sewn to make custom enclosures to reduce noise transfer from generator sets, plant rooms, printing machines and other heavy equipment.



LNG Pipes

Lagged around pipes, Wavebar® & Quadzero™ are important for LNG (Liquid Natural Gas) pipe applications to prevent noise breakout.

Wavebar® complies to the ISO 15665 (Group 2 Pipe size) test method.



Pyrotek's **Wavebar®** & **Quadzero™** range are available in various weights, widths, roll lengths and sheet sizes. Our MLV products are simple to cut and easy to install.

APPLICATIONS

Suited across a variety of applications, the mass loaded vinyl range offers superior acoustic transmission loss and complies to a range of international fire codes benefiting the following areas:

PRODUCT	TYPICAL AREAS OF USE
Wavebar®	• Home theatre and office partitions • Inside cavities, over lightweight walls and ceilings • Between the plenum chamber of a slab, the roof and adjoining partition walls
Wavebar® NC	• Noise curtain for indoor/outdoor industrial and construction sites • Enclosures for industrial equipment e.g. generators, engine rooms, punch presses
Wavebar® dBX	• Automotive cabin • Heavy transport and machinery • Acoustic doors
Quadzero™	• Building construction • LNG Pipes • Roof cavities
Quadzero™ NL	• Train and tram carriages • Marine deckheads and bulkheads • Marine engine room
Quadzero™ dBX	• Train and tram carriages • Marine engine room deck • Inside cavities or over lightweight walls, ceilings and floor constructions

FEATURES	BENEFITS
• Flexible and easy to install • Isolate cavities, over lightweight walls and ceiling constructions • Reinforced fabric strength	• Reduces noise transfer through lightweight partition walls and ceilings • Reduce cross-talk noise and ensure privacy • Longevity
• Can be designed as a partial or complete enclosure around noise sources • Manufacturing options with stainless steel eyelets and hook-and-loop fasteners • Portable acoustic curtain easily draped over fencing	• Curtains are durable and address environmental noise impact • Customised for unique purposes and difficult sites • Reduce noise transmission around construction areas and mobile equipment on site
• Low smoke emission - contains no ozone depleting substances • Can be easily moulded into linings • Thermoplastic properties	• Safe and self-extinguishes in heavy vehicle, road/engine bay • 100% recyclable • Rail carriage will hold its integrity for longer in case of emergency
• Fire resistant foil properties • Suitable for use with LNG pipes • Reflective foil faced surface	• Acts as a noise and vapour barrier • Joins are easily taped for quick installation • Free from lead, odour producing oils and bitumen
• Highest flame retardant properties • Self-extinguishes upon removal of flame • Aluminium foil faced surface	• Suitable for use in high risk areas including marine & offshore • Meets international marine & rail standards • Used where high fire standards are required
• Flame retardant properties • Reinforced aluminium facing • Suitable for use where thermoplastic materials are required	• Durable with low spread of flame • 100% recyclable • Aluminium faced materials can be easily joined using foil tape

With over 40 years of noise control experience, Pyrotek® is a well trusted name for performance improving technical solutions.

pyroteknc.com

PYROTEK
WORLDWIDE LOCATIONS

AUSTRALIA

CANADA

CHINA

CZECH REPUBLIC

HONG KONG

INDIA

INDONESIA

JAPAN

KOREA

MALAYSIA

SINGAPORE

NEW ZEALAND

TAIWAN

THAILAND

TURKEY

UNITED ARAB EMIRATES

UNITED KINGDOM

UNITED STATES OF AMERICA

VIETNAM

CONTACT DETAILS
for further information please visit our website at pyroteknc.com

Pyrotek endorse forest sustainability and the preservation of natural environment. We procure the highest quality materials from suppliers who hold FSC (Forest Stewardship Council) Certification and PEFC (Programme for the Endorsement of Forestry Certification) amongst other certification programmes.

VIBRATION CONTROL

Decidamp® SP80 effectively absorbs and dissipates vibrational energy from the flexural stress of the base structure to reduce panel coincidence and resonance effects.

DECIDAMP® SP80

Decidamp® SP80 is a lightweight, non-toxic structural damping material that is suitable for exterior and interior use and anywhere that noise can impact structural longevity, comfort and function.

Decidamp® SP80 is a superior extensional damping compound and is suitable to be applied directly to structures (steel, fibreglass and alloys) where sound damping is required. Available in grey (standard) or other colours can be ordered depending on MOQ.

Fast drying formula

Specifications

Packaging	20 kg pail
	5 gal pail
	300 kg drum
	55 gal drum

Features

- Advanced, non-sag formulation
- Excellent adhesion to most surfaces
- Water-based - non toxic, solvent free, low VOC
- Excellent flame resistance, ignition retardant
- Designed for damping across broad temperature and frequency range
- Reduces resonant vibration and eliminates tinniness and ringing
- Easy application and clean up (Sprayable)
- Can be painted/gel coated over, once cured
- Cures to chip resistant finish

Application

- Oil and gas: pipe cladding
- Building: metal roofing, floors wall cladding
- Enclosures for machinery and industrial equipment
- HVAC, plant rooms, substations
- Stainless steel applications (sinks, bowls)
- Garbage chutes and other utilities where suitable

SOUNDSTEEL MPM

Soundsteel MPM is a fully damped steel composite comprising two outer layers of steel that is laminated together using a layer of a viscoelastic polymer. The function of the viscoelastic interlayer is to damp disturbing structure-borne sound.

Soundsteel MPM can be used in severe environments where other damping materials cannot withstand. When exposed to harsh environments, SS316 offers considerably high heat and corrosion resistance when compared to other grades of stainless steels.

Standard sheet size:
1220 mm x 2440 mm

Custom sizes and shapes available depending on MOQ

Features

- Able to fabricate using conventional machine shop tools
- Cut, form and join just like plain aluminium
- Maximum damping with minimum thickness

SOUNDALLOY MPM

Soundalloy MPM is a damped aluminium composite comprising two layers of aluminium laminated together using a layer of a viscoelastic polymer.

Soundalloy MPM is free from resonance and coincidence phenomena which often detract from the performance of other acoustic insulation materials.

Soundalloy MPM can also be used in severe environments which other materials cannot withstand.

Standard sheet size:
1200 mm x 2400 mm

Custom sizes available depending on MOQ

Features

- Various configurations of metal thicknesses
- Able to be die cut and formed into complex shapes
- Able to fabricate using conventional machine shop tools

Application

Soundsteel MPM and Soundalloy MPM can be used as metal claddings for pipes in the LNG industry, in engine rooms for high-speed craft/vessels, machinery equipment, compressors, or generator set enclosures.

Technical Datasheet

DECIDAMP® SP80

water-based vibration damping compound

Decidamp® SP80 is a fast drying, water-based viscoelastic vibration damping compound.

The advanced formula is optimised to suit building applications providing an acoustic improvement of structures that are exposed to vibrations and impact noise.

Developed with a special polymer technology, Decidamp® SP80 is a lightweight, non-toxic structural damping material that is suitable for exterior and interior use. It can be applied almost anywhere that noise can impact structural longevity, comfort and function.

With exceptional fire properties and compliance to international fire codes, it performs across several industries and is now developed for building applications. Decidamp® SP80 is easy to apply by simply spraying, rolling or trowelling onto surfaces. Once dry, the cured film is UV, water and chip resistant and effectively damps noise.

Decidamp® SP80 is a superior extensional damping compound and is suitable to be applied directly to structures (steel, fibreglass and alloys) where sound damping is required. Available in grey, as standard, or other colours can be ordered.

applications

- Metal roofing, floors and wall cladding
- Enclosures for machinery and industrial equipment
- HVAC, plant rooms and substations
- Stainless steel applications (sinks, bowls)
- Hospital equipment
- Whitegoods and dishwashers
- Back of house, garbage chutes, and utilities
- LNG pipe

features

- Advanced, non-sag formulation
- Excellent adhesion to most surfaces
- Water-based, non-toxic, solvent-free, and low VOC
- Excellent flame resistance, ignition retardant
- Designed for damping across broad temperature and frequency range
- Reduces resonant vibration and eliminates tinniness and ringing
- Easy application and clean up (Sprayable)
- Can be painted/gel coated over once cured
- Cures to a chip-resistant finish
- Fast drying formula

SPECIFICATIONS

Colour	Grey (standard) Other colours available depending on minimum order quantities
Available	20 kg (5 gal) pail
	300 kg (55 gal) drum

PRODUCT SPECIFICATIONS

Colour	UOM (kg)	Density (dry)	Service temp range (max short term)	pH	Chemical resistance				Recommended Coating thickness (dry film)		
GREY (STANDARD)	20 kg (5 gal) PAIL	1.8 g/cm^3	-40 °C to 120 °C (-40 °F to -184 °F)	8	UV excellent	water very good	petrol good	diesel good	steel ≥ 1.0 x T	aluminium ≥ 0.5 x T	FRP (laminate) ≥ 0.3 x T
	300 kg (55 gal) DRUM										

T= Substrate Thickness.

To achieve a desired dry film thickness, provision for material shrinkage of up to 15% on average should be included when applying wet coating.

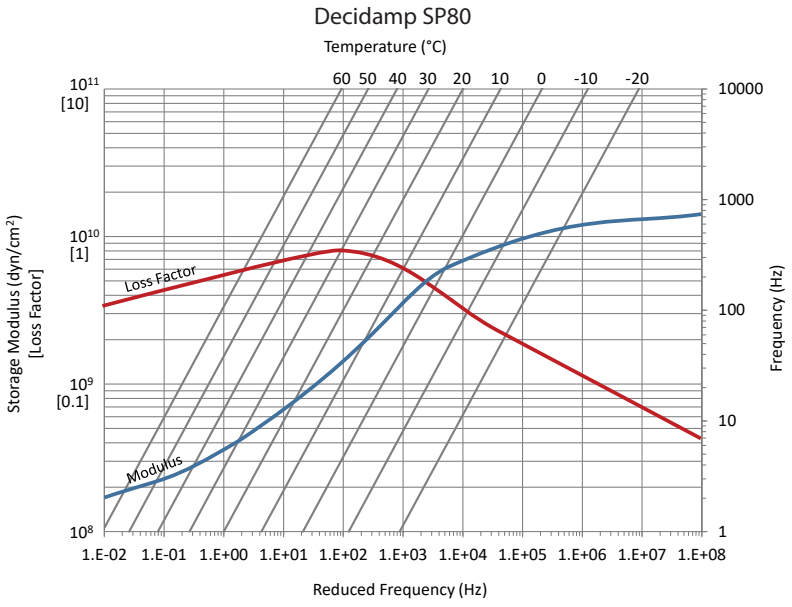
Storage: Store between 10 °C to 45 °C (50 °F to 113 °F).

Shelf Life: 24 months from receiving goods (stored under recommended conditions.

MATERIAL PROPERTIES

Test Method	Property	Report No.	Results
BS 476 Part 6	Fire propagation	376684	Complies with Class 0
BS 476 Part 7	Surface spread of flame	376685	
BS 476 Class 0 summary	Surface spread of flame Fire propagation	376686	
UL94	Flammability of plastic materials	29516AC1	HF-1, V-0
FMVSS-302	Flammability of interior materials	29516AC2	Complies to the requirements of US (DOT) Department of transportation for occupant compartments of motor vehicles

ACOUSTIC PERFORMANCE



Tested to ISO 6721-5:1996

Report Number: 12716AR

How to read a reduced frequency nomogram:

1. *Start by selecting the frequency (Hz) on the right-hand vertical axis.*
2. *Follow this value horizontally to the left to where the diagonal temperature isotherm intersects.*
3. *Draw a vertical line through the frequency and isotherm intersection, find the point where this line intersects the modulus and loss factor curves.*
4. *Draw horizontal lines from these points to the left-hand vertical axis to read the values.*

For further information and contact details, please visit our website pyroteknc.com

SOUNDSTEEL™ MPM

constrained layer viscoelastic steel sandwich laminate

Soundsteel® MPM is a fully damped steel composite comprising two outer layers of steel, laminated together using a layer of a viscoelastic polymer, to form the laminate.

Using the "constrained layer" principle, the function of the viscoelastic interlayer is to damp disturbing structure borne sound.

Soundsteel MPM is free from resonance and coincidence phenomena which often detract from the performance of other acoustic insulation materials.

Soundsteel MPM can be used to fabricate acoustic doors, laundry and garbage chutes, ducts, enclosures, extraction hoods, and automotive components such as valve covers & oil sumps. Because of the steel base material, Soundsteel MPM can be used in severe environments where other damping materials cannot withstand.

The standard product is supplied with an electro-galvanised finish, and available in various metals and surface finishes. Using electro-galvanised, cold-rolled, low carbon steel allows the laminate to be used as a structural material in equipment construction.

Soundsteel MPM is also available with a choice 304 and 316 stainless steel grades, with surface finish of either polished, brushed or polyethylene (PE) coating for additional scratch resistance. When exposed to harsh environments, SS316 offers considerably high heat and corrosion resistance when compared to other grades of stainless steels.

Note: Powder-coated panels should not be bent. Bending should be completed on plain panels and painted on site. We recommend conducting trials on small sample pieces first.

SPECIFICATIONS

Available	Sheet size: 1220 mm x 2440 mm All dimensions are nominal.; Other sizes and shapes available on request.

applications

- Engine rooms for high speed craft/vessels
- Machinery and equipment, compressor and generator set enclosures
- Acoustic hoods and chutes
- Conveyor systems
- Crushers / Granulators
- Coin counters
- Air conditioner casings
- Automotive sumps and panels
- Acoustic wall panels and doors
- LNG cladding

features

- Maximum damping for minimum thickness
- Complies to IMO FTP 2010 - low spread of flame
- Can be used as part of the "main structure"
- Cut, form and join just like plain aluminium
- Insulates against air-borne sound, impact and vibration
- Able to be painted & powder coated - best results from the manufacturer for powder coating
- Effective "in-structure damping"
- No need for external damping materials
- Reduces or eliminates need for use of external isolators
- Lightweight damped structures
- Broad temperature range (-40ºC to 110ºC)
- Able to fabricate using conventional machine shop tools
- Available with a choice of polished, electro-galvanised, brushed or polyethylene (PE) coated surface finishes
- Able to be die formed into complex shapes
- Various configurations of metal thicknesses available from 1 mm - 6 mm

PRODUCT SPECIFICATIONS

Viscoelastic layer	Transmission loss/STC	Standard thickness (mm)	Sheet size (mm)	Recommended max service temperature	Surface density (kg/m^2)
Acrylic	29*	1.2	1220 x 2440	110 °C	8.6
	30	1.6			11.7
	32*	2.0			14.0

All dimensions are nominal. Other sizes and shapes available on request.
**Results shown have been calculated using transmission loss software. Base data was compiled from several years of acoustic testing. The software uses well known acoustic formula. Values given are within 1-2 dB of actual test data. Variation will always occur in test data and predictions. This is due to variations in material properties, different methods and standards.*

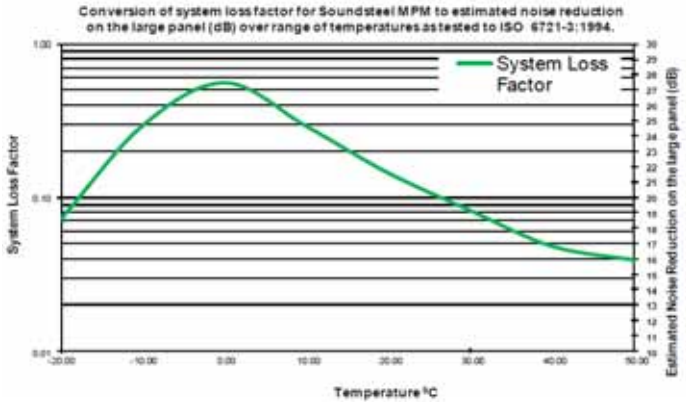
MATERIAL PROPERTIES

Test method	Index	Description	Report	Results
AS 1530.1 1994*	Combustible/Non-combustible	Combustibility test for materials	FNC 291	Non-combustible

**Soundsteel MPM 1.6 mm*

ACOUSTIC PERFORMANCE

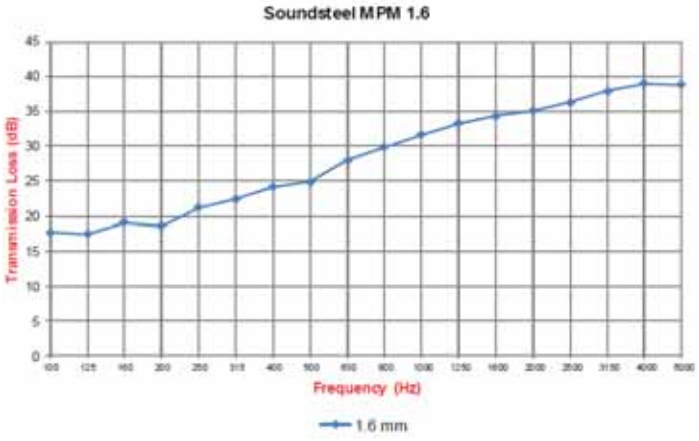
Temperature °C	System loss factor
-20	0.97
-10	0.30
0	0.56
10	0.29
20	0.14
30	0.08
40	0.05
50	0.04
Maximum estimated noise reduction (dB)	27.5



System Loss Factor Tested to ISO 6721-3:1994 - Report No. 25111 -Mk1

System loss factor is a dimensionless figure representing how well a particular system is damped. Standard ASTM E756-23/ISO 6721-3 is used to test for system loss factor. A system is a combination of the substrate, be it steel, aluminium or fibreglass and the damping material itself. System loss factor is system specific, hence the composition of the tested system needs to be provided.

