

TECHNICAL DATA SHEET

UREPAC[®] RIGID 4 100

PRODUCT DESCRIPTION

UrePac[®] Rigid 4 100 is a low density rigid polyurethane Spray Foam system based on polyether polyols and MDI isocyanate. It has been specifically formulated to be a medium density structural spray foam.

PRODUCT FEATURES

- Zero ODP
- Seamless, Durable and Waterproof
- High strength to weight properties

UREPAC RIGID 4 100 POLYOL SPECIFICATION

Appearance: Clear amber liquid

Specific Gravity (22°C): 1.10 ± 0.02 g/mL

Viscosity (Brookfield) (22°C): 1,000 ± 100 mPa.s

Spindle 3 Speed 100

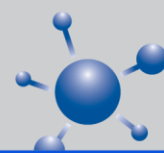
UREPAC ISO2001 MDI ISOCYANATE SPECIFICATION

Appearance: Clear brown liquid

Specific Gravity (22°C): 1.23 ± 0.02 g/mL

Viscosity (Brookfield) (22°C): 210 ± 70 mPa.s

Spindle 1 Speed 50



MIXED SYSTEM SPECIFICATION

Mix Ratio:	By Weight	100 Polyol : 120 Isocyanate
	By Volume	100 Polyol : 100 Isocyanate

Test	Specification	Units
Cream Time (22°C): <i>Time from when mixing commences till the liquid starts to expand.</i>	4 ± 1	seconds
String time (22°C): <i>Time from when mixing commences till "strings can be pulled from the surface of the rising foam.</i>	15 ± 2	seconds
Rise time (22°C): <i>Time from when mixing commences till the foam finishes expanding.</i>	23 ± 3	seconds
Free Rise Density (22°C):	100 ± 10	kg/m ³

(Obtained from Laboratory 110g cup test, results will vary depending on mix quantities)

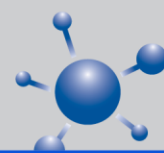
TYPICAL CURED FOAM PROPERTIES

Test	Method	Specification
Core Density:	ASTM D1622	100±2 kg/m ³
Dimensional Stability (70°C)	+5% Volume (@ 24 hours)	Pass
Closed Cell Content:	ASTM D6226	>95%
Initial K Value:	ASTM C518	0.0280 W/mK

After 7 days cure @ 22°C unless otherwise specified.

PACKAGING OPTIONS:

Packaging	UrePac Rigid 4 100 Polyol	UrePac ISO2001 MDI Isocyanate
205L Closed Head Drum	210kg	250kg
1000L IBC	1050kg	1250kg



STORAGE

POLYOL should be stored in closed containers under dry conditions out of direct sunlight between 18 and 25°C.

ISOCYANATE should be stored separately from the polyol component, but under the same conditions.

Both products will have a minimum shelf life of six months when stored under these conditions.

CURED PRODUCT: Like all polyurethanes based on aromatic isocyanates this foam is **not** UV stable and will have surface discolouration and degradation if exposed to UV radiation and sunlight. Please speak to our technical consultants regarding our UV stable coating options if this product is required for use in external applications.

PROCESSING CONDITIONS:

All processing conditions are given as a guide only, it is the responsibility of the customer to satisfy themselves that the product is suitable for their requirements by running closely monitored trials prior to production.

COMPONENT PREPARATION

POLYOL should be mixed or recirculated each day prior to use as the components may separate.

ISOCYANATE does not need to be mixed prior to use.

It is recommended that both components should be preconditioned to 22-25°C to ensure that the system will have consistent reactivity and performance, but the drums must be above 10°C before spraying.

MACHINE SETTINGS

Dynamic Spray Pressure: > 1200 psi

[Note: this is Gun type / setup / output dependant]

Primary Heater Temperatures: 45-50°C

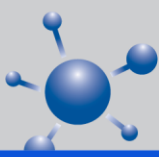
[set both Component temperatures the same]

Hose Temperature: as per Primary Heater setting

APPLICATION CONDITIONS / GUIDELINES

The minimum recommended nominal thickness for general applications is 20 - 25 mm. This product shall generally be applied in one or more passes at typically 20 - 50 mm and no less than 10mm per pass. Each pass should be allowed to cure before the next pass is applied. The time frame will be dependent on the ambient conditions. Feathering of thicknesses less than 10 - 15 mm should be avoided at edge terminations.

If higher Thermal Insulation performance is required then increased thicknesses can be applied. When



increased foam thickness is required the application rate must be monitored to prevent excessive exotherm / temperature increase in the applied thickness per pass.

SUBSTRATE/SURFACE PREPARATIONS

- the substrate temperature should be a minimum of 15°C to achieve good foam adhesion and effective product yield.
- Do not apply spray foam insulation to damp substrates.
- Check the atmospheric conditions to ensure the temperature of the surface to which the product is to be applied is a minimum of 3°C above the Dew Point at the time of application.
- The product should not be applied in windy conditions due to potential application losses, possible contamination of surrounding areas / surfaces from wind-borne spray and the lack of application control resulting in variable applied thickness and surface evenness / irregularities.
- In internal application situations, protect surrounding surfaces from overspray.
- The product can be applied in temperatures of up to 35°C, so long as Dew Point conditions are met and the applied thickness and rate of application are controlled.
- In specific temperature and humidity conditions the effects of water vapour 'drive' must be considered in system design and application requirements. This is also important under possible water vapour condensation temperature / humidity conditions.
- When spraying or pouring, excessive thickness should not be applied as the exotherm of the reaction may lead to spontaneous combustion, excessive pressure build up or thermal expansion from the significant heat developed in the foaming reaction.

DISPOSAL

Liquid Systems: Liquid polyol or isocyanates should be disposed of with an EPA approved industrial waste company which meet all applicable federal, state and local laws and regulations.

Cured Urethanes: Fully reacted and cured polyurethanes are inert and can be disposed of as regular landfill.

Container: Dispose of decontaminated drums in accordance with all applicable federal, state and local laws and regulations.

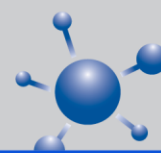
Do Not Re-use Empty Container.

Do Not Cut or Weld Empty Container.

WATER CONTAMINATION CAN CAUSES DANGEROUS PRESSURE BUILD UP IN ISOCYANATE DRUMS

DISCLAIMER

This information is given in good faith but without warranty and is supplied to users based on our general experience and, where applicable, on the results of tests on samples of typical manufacture. However, because of the many factors which are outside our knowledge and control that can affect the use of these products, it is imperative that the end user is satisfied that the material will meet



their individual processing and performance requirements. Pacific Urethanes Pty Ltd cannot accept liability for any injury, loss or damage resulting from reliance upon this information.

FIRE RATING AND BUILDING CODES

UrePac Rigid 4 100 contains fire retardant chemical additives at a low level. The type and level of the Flame retardant of chemical, incorporated in the Polyol component is only sufficient to cause the foam to self-extinguish once the flame source is removed from the foam's surface.

Although UrePac Rigid 4 100 Polyol contains fire retardant, foam produced from this system will burn while in contact with a flame or under the high temperature and combustion conditions that occur in building fires. The Building Code of Australia sets out the requirements/use conditions and guidelines for the use of these systems in building applications.

All sales of this product shall be subject to Pacific Urethanes' Terms and Conditions of Sale. For a copy of these terms please contact us at info@pacificurethanes.com.

For additional information, consult the Material Safety Data Sheet for this product.

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