

Donseal® PU440

One component, non sag, elastomeric polyurethane sealant with high tear and weather resistance [Formerly known as Flexseal PU440]



DESCRIPTION

Donseal PU440 is a one component non sag polyurethane sealant that cures by reacting with air humidity to form a tough and highly elastic low modulus sealant. Donseal PU440 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, aluminum, steel, ceramic, gypsum boards, etc.

ADVANTAGES

- » Very easy and economical to use.
- » One component.
- » Excellent aging resistance.
- » Paintable.
- » Excellent acoustic properties.
- » Remains elastic at temperatures down to -40°F (-40°C).
- » Good resistance to microorganisms and a variety of chemicals.
- » Good adhesion to most surfaces without need for priming.
- » Excellent water resistance.

STANDARDS

Donseal PU440 complies with:

- » ASTM C920, Type S, Grade NS, Class 25, Use NT, T₁, A, M and I.
- » Federal specification TT-S-00230C, Type II, Class A.
- » EN 15651-1:2012, F-EXT-INT-CC.

Environmental:

- » LEED® EQc 4.1 SCAQMD.
- » Rule 1168.

METHOD OF USE

SURFACE PREPARATION

All substrates should be clean, dry, free from dust, oil, grease and any contaminations that could effect the bonding. If the substrates need to be cleaned, use methyl ethyl ketone (MEK), acetone or grease remover. Always be sure that the substrates are dry before the application.

TECHNICAL PROPERTIES:

Color:	Various
Specific gravity:	1.16 ± 0.03
Application temperature:	40 up to 100°F (4 to 38°C)
Service temperature:	-40 to 175°F (-40 to 80°C)
Shock temperature:	248°F (120°C)
Curing rate:	≈ 1/8" (3 mm)/day
Tack free time: ASTM C679	1 - 3:30 hr @ 75°F (24°C) & 50% RH
Shore A Hardness: ASTM C661	40 ± 5 @ 21 days
Elongation at break: ASTM D412	≥ 700% @ 7 days
Tensile strength: ASTM D412	≥ 260 psi @ 7 days (1.8 MPa)
Tear strength: ASTM D624	≥ 45 pli @ 7 days (8 kn/m)
Adhesion in peel*: ASTM C794	Concrete No adhesion loss at 15 lbf (70 N) Aluminum No adhesion loss at 15 lbf (70 N)
Effects of accelerated weathering: ASTM C793	No cracking
Effect of heat aging: ASTM C1246	Pass @ 158°F (70°C)
Thermal resistance:	Passed 100 days @ 176°F (80°C)
Movement accommodation: ASTM C719	± 25%
Water immersion*: ASTM C1247	Passes 10 weeks with movement cycling
VOC: ASTM D2369	≤ 75 g/ltr (comply with LEED)

* Tested without primer.



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PRIMING

- » Donseal PU440 generally has strong adhesion to common clean, dry and sound substrates without primers. However, Flexprime Universal can be used on porous and non-porous surfaces in order to achieve optimum adhesion strength. For joints which will be continuously submerged in water, Flexprime Universal is recommended.
- » Using a small brush apply one thin coat at the joint sides and avoid over priming. Apply Donseal PU440 sealant while the primer is still tacky to achieve optimum adhesion strength.
- » Alternatively, for porous substrates and joints which will be continuously submerged in water, Flexprime PS100 Primer can be used. It is not recommended to use Flexprime PS100 for non-porous substrates. Mix the two components of Flexprime PS100 and apply using small brush. Apply Donseal PU440 within 10 - 30 minutes from the application of Flexprime PS100 at 73°F (23°C).

APPLICATION

The recommended application temperature range is 40°F to 100°F (4°C to 38°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, the ratio of width to depth of the sealant should be 2:1. Minimum sealant depth should however be 1/4" (6 mm).

For optimum performance, Donseal PU440 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 for this step).
- » Place Donseal PU440 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:

- » A barrel-caulking gun should be used for application, unscrew the gun end cap and fix the nozzle into the cap.
- » Place Donseal PU440 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 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 is generally paintable, it is recommended test for the specific paint compatibility.
- » Long exposure to UV, will reduce surface gloss, but will not affect sealant performance.

CLEANING

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

PACKAGING

Donseal PU440 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"	5/8"	3/4"	15/16"
1/4"	24.4	16.3			
3/8"			6.5	5.4	4.3
5/8"					2.6

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STORAGE

Donseal PU440 should be stored in original unopened packages at temperatures between 40°F and 77°F (4°C and 25°C) in a dry place.

SHELF LIFE

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

The technical properties and usages of this product may be adversely affected if these conditions are exceeded. DCP Technical Department should be contacted for advise.

CAUTIONS

HEALTH AND SAFETY

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

Product is non-hazardous once cured.

For further information refer to the Material Safety Data Sheet.

FIRE

Donseal PU440 is nonflammable.

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](#). DCP's limited warranty is in all cases subject to, and conditioned upon, the Terms.



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