Frequency (Hz)	1.6 mm
100	17.7
125	17.4
160	19.1
200	18.6
250	21.2
315	22.4
400	24.1
500	24.9
630	28.0
800	29.9
1000	31.7
1250	33.3
1600	34.4
2000	35.1
2500	36.3
3150	38.0
4000	39.0
5000	38.9
STC	30
R_w	30



Transmission Loss (Tested to AS1191 | NAL Report No. ATF-142

For further information and contact details, please visit our website pyroteknc.com

SOUNDALLOY™ MPM

constrained layer metal composite

Soundalloy™MPM is a damped aluminium composite comprising two layers of aluminium laminated together using a layer of a viscoelastic polymer to form the laminate.

Using the "constrained layer" principle, the function of the viscoelastic interlayer is to damp disturbing structure borne sound.

Soundalloy MPM is free from resonance and coincidence phenomena which often detract from the performance of other acoustic insulation materials.

Using aluminium sheet allows the laminate to be used as a structural material in equipment construction.

Soundalloy MPM can be used to fabricate acoustic doors, laundry and garbage chutes, ducts, enclosures, extraction hoods, and automotive components such as valve covers & oil sumps.

Because of the aluminium base material, Soundalloy MPM can be used in severe environments which other materials cannot withstand.

Other metals such as stainless steel and EG steel can be substituted for aluminium.

Note: Powder-coated panels should not be bent. Bending should be completed on plain panels and painted on site. We recommend conducting trials on small samples pieces first.

applications

- Engine rooms for high speed craft/vessels
- Machinery and equipment, compressor and generator set enclosures
- Acoustic hoods and chutes
- Conveyor systems
- Crushers / Granulators
- Coin counters
- Air conditioner casings
- Automotive sumps and panels
- Acoustic wall panels and doors
- LNG cladding

features

- Maximum damping for minimum thickness
- Complies to IMO FTP 2010 - low spread of flame
- Can be used as part of the "main structure"
- Cut, form and join just like plain aluminium
- Insulates against air-borne sound, impact and vibration
- Able to be painted & powder coated - best results from the manufacturer for powder coating
- Effective "in-structure damping"
- No need for external damping materials
- Reduces or eliminates need for use of external isolators
- Lightweight damped structures
- Broad temperature range (-40oC to 110oC)
- Able to fabricate using conventional machine shop tools
- Able to be die formed into complex shapes
- Various configurations of metal thicknesses available from 1mm - 6mm.

SPECIFICATIONS

Colour	Silver (Aluminium)
Available	Sheet size: 1200 mm x 2400 mm
	Custom depending on MOQ

PRODUCT SPECIFICATIONS

Product	Viscoelastc layer	Finish	Thickness (mm)	Sheet size (mm)	Recommended max service temp	Surface density (kg/m^2)
Soundalloy MPM 1600	Acrylic	Aluminium	1.6	1200 x 2400	110˚C	4.1
Soundalloy MPM 2100			2.1	1200 x 2400		5.4

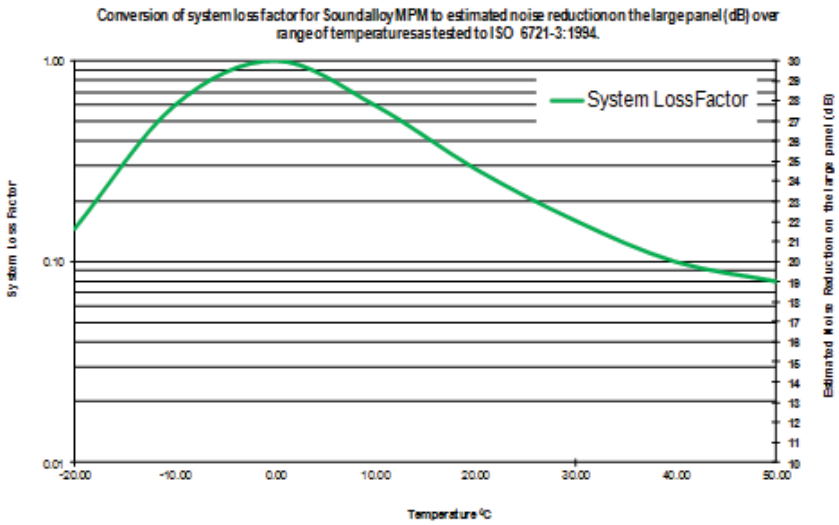
MATERIAL PROPERTIES

Test method	Index	Report no.	Results	Description
IMO FTP 2010	CFE: Critical flux at extinguishment Qsb: Heat of sustained burning Qt: Total heat released Qp: Peak heat release rate	Resolution MSC.307(88)) Annex 1 Part 5 (Report No. 323596)	>50.5kW/m^2 >30.3MJm^{-2} <0.01kW <0.01MJ Meets all low flame spread requirements for bulkhead, wall, ceiling and floor coverings	Surface flammability of bulkhead, wall, ceiling, floor covering
EC Type Examination Certificate Module B (MED B) + Module D (MED D)	-	Certificate No. 164.112/1121/ WCL MED0362TE; MEDD000015N	Complies. USCG type approval granted	WHEELMARK
DNV-GL Type approval, & Transportation Canada type approval to requirements of TP 14612	Surface materials of low flame spread	Certificate No. F-21141	Complies for Offshore Standards, SOLAS & recognized by Transport Canada.	Suitable for use on DNV-GL surveyed and Canadian flag state vessels.

ACOUSTIC PERFORMANCE

Temperature ^0C	System loss factor
-20	0.15
-10	0.60
0	1.00
10	0.60
20	0.29
30	0.16
40	0.10
50	0.08
Maximum estimated noise reduction (dB)	30.0

System loss factor is a dimensionless figure representing how well a particular system is damped. Standard ASTM E756-23/ISO 6721-3 is used to test for system loss factor. A system is a combination of the substrate, be it steel, aluminium or fibreglass and the damping material itself. System loss factor is system specific, hence the composition of the tested system needs to be provided.



(Tested to ISO 6721-3 : 1994 Report No. 25111Mk2)

For further information and contact details, please visit our website pyroteknc.com

Installation Guide

Pyrotek

WATER BASED COATING INSTALLATION GUIDE

103-1IG VERSION* 06/2017

DECIDAMP® SOUNDPAINT

This Installation Guide provides recommendations to maximise the service life in various applications.

KEY INSTALLATION REQUIREMENTS

Decidamp Soundpaint® is a high-performance, fast drying, water based viscoelastic vibration damping compound, specially formulated for easy application and maximum performance.

This advanced formula was developed for acoustic improvement of structures that are exposedto vibration and impact.

It effectively absorbs and dissipates vibrational energy from the flexural stress of the base structure to reduce panel coincidence and resonance effects.

SURFACE PREPARATION

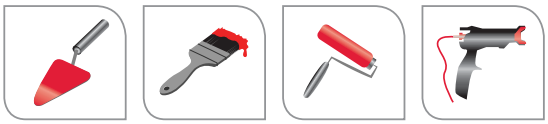
This product is specifically formulated to provide high adhesion to difficult substrates such as uncoated aluminium, however adequate surface preparation is essential.

- Remove any dust, dirt, oil, grease, rust, mould-release agent, etc. from the surface using a suitable solvent.
- Abrading the surface by wire brushing, sandblasting or abrasive paper is recommended for highly polished surfaces.
- On steel substrates, surface priming is recommended to prevent flash rusting.

METHODS OF APPLICATION

Decidamp® Soundpaint can be applied using the following methods:

- Trowel: Simply apply and smooth as required.
- Brush: For brush applications, we recommend adding 0.3% of water by weight per kg of product. This will assist in easier and smoother application. Use a wide 100mm thick nylon bristle brush. Keep brush well loaded with Soundpaint and use short strokes, applying a thick coat of approximately 2-3mm. Avoid “painting” back and forth as this will cause the coat to become too thin.
- Roller: For roller applications, we recommend adding 1% of water by weight per kg of product. This will aid in an easier and smoother application. Using a short knap cloth roller, roll with short strokes, and try to avoid rolling back and forth, as this will cause the coat to become too thin. Use a light brush to “tip-off” the stipples if desired.
- Air assisted and Airless spray systems: Four main spray systems are available for the application of Soundpaint. (stated overleaf)



APPLICATIONS

- Marine: Boat hulls, ceilings, decks and bulkheads
- Machinery and industrial equipment enclosures
- HVAC, plant rooms, substations
- Exit ways, smoking areas, stairwells
- Rail: locomotives, carriages, high speed trains
- Automotive, trucks and bus underbodies
- Heavy earthmoving equipment
- Stainless steel applicatins (sinks, bowls)
- Hospital equipment
- Whitegoods and dishwashers
- Metal floors, deck roofing, wall cladding

Please refer to our website pyroteknc.com for the latest information

Ensure proper preparation, mixing and application for best results. Decidamp® Soundpaint should always be applied to surfaces that are clean, dry and free of contaminants.

MIXING & APPLICATION

Mix thoroughly before application, using a ribbon or paddle mixer as shown. The product should be mixed until it is a smooth creamy consistency.

If required, the viscosity of the product can be altered by the addition of0.3% of water by weight per kg of product. Should be applied above ambient temperatures of 10°C.

DRYING TIMES

For best results, allow the compound to dry naturally as force drying may result in cracking of the coat. In cold conditions, substrate can be warmed to aid drying. Forced ventilation can be used to help coating dry. Air movement should be both in/out during drying process.

Product		**Decidamp SP80 *** **(previously Soundpaint SP150)* **Decidamp SP150** **Decidamp SP450**	**Decidamp SP500**
Drying time of 3mm coating	Initial drying	3-4 hours	4-6 hours
	Completely dry	24 – 72 hours	24 – 96 hours

Note, drying times are a guide only. Testing should be performed by the end user, as end use conditions (thickness of application, substrate type, temperature and humidity) will effect this greatly.

APPLICATION RATE & COVERAGE

Can be applied up to 6mm wet film (achieves approx. 5.2mm DFT) per coating session without slumping. Typically, Decidamp is built up over two sessions of 3mm wet coats, allowing 20-40 minutes between each application.

For best damping performance, the following application thicknesses are recommended:

- Dry coating thickness steel: >1.0 x substrate thickness
- Dry coating thickness aluminium: >0.5 x substrate thickness
- Dry coating thickness FRP: >0.3 x substrate thickness

To achieve a desired dry film thickness, provision for material shrinkage of up to 15% on average should be included when applying wet coating.

Note, specifications or specific requirements of an installation may supersede these recommended thicknesses.

Resistant to water spray or immersion up to 12 hours, however if this is anticipated, Decidamp should always be sealed with a suitable commercial waterproof sealant/coating, applied well after complete curing of the material.

WET GAUGE FILM THICKNESS CHECK

To ensure the correct film build is achieved, a wet film gauge can be used (right).

RECOMMENDED SPRAYING SETUPS

SPRAY SYSTEM	PNEUMATIC PISTON PUMP (AIRLESS)	PNEUMATIC PISTON PUMP (AIR ASSISTED)	BOTTOM ENTRY PRESSURE POT	GRACO RTX1500
GUN TYPE	XTR-7 Airless spray guns	GNG/T3005 Texture Gun, Bottom Entry	GNG/T3005 Texture Gun, Bottom Entry	RTX1500 Heavy duty trigger gun
LINE PRESSURE	Typically 138 – 207 bar (3000 psi). Higher pressure required for longer hose lengths.	24-30 bar (350-440 PSI)	2-4 bar (30-60 PSI)	Max. 7 bar (100PSI)
LENGTH OF HOSE FROM PUMP TO GUN	6 m + 1 m whipping	15– 30 m	5 - 20 m	7.5 m nominal
DIAMETER OF HOSE	9.5mm (3/8") ID and 6.5 mm (1/4") ID whipping	19 mm ID (3/4" ID)	19 mm ID (3/4" ID)	19 mm ID (3/4" ID)
DIAMETER OF NOZZLE	0.6 to 0.7 mm (0.023" to 0.029") (Reversible tip 423 to 429*)	4 mm (0.157")	4 mm (0.157")	4 mm (0.157")
PUMP TYPE	Ratio 70:1 piston pump	Ratio: 4:1or greater Flow: 3 L/min 2-ball piston pump	20 litre bottom entry pressure pot	Peristaltic
AIR PRESSURE	2.2 bar (43 PSI)	6 - 7 bar (90 - 100 PSI)	Pressure in gun: 6 bar (85 PSI) Pressure in pot: 2-4 bar (30-60 PSI)	Air compressor included in unit

Maximum of 207 bar (3000 psi) line pressure recommended for Decidamp SP500.
Excessive pressure may impede final properties of the material.

Pneumatic Piston Pump

XTR-7 Airless Spray Gun

GNG/T3005 Texture Gun Bottom Entry

Bottom Entry Pressure Pot

RTX 1500

PRODUCT INFORMATION

Product	**Decidamp SP80*** **(Previously Soundpaint SP150)*	**Decidamp SP150**	**Decidamp SP450**	**Decidamp SP500**
Volume solids	70-75%	70-75%	70-75%	70-75%
Weight kg/m²/mm	1.8 kg/m²/ mm DFT	1.6 kg/m²/ mm DFT	1.6 kg/m²/ mm DFT	1.3 kg/m²/ mm DFT
Consumption for 1mm DFT ***Includes allowance for up to 15% material shrinkage***	2.1 kg/m²	1.85 kg/m²	1.85 kg/m²	1.5 kg/m²

Substrates: Can be used on Steel, Aluminium, GRP/FRP Laminate, GRP/FRP.

Water resistant: Decidamp SP150, SP450, SP500 varieties are water resistant, however where regular exposure is expected, Soundpaint should always be sealed with a suitable commercial waterproofing sealant/coating, applied well after complete curing of the material.

Shelf life and Storage:
24 months from receiving goods (when stored under recommended conditions).
Product to be stored and transported between 10 and 45°C.
Do not allow to freeze.
Partially used pails of product can be reused, if selaed firmly after first use.
Opened product should be resealed and used within 2 months (Frequent opening of seal must be avoided)

Clean up and Safety:
Equipment easily cleaned with water
Personal Protection Equipment (PPE) including eye protection, gloves and safety clothing are highly recommended.

Please contact Pyrotek for further information or detailed advice on your specific application.

SOUNDSTEEL / SOUND ALLOY

This Installation Guide provides recommendations for working on Soundmetal panels ie joining, bending, welding and fastening.

WORKING HEALTH AND SAFETY

- Make sure that the premises are well ventilated when welding panels.
- Personal Protection Equipment (PPE), including eye protection, gloves and safety clothing is recommended. Refer to MSDS, use in a well ventilated area.

Note: This product is suitable for professional and experienced users only.

CONDITIONS BEFORE WORKING ON PANELS

All panels must be at room temperature (15°C - 35°C) before they can be worked on. If you have no heated storage space, the panel must be brought into heated premises at least 24 hours prior to any working operations. If the temperature of the panel is below room temperature, bending and like operations may cause the thermoplastic layer to separate from the facing.

PROCESSING PANELS

CUTTING:
Panels are easily cut with guillotine shears. Cutting edges should be well sharpened. Set the clearance between cutting edges as for a sheet metal thickness equal to 60% of the thickness of the panel. Standard MPM panels come with outer layers of equal thicknesses. Panels with outer layers of unequal thickness, should be cut with the thinner side facing up. MPM panels can also be laser cut. Water jet cutting is not recommended.

SAWING AND SLOTTING:
If the panel is to be sawn or slotted with a cutting wheel or similar tool, it should first be spot or tack welded on both sides of the cutting line. Use minimum heat.

BEADING AND FLANGING:
These operations can be performed in the same way as with single sheets of metal. As the operation takes place under compressive force, there is no risk of separation at the edges of the panel.

PUNCHING:
Any drilling or piercing should be done after bending, as the holes will otherwise be displaced.

BENDING:
Panels can be bent and edged without trouble provided that a few essential points are kept in mind. The bending radius should be at least 1.5 - 2.0 times the thickness of the panel. For best results with heavier-gauge panels, the radius of the die should be slightly larger than that of the tool.

When bent, it behaves like two sheets of metal lying loosely one on the other, and the facings are displaced by the difference in bending radius between the inner and outer facing.

Pyrotek's 'Soundmetal' range of products include two standard damping sandwich panels - Soundalloy™ MPM (Refer to TDS '111IP') and Soundsteel® MPM (Refer '121IP').

applications

- Engine rooms for high speed craft/vessels
- Machinery and equipment, compressor and generator set enclosures
- Acoustic hoods and chutes
- Conveyor systems
- Crushers / Granulators
- Coin counters
- Air conditioner casings
- Automotive sumps and panels
- Acoustic wall panels and doors

Please refer to our website pyroteknc.com for latest information

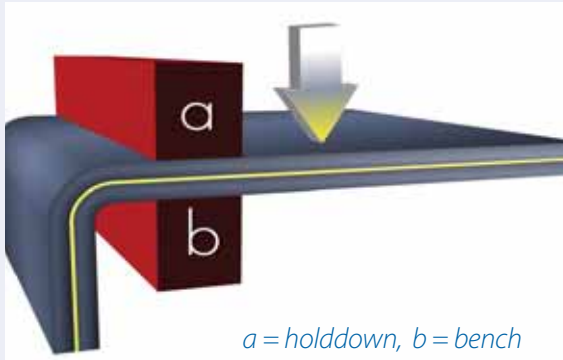
PROCESSING PANELS (cont.)

