POLYPHEN™

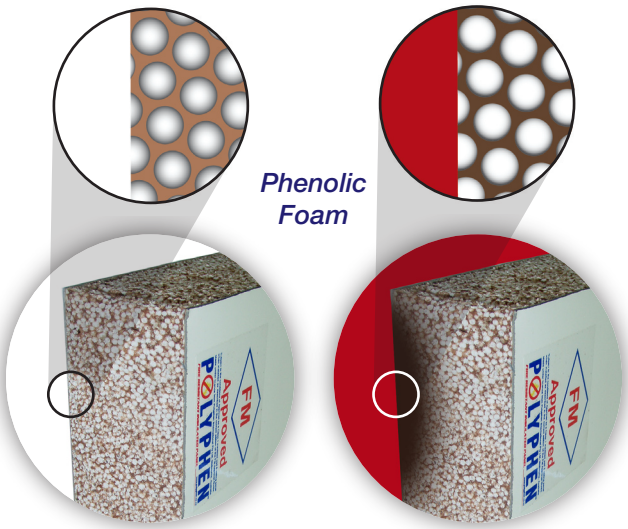
FIRE RESISTANT INSULATED PANEL

Polyphen® Panels are New Zealand made, fire resistant insulation panels for coolroom, coldstore and food industry buildings. Polyphen Panels meet the requirements of the insurance industry and NZ Standards.

Polyphen® is a phenolic composite foam, a thermo-setting foam that remains solid in a fire, in contrast to thermo-plastic foams such as polystyrene (EPS), which soften, melt and vaporise when subjected to fire.

Polyphen® Panels are the answer to the increasing reluctance of the insurance industry to insure buildings containing polystyrene foam.

When exposed to fire the phenolic foam chars to form a rigid honeycomb matrix which inhibits fire spread.



LOWER INSURANCE PREMIUMS

The use of Polyphen® Fire Resistant Panels will attract lower insurance premiums and ensure the future insurability of new buildings.

FIRE RATINGS

Polyphen® Panels have been fire tested as wall panels and have certified fire ratings from 45 minutes for 100mm panel and up to two hours for 200mm panels. These ratings are significantly greater than the ratings achieved by other fire resistant panels.

FM APPROVED

Polyphen® Panels have met the stringent requirements of FM Approvals Standard 4880 (1994) Metal faced Class 1 Fire Rated panels.

Polyphen® Panels are Approved panels as prescribed by NZS 4541:2007 and referenced in NZ Building Code.

THE PRESS

WEDNESDAY, 22 JUNE 2005

500 flee Takaka fire

Takaka, in Golden Bay, will count the cost today of a spectacular blaze that destroyed the town's dairy factory, its biggest employer.

Firefighters spent several hours battling huge flames as thick, black smoke, fed by polystyrene in the building's construction, billowed from the rapidly disintegrating factory.

NEW ZEALAND MADE

NZ MADE

Polyphen® foam is manufactured in New Zealand and laminated in panels by leading NZ panel makers Metalcraft Insulated Panels, The Insulation Panel & Door Co (IPD), and Long Industries.

SHORT LEAD TIME

As Polyphen® Panels are manufactured in New Zealand, they are readily available at short lead times for both the initial order and for any extra panels required during the course of construction. Replacement panels for damaged areas are also readily available.

STANDARD COOLROOM PANEL SYSTEM

As Polyphen® Panels are laminated locally on standard coolroom panel production lines, Polyphen® panels and construction details are readily compatible with existing construction and other local panels.

SUSTAINABLE CHOICE

The energy saved over a lifetime of a Polyphen® insulation panel in reduced heating more than compensates for the raw material and energy used in its construction.

RECYCLABLE

Polyphen® panels are recyclable when returned to the panel plant. The steel facings are 100% recyclable and the foam is reprocessed.

DATA SHEET

Polyphen® Panel has a tongue and groove joining system roll-formed along the length of the panel. Facings are Colorsteel® with a fire resistant Polyphen® core.

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PANEL SPECIFICATION

WIDTHS	1200mm cover (plain facings) 1000mm cover (ribbed roof panel)
LENGTH	Cut to order
CORE	Polyphen®
'K' VALUE	0.0368 W/mK
MAX FACING TEMP	100°C Dry Heat Sustained
ADHESIVE	Thermosetting Two Part Polyurethane
FINISH	Plain / Ribbed

PANEL FACING DETAILS

MATERIAL	Colorsteel® CP
THICKNESS	0.6 mm (BMT)
SUBSTRATE	Galvanised or Zincalume ZM275 G300
GLOSS LEVEL	25%
COLOUR	Titania*

*Non standard colours and paint types may be negotiated subject to quantity and time considerations.

PANEL CORE DETAILS

MATERIAL	Polyphen®
DESCRIPTION	Phenolic composite foam
DENSITY	40.0 ± 3 kg/m3
COMPRESSIVE STRENGTH	126 kPa
CROSS BREAKING STRENGTH	248 kPa
TENSILE STRENGTH	237 kPa
SHEAR STRENGTH	104 kPa

PANEL PROPERTIES

THICKNESS (MM)	50mm	75mm	100mm	150mm	200mm	250mm
WEIGHT (kg/m²)	12.7	14.0	15.2	17.6	20.0	22.0
R VALUE 8C m²K/W	1.50	2.27	3.00	4.45	5.90	7.36
FIRE RESISTANCE	FM Approvals Standard 4880 (1994) Wall-Ceiling Construction Metal faced – Class 1 Rated NZ Standard NZS 4541:2007 Approved Panel					

PANEL SPAN IN METRES

Indicative only, to be confirmed by Structural Engineer for specific site conditions.

THICKNESS (MM)	50mm	75mm	100mm	150mm	200mm	250mm
INTERNAL WALL	6.0	7.3	8.4	9.1	9.1	9.1
INTERNAL CEILING	3.9	5.3	6.8	8.7	10.1	11.3
EXTERNAL WALL	4.0	4.9	5.7	7.0	8.1	9.1
EXTERNAL CEILING/ROOF	3.5	4.4	5.0	6.2	7.1	8.0

CONTACT DETAILS

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