

TECHNICAL DATA SHEET

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 Limited
 ABN 48 004 297 009



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DESCRIPTION

***HISEAL* provides a tough, elastic, UV resistant and weatherproof seal in exterior joints in concrete, brick and concrete block-work construction.**

HISEAL is a high performance, 1-part polyurethane construction sealant ideal where extra toughness and resistance to the elements is needed.

RECOMMENDED USES

- ◆ Sealing expansion joints in
 - Tilt-up and precast concrete construction
 - Brick and concrete block work
 - Tiled walls
 - In-situ concrete
- ◆ Perimeter sealing around window and doorframes
- ◆ Tiled Walls
 - Internal corners
 - Expansion joints
- ◆ Interior / Exterior

ALSO SUITABLE FOR

- ◆ Office partitioning
- ◆ Shop fitting
- ◆ Wet-area fixtures (eg Baths, Sinks)
- ◆ Shower installations
- ◆ Splashbacks
- ◆ Architraves, skirting boards
- ◆ Façade Panels
- ◆ Sheet metal lap joints

SUITABLE FOR USE ON

- ◆ Concrete & Cement
- ◆ Brick
- ◆ Concrete Block
- ◆ Aluminium
- ◆ Ceramic Tiles
- ◆ Laminate

- ◆ Stainless Steel
- ◆ Galvanised Steel
- ◆ Timber
- ◆ Particleboard
- ◆ MDF
- ◆ Plywood
- ◆ Plasterboard

FEATURES AND BENEFITS

- ◆ **UV and Weather Resistant**
 - Excellent resistance to aging and weathering
 - Permanently flexible
 - Will not shrink or crack
- ◆ Thixotropic - No sagging or running
- ◆ Excellent **flexibility** – joint movement $\pm 25\%$
- ◆ Acoustic Rated
- ◆ Suitable for contact with **drinking water – AS4020-1994**
- ◆ **Non-corrosive** neutral cure
- ◆ Paintable with acrylic based surface coatings
- ◆ AS1157-1972 **Fungus and mildew resistant**

TYPICAL PROPERTIES

Typical properties after 7 days cure at 25°C and 50% RH

Appearance	Non sag smooth thixotropic paste
Chemical Type	Polyurethane
Application Temperature	+5°C to + 35°C
Tool Working Time	30 minutes at 20°C
Tack Free Time	6 to 12 hours
Cure Rate	2 mm per 24 hour period
Max. Joint Movement	$\pm 25\%$
Max. Joint Width	50mm
Elongation at Break	900%
Cure Hardness	Shore A 30
Tensile Strength	1.3 N / mm ²
Service Temperature	-40°C to + 70°C
Chemical Resistance	Dilute Alkalis and acids. Temporary contact with petrol, diesel and other hydrocarbons.



PRECAUTIONS

- ◆ Do NOT use in:
 - Joints subject to prolonged immersion in water eg Swimming pools
 - Contact with chlorinated water
 - Joints subject to foot or vehicle traffic - Use HISEAL™ TG.
 - Marine applications
 - Contact with materials containing bitumen
 - Prolonged contact with hydrocarbons
 - Glazing applications
 - Below grade applications
- ◆ HISEAL may not cure when used in confined or air free spaces
- ◆ Do not apply solvent or oil-based paint to HISEAL
- ◆ Do not use on Teflon, polyethylene or polypropylene.
- ◆ **Pre-test** for staining or discolouration on unpredictable absorptive surfaces such as marble, limestone or granite.

JOINT DESIGN

Consult Joint Design Guide available from Ramset or the web.

Unless otherwise specified, joint design must conform to the following joint width to joint depth relationships.

Joint Width	Joint Depth
6 mm to 10 mm	Equal to Joint Width
10 mm to 20 mm	10 mm
20 mm to 50 mm	Equal to ½ x Joint Width

Correct joint design is necessary to ensure sealants do not split or tear.

- ◆ Depth must not be less than 6-mm
- ◆ Control joint depth using closed-cell polyethylene backer rod available from Ramset, or other non-adherent material to prevent three-sided adhesion
- ◆ Joint movement capacity is ± 25% of nominal joint width.
- ◆ Anticipated joint movement must be less than the joint movement capacity.
- ◆ Lap shear joints should have a bead width equal to, or greater than twice the anticipated movement.
- ◆ For all applications requiring a high degree of dynamic movement the designed joint width should be at least four times the total anticipated joint movement

Failure to observe these recommendations can result in tearing or splitting of the sealant.

