

Technical Data Sheet

Product: Resolution Phenolic – Preformed Pipe Section (PPS)

Product Description: Resolution Phenolic PPS is a high-performance, rigid phenolic foam pipe insulation designed for HVAC, industrial, and commercial applications. It features a closed-cell, fibre-free core with a factory-applied foil vapour barrier jacket, providing excellent thermal performance with minimal thickness. Additionally, it offers outstanding fire properties, including zero flame spread and near zero smoke development, making it a safe and reliable choice for demanding environments. Resolution Phenolic PPS does not contain chlorides or halogenated fire retardants, unlike PVC Nitrile (Armaflex and K-Flex) and Glasswool PPS, which can cause stress corrosion cracking on stainless steel pipework in the presence of moisture.

Product Features and Benefits:

- High-performance thermal insulation (aged thermal conductivity as low as 0.023 W/mK)
- ISO 9705 Group 1-S fire rating, Euroclass BL-s1, d0, with HVAC foil facing
- Also achieves fire performance AS/NZS 1530.3 and AS 1366.2:1992 test standards
- Resistant to moisture - Closed Cell > 95%, plus factory-applied foil vapour barrier jacket
- Contains no chlorides or halogenated fire retardants.
- Wide temperature operating ranges from +120°C down to -180°C
- Lightweight, durable, and easy to handle and install.
- Compliant with environmental standards: low ODP and GWP

Product Properties:

Property	Test Standard	Unit	Typical Result
Density		Kg/m ³	40
Operating Temperature		Upper Limit (°C)	120
		Lower Limit (°C)	-180
Product Sizes (<i>Note 1</i>)		Diameter (mm)	Any
		Wall Thickness (mm)	Any
		Length (mm)	1000
Thermal Conductivity	AS/NZS 4859.1:2018	W/m.K @ 15°C	0.023
Thermal Resistance	AS/NZS 4859.1:2018	R Value	(<i>Note 2</i>)
Fire Performance (<i>Note 3</i>)	EN 13501-1		B/BL-S1-D0
	ISO 9705		Group 1-S
	AS/NZS 1530.3	Ignitability	0
		Spread of Flame	0
		Heat Evolved	0
		Smoke Developed	0-1
	AS 1366.2:1992	Flame Propagation	Complies
Compressive Strength	AS 2498.3-1993	kPa @ 10% yield	≥150

Closed Cell Content	EN ISO 4590	%	>95
Foil Emittance Value	ASTM C1371	%	4
VOC Emissions	DIBt / AgBB - scheme 2015		Complies (<i>Note 4</i>)

Product Properties - Notes:

1. Refer to “Resolution Phenolic PPS - Specification Guidelines” for the correct insulation thickness recommendations based on specific temperature and diameter requirements.
2. Refer to “Resolution Phenolic PPS – Thermal Resistance Table (all pipe schedules)” for the relevant R Values.
3. Fire Performance - Class B/BL-S1-D0 in accordance with EN 13501-1, which correlates to Group 1-S as per C/AS2 New Zealand Building Code Acceptable Solutions table C1.1 below.

Table C1.1 Alternative test or classification standards for Group Numbers		
Requirements according to C/VM2 Appendix A using ISO 9705 or ISO 5660	Australian requirements according to NCC Specification C1.10 Clause 4 using AS ISO 9705	European Classification using EN 13501-1
Group Number 1-5	Group Number 1, and a smoke growth rate index not more than 100	Class A1, A2 or Class B and smoke production rating s1 or s2
Group Number 1	Group Number 1	Class A1, A2 or B
Group Number 2-5	Group Number 2, and a smoke growth rate index not more than 100	Class C and smoke production rating s1 or s2
Group Number 2	Group Number 2	Class C
Group Number 3	Group Number 3	Class D
Group Number 4	Group Number 4	Class E and F

4. VOC's - The tested product complies with the requirements of DIBt / AgBB - scheme 2015. The product is suitable for indoor use in buildings. The classification value R for the (WOC, VOC, SVOC with NIK) substances with more than 5 µg/m³ after 28 days is below the classification threshold of 1. The formaldehyde emission after 28 days is below the classification threshold of 100 µg/m³

Scope of Use:

- Resolution Phenolic PPS is an insulation solution for pipework in building services and HVAC applications.
- Suitable for insulating mild steel, stainless steel, carbon steel, copper, multiplex and plastic pipework

Installation Guidelines:

- For optimum performance, install Resolution Phenolic PPS using factory-supplied self-adhesive tape to complete the vapour barrier at joints and gaps. Low-permeability, multi-layer vapour barrier jackets are recommended for applications below 0°C. Consult Accumen's Technical Services for installation guidelines.

Product Compliance:

When installed in accordance with the manufacturer's instructions, Resolution Phenolic PPS will satisfy the 15-year durability clause NZBC B2.3.1(a).

Resolution Phenolic PPS; meets the relevant clauses of NZBC C3.4(a) Prevention of Fire, E3 Internal Moisture, F2 Hazardous Building Materials, and contributes to meeting H1 Efficiency and G6 Acoustic Design requirements.

Environmental Data:

- Manufactured with a CFC/HCFC-free blowing agent.
- Zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP).
- Recyclability: New Zealand pending further development

Warranty Information:

- Standard product warranty applies. Please refer to the manufacturer's warranty documentation for further details.

For technical support, custom specifications, or further product information, please contact Accumen Shapes – info@accumen.co.nz



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Users are advised to seek advice from a qualified expert or professional to ensure the product's suitability and compliance with specific requirements, relevant standards, and applicable laws or regulations.