

Donseal® PU440 Ultra

One component, low modulus, non sag, elastomeric polyurethane sealant



DESCRIPTION

Donseal PU440 Ultra is a one component, solvent free, non sag polyurethane sealant that cures by reacting with air humidity to form a tough and highly elastic sealant. Donseal PU440 Ultra has a very wide service temperature range. Suitable for vertical and horizontal joints.

APPLICATIONS

- » General sealing of construction and expansion joints.
- » Basement walls.
- » Precast concrete elements.
- » For concrete, wood, marble, stone, aluminum, steel, ceramic, gypsum boards, glass, etc.

ADVANTAGES

- » Very easy and economical to use.
- » One component.
- » Solvent free.
- » Excellent aging resistance.
- » Paintable, consult DCP's Technical Department for more details.
- » Remains elastic at low temperatures.
- » Good resistance to microorganisms and a variety of chemicals.
- » Good adhesion to concrete without the need for priming.
- » Excellent storage stability and shelf life.
- » Low VOC.

STANDARDS

Donseal PU440 Ultra complies with:

- » ASTM C920, Type S, Grade NS, Class 35, Use NT, T₁, A, G, M and I*.
- » LEED® EQc 4.1 SCAQMD, Rule 1168.

* For use I — at normal condition for immersion test.

TECHNICAL PROPERTIES @ 77°F (25°C) & 50% RH:

Colour:	White, grey, beige, black
Specific gravity:	1.47 ± 0.05
Curing rate:	≈ 0.1" (2.5 mm)/day @ 73°F (23°C) & 50% RH
Skin time:	30 - 50 min @73°F (23°C) & 50% RH
Tooling time:	20 min @73°F (23°C) & 50% RH
Shore A hardness: ASTM C661	40 ± 5 @ 7 days
Service temperature:	-4 up to 158°F (-20 up to 70°C)
Application temperature:	40 to 120°F (5 to 50°C)
Adhesion in peel: ASTM C794	Concrete Pass, no adhesion loss Aluminum Pass, no adhesion loss Glass Pass, no adhesion loss
Tack free time: ASTM C679	1:00 to 2:00 hr @ 73°F (23°C) & 50% RH
Elongation at break: ASTM D412	≥ 500% @ 7 days
Tensile strength: ASTM D412	≥ 255 psi @ 7 days (1.8 MPa)
Tear strength: ASTM D624	≥ 40 pli @ 7 days (7 kn/m)
Effects of accelerated weathering: ASTM C793	No cracking
Effects of heat aging: ASTM C1246	Pass @ 158°F (70°C)
Effects of continuous Immersion*: ASTM C1247 After 10 weeks of immersion at 73°F (25°C) water	Pass , Class 2 (at normal conditions)
Movement accommodation: ASTM C719	± 35%
VOC:	≤ 10 g/ltr (comply with LEED)

*Tested with primer.



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METHOD OF USE

SURFACE PREPARATION

All substrates should be clean, dry, free from dust, oil, grease and any contaminations that could effect the adhesion.

If the substrates need to be cleaned, use methyl ethyl ketone (MEK) or acetone. Always be sure that the substrates are dry before the application.

PRIMING

- » Donseal PU440 Ultra generally has strong adhesion to common clean, dry and sound substrates without primers. However, for stronger adhesion, Strongcoat Primer or Flexprime Universal can be used on porous and nonporous surfaces in order to achieve optimum adhesion strength.
- » For joints which will be continuously submerged in water, Flexprime Universal or Strongcoat DPM should be used. Consult DCP's Technical department for best primer suggestions.
- » Using a small brush apply one thin coat at the joint sides and avoid over priming. Apply Donseal PU440 Ultra over the primed surface after 12 - 24 hours to achieve optimum adhesion strength.

APPLICATION

The recommended application temperature range is 41°F (5°C) to 122°F (50°C). For cold weather application, store the product in a heated area at 68°F (20°C) for 24 hours prior to use. Install polyethylene joint backing rod to control the sealant depth.

For optimum performance in expansion joints, the ratio of width to depth of the sealant should be 2:1. Minimum sealant depth should however be ¼" (6 mm).