APPLICATION INSTRUCTIONS

JOINT PREPARATION

Concrete must be at least 28 days old.

Surfaces must be clean, dry, sound and free from laitance, dust, oil, grease, form release agents, surface coatings, adhesives or any agent, substance, material or contaminant that may interfere with the bond or may later affect the sealant.

Remove all dirt, dust, laitance and loose materials by vigorous wire brushing and compressed air jet.

Joint faces must be sound, flat and free of surface irregularities. Saw cut or reface any joint faces that do not meet these requirements with a suitable epoxy or cement mortar.

For a neat finish, cover the face of joint edges with masking tape before applying HISEAL. To avoid three-sided adhesion, ensure a bond breaker, such as Ramset Backer Rod is used in the joints prior to application of HISEAL.

Priming: Prime non-porous surfaces such as aluminium and powder coated steel with Ramset Primer PRPUL1 prior to application of HISEAL.

If in doubt about the suitability of the surface, test adhesion before committing to the whole job.

- ◆ Apply bead of HISEAL to job surface
- ◆ Use spatula to force sealant bead into contact with surface
- ◆ Allow to cure through (See Curing)
- ◆ Assess bond by removing sealant

MIXING

No mixing is required.

APPLICATION

Ensure surface and sealant temperatures are above 5°C.

Apply HISEAL sealant in a continuous operation using a positive pressure to properly fill and seal the joint.

Tool the sealant with adequate pressure to ensure it is forced against the back-up material and onto the joint surfaces to promote adhesion.

A tool with a convex profile is recommended to keep the sealant within the joint.



Tooling Time: Tooling should be completed within 30 minutes of application.

Excess sealant should be wiped from all surfaces with a cloth saturated in xylene before it cures. Cured *HISEAL* is difficult to remove without affecting the substrate it has been applied to.

Masking around joints before applying sealant will make clean up easier. Remove masking tape before sealant skins (about 30 minutes).

Curing: *HISEAL* is rain resistant in vertical joints after 24 hours from application.

Cure Rate is 2 mm of thickness per 24-hour period. Full cure through is achieved within 7 days.

Painting: Apply water-based Acrylic surface coatings after 24-hours. Do not use oil or solvent-based coatings on *HISEAL*.

CLEAN UP

Clean up uncured material and equipment immediately after use using xylene. Cured *HISEAL* is difficult to remove via chemical means and mechanical means may be necessary.

ESTIMATING CHART

Lineal Metres per 960 g (600 ml) Sachet (Approx)

Joint Depth	Nominal Joint Width (mm)							
	6	8	10	12	15	20	25	50
6 mm	16.6	--	--	--	--	--	--	--
8 mm	x	9.4	--	--	--	--	--	--
10 mm	x	x	6.0	5.0	4.0	3.0	--	--
12.5 mm	x	x	x	x	x	x	1.9	--
25 mm	x	x	x	x	x	x	x	0.5



Lineal Metres per 450 g (300 ml) Cartridge (Approx)

Joint	Nominal Joint Width (mm)							
	6	8	10	12	15	20	25	50
6 mm	8.3	--	--	--	--	--	--	--
8 mm	x	4.7	--	--	--	--	--	--
10 mm	x	x	3.0	2.5	2.0	1.5	--	--
12.5 mm	x	x	x	x	x	x	1.0	--
25 mm	x	x	x	x	x	x	x	0.3

Coverage based on nominal dimensions

“--” Shallow joint. Risk of sealant tearing. Make joint deeper

“x” Joint depth > width. Risk of sealant tearing. Adjust depth with backing rod

Refer above for correct joint design details

HEALTH AND SAFETY

- ◆ Avoid contact with the skin, eyes.
- ◆ Avoid breathing vapour.
- ◆ If swallowed, do not induce vomiting give a glass of water.
- ◆ Wear protective gloves when using.
- ◆ For more detailed information refer to the Material Safety Data Sheet available from Ramset or the web

FIRE

HISEAL is not flammable for transport and storage. Cured and uncured *HISEAL* is combustible in the event of fire.

STORAGE

Store between 5°C and 30°C. Shelf life is 1 year in original unopened container.

COLOUR, PACK SIZES AND ORDER NUMBERS

Colour	Pack Size	Order No
Grey	300 ml cartridge	HYSLGYG375
Grey	600 ml Sachet	HYSLGYG720
White	300 ml cartridge	HYSLWHG375
White	600 ml Sachet	HYSLWHG720

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