BENDING (cont.)
The amount of displacement can be calculated according to the formula:

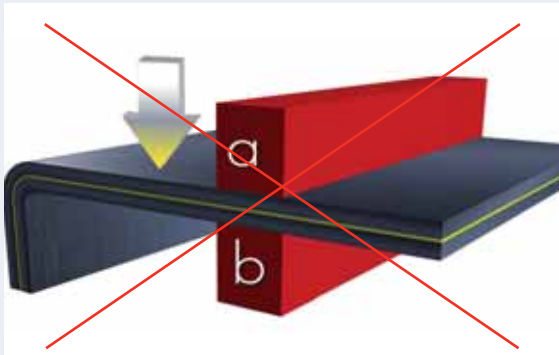
ð = α X π/180 X (RII - RI) mm
RI = R + t1/3
RII= R + t1 + p + t2/3

where ð = displacement
α = bending angle in degrees
t1 =thickness of facing nearest tool
t2= thickness of facing nearest die
RI=bending radius of inner facing(t1)
RII=bending radius of outer facing(t2)
p=thickness of plastic inlay

As a result of the displacement, you cannot make several successive bends without taking certain precautions. Always bend nearest a free edge to allow for displacement. If you bend on the side nearest a bent edge, the layers of the panel will split apart.
Note: Powder-coated panels should not be bent. Bending should be completed on plain panels and painted on site. We recommend conducting trials on small samples pieces first..



a = holddown, b = bench



JOIINING & FASTENING

MPM panels are readily joined by both resistance and arc welding.

Weldability of MPM Panels
Care must be taken to adjust current settings and to use the correct clamp design to form an electrical bridge between the two sheets of the sandwich system. In all welding operations you should try to limit both the duration and extent of heating of the thermoplastic inlay.

Resistance Welding
MPM panels lends itself well to resistance welding. The strength of the joints is equivalent to that normally obtained in solid steel sheet welding.

Before resistance welding begins, the insulating plastic inlay must be punctured. This is most easily done by making a centre punch mark under the first spot. For heavier gauge panels you can use a clip or clamp. Once electrical contact is established between the metal facings, no further punch marks are needed. (See fig RW1)

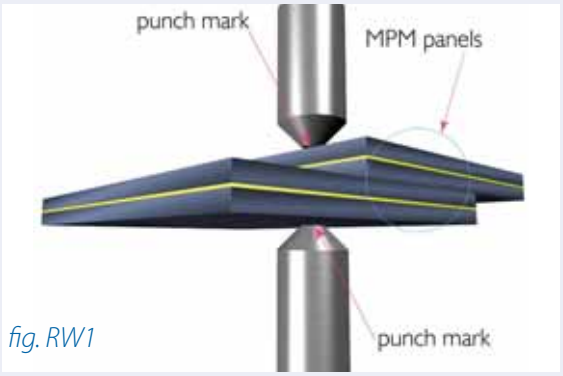


fig. RW1

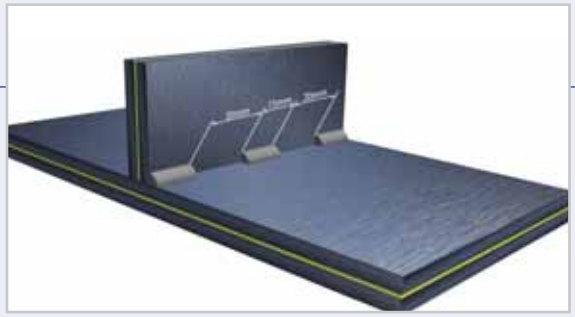
The electrode pressure should be increased by 50-80 % compared to solid metal; this is to ensure that the spot will penetrate the plastic inlay and deform the facings to establish electrical contact. The power should be increased by 20% compared to solid sheeting of the same thickness. With small spot welders developing less than 35kVA, the welding time should be prolonged.

When long edges are spot welded to prevent the panel from splitting apart, the intervals between spots should not be longer than 5cm (2inches) and shorter than that for asymmetrical panels.

Seam Welding
An overlapping form of spot welding is also a suitable method. Bolts, brackets and similar fittings can also be welded to the panel by application of double electrodes on the same side of the panel. In such cases, it isn't necessary to puncture the inlay.

Make sure that premises are well ventilated when you weld MPM panels.

VARIOUS TYPES OF JOINT



Fillet Welding to a heavier gauge material or between panels
First secure the edges of the MPM panel with spot welds. Continuous fillet welds should be avoided. Joints 15mm long, spaced 20mm apart are right. Intermittent fillet welding in a staggered pattern gives best results.

Butt Welding
Edges of the MPM panels should first be secured by spot welds and then built up as shown in the three figures.

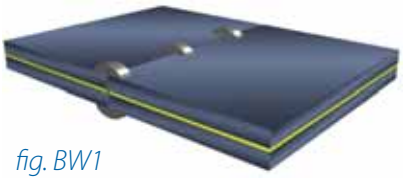


fig. BW1

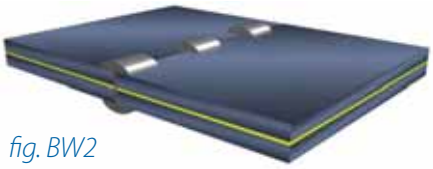


fig. BW2

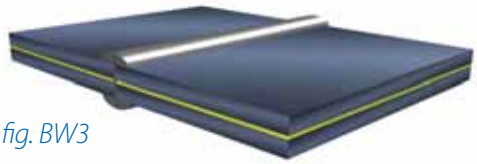


fig. BW3

Plug Welding
Panel edges should first be secured by spot welds. Welding data should be selected according to the thickness of the panel. Basic electrodes are recommended.
(See fig. PW1)

Corner Welding
Locate the panels so that one covers the thermoplastic inlay of the other one.
(See fig. CW1)

Make sure that premises are well ventilated when you weld MPM panels.

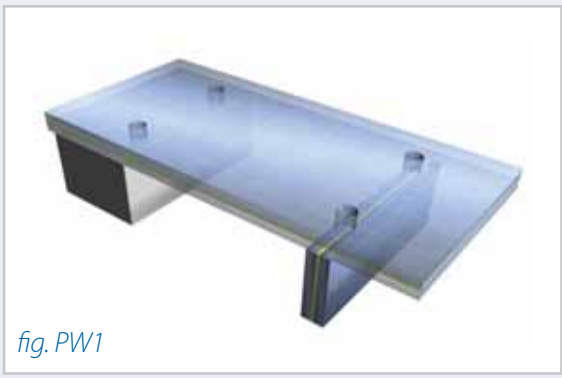


fig. PW1

fig. CW1

Please contact Pyrotek® for further information or detailed advice on your specific application.

Brochure

WATER BASED VIBRATION DAMPING COMPOUND

DECIDAMP® SP RANGE

BUILDING - INDUSTRIAL - TRANSPORT - MARINE - OIL & GAS

SOUNDPROOFING SOLUTIONS FOR ALL INDUSTRIES

pyroteknc.com

Pyrotek

Non-sag
formulation

Protect vessels, transportation, vehicles and other structures

WATER-BASED VIBRATION DAMPING COMPOUND

Decidamp® SP (Soundpaint) is a water-based, extensional damping compound designed to reduce impact-generated noise and address resonant vibration at its source. The viscoelastic properties effectively damp and dissipate vibrational energy to alleviate flexural stress of base structures, which can greatly assist in the prevention of metal structural fatigue. Our advanced formula was developed for acoustic improvement in marine vessels, rail carriages, vehicle chassis and other structures that are exposed to vibration and impact.

The Decidamp® range was developed to reduce structural-borne noise, metal fatigue and flexural or dynamic stress of structures.

VIBRATION DAMPING TO REDUCE NOISE & LESSEN STRUCTURAL FATIGUE

Structures with minimal internal damping properties can resonate on impact or when exposed to other momentary forces. If not effectively damped, structure borne vibration is converted to airborne noise. Increased damping in a structure will reduce vibration, noise transfer and structural fatigue. Effective damping can achieve greater than 20 dB reduction in noise.

FEATURES

- Certified to International Maritime Organization (IMO) fire safety standards
- Certified to European Standards EN45545-2 for railway applications
- USCG (United States Coast Guard) approved
- ClassNK (Nippon Kaiji Kyokai) approved
- Lightweight and easy to apply
- Faster drying with no slumping
- Contains no ozone-depleting substances
- Water-based, anti-corrosion and chip resistant properties
- Low consumption rate, high damping performance
- High build rate, with the ability to apply 2 mm thick in one single coat
- Seamless damping solution

Available in pails and drums according to project size and customer requirements.

50% quicker
application

Address structural fatigue in engines, underbody and surrounds.

Lightweight, less shrinkage

across every industry and application

DECIDAMP SP80

Suitable for architectural, building and industrial use

Tested to British Standards - BS 476 Part 6 & 7 - Complies with Class 0.

- Easily applied to any contoured, horizontal or vertical surface
- Apply up to 2 mm in one spray application
- No odour and low Volatile Organic Compound (VOC)

DECIDAMP SP150

Designed for marine and offshore applications

Complies to IMO FTP/SOLAS Annex 1 Part 5 & Annex 2. Wheelmark, USCG and ClassNK approved.

- Wheelmark approved for Marine Industry
- International Marine Organisation (IMO) (fire) approved coating of up to 10 mm thickness therefore highly suitable for thick substrates
- No slumping upon correct application, faster drying
- Can be painted or gel coated over

0575

DECIDAMP SP450 | SP500

Recommended for transport and rail applications

Complies to international fire standards including EN45545-2 - Results R1, R7, R8, R10 HL3.

- Achieves highest fire rating results in latest rail standards
- Premium lightweight formulation. High performance damping with excellent system loss factor
- Offers chip and corrosion resistance, no cracking properties and high build rate

EN45545-2
COMPLIANT

"Pyrotek SP150 Soundpaint® shows significant improvements to the transmission loss, vibration acceptance, and damping compared to the untreated steel and aluminium bulkheads. Comparisons to a previously tested spray-on damping treatment show that Soundpaint® performs significantly better in transmission loss, vibration acceptance, and damping."

Noise Control Engineering Inc. TM 12-071

Address resonant vibration in structures, facades, casings, chutes and anywhere high performance damping is required.

TYPICAL AREAS OF USE

BUILDING/INDUSTRIAL -

- Commercial, and multi-storey residential
- Government infrastructure projects, schools, educational and hospitals
- Industrial factories and equipment
- Mills and processing equipment
- Metal roofing - interior rain noise
- Metal structures - frames, facades, stairs
- HVAC - ducts, fan housing ventilation units
- Generator sets - metal panels
- Industrial - cabinets, covers, chutes
- Machinery - sheet metal, guards

MARINE -

- Pleasure craft, luxury
- Super yachts, mega yachts
- Military and amphibious warfare
- Work boats, tugs and trailers
- Commercial, coast guard, rescue vessels
- Offshore oil and gas platforms
- Hulls - reduces wave slap noise and resonance
- Decks, under screed interior floor
- Wall partitions, interior lining
- Bulkhead and deckhead
- Bow thruster, transom, propeller tunnels
- Engine rooms, enclosures
- Superstructure

TRANSPORT & RAIL -

- Carriages - trams, high speed, locomotive, monorail, urban trains
- Military, personnel carriers, combat, utility and transport vehicles
- Mining vehicles and equipment
- Specialist vehicles - armoured vehicles
- Passenger rail carriages - interior linings, floor, wall and ceiling
- Diesel and electric motor carriages
- Bus and truck - floor pans, engine bay, under bonnet, firewall, wheel arches
- Underbody, and interior body applications

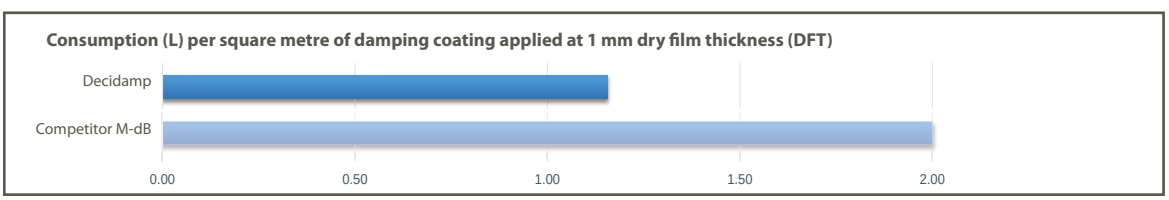
Highest certification in fire standards

Reduce vibration across challenging substrates and areas

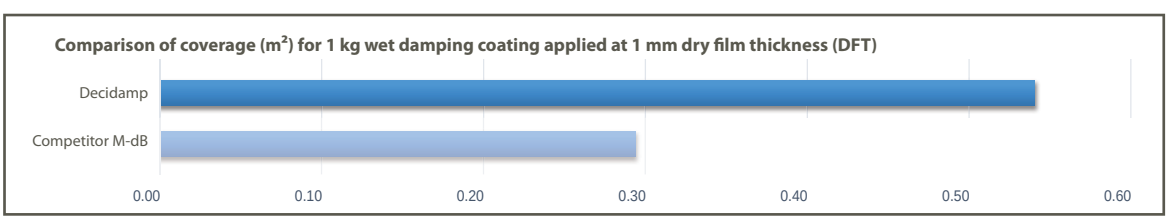
*Based on supplier technical datasheet & literature 2017

Better coverage apply less

OUTSTANDING CONSUMPTION AND COVERAGE



CONSUMPTION (L/m²/mm DFT)



COVERAGE (m²/kg/mm DFT)

15% lighter high solids

EASY INSTALLATION

Specifically formulated to provide high adhesion to many substrates including metal (electro galvanised steel, uncoated aluminium and stainless steel), and fibre reinforced plastics (FRP). The final cured layer of Decidamp varieties is water resistant and chip resistant. Decidamp is optimised to work best at typical temperatures of use.

INDEPENDENT CERTIFICATION AND TESTING HAS BEEN CONDUCTED BY:

Exova Warrington, UK

Van Cappellen Consultancy, Netherlands

Intersona, Netherlands

LA.P.I., Italy

Intertek, USA

SGS, France

Noise Control Engineering, USA

TÜV SÜD, Singapore

Pyrotek

pyroteknc.com

With over 40 years of noise control experience, Pyrotek® is a well trusted name for performance improving technical solutions. We offer global resources with dependable local support.

80+ locations in 30 countries

- Six research and development centres
- Five engineering centres
- Global headquarters in Spokane, Washington, USA

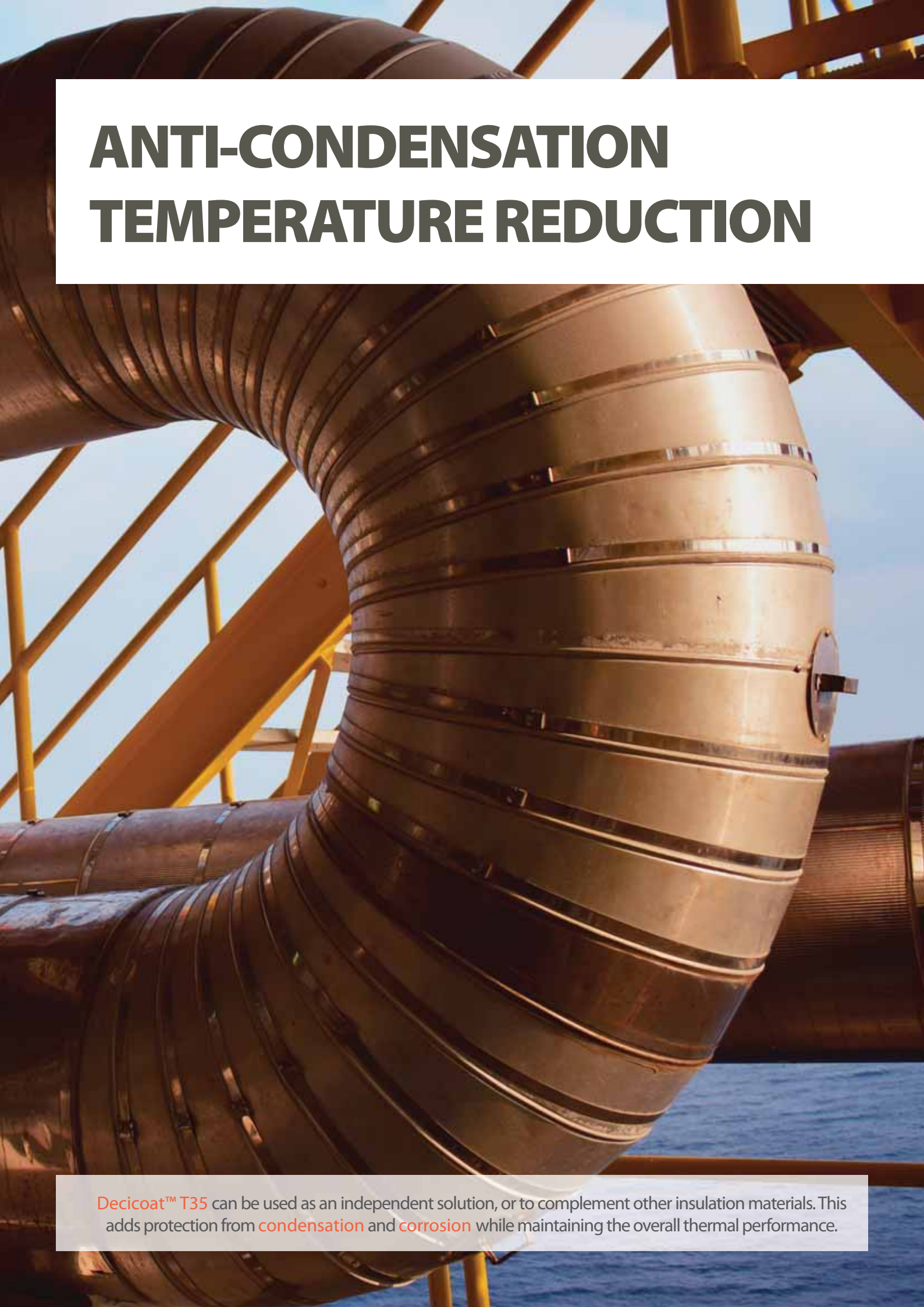
pyroteknc.com

CONTACT DETAILS
for further information or to see your local office
please visit our website

Pyrotek endorse forest sustainability and the preservation of natural environment. We procure the highest quality materials from suppliers who hold FSC (Forest Stewardship Council) Certification and PEFC (Programme for the Endorsement of Forestry Certification) amongst other certification programmes.

