

# DonProof PU-P60

Spray applied, pure polyurea membrane for waterproofing and protection



## DESCRIPTION

DonProof PU-P60 is a sprayable, high-quality, two-component, 100% solids, aromatic pure polyurea coating that cures to form a solid, seamless, watertight and waterproof, high density polyurea membrane, with high mechanical properties.

DonProof PU-P60 is designed to have excellent adhesion on many common construction surface such as concrete, ceramic tiles, metals, spray polyurethane foam, plywood, asphalt/bituminous sheets when primed with Strongcoat Primer Range.

DonProof PU-P60 adaptability and drying time makes it suitable for application on uneven surfaces and in areas of any shape, whether curved or squared.

## APPLICATIONS

Waterproofing and protection of:

- » Sloped and flat roofs (walkable), balconies, and overhangs.
- » Green roofs.
- » Retaining walls and foundations.
- » Tanks and irrigation canals, suitable for contact with potable water.
- » Water, waste water and storm water plants and infrastructures.
- » Car park and bridge decks.
- » Cut and cover structures.
- » Furniture and thematizations.
- » Swimming pools, aquariums, lakes.
- » Vehicle and boat coatings (bed liners).

## ADVANTAGES

- » Solvent free.
- » Excellent mechanical properties, high tensile and tear strength, high abrasion resistance.
- » Excellent adhesion to all common substrates.
- » Strong, flexible and hard-wearing membrane.
- » Seamless and monolithic.
- » Excellent thermal stability. Max service temperature 120°C.
- » Cold Resistance: down to minus 40°C.
- » Excellent stability and durability.
- » Friendly to the environment, free from harmful VOC compounds.
- » Optimum maintenance and cleaning properties for the cured surface.
- » Trafficable and it accept a rough finish to make it non-slip.

## TECHNICAL PROPERTIES @ 25°C:

Colour:	Grey Other colours are available upon request
Density:	1.06 ± 0.05 g/cm <sup>3</sup>
Solid content: ASTM D2697	100%
Gel time:	6 - 20 sec
Tack free time:	30 - 45 sec
Recoating time:	10 sec - 6 hr
Light pedestrian traffic time:	1 - 4 hr
Vehicle traffic time:	24 hr
Curing time:	24 hr
Service temperature:	-40 to 120°C (wet)
Shore D hardness: ASTM D2240	≥ 40
Taber abrasion: ASTM D4060 (1 kg/1000 rev) CS17 wheel	45 milligram
Tensile strength: ASTM D412	≥ 20 MPa
Bond strength to concrete:*	≥ 2.0 MPa
Elongation: ASTM D412	400 ± 50%
Tear strength: ASTM D624	≥ 70 N/mm
Crack Bridging: ASTM C1305	no cracks occurred after 25 cycles
Flexibility: ASTM D522 (2 mm mandrel)	Pass

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- » Fast reactivity and cure time resulting in fast return-to-service time.
- » Maintains high physical properties on weathering.
- » Excellent corrosion protection.
- » Resistant to many chemicals, solvents, acids and alkalis (consult DCP technical department for more information).

## METHOD OF USE

### SURFACE PREPARATION

#### Concrete surfaces

The surface should be clean, dry, sound, and free from oil, grease, and wax contamination. Cement laitance, loose particles, mold release agents, or curing membranes must be removed.

Fill surfaces irregularities and imperfections with a suitable epoxy resin mortar such as Quickmast 341 to limit out-gassing. The maximum atmospheric relative humidity should not exceed 90%. New concrete structures need to dry for at least 28 days. Do not proceed with the application in the presence of moisture.

Concrete relative humidity must be  $\leq 75\%$ . Alternatively, concrete moisture meter must show  $< 5\%$ . On-grade or below-grade concrete floors or slabs should have a moisture barrier installed to protect from ground moisture.

Concrete surface should achieve an open pore surface (surface Preparation index -CSP- 3 to 6) by grit blasting, milling, or sandblasting.

Substrate humidity or the presence of water on the substrate can affect the membrane's adhesion, which will have a negative effect on the result of the system. Working at ambience temperatures below 4°C or more than 50°C is not recommend.

#### Steel / metal surfaces

All surfaces should clean and free from contamination be grit blasted to reach a bright finish meeting the requirement of Swedish Standard SA 2 1/2.

### PRIMING

It is recommended to prime all kinds of substrates using epoxy primer of Strongcoat Primer Range. Strongcoat Primer Range is designed to significantly improve the adhesion between DonProof PU-P60 and non-porous substrates.

