

# Hi-Seal™ DuraMax

## Silyl Modified Polymer

### Description

Ramset DuraMax is a solvent free versatile 1-part low modulus silyl modified polymer (SMP) sealant for multipurpose applications in the construction and general building industry.

DuraMax cures with humidity from the air to form a tough but low modulus sealant with high elasticity, which has an excellent resistance against weathering and chemicals. This new easy to use sealant is even resistant to water immersion during the early stages of curing.

DuraMax is free of solvents, PVC, PCB and isocyanates and is fully paintable according to DIN 52452, PT4. It has an extraordinary low shrinkage on curing.

Ramset Hi-Seal DuraMax Construction Sealant passes ISO 11600-F-25LM and is New Zealand E2/AS1 compliant. This also confirms a ± 25% joint movement capability.

DuraMax is suitable for most common building materials such as concrete, brick, fibre cement boards, glass, ceramic tiles, marble, natural stone, metals, timber, rigid PVC and all connection and movement joints, indoor and outdoor. It is ideal for all construction joints, such as at window, door, roof and facades, joints in wood and metal architraves.

The VOC level of 10 gms/L means it can confidently be specified for any building compliant to NZGBC requirements. Ramset DuraMax is one of the safest and lowest VOC construction sealant on the New Zealand market.

### General Properties

Type	Silyl Modified Polymer (SMP), neutral curing
Colours:	Grey, Black, White
Curing system:	With humidity from air
Sagging:	< 2 mm (DIN 52454-ST-U 26-23)
Extrusion rate:	> 100 g/min (DIN 52456 - 6 mm)
Density:	Approximately 1.5 g/cm (DIN 52451 -PY)
Total Joint movement:	± 25% of joint width
Skin formation:	(+23°C / 50% RH) Approximately 2 hours
Curing speed:	(+23°C / 50% RH) Approximately 2 mm/24 hours
Shrinkage:	< 3% (DIN 52451 -PY)
Tensile strength:	(@ 100% elongation) Approximately 0.3 - 0.4 N/mm <sup>2</sup> (DIN 52455 NWT-1-A2-100)
SHORE A hardness:	Approximately 20 (DIN 53505, 28 days at 23°C/50% RH)
VOC	10 grams per litre as per SCAQMD Rule 1168.
Solvent Content:	Zero
Isocyanate Content:	Zero
Temperature limits:	Approximately -40°C to +80°C; short-time up to +100°C
Application temperatures:	+5°C to +40°C (surface temperature)



## Preparation of Joints

Surfaces to be sealed have to be sound, clean and dry and free from dust, grease and release agents and flaky paint or old sealant residue. Do not attempt to re-seal over silicone sealants. Materials to be sealed must be compatible with DuraMax (according to DIN 52452, Part 1); they must not contain bitumen or tar. Adhesion and compatibility with plastics must be tested to ensure good adhesion. When sealing coated surfaces (such as water repellent facades) a pre-test for compatibility must be carried out. With some acrylic coatings adhesion loss has been observed due to plasticizer migration.

Joint design is done according to DIN 18540; that is approximately 2:1 ratio width to depth. Avoid three sided adhesion. Always use profiles made from polyethylene foam for pre-filling, to avoid adhesion of the sealant to the backside of the joint. Profiles have to be compatible with DuraMax; do not use products containing bitumen, tar or oil. Cover edges of the joint with adhesive masking tape.

Primers: Use DuraMax Porous Primer, a film forming film-forming primer for concrete and other porous materials and for a few metals and plastics. For sealing of natural and synthetic stone compatibility tests have to be performed. This product can be used without primer on anodized aluminium, galvanised steel, rigid-PVC, polystyrene and polycarbonate. Any glass surfaces must be primed using DuraMax Glass Primer to prevent UV attack to the glass / sealant interface.

## Application

Fill joints with sealant evenly and without trapping air. Smooth surface immediately using spatula wetted with water with a SMALL amount of wetting agent added. Remove adhesive tape directly after smoothing of the surface and before sealant forms any skin. Use only low concentration of wetting agent to avoid discoloration of sealant or adjacent surfaces. Use opened containers within short period of time.

Curing time depends on temperature and humidity. Once a firm skin has formed paint can be applied. It is best to use a pure acrylic water based paint as the first coating over the sealant. Note that DuraMax has a movement capability far greater than a normal paint film. If the joint is moving then cracks can appear in the paint surface.

## Limitations

Ramset DuraMax is not recommended for sealing floor joints. This sealant is not designed to seal continuously immersed joints or below waterline applications.

## Cleaning

Uncured material can be removed using Solvent. This solvent can also be used to remove grease from the surface to be sealed. Cured materials can only be removed mechanically.

## Health & Safety

Fuller details on each of the products mentioned are available on the product Safety Data Sheets. To ensure no harm is caused to persons using Ramset products, it is recommended that the appropriate Safety Data Sheets are read by all concerned.

## First Aid

If swallowed do not induce vomiting, give a glass of water and contact a doctor immediately.

If skin contact occurs remove contaminated clothing, wash with warm soapy water. Do not scrub.

If eye contact occurs hold open and flood with water for at least 15 minutes. Get medical advice.

For emergency information contact the National Poisons Information Centre, phone 0800 764 766 (0800 POISON) or CHEMICAL, phone 0800 243 622.

## Disposal

If spilt, absorb with clay, sand or earth. Dispose of in land fill.

## Shelf Life

9 months if stored in cool, dry conditions in original, unopened containers.

## Usage

The following usages apply for a 10 x 10mm<sup>2</sup> joint:

- 600ml sausage - approximately 6 metres
- 300ml cartridge - approximately 3 metres

## Packaging

Colour	Pack Size	Order Number
White	300ml cartridge	HSDMW300
Grey	600ml sausage	HSDMG600
Black	600ml sausage	HSDMB600