DECIDAMP 092018

ANTI-CONDENSATION TEMPERATURE REDUCTION



Decicoat™ T35 can be used as an independent solution, or to complement other insulation materials. This adds protection from condensation and corrosion while maintaining the overall thermal performance.

DECICOAT™ T35

Decicoat T35 is a water-based spray-on thermal insulation coating specially formulated with anti-condensation and corrosion protection properties. It also complies to international fire codes for building, rail and marine applications.

Packaging	19 L pail
	5 gal pail
	200 L drum
	53 gal drum

Features

- Thermal insulation, excellent anti-condensation and corrosion protection
- Lightweight, non-sag formulation with excellent adhesion to various metal substrates
- Complies to international standards for low spread of flame, smoke and toxicity
- Water-based compound – no volatile solvents or thinners required for cleaning (low odour environment)
- No primer required - easy, fast and seamless application
- Sprayable - air gun or airless spray system
- Long-lasting, cures to a hard chip,
- UV and moisture-resistant finish
- Can be used in conjunction with other insulation materials

Application

- Applications exposed to high humidity and temperature fluctuations such as: LNG or cryogenic pipes, building interiors or walls
- Underside of metal deck roofing and metal wall cladding
- Applied in conjunction with traditional fibrous or foam insulation to improve overall thermal insulation systems

Why Decicoat T35?

Condensation is associated with relative humidity, air pressure and occurs when temperature differentials between two areas pass over the 'dew point' threshold. **Decicoat T35** regulates surface temperatures of the component by inhibiting thermal transfer to effectively control the onset of condensation when applied with the appropriate coating thickness.

Technical Datasheet

0575

DECICOAT™ T35

water-based, sprayable thermal coating

Decicoat T35 is a water-based spray-on thermal insulation coating specially formulated with anti-condensation and corrosion protection properties. It has been developed to meet market requirements in the rail, off-shore, marine, chemical, petroleum, automotive and construction industries.

Unlike traditional insulation materials like glass wool or mineral fibre, Decicoat T35 provides a seamless and sprayable application with 100% coverage. This means Decicoat T35 successfully prevents thermal bridging.

With excellent adhesion to most metals, Decicoat T35 bonds flush with substrates even around uneven surfaces. Depending on the application requirement, it can be used as an independent solution, or to complement other insulation materials, when added protection from condensation and corrosion are required for overall thermal performance.

Condensation is associated with relative humidity, air pressure and occurs when temperature differentials between two areas pass over the 'dew point' threshold. With the right coating thickness, Decicoat T35 regulates surface temperatures of the component by inhibiting thermal transfer to effectively control the onset of condensation.

Near odourless, it complies with international fire codes for rail and marine applications, exhibiting a low spread of flame, low heat release, low toxicity and low smoke release during combustion.

SPECIFICATIONS

Colour	White
Available	Pail: 19 L, 5 gal
	Drum: 200 L

applications

- Marine vessels: interiors of superstructures and hulls in workboats, luxury yachts and super-liners.
- Rail applications: carriage ceiling and walls
- Industrial: on the underside of metal deck roofing, metal wall cladding or shipping containers
- Applications exposed to high humidity and temperature fluctuations
- Oil & gas/offshore: interior structures of habitable areas and LNG pipelines
- Automotive: heavy vehicles, buses, trailers, tractors
- Applied in conjunction with traditional fibrous or foam insulation to improve overall thermal insulation systems
- Domestic: pipes, walls, interiors

features

- Thermal insulation, excellent anti-condensation and corrosion protection
- Eliminate thermal bridging
- Complies to international standards - low spread of flame, smoke and toxicity
- Manufactured under ISO 9001 Quality Systems
- Use in conjunction with other insulation materials
- Decrease interior sound levels by damping panel resonance
- Lightweight, non-sag formulation with excellent adhesion to various metal substrates
- Long-lasting, cures to a hard chip, UV and moisture-resistant finish
- Water-based compound – no volatile solvents or thinners required for cleaning - low odour environment
- No primer required - easy, fast and seamless application
- Sprayable - air gun or airless spray system

PRODUCT SPECIFICATIONS

Colour	Size	Density		Service temp range (max short term)	Application guidance
		Wet	Dry		
White	19 L pail	0.6 g/cm^3	0.4 g/cm^3	-40 °C to 120 °C	Minimum recommended application: 0.5 mm DFT General purpose installation: 2 mm DFT Other thicknesses as per specification or requirement
	5 gal pail				
	200 L drum				

MATERIAL PROPERTIES

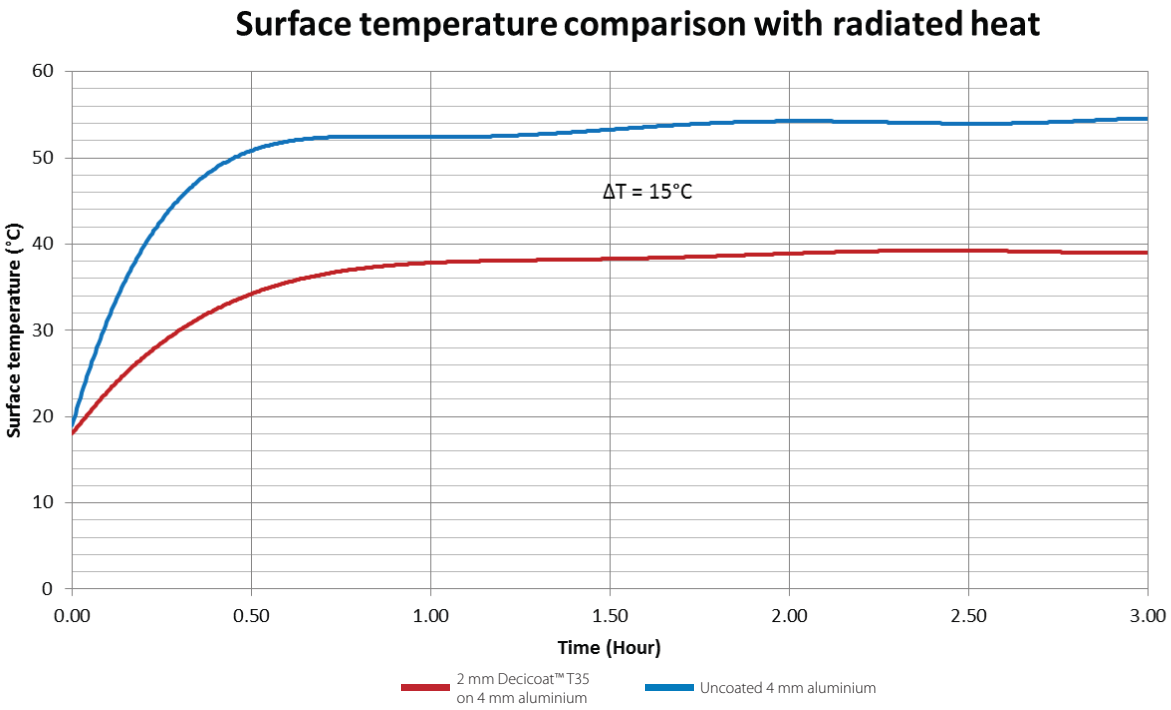
Test method	Property	Report	Results
IMO FTP Part 5	Surface flammability	376675	Complies for Bulkhead, walls and ceiling linings. USCG Type approval granted.
IMO FTP Annex 2	Smoke and toxicity	376675	
MED B	EC Type Certificate (Module B) for Marine Equipment Directive	164.112/112/EWC MED0384TE	
MED D	EC Type Certificate (Module D) for Marine Equipment Directive	MEDD00000UK MEDD00000R4 MEDD00001HN	
DNV Type approval	Type approval certification	F-21139	Complies to DNV GL Offshore Standards, SOLAS & recognised as suitable for use by Transport Canada.
EN 45545-2 (ISO 5658-2)	Spread of flame	376677	R1, R7, R8, HL3
EN 45545-2 (ISO 5660-1 : 50kWm-2)	Heat release rate by cone calorimeter	376679	
EN 45545-2 (ISO 5659-2 : 50kWm-2)	Smoke generation (optical density)	376678	
RISSB AS 7529	Material fire performance	376677, 376678, 376679	Complies with requirements for combustible component material in Locomotive and Passenger rolling stock.
ASTM E 162	Surface flammability	101731845MID-001c	Complies for US (FRA) Federal railroad administration requirements and requirements of NFPA 130 - Complies for US (DOT) Department of transportation requirements for acoustic insulation of transit bus and vans (Docket 90A).
ASTM E 662	Optical Density of Smoke Generated	101731845MID-002c	
ASTM E 800 (SMP-800C)	Gases Present or Generated During Fires	101731845MID-003c	
FMVSS 302	Flammability of interior materials	20713JY	Complies to the requirements of US (DOT) Department of transportation for occupant compartments of motor vehicles.

CHEMICAL RESISTANCE

UV	Water	Petrol	Diesel	10% HCl solution	10% NaOH solution	Permeability (ASTM1653) (Report no. 19013BD1)
2000+ hours	Excellent	Good	Good	Good	Good	< 3 metric perms

THERMAL PERFORMANCE - (REPORT NO.20613BD1)

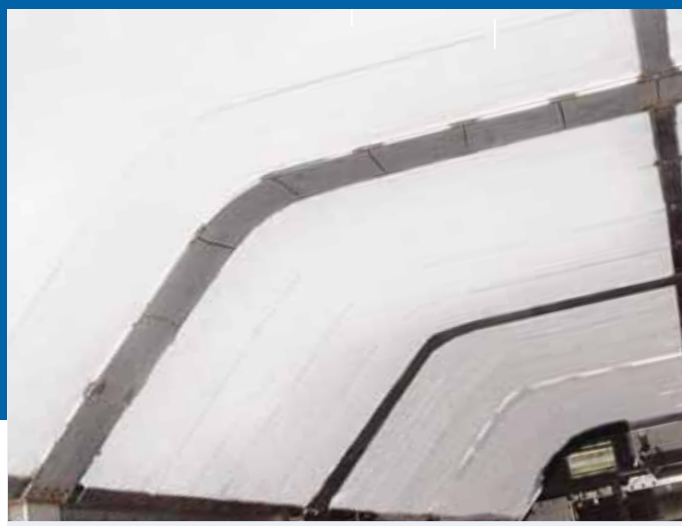
Thermal conductivity (ISO 8302) (Report no. 332/13)
0.07 $Wm^{-1}K^{-1}$



Installation Guide

DECICOAT™ T35

This installation guide provides recommendations to maximise the service life in various applications. Decicoat™ T35 is a water-based thermal insulation compound that is simple to apply using a range of spray systems.



WORKING HEALTH AND SAFETY

- Ventilation is recommended for enclosed areas
- Personal Protection Equipment (PPE) including eye protection, gloves, respirator and safety clothing is recommended
- Equipment is easily cleaned with water

SURFACE PREPARATION

The product is specifically formulated to provide strong adhesion to difficult substrates such as uncoated aluminium, however, adequate surface preparation is essential for the best results.

- Ensure surfaces are free from dust, dirt, oil, grease, rust, mould, release agent, etc.
- It is recommended to abrade highly polished surfaces by wire brushing, sandblasting or using abrasive paper
- Ensure substrates are completely dry before applying Decicoat™ T35
- Decicoat™ T35 can be applied to a range of metallic substrates

MIXING

- Decicoat™ T35 should be thoroughly mixed before application using a ribbon or paddle mixer
- Mix until it is at a smooth and creamy consistency
- The pail can be placed upside down for 24 hours before use/opening to make mixing easier

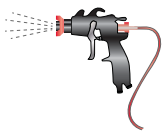
RECOMMENDED APPLICATION METHODS

Spray systems:

- Air assisted
- Airless spray systems

Suggested systems:

- *Pneumatic piston pump with XTR-7 airless spray gun*
- *GNG/T3005 texture gun with bottom entry pressure pot*



Trowel

- Can easily be applied by trowel

Ventilation can be used to assist in drying of the coating. Air movement should be both in/out during the drying process.

applications

- Marine vessels: interiors of superstructures and hulls in workboats, luxury yachts and super-liners
- Offshore platforms: interior structures of habitable areas
- Industrial: for underside of metal deck roofing and metal wall cladding
- Automotive: heavy vehicles, buses, trailers, tractors
- Rail applications: cars, interiors
- Domestic: pipes, walls, interiors
- Applied in conjunction with traditional fibrous or foam insulation to improve overall thermal insulation systems
- Applications exposed to high humidity and temperature fluctuations

Please refer to our website pyroteknc.com for the latest information

APPLICATION

Application rate and coverage:

- The minimum dry film thickness (DFT) should be 0.5 mm (0.02 in)
- A DFT of 2 mm (0.08 in) is recommended when applied to a system
- Additional thickness can be applied to achieve desired results
- Each coating should be 0.5 mm (0.02 in) to 1 mm (0.04 in) thick when applied
- The product must be dry before applying any additional coatings
- Allow at least 1 hour for 0.5 mm (0.02 in) coating to dry
- 1 mm (0.04 in) coating is touch dry after 1 hour
- It is dry enough for another coating after 1.5 hours
- 2 mm (0.08 in) coating can take up to 6 hours to dry at 35 °C (95 °F) with a relative humidity of 50%
- For best results, allow the compound to dry naturally
- Forced drying may result in cracking
- Decicoat™ T35 requires at least 1 day to fully cure
- In humid environments, the product can take longer to cure
- The application rate and curing time will vary in environments greater than 70% humidity
- Thicker applications as a single coat are possible but will require a longer drying time
- Apply the product above ambient temperatures of 10 °C (50 °F)
- The substrate can be 'warmed' to aid the drying process in cold conditions

Thickness check:

- A wet film gauge can be used to ensure the correct thickness achieved

PRODUCT INFORMATION

Product	Decicoat™ T35
Weight	0.4 kg/m²/mm DFT (0.08 lb/ft²/mm DFT)
Consumption for 1 mm (0.04 in) DFT *Includes allowance for up to 10% material shrinkage*	1.1 L/m² (0.027 gal/ft²)

Packaging and storage:

- Available in 19 L (5 gal) pail and 200 L (53 gal) drum
- Shelf life: 24 months from date of manufacture under recommended storage conditions
- Do **not** allow the product to freeze
- Stored and transported between 10 °C to 45 °C (50 °F to 115 °F)
- The product can be reused if sealed firmly and stored correctly after use

	RECOMMENDED SPRAY SYSTEMS	
	PNEUMATIC PISTON PUMP (Airless)	BOTTOM ENTRY PRESSURE POT
Gun type	XTR-7 Airless Spray Guns	T3005 Texture Gun, Bottom Entry
Line Pressure NB: Higher pressure required for longer hose lengths.	207 bar (3000 psi)	2-4 bar (30-60 psi)
Length of hose from pump to gun	6 m + 1 m (19.7 ft + 3.3 ft) whipping	5 m to 20 m (16.4 ft to 65.6 ft)
Diameter of hose	9.5 mm (3/8 in) ID and 6.5 mm (1/4 in) ID whipping	19 mm (3/4 in) ID
Diameter of nozzle	0.6 mm - 0.7 mm (0.024 in - 0.028 in) (Reversible tip 523 - 529)*	2 mm (0.079 in)
Pump type	Ratio 70:1 piston pump	20 L (5.3 gal) bottom entry pressure pot
Air pressure	2.2 bar (32 psi)	Pressure in gun: 6 bar (85 psi) Pressure in pot: 2-4 bar (30-60 psi)

*The above table is a general guide only. *Medium fan size tip.*

On-site application trials must be carried out prior to full production.

Remove strainers/filters from the spray gun and pump inlet to avoid clogging the pneumatic piston pump. Use tip 329 for a smaller fan size or tip 629 for a larger fan size.

Please contact Pyrotek® for further information or detailed advice on your specific application.

For further information and contact details, please visit our website pyroteknc.com

Brochure

thermal insulation, anti-condensation
and corrosion protection

DECICOAT T35

Pyrotek®

SOUNDPROOFING SOLUTIONS FOR ALL INDUSTRIES

pyroteknc.com

Decicoat® T35 is a one-part, water based thermal insulation coating, specially formulated to provide excellent properties for anti-condensation and protection from corrosion under insulation (CUI).

SEAMLESS INSTALLATION - CONTROLS THERMAL BRIDGING

Thermal bridges are pathways for heat transfer, typically caused when insulation is not continuous. Being sprayable, Decicoat T35 bonds flush around uneven surfaces, tight areas and provides 100% coverage even around mechanical assemblies. This reduces the occurrence and impact of thermal bridging where even high performance foam insulation systems with radiant barrier faces fail.

LIGHTWEIGHT AND SPRAYABLE

It's a lightweight acrylic system, with excellent adhesion and non-sag formulation. It can be easily and quickly sprayed like paint with a range of spray systems.

THERMAL PROPERTIES

Decicoat T35 provides the benefits of both good thermal resistance (R value) and acts as a good radiant barrier (low emissivity). It controls both, rapid heat dissipation and heat absorption and exhibits increased performance with additional coatings thereby offering weight and space efficiency.