Refer to the Technical Datasheet of the primer for further information or Consult DCP's Technical Department for specific primer recommendations based on the project conditions.

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### TECHNICAL PROPERTIES @ 25°C:

Water vapor transmission: ASTM E96	0.2 - 0.3 g/(m <sup>2</sup> /hr)
Water absorption: ASTM D570	~1% @ 24 hr
VOC: ASTM D2369	< 10 g/ltr

\* When primed with Strongcoat Primer Range.

Note: The above data was developed under controlled laboratory conditions. Properties in the field may vary. Expect reasonable variations from these results, depending on equipment, spray gun, mix chamber temperature, pressure and related parameters, jobsite and test conditions.

### APPLICATION

DonProof PU-P60 is hot spray applied; a suitable two components, high-pressure, heated plural component 1:1 spray proportioning equipment should be used such as Graco Reactor, or equivalent. capable of delivering materials without loss of pressure or drop in temperature for the appropriate hose length on a consistent basis. Both Part-A and Part-B material should be preconditioned at 26 - 33°C before application.

Both components must be sprayed at a minimum of 2000 psi and at temperatures above 70°C. Adequate pressure and temperature should be maintained at all times. (consult DCP's technical department for further details).

	Component A	Component B
Density: ASTM D792	1.12 ± 0.05 g/cm <sup>3</sup>	1.01 ± 0.05 g/cm <sup>3</sup>
Viscosity @ 70°C: ASTM D4878	100 ± 20 cps	50 ± 20 cps
Mix ratio:		
By weight	100	110
By volume	100	100

Stir/mix individual components well before use using a drum stirrer to homogenize the pigment and disperse any settlement. Failing to do so may cause color variances, foaming, sticky coating, and negatively affect DonProof PU-P60 performance.

Insert the pumps into the drums and attach the hoses to the equipment, set up the hoses and machine temperatures and start the equipment following the manufacturer instructions.

# DonProof PU-P60

Apply the material using the spray gun. always apply DonProof PU-P60 perpendicularly to the substrate regardless of whether the surface is horizontal or vertical. This is extremely important, otherwise, it will cause gaps in the layer and incomplete seal.

On horizontal surface applications, a texture "stipple" coat can be applied for non-skid purposes, after reaching the initial desired film thickness

## CONSUMPTION

Consumption will depend on the type of application, weather conditions, or substrates' nature.

- » Recommended consumption is approximately: 2.1 kg/ m<sup>2</sup> to provide 2 mm dry film thickness.

## UV PROTECTION COAT

As with all aromatic coatings, DonProof PU-P60 should be sealed with a suitable polyurethane protection coat to prevent yellowing due to UV rays exposure. However, this will not cause any negative effect on the physical properties of the product.

Consult DCP's Technical Department for specific recommendations for an aliphatic topcoat to guarantee its durability.

## CLEANING

All tools should be cleaned immediately with water.

## PACKAGING

DonProof PU-P60 is available in 380 litre drums (190 litre for each component) or 38 litre kits (19 litre for each component).

## STORAGE

DonProof PU-P60 has a shelf life of 12 months from date of manufacture if stored in a dry place, away from direct sunlight, extreme heat, cold, or moisture and in its original unopened pails at temperatures between 5°C and 35°C.

Once the tin has been opened, the product must be used. Once opening, component B drum must be agitated mechanically before inserting the transfer pumps and use.

If these conditions are exceeded, DCP Technical Department should be contacted for advice.

## Chemical Resistance, modified ASTM D3912 after immersion in the below chemicals

Hydrochloric Acid 10%	R
Sulphuric Acid 15%	R
Phosphoric Acid 10%	R
Acetic Acid 10%	R
Sea water	R
Waste Water	R
Water @ 80°C	R
De ionized Water	R
Ammonium Hydroxide 20%	R
Ammonium Hydroxide 50%	RS
Pottasium Hydroxide 10%	R
Pottasium Hydroxide 20%	RS
Sodium Hydroxide 20%	R
Hydrogen Sulphide (gas)	R
Sodium Hydroxide 50%	RS
Diesel Fuel, Gasoline (unleaded)	R
Motor Oil, Brake Oil	RS
Hydraulic Oil	R

*R: Resistant*

*RS: Resistant with slight discoloration*

*SS: Slight softening*

## CAUTIONS

## HEALTH AND SAFETY

Apply in well ventilated areas. Do not smoke. Do not apply near naked flames. In closed areas use force ventilation and carbon active masks.

For further information refer to the Material Safety Data Sheet.

## FIRE

DonProof PU-P60 is nonflammable.

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## 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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DCP Building Excellence



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