PRODUCT DATA SHEET

# DUROSEAL HYBRID 40FC

One-Component Advanced Polymer Sealant

DUROTECH
Engineered Construction Chemicals
Made In Australia For Over 45 Years

## DESCRIPTION

DUROSEAL HYBRID 40FC is a one component advanced polymer sealant, high-performance, isocyanate free, elastomeric joint sealant based on advanced PU Polymer technology. It offers excellent performance in moving joints and isolation joints. It exhibits the advantages of both polyurethane and silicon sealants like excellent UV stability, outstanding adhesion and primer less bond to most substrates and can be used for indoor and outdoor applications.

## FEATURES

- Isocyanate and tin free, ultra-low VOC
- Non-corrosive and paintable
- Movement accommodation factor ± 30%
- Excellent adhesion without priming
- Fast curing & early skin formation, superior UV resistance
- Highly resistant to sea water, mineral oils, aliphatic solvents, dilute acids and alkalis and extended life due to advanced polymer technology
- Odorless
- Stable at temperatures from - 40°C to 200°C
- Safe and environmentally friendly

## USES

- Typical applications for DUROSEAL HYBRID 40FC medium modulus include; sealing of expansion and isolation joints on buildings and concrete structures like bridge decks, retaining walls ,boundary walls, water retaining structures, precast concrete panel joints, perimeter caulking (windows, door, panels), EIFS, aluminum, wood, masonry and sealing of roof flashing and termination grooves for waterproofing.
- As a waterproofing perimeter fillet beneath waterproofing membranes
- Waterproof sealant in wet area water stops

## TECHNICAL INFORMATION

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| **Skin Over Time, mins.** | | 40 - 50 |
| **Tack Free Time, mins.** | ASTM C-679-87 | 60 - 70 |
| **Shrinkage,%** | ASTM C-1241-00 | <5 |
| **Flow (sag or slump)** | ASTM C-639-01 | Non Sag |
| **Hardness : Shore A** | ASTM D-2240-97 | 30 - 35 |
| **Movement Capability, %** | ASTM C-719 | ±30 |
| **Peel Strength (N), concrete** | ASTM C-794-93 | >30 |
| **Tensile Strength (N/mm2)** | ASTM D-412-98a | 1.0 |
| **Elongation at break, %** | ASTM D-412-98a | >400% |
| **Effects of Accelerated Aging @ 300 hrs. UV exposure** | ASTM C-793 | No deterioration |
| **Application Temperature (°C)** | | +5 to +40 |
| **Service Temperature (°C)** | | - 40 to 200 |

## Colour

White, Off-white, Grey, and Black. Custom colours available!

## PACKAGING:

600 ml sausage, 20 sausages per carton.



SINCE 1977

## Advantages

- No chemical attack on substrate
- Can be over painted, preferably with flexible paints
- No mixing, easy tooling and minimal wastage
- Can be used to seal expansion joints
- Easy Application
- Reduce dirt pick-up
- Higher stability compared to normal PU sealants
- Provides long lasting, weather resilient seal
- Better air quality especially in indoor applications. Suitable for all climates
- Single component & convenient packing

## Expansion Joint Design

DUROSEAL HYBRID 40FC may be used in any joint designed in accordance with accepted architectural/ engineering practices. Joint width should be at least 4 times the anticipated movement, and not less than (5mm). While applied on an expansion joint, the depth (D) of the sealant should be equal to the width (W) of the joints that are less than 10mm wide. For wider joints, width to depth ratio should be 2:1. The maximum width of the joint on which DUROSEAL HYBRID 40FC can be applied is 25mm.

## Joint Backing

Closed cell polyethylene backer rod is recommended as joint backing to control sealant depth and to ensure intimate contact of sealant with joint walls when tooling. Where depth of joint is insufficient for the use of backer rod, an adhesive backed polyethylene tape (bond breaker tape) should be used to prevent three-sided adhesion. All backing should be dry at time of sealant application.