APPLICATIONS

- Marine vessels - interiors of structures and hulls in workboats, luxury yachts and super-liners etc
- Off-shore platforms - interior structures of habitable areas
- Industrial: the underside of metal deck roofing and metal wall cladding
- Automotive: heavy vehicles, buses, trailers, tractors.
- Rail cars: applied in conjunction with traditional fibrous or foam insulation to improve overall thermal insulation systems
- Domestic: pipes, walls, interiors
- Applications exposed to high humidity and temperature fluctuations

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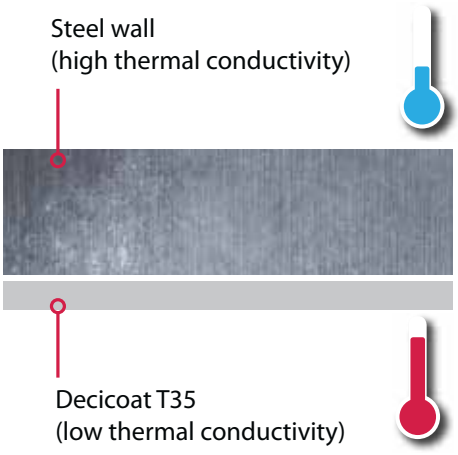
FIRE CERTIFICATION

Decicoat T35 achieves a wheelmark and complies with stringent international fire standards for building, industrial, rail and marine applications. It is low VOC and near odourless.

PREVENTS CONDENSATION

When thermal conduction takes place through a substrate, condensation occurs on the surface, when its temperature reaches the 'dew-point' threshold. i.e. the point of onset of condensation. Decicoat T35 has proven low thermal conductivity and permeability properties. When used on substrates exposed to high humidity or temperature variations, it inhibits thermal transfer and effectively regulates the temperature of the substrate surface to remain above the dew-point threshold, thereby preventing the onset of condensation.



PREVENTING CORROSION

Corrosion is a chemical and physical change that occurs in a material due to its interaction with its environment. Decicoat T35 provides a protective coating to metallic substrates, aiding in the prevention of condensation. Condensation can typically act as an electrolyte as part of galvanic corrosion. It will also cause dissolution of chloride and sulfide ion contaminants that exacerbate the corrosion process.

Decicoat T35 is formulated for ease of installation by spray application, directly onto ferrous and nonferrous surfaces.

INHIBITS CORROSION UNDER INSULATION (CUI)

Chemical contaminants typically found in materials such as glass wool or mineral fibre react with moisture trapped in the air gaps, under poorly installed insulation, to form an acidic reaction which corrodes the metallic substrate.

Corrosion under Insulation (CUI), is difficult to detect and treat in situ, and leads to degradation and reduced performance of the system over a period of time.

In eliminating the occurrence of thermal bridging, Decicoat T35 inhibits CUI and enhances the durability of such insulation systems. It maintains the overall thermal performance of the system besides offering a weight, space, cost and time efficient solution.

pyroteknc.com

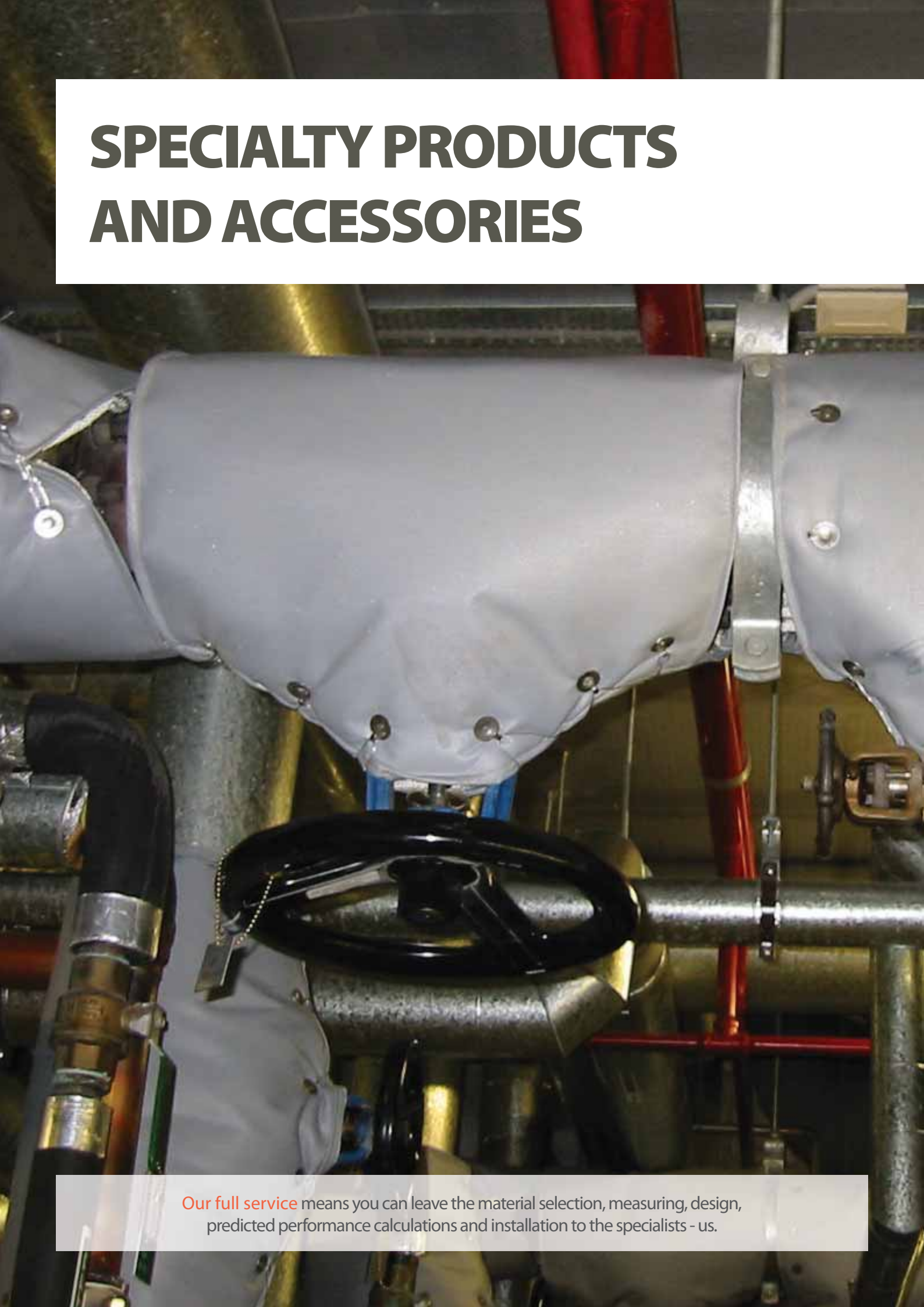
PYROTEK WORLDWIDE LOCATIONS

AUSTRALIA
CANADA
CHINA
CZECH REPUBLIC
HONG KONG
INDIA
INDONESIA
JAPAN
KOREA
MALAYSIA
SINGAPORE
NEW ZEALAND
TAIWAN
THAILAND
TURKEY
UNITED ARAB EMIRATES
UNITED KINGDOM
UNITED STATES OF AMERICA
VIETNAM

CONTACT DETAILS
for further information and
contact details, please visit
our website at pyroteknc.com

Pyrotek endorse forest sustainability and the preservation of natural environment. We procure the highest quality materials from suppliers who hold FSC (Forest Stewardship Council) Certification and PEFC (Programme for the Endorsement of Forestry Certification) amongst other certification programmes.

SPECIALTY PRODUCTS AND ACCESSORIES



Our full service means you can leave the material selection, measuring, design, predicted performance calculations and installation to the specialists - us.

Pyrotek®

SPECIALTY PRODUCTS SUMMARY

ACOUSTIC AND THERMAL SOLUTIONS

Pyrotek®

ACOUSTIC AND THERMAL SOLUTIONS

oil and gas

- Metal fabrication & cladding
- Cryogenic insulation
- Flexible valve covers
- Condensation protection
- Acoustic and vapour barriers
- Covers and high temperature material
- Expansion joints

power generation

- Turnkey solutions for acoustic enclosures
- Custom fabricated removable thermal jacketing
- Acoustic louvre design and fabrication
- Vibration damping products
- On-site noise level testing
- Expansion joints

transport

- Custom-designed cab insulation to meet the current noise regulations
- Thermal exhaust and turbo covers for personal protection
- Heat shielding products
- Noise and vibration monitoring and control
- High temperature seals and exhaust tapes

Pyrotek was established in 1956. Our high temperature and acoustic products are developed through innovation and understanding of market needs. Our advanced material expertise and product engineering knowledge provides product solutions for the most demanding applications. Our goal is to provide high quality products and services to all areas of industry and to be at the forefront of technology in product application and design. We are able to offer products to reduce noise and fire risk in the oil and gas, marine, offshore, power generation, mining, thermal, fire and welding protection, petrochemical, transport and aerospace domains.

- Turbocharger covers
- Valve covers
- Insulation blankets
- Exhaust lagging
- Acoustic insulation
- Accommodation fire panels
- Fire protection to meet B, A, H and J class

marine and offshore

- Flexible hoses
- Dust and flange covers
- Anti-static materials
- Fabricated insulation covers
- Acoustic treatments
- Seals and flanges

mining

Research, Development and Capabilities

Pyrotek's more than 50 years' experience supports our premium thermal and noise insulation products and services. These products reduce noise and heat to comfortable safe levels in a range of applications.

Our world-class team of engineers and scientists bring a wealth of knowledge and experience to successfully control and reduce heat and noise in demanding environments. They refine existing products and create new materials as required to meet the unique needs of our customers.

Working with a diverse range of impregnated fabrics for high temperature applications allows us to select textiles that are engineered for strength, dependability and long service life in the toughest of environments. Pyrotek offers services such as:

- CNC cutting technology including laser, waterjet and multi-axis tables
- digitally created patterns using the latest software for repeatability
- fully equipped laboratory to simulate international fire and mechanical testing
- onsite installation service including project management, underground, cryogenic and hot work installation

Acoustic Insulation

Pyrotek helps control noise. Our world-class team of engineers and scientists bring a wealth of knowledge and experience to design and develop products that successfully control noise in demanding environments.

Vibration Damping

Vibration noise can be minimised by applying vibration damping materials that dissipate vibration energy in the structure and convert it to heat. Our products include constrained layer damping, extensional damping and vibration isolation.

Noise Barriers

Noise barriers are a flexible, mass-loaded vinyl, offering superior acoustic transmission loss. Our range includes noise-reducing floor mats, mass barriers, low spread of flame, low smoke & fire retardant noise barriers.

Sound Absorbers

Sound absorbers are applied to reduce noise energy. We provide a range of materials such as fibreglass, foam and polyester with a variety of surface coverings to suit each application.

Barrier Absorber Composites

Pyrotek has created a unique acoustic solution – combining acoustic foam and a noise barrier, developed with the aim of simplifying the acoustic treatment of enclosures, engine bays and plant rooms.

Fabricated Covers - Metallic and Fabric

All exhaust gas duct work requires expansion joints or vibration eliminators to absorb any movement in the duct work.

We manufacture a range of fabric and metallic expansion joints. The correct materials are selected depending on temperature and the type of corrosive gases present. We supply fabric expansion joints made from high temperature fabrics and are also able to incorporate high density noise barrier materials to provide a sound barrier in joints on or near fans.

We offer a complete service including design, manufacture and supply of the fabric and metallic expansion and associated steelwork.

- Fabric expansion joints custom designed and fabricated
- Custom-made metallic bellows for high temperature, pressure and chemical resistance.
- High noise reduction acoustic expansion joints
- Variety of specialty fabrics to withstand highly corrosive, acidic and alkaline conditions
- Complete expansion joint assemblies ready for installation
- On-site supervision of installation

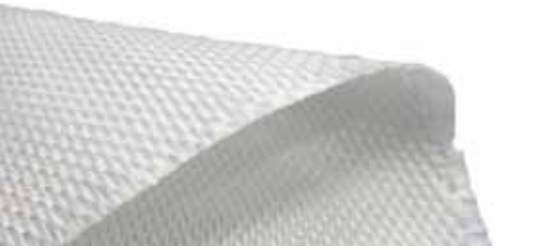
Expansion Joints - Metallic and Fabric

Pyrotek speciality products custom makes and designs covers that utilise our range of fabrics, felts and blankets to suit a variety of conditions from cryogenic to high temperature metal smelting. There is an increasing demand for removable insulation covers for all types of high temperature equipment. Our covers provide excellent personal protection from heat and are easy to remove and replace when performing maintenance.

Our full service means you can leave the material selection, measuring, design, predicted performance calculations and installation to the specialists - us.

- Industrial machinery and turbine covers
- Custom-made valve and flange covers for the off-shore industry
- Exhaust and manifold covers for the mining and marine industry
- Aerospace-approved products
- Prefabricated jackets for pipes, holding vessels and tanks
- High temperature acoustic curtains and covers
- Fire-rated curtains

Fabrics

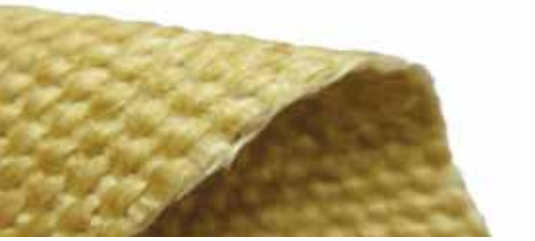


Plain fibreglass

Pyrotek manufactures and coats fibreglass fabric offering an extensive range of fibreglass fabrics in an extensive range of weights, finishes, colours and textures. Weights are available from 50g/m^2 up to 3000g/m^2. All our loom state fabrics are available with a weave set finish to reduce fraying.

Wire-reinforced fibreglass

A unique method of introducing stainless steel continuous fibres gives us the ability to design high temperature fabrics where additional strength and integrity is required. Our wire-reinforced fabrics are also available with graphite, vermiculite or silicon coatings.



Vermiculite-coated fibreglass

Our vermiculite-coated fabrics exhibit excellent temperature and abrasion resistance. The vermiculite treatment improves the fabrics temperature resistance to withstand temperatures up to 800ºC. A vermiculite coating can also be applied onto silica glass or ceramic fabric. Typically these fabrics are supplied in weights of 600 and 1000g/m^2.

Graphite-impregnated fibreglass

Our graphite-treated fabrics are impregnated using a dip coating method to provide a uniform coverage. We offer several graphite treatments for an assortment of applications. Graphite treatment improves the base fabric's heat resistances and also offers excellent abrasion resistance.

Silicon-coated fibreglass

Silicon-coated fabrics are available in various weights from 180 to 1200g/m^2. Our optimised formula offers excellent heat resistances allowing the fabric to remain flexible and durable during prolonged use at high temperatures. Our silicon fabrics are available with a single-sided or double-sided coating and in a range of standard colours. Silicon also has excellent UV durability and is resistant to water, oils, grease, fuels and many chemicals.

Foil and mylar-faced fibreglass

Our fibreglass fabrics can be supplied with a layer of pure aluminium foil, stainless steel foil or mylar-faced films. These facings offer a highly reflective surface and also act as a vapour and liquid barrier. The films are bonded using the latest technology and are resistant to higher temperatures than traditional laminations.

Neoprene-coated fibreglass

Neoprene offers excellent fire resistance and also provides high resistance to chemical and liquid attack. Neoprene-coated fabrics provide excellent protection against hot metal grindings and weld splatter. A full range of weights and sizes is available.

Silica glass

Silica glass fabrics have been developed for use in applications requiring higher temperature performance than traditional fibreglass. Fibreglass fabrics are typically rated to 550ºC, silica glass fabrics can withstand temperatures of up to 1000ºC. Silica fabrics also have excellent chemical resistance and electrical insulation properties.

Teflon®-coated fibreglass

Teflon® (PTFE) is a high temperature non-reactive polymer coating. Our Teflon coated fabrics are resistant to most reactive and corrosive chemicals and also have high abrasion resistance. These fabrics are often used as a weather or chemical resistant barrier. A comprehensive range of weights and sizes is available.

Ceramic-coated woven fabric

Offering the highest temperature resistance in woven fabrics, our ceramic fabrics have excellent chemical, abrasion and thermal resistance. These fabrics are able to withstand temperatures up to 1600ºC without melting. They can easily be cut, sewn and fabricated into various shapes, and are available with stainless steel or Inconel® wire reinforcing.

Thermal Insulation

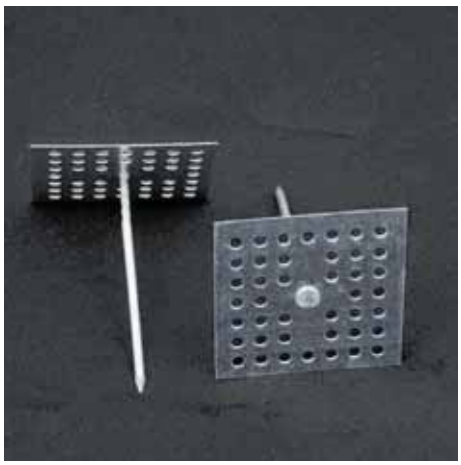
Pyrotek supplies a wide range of thermal insulation products to meet different requirements.