For optimum performance, Donseal PU440 Ultra should be applied when the joint is at mid-point of its designed expansion and contraction.

For cartridge application:

- » Use a utility knife to cut/trim the nozzle cap diagonally so that it fits the joint width.
- » Open the tip of the cartridge by using a pin to cut the seal (Caulking guns usually have a pin tool to be used).
- » Place Donseal PU440 Ultra cartridge into the cartridge gun.
- » Press the tip of the gun firmly towards the point of application and pull the trigger to release the sealant.

For sausage application:

- » Place Donseal PU440 Ultra sausage inside the caulking gun barrel.
- » Use scissors or utility knife to cut the clip off the sausage while still in the gun.
- » Cut/trim the nozzle cap diagonally so that it fits the joint width.
- » Extrude Donseal PU440 Ultra by squeezing the large trigger.
- » To replace the sausage, simply unscrew the end cap, dispose of the used pack, and load in the new sausage.

Extrude and dispense firmly into the joint while ensuring complete contact between the applied sealant and joint walls. Maintain a steady flow of sealant to avoid air entrapment, and avoid overlapping the sealant. Tooling and finishing should be carried out immediately after the application of the sealant.

LIMITATIONS

- » Not recommended for unsound substrates.
- » Although Donseal PU440 Ultra is generally paintable, it is advisable test for the specific paint for compatibility.
- » Long exposure to UV, will reduce surface gloss, but will not affect sealant performance.
- » For thicknesses below 3/8", it is recommended to tool immediately.

CLEANING

Clean tools and equipment first with paper towels and then wipe with Acetone, xylene or other suitable solvents.

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PACKAGING

Donseal PU440 Ultra is available in 20.2 fl. oz. (600 ml) sausages, and in 10.1 fl. oz. (300 ml) moisture proof cartridges.

CONSUMPTION IN JOINTS

(Lineal feet per 10.1 fl. oz. cartridges)

Width \ Depth	1/4"	3/8"	1/2"	3/4"	1"
1/4"	24.2	16.2	12.1	8.1	
3/8"		10.8	8.1	5.4	
1/2"			6.1	4.0	3.0

(Lineal feet per 20.2 fl. oz. sausage)

Width \ Depth	1/4"	3/8"	1/2"	3/4"	1"
1/4"	48.4	32.4	24.2	16.2	
3/8"		21.6	16.2	10.8	
1/2"			12.2	8.0	6.0

STORAGE

Donseal PU440 Ultra should be stored in original unopened packages at temperatures between 40°F and 86°F (4°C and 30°C) in a dry place.

SHELF LIFE

Donseal PU440 Ultra has a shelf life of 12 months from date of manufacture if stored under the recommended conditions.

If these conditions are exceeded, contact DCP Technical Department for advice.

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Donseal® PU440 Ultra

CAUTIONS

HEALTH AND SAFETY

If Donseal PU440 Ultra comes into contact with the eyes, flush with copious amounts of cold water and obtain medical attention.

Product is non-hazardous once cured.

For further information, refer to the Material Safety Data Sheet.

WARRANTY

Unless expressly stated otherwise in the Sales Documents, the Limited Warranty shall expire on the expiry date listed on the Product's label or packaging. The full text of DCP's limited warranty is found in DCP's standard terms and conditions of sale (the "Terms"), which are available at [DCP Website/USA – Terms & Conditions](http://www.dcp-int.com/USA-Terms-Conditions). DCP's limited warranty is in all cases subject to, and conditioned upon, the Terms.

MORE FROM DON CONSTRUCTION PRODUCTS

A wide range of construction chemical products are manufactured by DCP which include:

- » Concrete admixtures.
- » Surface treatments
- » Grouts and anchors.
- » Concrete repair.
- » Flooring systems.
- » Protective coatings.
- » Sealants.
- » Waterproofing.
- » Adhesives.
- » Tile adhesives and grouts.
- » Building products.
- » Structural strengthening.

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Note:

We endeavour to ensure that any information, advice or recommendation we may give in product literature is accurate and correct. However, because we have no control over where and how products are applied, we cannot accept any liability arising from the use of the products.

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