## Yield

The following formula is an approximate guideline to calculate foreseen yield for a standard 600ml sausage of DUROSEAL HYBRID 40FC.
L = 600 / (W x D)
Where: L = Length of sealant in meters obtained per cartridge.
D = Depth of the joint in mm W = Width of the joint in mm

## Substrate Preparation

Surfaces must be sound, clean, and dry. All release agents, dust, loose mortar, laitance, paints, or other loose particles must be removed. This can be accomplished with a thorough wire brushing, sanding, or solvent washing, depending on the contamination. It is recommended that surface temperatures be below 40˚C at the time the sealant is applied.

## Priming

DUROSEAL HYBRID 40FC typically adheres to common construction substrates without primers; however, due to the variability of substrate finishes, where deemed necessary, use a suitable primer.

## Application

DUROSEAL HYBRID 40FC is easy to apply with conventional caulking equipment. Ensure that the backer rod is friction fitted properly. Mask the sides of the joint with tape prior to filling for a cleaner finish. Fill the joint completely with a proper width-to-depth ratio and tool to ensure intimate contact of sealant with joint walls. Dry tooling is always preferred, although xylene can be used in limited amounts to slick the spatula if needed following the initial dry tooling.

## Clean Up

Excess sealant and smears adjacent to the joint interface can be carefully removed with xylene or mineral spirits before the sealant cures. Any utensils used for tooling can also be cleaned with xylene or mineral spirits.

## For Optimum Performamce

In cool or cold weather, store container at room temperature for at least 24 hours before using.

DUROSEAL HYBRID 40FC can adhere to other residual sealants in restoration applications. For best results always clean the joint as advised in the Surface Preparation section of this data guide. A product field adhesion test for DUROSEAL HYBRID 40FC within the specific application is always recommended to confirm adhesion and suitability of the application.

When using DUROSEAL HYBRID 40FC in a traffic-bearing horizontal joint, use a firmer joint backing, such as neoprene rod or polyethylene foam block, and recess the surface of sealant (3mm-6mm).

Pursuant to accepted industry standards and practices, using rigid paints and/or coatings over flexible sealants can result in a loss of adhesion of the applied paint and/or coating, due to the potential movement of the sealant however, should painting and/or coating be desired it is strongly recommended that the applicator of the paint and/or coating conduct on-site testing to determine compatibility and adhesion.

## Limitations

- Do not apply over contaminated surfaces.
- Do not use DUROSEAL HYBRID 40 FC as a structural (load - transferring) sealant.
- DUROSEAL HYBRID 40 FC is not recommended for use with natural rubbers such as EPDM, PVC or TPO.
- DUROSEAL HYBRID 40 FC is not recommended for use under polyurethane waterproofing membranes.
- DUROSEAL HYBRID 40 FC is not recommended for on damp or green concrete.
- DUROSEAL HYBRID 40 FC is not recommended for exposure to harsh chemicals such as acids, degreasing agents, or hydrocarbons (chlorine, bromine, etc.).
- DUROSEAL HYBRID 40 FC is not recommended for soft architectural finishes without prior testing.
- DUROSEAL HYBRID 40 FC is not recommended for Natural Stone without prior testing.
- DUROSEAL HYBRID 40 FC is not recommended for use on bitumen will result in discoloration.
- DUROSEAL HYBRID 40 FC is not recommended for use in chlorinated, potable, heavy or wastewater.

## Storage and Shelf Life

DUROSEAL HYBRID 40FC has a shelf life of 12 months when stored in tightly closed original cartons, in a dry place at a temperature between +5°C and +25°C.

## Curing Time

DUROSEAL HYBRID 40FC generally cures at a rate of 2mm per day at 25°C and 50% relative humidity. DUROSEAL HYBRID 40FC skin in 10-15 minutes and be tack-free in 30-45 minutes. Lower temperatures and humidity will extend curing time.

## Health and Safety

Use only with adequate ventilation. Prevent contact with skin, eyes and clothing. Wash thoroughly after handling. Avoid breathing vapors. DO NOT take internally. Always utilize the accompanying MSDS for information on Personal Protective Equipment (PPE) and health Hazards.

**Durotech Industries Pty Ltd**

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