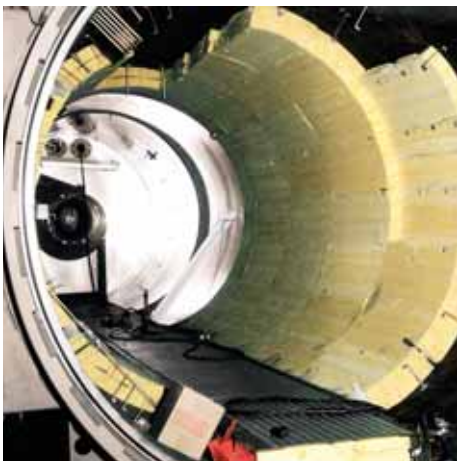
- Polyester from 20 to 80kg/m^3 for thermal and acoustic applications from -10^{0}C to 110^{0}C
- Traditional glasswool, 16 to 130kg/m^3 for temperature from -10^{0}C to 530^{0}C
- Quilted fibreglass blanket for thermal and acoustic applications for applications needing better mechanical strength
- Cryogenic fibreglass for temperatures from -150^{0}C to 530^{0}C
- Needlemat, 130kg/m^3 fibreglass felt with high mechanical strength and rated to 650^{0}C
- Rockwool from 45 to 130kg/m^{3,} Rockwool is suitable for temperatures up to 830^{0}C
- ULTIMATE, a marine certified thermal and acoustic fire insulation achieving A0 to A60 requirements
- Ceramic fibre for service temperatures 1200^{0}C to1600^{0}C
- BioSoluble fibre (or low bio-persistence fibres for temperatures between 1000^{0}C to1200^{0}C

Accessories

Pyrotek offers a range of consumable items to complement our products

- Weld pins and clips in a range of styles and sizes, both Arc and CD pins are available in plain or bimetallic versions
- Industrial insulation pins and clips are available with either a perforated based plate or pressure sensitive adhesive
- Fire proof mastic compounds rated to 1000^{0}C for sealing penetrations in high temperature applications
- High temperature fibreglass or ceramic tapes and ropes for door seals and lagging
- High temperature silicone coated fibreglass tubing
- Braided ropes and tadpole seals available in a comprehensive range of sizes
- Insulcoat - anti condensation coating
- Stainless steel knitted mesh
- Lacing hooks, eyelets and sewing treads





Pyrotek endorse forest sustainability and the preservation of natural environment. We procure the highest quality materials from suppliers who hold FSC (Forest Stewardship Council) Certification and PEFC (Programme for the Endorsement of Forestry Certification) amongst other certification programmes.

Pyrotek®

PYROTEK WORLDWIDE LOCATIONS

AUSTRALIA
CANADA
CHINA
CZECH REPUBLIC
HONG KONG
INDIA
INDONESIA
JAPAN
KOREA
MALAYSIA
SINGAPORE
NEW ZEALAND
TAIWAN
THAILAND
TURKEY
UNITED ARAB EMIRATES
UNITED KINGDOM
UNITED STATES OF AMERICA
VIETNAM

CONTACT DETAILS
for further information and contact details, please visit our website at pyroteknc.com

FABRICATED **COVERS**

Pyrotek® designs and manufacture custom covers that utilise our range of fabrics, felts and blankets to suit a variety of conditions from cryogenic to high temperature applications. There is an increasing demand for removable insulation covers for all types of high-temperature equipment. Our covers provide excellent personal protection from heat and are easy to remove and replace when performing maintenance.

TAPE **ALR**

Tape ALR is a high-performance insulation reinforced aluminium foil tape, designed for use as a joining and covering tape for Pyrotek's aluminium foil faced products like Soundlag, Sorberfoam, Sorberpoly and Sorberbarrier.

The reinforcing mesh in Tape ALR provides excellent mechanical stability during application and once in place prevents further movement. The nature of the tape is such that it provides a rare combination of high strength, flexibility and conformability.

FIXSEAL **MSP15**

Fixseal MSP15 is a high quality single component joint sealant with high adhesive strength. It is based on MS Polymer®, which is chemically neutral and fully elastic with excellent primerless bonding.

For use in low movement joints, adhesion and waterproofing in the construction, automotive, marine and aerospace industries where a strong bond and/or UV resistant flexible seal is required.

For our complete product range, visit pyroteknc.com/industries/oil-and-gas/

Technical Datasheet

TAPE ALR

reinforced aluminium foil tape

Tape ALR is a high performance insulation reinforced aluminium foil tape, designed for use as a joining and covering tape for Pyrotek Noise Control's aluminium foil faced products like Soundlag®, Sorberfoam™, Sorberpoly™ and Sorberbarrier®.

The reinforcing mesh in Tape ALR provides good mechanical stability during application and once in place prevents further movement. The nature of the tape is such that it provides a rare combination of high strength, flexibility and conformability.

The pressure sensitive adhesive backing on Tape ALR which is rubber or acrylic based, is formulated to give high initial tack and high holding power.

The backing is protected by a silicone coated, removable release paper which provides easy release properties and aids ease of application.

APPLICATION PRECAUTIONS

- Surfaces must be smooth, clean and free from grease, loose or flaking paint, dirt, and contaminants.
- Surfaces can be cleaned with a degreasing solvent cleaner before applying the product
- Pressure should be used when applying to any surface
- Adhesion tests are recommended for powder coated surfaces
- Ageing trials should be performed on plasticised PVC
- These tapes are not to be used as mechanical joining devices
- It is essential, that the user evaluate product suitability for a particular application.

applications

- Pipe lagging
- Machinery and equipment enclosures
- Compressor and generator set enclosures
- Car, boat, truck and bus engine compartments, firewalls and bonnets
- Air-conditioning units and systems
- Hydraulic pump enclosures

features

- High performance synthetic pressure sensitive adhesive backing
- Polyethylene fibre mesh/film composite reinforced aluminium foil
- High initial tack and grab
- Broad operating temperature range
- High performance in heat, humidity and environmental conditions
- Resistant to dust, oils and solvents
- Reflects and insulates against heat
- Easily cut, shaped, fabricated allowing easy installation
- Puncture and tear resistant
- Tougher than similar products
- Long service life
- Dimensionally stable

PRODUCT SPECIFICATIONS

Standard product nomenclature	Colour	Roll length (lineal metres)	Standard width (mm)	Application temperature range (°C)	Operating temperature range (°C)
Tape ALR - VTR	Metallic Silver Facing	50	48, 72, 96	-20 to +55	-35 to +125
Tape ALR - PPC				+20 to +40	-5 to +65

Dimensional tolerance +/- 3%
Custom widths available on request

MATERIAL PROPERTIES

Product name	Adhesive tape	Tensile strength	Adhesion strength (steel)	Elongation at break	Flammability properties (AS 1530.3 1999)
Tape ALR - VTR	Acrylic	72N/25mm	20N/25MM	21%	0,0,0, 0-1 (complies)
Tape ALR - PPC	Rubber	100N/25mm		25%	

FIXSEAL MSP15

modified silyl polymer sealant

Fixseal MSP15 is a high quality single component joint sealant with high adhesive strength. It is based on MS Polymer®, which is chemically neutral and fully elastic with excellent primerless bonding.

For use in low movement joints, adhesion and waterproofing in the construction, automotive, marine and aerospace industries where a strong bond and/or UV-resistant flexible seal is required.

SPECIFICATIONS

Colour	colourfast black, non-yellowing white
Packaging	290ml cartridge, 600ml foil bag
Shelf life and storage	15 months cartridges; 15 months Foil bags In unopened packaging in a cool and dry storage place at temperatures between +5°C and +25°.
Clean up	Methylated spirits or industrial alcohol cleaner immediately after application and before curing

HEALTH AND SAFETY RECOMMENDATION

Apply the usual industrial hygiene. Wear gloves, safety glasses.

CERTIFICATION

SOLAS Certified
MED 0327QA, U.S. Coast Guard
Approved No. 164.106/1121/WCL.

Note: The contents contained in this documentation are the result of our experiments and our experience and have been submitted in good faith. Because of the diversity of the materials and substrates and the real number of possible applications which are beyond our control we cannot accept any responsibility for the results obtained. In every case it is recommended to carry out preliminary experiments and compatibility tests.

applications

- Sealing and bonding of areas with high traffic, floor joints and low movement wall joints.
- Suitable for bonding and sealing but not limited to steel, aluminium, stainless, PVC, fiberglass, concrete, composite, glass, timber, mirrors, polystyrene, rubber, PU foam, etc.
- Connection joints in sheet metal fabrication.
- Sealing and bonding of coachwork, caravans, boats, commercial ferries and ships, buses, aircraft, domestic and commercial construction.

features

- High bond strength on a wide variety of substrates
- High performance mechanical properties
- Flexible elastic rubber; movement accommodation up to 20%
- Assessed under criteria of NOHSC Australia and considered as non-toxic, Certificate No.2146.
- US Coast Guard Approved : Approval No. 164.106/1121/WCL
- Solas Certified : MED 0327QA
- No bubble formation within the sealant.
- Primerless adhesion (except where capillary water pressure can occur).
- Easy to tool and finish
- Excellent extrudability and UV resistance
- Ecological advantages - free from isocyanates, solvents, halogens and acids
- Minimal health and safety considerations
- Can be wet on wet painted with all water-based paints and many other systems*
- No staining of porous materials such as natural stone, granite, marble, etc.

MATERIAL PROPERTIES

Base	MS Polymer®
Consistency, Density	Stable Paste, 1.55kg/m^3
Curing system	Moisture Cure
Skin Formation(*)	Approx. 15 min (23°C/ 50% R.H)
Tack Free Time (*)	Approx. 4 hours (23°C/ 50% R.H)
Cure Rate (*)	3mm/24hr (23°C/50%R.H)
Hardness	48 Shore A
Change In Volume	<2%
Specific Gravity	1.55 kg/m^3
Maximum Deformation	± 20%
Temperature Resistance (cured)	-40°C to100°C
Elastic Modulus 100%	1.1 N/mm^2 (ISO37, DIN 53504)
Tensile Strength	2.2 N/mm^2 (ISO37, DIN 53504)
Elongation At Break	> 300% (ISO37, DIN53504)
Shear Strength	>1.6N/mm^2 (ISO37, DIN 53504)

APPLICATION EQUIPMENT

Method: Manual or pneumatic caulking gun
Application temperature: +5°C to +35°C
Clean up: Methylated Spirits or industrial alcohol cleaner immediately after application and before curing
Tooling: mild diluted soapy solution (e.g. pH neutral dishwashing liquid diluted in fresh clean water), before skin formation
Repair: Fixseal FIX15 - MSP15

Surfaces

Typical Surface: Abraded with red abrasive pad or suitable sand paper, clean, dry, free of dust and grease, wipe surface clean with industrial alcohol.

Glass: clean, dry, free of dust and grease, wipe surface clean with industrial alcohol.
As the specific properties of substrates will differ from manufacturer to manufacturer we strongly recommend compatibility tests.

Priming

a) For porous substrates we recommend Primer PR10 be applied.
b) PE or PP Plastics we recommend Primer PR20 be applied for good adhesion.

Remarks: Fixseal MSP15 may be painted over with water based paints. However due to the large number of paints such as and not limited to 1 and 2 pack PU paints, acrylics, 2 pack varnishes that are available, we strongly recommend compatibility tests before application. The drying time of some alkali paint systems may increase and some enamel and oil-based paints will not cure properly.

PROJECT LIST

Image owned by Woodside Energy Ltd.

Projects	North West Shelf (NWS)
Builder	Woodside
Owner	Woodside/BHP
Year	1989 onwards
Location	Western Australia

Projects	Darwin LNG
Builder	Bechtel
Owner	ConocoPhillips
Year	2003 to 2006
Location	Northern Territory, Australia

Image owned by ConocoPhillips Australia

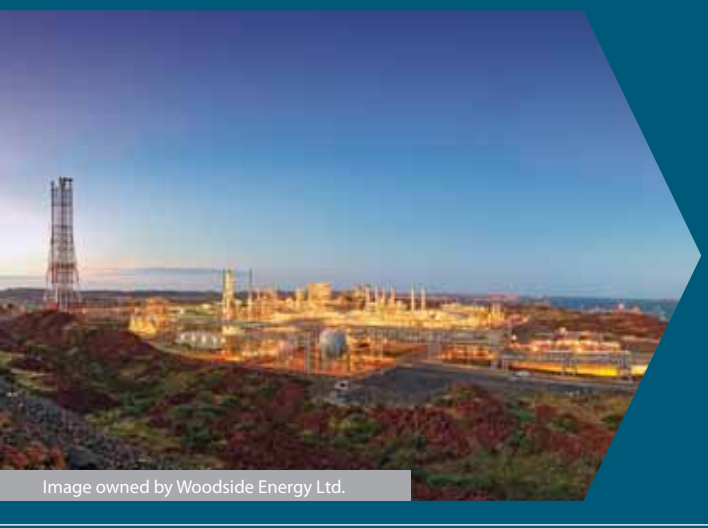


Image owned by Woodside Energy Ltd.

Projects	Pluto Gas Trains 1, 2 and 4
Builder	John Holland
Owner	Woodside
Year	2009 to 2013
Location	Western Australia

Projects	Pluto Gas Trains 3 and 5
Builder	AMEC Foster Wheeler WorleyParsons
Owner	Woodside
Year	2011
Location	Western Australia

Image owned by Woodside Energy Ltd.

Image owned by Santos

Projects	CSG Compressor Stations
Builder	Santos GLNG
Owner	Santos
Year	2013 to 2016
Location	Queensland, Australia

Projects	Gorgon
Builder	Chevron Australia
Owner	Joint venture - Chevron (Majority)
Year	2013 to 2017
Location	Western Australia

Image owned by Chevron Australia

Image owned by Chevron Australia

Projects	Wheatstone
Builder	Chevron
Owner	Joint venture - Chevron (Majority)
Year	2014 to 2017
Location	Western Australia

Projects	Gina Krog/Mariner
Builder	DSME, Daewoo Shipbuilding and Marine Engineering
Owner	Statoil
Year	2014 to 2018
Location	North Sea

Image owned by Inpex

Projects	Ichthys LNG Project
Builder	JKC Australia
Owner	Inpex
Year	2014 to 2018
Location	Western Australia

Projects	Curtis Island LNG
Builder	Bechtel
Owner	APLNG
Year	2015 to 2017
Location	Queensland, Australia

Image owned by Australia Pacific LNG

Image owned by Bechtel

Projects	Curtis Island LNG
Builder	Bechtel
Owner	QGC
Year	2015 to 2017
Location	Queensland, Australia

Projects	Curtis Island LNG
Builder	Bechtel
Owner	GLNG
Year	2015 to 2017
Location	Queensland, Australia

Image owned by Santos

Safety Data Sheet

Safety Data Sheet
Wavebar

Revision Date: *2018-07-09*
Revision *3*

Classification Symbol(s)	Personal Protective Equipment (PPE)	Transport Symbols
		

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Commodity code 17004-WAVEBAR

Product Name Wavebar

Synonyms Wavebar Original, Quadzero, Quadzero MVT, Wavebar Outdoor, Sound Baffle, Sound Damping Pad

Product description This MSDS supports the product as a mass barrier or as a component of an acoustic composite material that may be supplied with a number of different, non-hazardous facing materials.

Product use Acoustic application/Noise reduction.

Details of the supplier
Pyrotek Pty. Ltd.
147-149 Magowar Road
Girraween
NSW 2145
Australia

Pyrotek (61) (0)2 8868 2000
Email: SDS@pyrotek-inc.comREACH email: REACH@pyrotek-inc.com

Emergency Telephone Number CHEMTREC 1800 752 022 (24 hrs), Pyrotek Australia 1800 679 422

2. Hazards Identification

Classification according to EU Regulation EC 1272/2008 (GHS)

Classification according to EU Directives 67/548/EEC or 1999/45/EC [Australian NOHSC: 1008 (2004)]

Australian Hazard text Not classified as hazardous according to criteria of NOHSC:1008 (SWA/ASCC).

R -phrase(s)

Poison Schedule Number No information available

Further information During manufacture the Barium Sulfate, plasticiser and Polyvinyl Chloride are fused and as such become fully encapsulated within the product.

3. Composition/information on Ingredients

All other ingredients determined not to be hazardous according to NOHSC / GHS criteria

4. First Aid Measures

General advice	No information available.
Inhalation	Not a normal route of exposure. In the unlikely event of excessive inhalation of dust remove the individual to the fresh air.
Skin Contact	In the unlikely event of skin irritation, wash affected part with mild soap and running water.
Eye Contact	Not a normal route of exposure. Flush eyes with water as a precaution.
Ingestion	Not a normal route of exposure. Seek medical advise.
Aggravated Medical Conditions	None known.
Notes to Physician	None known.

For advice, contact Poisons Information Centre
In Australia, call Tel: 13 1126
In New Zealand, call Tel: 034747000

5. Fire-Fighting Measures

Flammable properties	This material is not a combustable or flammable solid. The product self extinguishes on removal of direct flame.
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding fire
Unsuitable Extinguishing Media	None known.
Special exposure hazards in a fire	Avoid breathing fire vapors.
Specific hazards arising from the chemical	Thermal decomposition can lead to release of irritating gases and vapors. Primary combustion products are:. Carbon dioxide (CO2), Carbon monoxide (CO). Hydrocarbons.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Australian Hazchem Code	None known

6. Accidental Release Measures

Personal precautions	Use personal protective equipment.
Environmental Precautions	No special environmental precautions required.
Methods for cleaning up	Material is a Solid, pickup and replace in container.

7. Handling and Storage

Handling	Handle in accordance with good industrial hygiene and safety practice.

Storage Keep in a dry place.

Materials to avoid Strong oxidizing agents.

8. Exposure Controls/Personal Protection

Exposure Guidelines

Biological standards

Occupational exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas when mist is present.

Environmental exposure controls No information available.

Personal Protective Equipment
Considerations to aid the user in PPE assessments in line with expected use follow below. However in certain circumstances the user must determine if additional protective equipment is required.
If exposure limits are exceeded or irritation is experienced, locally approved respiratory protection should be worn.
Positive-pressure supplied air respirators may be required if high airborne contaminant concentrations as a result of the use of the product. Proper skin and eye protection should also be determined by the user and provided in accordance with current local regulations.

Eye Protection Avoid contact with eyes

Respiratory protection No special protective equipment required.

Skin Protection Long sleeved clothing.

