

POWA Group

Powatherm Ecoflex Protec4z

Flexible Thermal Insulation



POWATHERM ECOFLEX PROTEC4Z

Flexible Thermal Insulation



MATERIAL CHARACTERISTICS

Crossed-Linked closed cell polyolefin foam reinforced with heat laminated embossed pure aluminium foil.

SHEETS/ROLLS

Comes with factory applied adhesive backing

PIPE SECTIONS

Pre-formed to give a snug-fit on pipes and supplied with a longitudinal slit

STRUCTURE

Completely closed cell.
No losses fibres

MALLEABILITY

Excellent flexibility and high resilience to deformation

COLOUR: Greyish Black

DENSITY: 25-30 kgfm³
(foam only)



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Technical Specifications	Test Standard	EcoFlex - Protec4Z
Thermal Conductivity	ASTM C518	0.034 W/mK@ 24°C
Water Vapour Permeability	ASTM E96	0.00 g/h.m2
Water Vapour Permeance	ASTM E96	0.00 perms
Water Absorption (Vol.%) 28 days	BSEN 12087: 1997 Method 2A	0.3
Surface spread of flame	BS 476 Part 7	Class 1
Toxic Fume, R	BS6853: 1999	0.77
Smoke & Toxicity	ISO 5659-2 IMO MSC 61 (67) 1996	Ds<200, passed toxicity level
Operating Temperature		-80 °C to 100 °C
Environmental Concerns		CFC & HCFC Free Non contributing to ODP & GWP
Ozone Resistance		Excellent
UV & Weather Resistance		Excellent. No additional UV coatings required. Pass 300hr Salt Spray test



Certificate of Test

NE6536

REPORT No.: FNE10319

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AS/NZS 1530.3:1999 SIMULTANEOUS DETERMINATION OF IGNITABILITY, FLAME PROPAGATION, HEAT RELEASE AND SMOKE RELEASE

TRADE NAME: Powatherm Ecoflex Protec4Z (25 mm sample) sheet or tubular pipe and ducting etc. thermal insulation

SPONSOR: Rapid Industrial Group Pty Ltd
25 Common Street
GOULBURN NSW
AUSTRALIA

DESCRIPTION OF SAMPLE: The sponsor described the tested specimen as UV-protected reinforced pressed aluminium foil facing bonded to 25-mm thick layer of cross-linked polyethylene fire-retardant foam. The foil was adhered to the foam using acrylic based adhesive at an application rate of 0.025 L/m³. The specimen contained flame-retardant additives.

Nominal total density: 25 kg/m³
Nominal total thickness: 25 mm
Colour: low-glare silver (foil) / charcoal grey (foam)

TEST PROCEDURE: Six samples were tested in accordance with Australian Standard 1530, Method for fire tests on building components and structures, Part 3: Simultaneous determination of ignitability, flame propagation, heat release and smoke release, 1999. For the test, each sample was held between two layers of square mesh having 0.8-mm dia. wires at approximately 13-mm centres over each face, and was clamped to the specimen holder in four places.

RESULTS: The following means and standard errors were obtained:

Parameter	Mean	Standard Error
Ignition Time (min)	N/A	N/A
Flame Spread Time (s)	N/A	N/A
Heat Release Integral (kJ/m ²)	N/A	N/A
Smoke Release (log ₁₀ D)	-1.914	0.100

For regulatory purposes these figures correspond to the following indices:

Ignitability Index (0-20)	Spread of Flame Index (0-10)	Heat Evolved Index (0-10)	Smoke Developed Index (0-10)
0	0	0	1

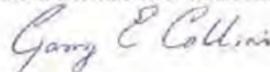
The results of this fire test may be used to directly assess fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all fire conditions.

DATE OF TEST: 9 November 2011

Issued on the 21st day of November 2011 without alterations or additions.



Heherson Alarde
Testing Officer



Garry E Collins
Manager, Fire Testing and Assessments



This document is issued in accordance with NATA's accreditation requirements.
Accreditation No. 165 – Corporate Site No. 3625



CSIRO Materials Science and Engineering
14 Julius Avenue, Riverside Corporate Park, North Ryde NSW 2113 AUSTRALIA
Telephone: 61 2 9490 5444 Facsimile: 61 2 9490 5555

Emission Test Certificate

Friday 20th September 2013

Supplier: PowAGroup Global (PO Box 1236, Goulburn NSW 2580)

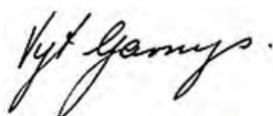
Sample Description: Powatherm Ecoflex Protec4Z Foil Faced Fire Retardant Cross Linked Polyolefin Foam Insulation

Date Tested: September 2013 (Tested by FORAY Laboratories – NATA Accreditation 1231)

Test Method: ASTM D5116 “Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Material/Products”.

Emission Data:

<p>Green Building Council of Australia Green Star Office Design IEQ-13</p>	<p>Powatherm Ecoflex Protec4Z Foil Faced Fire Retardant Cross Linked Polyolefin Foam Insulation</p>
<p>Total Volatile Organic Compound Emission Rate limit <0.5mg/m²/hr</p>	<p>Total Volatile Organic Compound Emission Rate: <0.009 mg/m²/hr</p>



Dr. Vyt Garnys
PhD, BSc(Hons) AIMM, ARACI, ISIAQ
ACA, AIRAH, FMA
Managing Director and Principal Consultant



Nick Joy
BSc(Hons)
Consultant

CV130905

Emission Test Certificate

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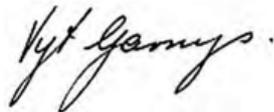
Sample Description: Powatherm Ecoflex Ezylag Fire Rated Closed Cell Elastomeric Foam Insulation

Date Tested: September 2013 (Tested by FORAY Laboratories – NATA Accreditation 1231)

Test Method: ASTM D5116 “Standard Guide for Small-Scale Environmental Chamber Determinations of Organic Emissions from Indoor Material/Products”.

Emission Data:

<p>Green Building Council of Australia Green Star Office Design IEQ-13</p>	<p>Powatherm Ecoflex Ezylag Fire Rated Closed Cell Elastomeric Foam Insulation</p>
<p>Total Volatile Organic Compound Emission Rate limit <0.5mg/m²/hr</p>	<p>Total Volatile Organic Compound Emission Rate: 0.055 mg/m²/hr</p>



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