Hand Protection Cut resisitant or Leather gloves

General industrial hygiene practice Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Physical state	Solid	**Appearance**	Flexible
Color	Grey, Black, dark brown	**Odor**	No information available
pH - VALUE 1	No data available	**Water solubility**	Immiscible in water
Vapor pressure	No data available	**Vapor density**	No data available
Boiling point / boiling range	No data available	**Melting point/range**	No data available
Flash point	No data available	**Autoignition temperature**	No data available
Upper explosion limit	No data available	**Lower explosion limit**	No data available

10. Stability and Reactivity

Stability Stable under normal conditions.

Conditions to Avoid Prolonged exposure to high temperatures.

Materials to avoid Strong oxidizing agents.

Hazardous Decomposition Products Sulfur oxide. Carbon oxides. Thermal decomposition can lead to release of irritating gases and vapors.

Possibility of Hazardous Reactions None known

11. Toxicological Information

Local effects No information available.

Target organ effects No information available.

Acute Toxicity

Potential Health Effects

Inhalation Not a normal route of exposure.

Eye Contact Contact with eyes may cause irritation.

Skin Contact Long-term or repeated skin contact in combination with bad hygiene may cause skin irritation.

Ingestion Not a normal route of exposure. Ingestion may cause gastrointestinal irritation.

Aggravated Medical Conditions None known.

Specific effects

Carcinogenic effects No information available.

Mutagenic effects No information available.

Reproductive Toxicity No information available.

12. Ecological Information

Ecotoxicity effects Information follows.

Persistence and degradability None known

Mobility in Environmental Media None known

Bioaccumulation None known

13. Disposal Considerations

Waste disposal methods Dispose of in accordance with federal, state and local regulations.

Contaminated packaging Empty containers should be taken for local recycling, recovery or waste disposal.

14. Transport Information

Not regulated for transport.

15. Regulatory Information

International Inventories

Carcinogenic substances Not Listed

16. Other Information

Revision Date: 2018-07-09

Reason for Revision Routine review with applicable updates to better reflect product.

Prepared By:
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Spokane, WA 99206 USA
Ph: (509) 926-6212
Fax: (509) 927-2408
msds@pyrotek-inc.com.

Literary reference Information taken from reference works and the literature.

Key Legend Information
SWA - Safe Work Australia (formerly ASCC - Australian Safety and Compensation Council and NOHSC - National Occupational Health & Safety Commission)
SUSDP - Standard for the Uniform Scheduling of Drugs and Poisons [Aust]
TWA - Time Weighted Average [Int]
STEL - Short Term Exposure Limit [Int]
AICS - Australian Inventory of Chemical Substances [Aust]
Dangerous Goods - Initial Emergency Response Guide (SAA/SNZ HB76:2004)[Aust]
AS/NZS 1715 - Selection, use and maintenance of respiratory protective devices. [Aust/NZ]
Hazchem Code - Fire fighters designation [Aust]
IATA - International Aviation Transport Authority [Int]
IMDG - International Maritime Dangerous Goods [Int]
ADR/RID - European Road & Rail Transportation Union - [Int]
GHS - United Nations Globally Harmonized System for the classification and labelling of Chemicals [Int]
EINECS - European Inventory of Existing Commercial Chemical Substances [Int]
ELINCS - European List of Notified Chemical Substances [Int]
EU - European Union [Int]

[Aust/NZ] = Australian New Zealand
[Int] = International

End of SDS

SAFETY DATA SHEET
Decidamp SP80

Revision Date *2017-03-26*
Revision *5*

Classification Symbol(s)	Personal Protective Equipment (PPE)	Transport Symbols

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product code 17001-SP150 AF

Product name Decidamp SP80

Synonyms Soundpaint SP150

Product use Sound absorbing material.

Manufacturer or supplier's details
Pyrotek Pty. Ltd.
147-149 Magowar Road
Girraween
NSW 2145
Australia

Pyrotek (61) (0)2 9631 1333
Fax: (61) (0)2 9631-0233
Email: SDS@pyrotek-inc.comREACH email: REACH@pyrotek-inc.com

Emergency telephone number CHEMTREC 1800 752 022 (24 hrs), Pyrotek Australia 1800 679 422

2. HAZARDS IDENTIFICATION

Classification according to EU Regulation EC 1272/2008 (GHS)

Not a hazardous substance or mixture according to the Globally Harmonised System (GHS)

Classification according to EU Directives 67/548/EEC or 1999/45/EC [Australian NOHSC: 1008 (2004)]

Australian Hazard text Not classified as hazardous according to criteria of NOHSC:1008 (SWA/ASCC).

Classification Symbol(s) In accordance with Directive EC 1272/2008 and its amendments, this substance does not need to be classified nor labelled

Poison Schedule Number No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

All known components determined not to be hazardous according to NOHSC / GHS criteria

4. FIRST AID MEASURES

General advice	No information available.
Inhalation	In the unlikely event of excessive inhalation of dust remove the individual to the fresh air. If aspirated, get immediate medical attention.
Skin contact	In the unlikely event of skin irritation, wash affected part with mild soap and running water.
Eye contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes.
Ingestion	Not a normal route of exposure. DO NOT induce vomiting. Drink plenty of water. Consult a physician.
Aggravated Medical Conditions	No information available.
Notes to physician	No information available.

For advice, contact Poisons Information Centre
In Australia, call Tel: 13 1126
In New Zealand, call Tel: 034747000

5. FIRE-FIGHTING MEASURES

Flammable properties	The product is not flammable.
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding fire
Unsuitable Extinguishing Media	None known.
Special exposure hazards in a fire	No information available.
Specific hazards arising from the chemical	None known.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Australian Hazchem Code	None known

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Appropriate protective equipment as detailed in section 8.
Environmental precautions	Pick up and transfer to properly labelled containers. Prevent product from entering drains. Flush into sewer with plenty of water.
Methods for cleaning up	Shovel or sweep up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

7. HANDLING AND STORAGE

Handling Handle in accordance with good industrial hygiene and safety practice.

Storage Keep in a dry, cool and well-ventilated place.

Materials to avoid No information available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines No exposure limit allocated

Biological standards No biological limit allocated

Occupational exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas

Environmental exposure controls No information available.

Personal Protective Equipment
Considerations to aid the user in PPE assessments in line with expected use follow below. However in certain circumstances the user must determine if additional protective equipment is required.
If exposure limits are exceeded or irritation is experienced, locally approved respiratory protection should be worn.
Positive-pressure supplied air respirators may be required if high airborne contaminant concentrations as a result of the use of the product. Proper skin and eye protection should also be determined by the user and provided in accordance with current local regulations.

Eye protection Safety glasses with side-shields [AS/NZS 1337]

Respiratory protection In order to avoid inhalation of spray-mist and sanding dust, all spraying and sanding must be done wearing adequate respirator.

Skin Protection Work uniform or laboratory coat.

Hand protection Rubber or plastic gloves

General industrial hygiene practice Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid	**Appearance**	Paste
Colour	Grey	**Odour**	No odour
pH value	No data available	**Vapor pressure**	No data available
Vapor density	No data available		
		Boiling point/range	No data available
Melting point/range	No data available	**Flash point**	Non flammable
Autoignition temperature	No data available	**Upper explosion limit**	No data available
Lower explosion limit	No data available		

10. STABILITY AND REACTIVITY

Stability Stable under normal conditions.

Conditions to avoid Extremes of temperature and direct sunlight.

Materials to avoid No information available.

Hazardous decomposition products carbon dioxide (CO2). Carbon monoxide. Nitrogen oxides (NOx).

Possibility of Hazardous Reactions None known

11. TOXICOLOGICAL INFORMATION

Local effects No information available.

Target Organ Effects No information available.

Acute toxicity No information available

Potential health effects

Inhalation At spraying, mist may arise. Avoid breathing vapors or mists. May cause irritation of respiratory tract.

Eye contact Contact with eyes may cause irritation.

Skin contact May cause skin irritation and/or dermatitis.

Ingestion Not a normal route of exposure. Ingestion may cause gastrointestinal irritation. May be harmful if swallowed.

Specific effects

Carcinogenic effects No information available.

Mutagenic effects No information available.

Reproductive toxicity No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects Not expected to be an environmental hazard. Avoid release to the environment.

Persistence and degradability None known

Mobility in Environmental Media None known

Bioaccumulation None known

13. DISPOSAL CONSIDERATIONS

Waste disposal methods Dispose of in accordance with local regulations.

Contaminated packaging Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

Not regulated for transport.

15. REGULATORY INFORMATION

All known constituents of this product are listed in the Australian Inventory of Chemical Substances (AICS)

Carcinogenic substances Not Listed

EU Labeling EC Label

16. OTHER INFORMATION

Revision Date 2017-03-26

Reason for revision Product name(s) updated and routine review. Routine review with applicable updates to better reflect product.

Prepared By

Pyrotek Pty. Ltd.
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Phone: (61) (0)2 9631-1333
Fax: (61) (0)2 9631-0233.

Literary reference Information taken from reference works and the literature.

Key Legend Information

SWA - Safe Work Australia (formerly ASCC - Australian Safety and Compensation Council and NOHSC - National Occupational Health & Safety Commission)
SUSDP - Standard for the Uniform Scheduling of Drugs and Poisons [Aust]
TWA - Time Weighted Average [Int]
STEL - Short Term Exposure Limit [Int]
AICS - Australian Inventory of Chemical Substances [Aust]
Dangerous Goods - Initial Emergency Response Guide (SAA/SNZ HB76:2004)[Aust]
AS/NZS 1715 - Selection, use and maintenance of respiratory protective devices. [Aust/NZ]
Hazchem Code - Fire fighters designation [Aust]
IATA - International Aviation Transport Authority [Int]
IMDG - International Maritime Dangerous Goods [Int]
ADR/RID - European Road & Rail Transportation Union - [Int]
GHS - United Nations Globally Harmonized System for the classification and labelling of Chemicals [Int]
EINECS - European Inventory of Existing Commercial Chemical Substances [Int]
ELINCS - European List of Notified Chemical Substances [Int]
EU - European Union [Int]

[Aust/NZ] = Australian New Zealand
[Int] = International

End of SDS

SAFETY DATA SHEET

Revision Date *2016-09-13* **Revision Number** *2*

Soundmetal

Classification Symbol(s)	Personal Protective Equipment (PPE)	Transport Symbols

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product code 17001-SOUND METAL

Product name Soundmetal

Synonyms Soundmetal MPM, SoundSteel, SoundAlloy, SoundZincalume

Product description Product is supplied as a laminated sheet with either galvanized steel, Zincalume, or Aluminium.

Product use Acoustic application/Noise reduction.

Manufacturer or supplier's details
Pyrotek Pty. Ltd.
147-149 Magowar Road
Girraween
NSW 2145
Australia

Pyrotek (61) (0)2 9631 1333
Fax: (61) (0)2 9631-0233
Email: SDS@pyrotek-inc.comREACH email: REACH@pyrotek-inc.com

Emergency telephone number Chemtrec 1800 752 022 (24 hrs), Pyrotek Australia 1800 679 422

2. HAZARDS IDENTIFICATION

Classification according to EU Regulation EC 1272/2008 (GHS)

Not a hazardous substance or mixture according to the Globally Harmonised System (GHS)

Classification according to EU Directives 67/548/EEC or 1999/45/EC [Australian NOHSC: 1008 (2004)]

Australian Hazard text Not classified as hazardous according to criteria of NOHSC:1008 (SWA/ASCC).

Poison Schedule Number No information available

Further information	No hazards resulting from the material as supplied Steel products in their solid state present no inhalation, ingestion, or contact health hazard. Operations such as burning, welding, sawing, brazing, grinding, and machining, which result in elevating the temperature of the product to, or above its melting point, or result in the generation of airborne particulates, may present hazards.

3. COMPOSITION/INFORMATION ON INGREDIENTS

All other ingredients determined not to be hazardous according to NOHSC / GHS criteria

4. FIRST AID MEASURES

General advice	No information available.
Inhalation	Not a normal route of exposure. Move to fresh air. Consult a physician if necessary.
Skin contact	In the unlikely event of skin irritation, wash affected part with mild soap and running water.
Eye contact	Not irritating to eyes in the form supplied.
Ingestion	Not a normal route of exposure.
Aggravated Medical Conditions	None known.
Notes to physician	No information available.

For advice, contact Poisons Information Centre
In Australia, call Tel: 13 1126
In New Zealand, call Tel: 034747000

5. FIRE-FIGHTING MEASURES

Flammable properties	The product is not flammable.
Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding fire
Unsuitable Extinguishing Media	None known.
Special exposure hazards in a fire	None Known.
Specific hazards arising from the chemical	None known.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Australian Hazchem Code	None known

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Use personal protective equipment.
Environmental precautions	No special environmental precautions required.
Methods for cleaning up	No special method required.

7. HANDLING AND STORAGE

Handling Handle in accordance with good industrial hygiene and safety practice.

Storage Keep in a dry, cool and well-ventilated place.

Materials to avoid Acids. Alkalis.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Occupational exposure controls

Engineering Controls If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit

Environmental exposure controls No information available.

Personal Protective Equipment
Considerations to aid the user in PPE assessments in line with expected use follow below. However in certain circumstances the user must determine if additional protective equipment is required.
If exposure limits are exceeded or irritation is experienced, locally approved respiratory protection should be worn.
Positive-pressure supplied air respirators may be required if high airborne contaminant concentrations as a result of the use of the product. Proper skin and eye protection should also be determined by the user and provided in accordance with current local regulations.

Eye protection Safety glasses

Respiratory protection No special protective equipment required.

Skin Protection Long sleeved clothing.

Hand protection Cut resisitant or Leather gloves

General industrial hygiene practice Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid	**Appearance**	Sheet
Colour	Silver	**Odour**	Not available
pH value	No data available	**Vapor pressure**	No data available
Vapor density	No data available		
		Boiling point/range	No data available
Melting point/range	No data available	**Flash point**	Non flammable
Autoignition temperature	No data available	**Upper explosion limit**	No data available
Lower explosion limit	No data available		

10. STABILITY AND REACTIVITY

Stability Stable under normal conditions.

Conditions to avoid None known.

Materials to avoid Acids. Alkalis.

Hazardous decomposition products carbon dioxide (CO2). Carbon monoxide. Thermal decomposition can lead to release of irritating gases and vapors.

Possibility of Hazardous Reactions None known

11. TOXICOLOGICAL INFORMATION

Local effects No information available.

Target Organ Effects No information available.

Acute toxicity

Potential health effects

Inhalation Not a normal route of exposure.

Eye contact None known.

Skin contact Prolonged skin contact may cause skin irritation and/or dermatitis.

Ingestion Not a normal route of exposure.

Aggravated Medical Conditions None known.

Specific effects

Carcinogenic effects No information available.

Mutagenic effects No information available.

Reproductive toxicity No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects Information follows.

Persistence and degradability Not readily biodegradable

Mobility in Environmental Media None known

Bioaccumulation Does not bioaccumulate

13. DISPOSAL CONSIDERATIONS

Waste disposal methods Dispose of in accordance with local regulations.

Contaminated packaging Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

Not regulated for transport.

15. REGULATORY INFORMATION

International Inventories

Carcinogenic substances None listed

EU Labeling EC Label

16. OTHER INFORMATION

Revision Date 2016-09-13

Reason for revision Converted to GHS format.

Prepared By

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Literary reference Information taken from reference works and the literature.

Key Legend Information
SWA - Safe Work Australia (formerly ASCC - Australian Safety and Compensation Council and NOHSC - National Occupational Health & Safety Commission)
SUSDP - Standard for the Uniform Scheduling of Drugs and Poisons [Aust]
TWA - Time Weighted Average [Int]
STEL - Short Term Exposure Limit [Int]
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Hazchem Code - Fire fighters designation [Aust]
IATA - International Aviation Transport Authority [Int]
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GHS - United Nations Globally Harmonized System for the classification and labelling of Chemicals [Int]
EINECS - European Inventory of Existing Commercial Chemical Substances [Int]
ELINCS - European List of Notified Chemical Substances [Int]
EU - European Union [Int]

[Aust/NZ] = Australian New Zealand
[Int] = International

End of SDS

Safety Data Sheet
Decicoat T35

Revision Date: *2018-03-27*
Revision *6*

Classification Symbol(s)	Personal Protective Equipment (PPE)	Transport Symbols
		

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Commodity code 17703 - INSULCOAT

Product Name Decicoat T35

Synonyms Insulcoat TRP

Product use Thermal insulation, anti-condensation and corrosion protection. Acoustic application/Noise reduction.

Details of the supplier
Pyrotek Pty. Ltd.
147-149 Magowar Road
Girraween
NSW 2145
Australia

Pyrotek (61) (0)2 9631 1333
Fax: (61) (0)2 9631-0233
Email: SDS@pyrotek-inc.comREACH email: REACH@pyrotek-inc.com

Emergency Telephone Number CHEMTREC 1800 752 022 (24 hrs), Pyrotek Australia 1800 679 422

2. Hazards Identification

Classification according to EU Regulation EC 1272/2008 (GHS)

Not a hazardous substance or mixture according to the Globally Harmonised System (GHS)

Classification according to EU Directives 67/548/EEC or 1999/45/EC [Australian NOHSC: 1008 (2004)]

Australian Hazard text Not classified as hazardous according to criteria of NOHSC:1008 (SWA/ASCC).

Poison Schedule Number None known

Further information Dust from dried material may cause skin, eye and respiratory track irritation.

3. Composition/information on Ingredients

All other ingredients determined not to be hazardous according to NOHSC / GHS criteria

4. First Aid Measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Avoid breathing dust. Remove to fresh air. If symptoms persist, call a physician.
Skin Contact	Do not rub. Wash off with soap and water. Wash contaminated clothes before wearing them again.
Eye Contact	In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.
Ingestion	Not a normal route of exposure. Do NOT induce vomiting. Drink 1 or 2 glasses of water. Seek medical advise. Rinse mouth.
Aggravated Medical Conditions	No information available.
Notes to Physician	Treat symptomatically.

For advice, contact Poisons Information Centre
In Australia, call Tel: 13 1126
In New Zealand, call Tel: 034747000

5. Fire-Fighting Measures

Flammable properties	Not flammable.
Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the surrounding fire
Unsuitable Extinguishing Media	None known.
Special exposure hazards in a fire	Thermal decomposition can lead to release of irritating gases and vapors. Carbon oxides.
Specific hazards arising from the chemical	None known.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Australian Hazchem Code	None known
Poison Schedule Number	None known

6. Accidental Release Measures

Personal precautions	Appropriate protective equipment as detailed in section 8. Slippery, can cause falls if walked on.
Environmental Precautions	Avoid release to the environment. Do not flush into surface water or sanitary sewer system.
Methods for cleaning up	Contain the spill by using a mineral absorbent. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly.

7. Handling and Storage

Handling Avoid dust formation. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective occupational exposure limits.

Storage Keep containers tightly closed in a cool, well-ventilated place.

Materials to avoid Incompatible with strong acids and bases. Oxidizing agent.

8. Exposure Controls/Personal Protection

Exposure Guidelines

Occupational exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas when mist is present.

Environmental exposure controls No information available.

Personal Protective Equipment
Considerations to aid the user in PPE assessments in line with expected use follow below. However in certain circumstances the user must determine if additional protective equipment is required.
If exposure limits are exceeded or irritation is experienced, locally approved respiratory protection should be worn.
Positive-pressure supplied air respirators may be required if high airborne contaminant concentrations as a result of the use of the product. Proper skin and eye protection should also be determined by the user and provided in accordance with current local regulations.

Eye Protection Safety glasses

Respiratory protection Avoid breathing dust. During spraying, wear suitable respiratory equipment: Respirator with combination filter for vapor / particulate.

Skin Protection Work uniform or laboratory coat.

Hand Protection Rubber gloves

General industrial hygiene practice Avoid dust formation. Remove and wash contaminated clothing before re-use.

9. Physical and Chemical Properties

Physical state	Liquid	**Appearance**	Paste
Color	Off-white	**Odor**	Mild, Musty
pH - VALUE 1	No data available	**Water solubility**	Miscible in water
Specific gravity	0.5 - 0.6	**Vapor pressure**	No data available
Vapor density	No data available	**Boiling point / boiling range**	No data available
Melting point/range	No data available	**Flash point**	No data available
Autoignition temperature	No data available	**Upper explosion limit**	No data available
Lower explosion limit	No data available		

10. Stability and Reactivity

Stability Stable under normal conditions.

Conditions to Avoid Extremes of temperature and direct sunlight.

Materials to avoid Incompatible with strong acids and bases. Oxidizing agent.

Hazardous Decomposition Products Thermal decomposition can lead to release of irritating gases and vapors. Decomposition products:: Carbon oxides, Aluminum Oxide, Silicon oxides.

Possibility of Hazardous Reactions Hazardous polymerization does not occur

11. Toxicological Information

Local effects No information available.

Target organ effects No information available.

Acute Toxicity

Potential Health Effects

Inhalation Inhalation of vapors in high concentration may cause irritation of respiratory system. Inhalation of dry silica dusts may result in silicosis.

Eye Contact Contact with eyes may cause irritation.

Skin Contact May cause skin irritation and/or dermatitis.

Ingestion Not a normal route of exposure. Ingestion may cause gastrointestinal irritation.

Sensitisation May cause sensitization of susceptible persons. May cause sensitization by inhalation and skin contact.

Aggravated Medical Conditions No information available.

Specific effects

Carcinogenic effects No information available.

Mutagenic effects No information available.

Reproductive Toxicity No information available.

12. Ecological Information

Ecotoxicity effects Not expected to be an environmental hazard. The product should not be allowed to enter drains, water courses or the soil.

Persistence and degradability None known

Mobility in Environmental Media None known

Bioaccumulation None known

13. Disposal Considerations

Waste disposal methods Dispose of in accordance with federal, state and local regulations.

Contaminated packaging Empty containers should be taken for local recycling, recovery or waste disposal.

14. Transport Information

Not regulated for transport.

15. Regulatory Information

International Inventories

Carcinogenic substances Contains substances considered carcinogenic according to the following regulatory classifications

Poison Schedule Number None known

16. Other Information

Revision Date: 2018-03-27

Reason for Revision Routine review with applicable updates to better reflect product.

Prepared By:

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Literary reference Information taken from reference works and the literature.

Key Legend Information
SWA - Safe Work Australia (formerly ASCC - Australian Safety and Compensation Council and NOHSC - National Occupational Health & Safety Commission)
SUSDP - Standard for the Uniform Scheduling of Drugs and Poisons [Aust]
TWA - Time Weighted Average [Int]
STEL - Short Term Exposure Limit [Int]
AICS - Australian Inventory of Chemical Substances [Aust]
Dangerous Goods - Initial Emergency Response Guide (SAA/SNZ HB76:2004)[Aust]
AS/NZS 1715 - Selection, use and maintenance of respiratory protective devices. [Aust/NZ]
Hazchem Code - Fire fighters designation [Aust]
IATA - International Aviation Transport Authority [Int]
IMDG - International Maritime Dangerous Goods [Int]
ADR/RID - European Road & Rail Transportation Union - [Int]
GHS - United Nations Globally Harmonized System for the classification and labelling of Chemicals [Int]
EINECS - European Inventory of Existing Commercial Chemical Substances [Int]
ELINCS - European List of Notified Chemical Substances [Int]
EU - European Union [Int]

[Aust/NZ] = Australian New Zealand
[Int] = International

End of SDS

SAFETY DATA SHEET
TAPE ALR

Revision Date *2016-12-12*
Revision *1*

Classification Symbol(s)	Personal Protective Equipment (PPE)	Transport Symbols

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product code 17505 - ALR T

Product name TAPE ALR

Product use Aluminium foil tape.

Manufacturer or supplier's details
Pyrotek Pty. Ltd.
147-149 Magowar Road
Girraween
NSW 2145
Australia

Pyrotek (61) (0)2 9631 1333
Fax: (61) (0)2 9631-0233
Email: SDS@pyrotek-inc.comREACH email: REACH@pyrotek-inc.com

Emergency telephone number Chemtrec 1800 752 022 (24 hrs), Pyrotek Australia 1800 679 422

2. HAZARDS IDENTIFICATION

Classification according to EU Regulation EC 1272/2008 (GHS)

The product is an article and is not subject of Directive EC 1272/2008

Classification according to EU Directives 67/548/EEC or 1999/45/EC [Australian NOHSC: 1008 (2004)]

Classification Symbol(s) In accordance with Directive EC 1272/2008 and its amendments, this substance does not need to be classified nor labelled

Poison Schedule Number No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

All other ingredients determined not to be hazardous according to NOHSC / GHS criteria

4. FIRST AID MEASURES

General advice	No information available.
Inhalation	Not a normal route of exposure.
Skin contact	If skin irritation persists, call a physician.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.
Ingestion	Not a normal route of exposure. If swallowed. Consult a physician if necessary.
Aggravated Medical Conditions	No information available.
Notes to physician	No information available.

For advice, contact Poisons Information Centre
In Australia, call Tel: 13 1126
In New Zealand, call Tel: 034747000

5. FIRE-FIGHTING MEASURES

Flammable properties	The product is not flammable.
Suitable extinguishing media	Dry chemical, carbon dioxide (CO2), Water
Unsuitable Extinguishing Media	None known.
Special exposure hazards in a fire	No information available.
Specific hazards arising from the chemical	None known.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Australian Hazchem Code	None known

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Use personal protective equipment.
Environmental precautions	No special environmental precautions required.
Methods for cleaning up	Material is a Solid, pickup and replace in container.

7. HANDLING AND STORAGE

Handling	Handle in accordance with good industrial hygiene and safety practice. Take precautionary measures against static discharges.
Storage	Keep in a dry, cool and well-ventilated place.
Materials to avoid	Strong acids.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines	No exposure limit allocated
Biological standards	No biological limit allocated

Occupational exposure controls

Engineering Controls No standards established for this product

Environmental exposure controls No information available.

Personal Protective Equipment
Considerations to aid the user in PPE assessments in line with expected use follow below. However in certain circumstances the user must determine if additional protective equipment is required.
If exposure limits are exceeded or irritation is experienced, locally approved respiratory protection should be worn.
Positive-pressure supplied air respirators may be required if high airborne contaminant concentrations as a result of the use of the product. Proper skin and eye protection should also be determined by the user and provided in accordance with current local regulations.

Eye protection No special protective equipment required

Respiratory protection No special protective equipment required.

Skin Protection No special precautions required.

General industrial hygiene practice Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Solid	**Appearance**	Tape
Colour	Silver	**Odour**	Odourless; Mild Acrylic
pH value	No data available	**Water solubility**	Insoluble in water
Vapor pressure	No data available	**Vapor density**	No data available
Boiling point/range	No data available	**Melting point/range**	No data available
Flash point	No data available	**Autoignition temperature**	No data available
Upper explosion limit	No data available	**Lower explosion limit**	No data available

10. STABILITY AND REACTIVITY

Stability Stable.

Conditions to avoid No information available.

Materials to avoid Strong acids.

Hazardous decomposition products Carbon oxides. Thermal decomposition can lead to release of irritating gases and vapors.

Possibility of Hazardous Reactions Hazardous polymerisation does not occur

11. TOXICOLOGICAL INFORMATION

Local effects No information available.

Target Organ Effects No information available.

Acute toxicity

Potential health effects

Inhalation No information available.

Eye contact No information available.

Skin contact No information available.

Ingestion Not a normal route of exposure.

Specific effects

Carcinogenic effects No information available.

Mutagenic effects No information available.

Reproductive toxicity No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects No information available.

Persistence and degradability None known

Mobility in Environmental Media None known

Bioaccumulation None known

13. DISPOSAL CONSIDERATIONS

Waste disposal methods Dispose of in accordance with local regulations.

Contaminated packaging Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

Not regulated for transport.

15. REGULATORY INFORMATION

All known constituents of this product are listed in the Australian Inventory of Chemical Substances (AICS)

Carcinogenic substances None listed

16. OTHER INFORMATION

Revision Date 2016-12-12

Reason for revision Converted to GHS format.

Prepared By Pyrotek Pty. Ltd.
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Literary reference Information taken from reference works and the literature.

Key Legend Information
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EINECS - European Inventory of Existing Commercial Chemical Substances [Int]
ELINCS - European List of Notified Chemical Substances [Int]
EU - European Union [Int]

[Aust/NZ] = Australian New Zealand
[Int] = International

End of SDS

SAFETY DATA SHEET
FIXSEAL MSP 15

Revision Date *2016-12-14*
Revision *2*

Classification Symbol(s)	Personal Protective Equipment (PPE)	Transport Symbols

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product code 17207 - MSP15

Product name FIXSEAL MSP 15

Product description Adhesive for Reapor and Viterolite installations, MSP15.

Product use Mounting adhesive.

Manufacturer or supplier's details
Pyrotek Pty. Ltd.
147-149 Magowar Road
Girraween
NSW 2145
Australia

Pyrotek (61) (0)2 9631 1333
Fax: (61) (0)2 9631-0233
Email: SDS@pyrotek-inc.comREACH email: REACH@pyrotek-inc.com

Emergency telephone number Chemtrec 1800 752 022 (24 hrs), Pyrotek Australia 1800 679 422

2. HAZARDS IDENTIFICATION

Classification according to EU Regulation EC 1272/2008 (GHS)

Not a hazardous substance or mixture according to the Globally Harmonised System (GHS)

Classification according to EU Directives 67/548/EEC or 1999/45/EC [Australian NOHSC: 1008 (2004)]

Poison Schedule Number No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

All other ingredients determined not to be hazardous according to NOHSC / GHS criteria

4. FIRST AID MEASURES

General advice	If symptoms persist, call a physician.
Inhalation	Move to fresh air in case of accidental inhalation of vapors or decomposition products.
Skin contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes.
Eye contact	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Ingestion	DO NOT induce vomiting. Rinse nose, mouth and throat with water. Seek medical advise.
Aggravated Medical Conditions	No information available.
Notes to physician	No information available.

For advice, contact Poisons Information Centre
In Australia, call Tel: 13 1126
In New Zealand, call Tel: 034747000

5. FIRE-FIGHTING MEASURES

Flammable properties	None known.
Suitable extinguishing media	Water, Foam, Dry powder, carbon dioxide (CO2)
Unsuitable Extinguishing Media	None known.
Special exposure hazards in a fire	No information available.
Specific hazards arising from the chemical	None known.
Protective equipment and precautions for firefighters	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
Australian Hazchem Code	None known

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Slippery, can cause falls if walked on. Use personal protective equipment.
Environmental precautions	Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
Methods for cleaning up	If recovery is not feasible, admix with dry soil, sand or non-reactive absorbent and place in an appropriate chemical waste container.

7. HANDLING AND STORAGE

Handling	Ensure product is dry before use. Keep containers closed when empty. Handle in accordance with good industrial hygiene and safety practice.
Storage	Storage between 39-90 °F (4-32 °C).
Materials to avoid	No information available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines No exposure limit allocated

Biological standards No biological limit allocated

Occupational exposure controls

Engineering Controls Ensure adequate ventilation, especially in confined areas

Environmental exposure controls No information available.

Personal Protective Equipment
Considerations to aid the user in PPE assessments in line with expected use follow below. However in certain circumstances the user must determine if additional protective equipment is required.
If exposure limits are exceeded or irritation is experienced, locally approved respiratory protection should be worn.
Positive-pressure supplied air respirators may be required if high airborne contaminant concentrations as a result of the use of the product. Proper skin and eye protection should also be determined by the user and provided in accordance with current local regulations.

Eye protection Avoid contact with eyes

Respiratory protection No special protective equipment required.

Skin Protection Long sleeved clothing.

General industrial hygiene practice Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Paste	**Colour**	White; Various
Odour	Mild	**pH value**	No data available
Solubility	Soluble in organic solvents	**Water solubility**	Insoluble in water
Density	Ca. 1.67 g/cm3	**Vapor pressure**	No data available
Vapor density	No data available	**Boiling point/range**	No data available
Melting point/range	No data available	**Flash point**	No data available
Autoignition temperature	No data available	**Upper explosion limit**	No data available
Lower explosion limit	No data available	**Viscosity**	Thixotropic paste

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.

Conditions to avoid Exposure to air or moisture over prolonged periods. Exposure to moisture. Extremes of temperature and direct sunlight.

Materials to avoid No information available.

Hazardous decomposition products Thermal decomposition can lead to release of irritating gases and vapors.

Possibility of Hazardous Reactions No information available

11. TOXICOLOGICAL INFORMATION

Local effects No information available.

Target Organ Effects No information available.

Acute toxicity

Potential health effects

Inhalation	No information available.
Eye contact	No information available.
Skin contact	No information available.
Ingestion	No information available.

Specific effects

Carcinogenic effects	No information available.
Mutagenic effects	No information available.
Reproductive toxicity	No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity effects The product should not be allowed to enter drains, water courses or the soil.

Persistence and degradability	None known
Mobility in Environmental Media	None known
Bioaccumulation	None known

13. DISPOSAL CONSIDERATIONS

Waste disposal methods	Should not be released into the environment. Dispose of in accordance with local regulations.
Contaminated packaging	Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

Not regulated for transport.

15. REGULATORY INFORMATION

International Inventories

Carcinogenic substances	None listed

16. OTHER INFORMATION

Revision Date	2016-12-14
Reason for revision	The Safety Datasheets for the products you have purchased have been updated with important new information concerning safety, health or environmental protection.
Prepared By	Pyrotek Pty. Ltd. 147-149 Magowar Road Girraween

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Australia
Phone: (61) (0)2 9631-1333
Fax: (61) (0)2 9631-0233.

Literary reference Information taken from reference works and the literature.

Key Legend Information
SWA - Safe Work Australia (formerly ASCC - Australian Safety and Compensation Council and NOHSC - National Occupational Health & Safety Commission)
SUSDP - Standard for the Uniform Scheduling of Drugs and Poisons [Aust]
TWA - Time Weighted Average [Int]
STEL - Short Term Exposure Limit [Int]
AICS - Australian Inventory of Chemical Substances [Aust]
Dangerous Goods - Initial Emergency Response Guide (SAA/SNZ HB76:2004)[Aust]
AS/NZS 1715 - Selection, use and maintenance of respiratory protective devices. [Aust/NZ]
Hazchem Code - Fire fighters designation [Aust]
IATA - International Aviation Transport Authority [Int]
IMDG - International Maritime Dangerous Goods [Int]
ADR/RID - European Road & Rail Transportation Union - [Int]
GHS - United Nations Globally Harmonized System for the classification and labelling of Chemicals [Int]
EINECS - European Inventory of Existing Commercial Chemical Substances [Int]
ELINCS - European List of Notified Chemical Substances [Int]
EU - European Union [Int]

[Aust/NZ] = Australian New Zealand
[Int] = International

End of SDS

PYROTEK
WORLDWIDE LOCATIONS

AUSTRALIA

CANADA

CHINA

CZECH REPUBLIC

HONG KONG

INDIA

INDONESIA

JAPAN

KOREA

MALAYSIA

SINGAPORE

NEW ZEALAND

TAIWAN

THAILAND

TURKEY

UNITED ARAB EMIRATES

UNITED KINGDOM

UNITED STATES OF AMERICA

VIETNAM

CONTACT DETAILS
for further information please visit our website at pyroteknc.com

Pyrotek endorse forest sustainability and the preservation of natural environment. We procure the highest quality materials from suppliers who hold FSC (Forest Stewardship Council) Certification and PEFC (Programme for the Endorsement of Forestry Certification) amongst other certification programmes.