

SOUPLETHANE 6

SOLVENT FREE ,HIGHLY CROSS-LINKED POLYURETHANE PROTECTIVE COATING

PURPOSE

- As a lining against acids/chemicals bund lining, storage tanks, sewage treatment plants and swimming pools.
- Industrial coating system: Coating and lining in secondary and primary containment of Tanks, Vessels, Structures, Channel and Fire Water Tank.
- As external/internal coating for concrete and steel pipelines.
- Water proofing of concrete foundations and structures.
- For marine, offshore submerged/splash zones and other applications.
- For protection to prevent structure against aggressive chemical (pH1-13) to high concentration and industrial wastewater.
- For protection of structure against petroleum products – crude oil, aviation fuel, kerosene, etc.

TECHNICAL DATA

Colour	Grey (Standard), Cream
Solid Content	100%
Specific Gravity	1.3 kg / ltr.
Elongation (DIN 53504)	50%
Tensile Adhesion (ASTM D4541-1)	
On concrete:	3.5Mpa (failure in concrete)
On steel:	10Mpa
Tensile Strength (ASTM D412)	18Mpa
Abrasion Resistance	excellent
ASTM D4060, CS-17 wheels	
Chloride Permeability	100coulombs
ASTM C1702-2	negligible
Crack Bridging	2.2mm
LCPC 79-(7)	
Shore Hardness (ASTM D2240)	90-95 'A'
Resistance to Pressure	
Negative	10 bars (102m head)
Water Permeability	excellent
No penetration DIN 1048 (4)	
Flash Point	248°C
(Open Zahn Method)	
Service Temperature	
50°C TO 140°C	(non- immersion)
50°C TO 140°C	(immersion)

CHEMICAL RESISTANCE

Salt Spray	
ASTM B117(6)	More than 2000 hrs.
ASTM B1654(5)	
Chemical Resistance in immersed condition:	Excellent in Sewage Water, Acids, Alkalis, Seawater and Salt Solution

APPLICATION PROPERTIES

Mixing Ratio (A:B)	3 base:1 hardener (by volume)
Pot Life	
@ 20° C	10mins.
@ 30° C	5mins.
Tack Free	
@ 25° C	25mins.
@ 35° C	15mins.
Full Cure	
@ 25° C	1 day
@ 35° C	1 day

PROPERTIES

- Mechanically strong and flexible enough to allow crack bridging in excess of 2mm while bonding to the substrates.
- Fast spray application, no sagging
- Non-elastomeric Hybrid Polyurea/Polyurethane protective coating, uniquely designed, fine-tuned resulting in balanced characteristics and features.
- High build with excellent cohesive strength. High thickness can be obtained from thin to very thick film by subsequent layers for special application,
- Continuous film and lining – it is joint free, seamless with pinhole free surface with strong adhesion properties to the surface.
- Adequately strong adhesion to various substrates. It bonds strongly on concrete, ferrous and non-ferrous metallic substrates, wood, bitumen, asphalt, FRP and various insulation materials.
- Resistance to corrosion and aggressive chemicals Resistance to mechanical abuse and wear – High resistance to abrasion, erosion, indentation, impact and punishing stress.
- Resistance to environmental impacts. Chemical resistance and physical impermeability to chloride and sulphate.
- Resistance to UV radiation, effects of cycles/swings of high-low temperature, humidity and soil stress.
- Ecologically friendly: Solvent free which eliminates volatile emission in the environment.
- Ease of application: **Souplethane 6** is applied with twin component high pressure airless spray machine.

TECHNICAL SUPPORT

Rezcoat provides technical service support, to professional bodies, consulting Engineers, specifying bodies and on-site contractors, and applicators throughout the Middle-East.

APPLICATION REQUIREMENTS

SURFACE PREPARATION

FOR CONCRETE

The surface should be free of contamination, well cured, solid, dry with surface moisture <5% and free of laitance, dust, loose particles, foam oil and release agent or any other type of chemical. Clean any contamination with steam, degreaser as appropriate.

Deep contaminations by means of mechanical blasting, scrubbing or other means. Protrusions/ ridges, rout out surface cracks and cut V-grooves, clean the surface of all loose particles and dust, fill all exposed blowholes, routed out cracks with Resiputty 050 EP.

FOR STEEL

The surface should be free of contamination and prepared to (Sa2½) SIS 05 -5900. Use steam water or degreaser to clean contamination. For corrosion and scales, abrasive blast should be used, if not possible use brush or grinder with care not to polish surface of the metal. Grind, cut any protrusion/ridges to remove weld slag and splatter. Render pitted steel surface including damaged regions with **Resiputty 050 EP**. Cold welding to close holes using **Souplethane 6** applied in a thin coat and finally pressing an appropriately sized steel plate into the **Souplethane 6** and then leave to cure for few hours.

PRIMING

On concrete use: Souplethane Concrete Primer C111/Rezkem EP. Mix the primer thoroughly before application. The surface to receive primer should be well vacuumed. Ambient temperature should be about +5°C. Apply the primer at a rate 6 to 8m²/ltrs, avoid ponding of the primer. In porous concrete surface double priming may be necessary.

Ensure the primer is touched dry before the application of **Souplethane 6**. The table below gives the approximate overlay time of the coating onto the primer.

Temperature	Overcoating Period	
	(Min hours)	(Max hours)
20°C	20mins	12hrs
30°C	15mins	6hrs
50°C	5mins	3hrs

FOR STEEL SURFACES

Mix the Primer thoroughly before application. Immediately apply over well prepared surface at temperature >+ 3°C above dew point in one thin layer (about 30 to 50 microns) by brush roller or single component air spray. Over coating time after touch dry to a maximum of 8 hours. Beyond this limit, abrasive blast, remove the primer and reapply.

APPLICATION

1. Souplethane 6 shall be applied when ambient temperature is above -10°C or below 50°C, and relative humidity is below 90% and air temperature is 3°C above dew point. Protect the area to be coated from direct sunlight by suitably erecting sunshades or by other means to allow proper wetting of the surface, avoid rapid curing. On a given day, the area of coating must be defined such that all coats necessary to achieve the required thickness are done preferably the same day within the maximum inter-coat interval. In summer, program activity during cool parts of the day.

2. Clean & ensure that the primed surface is free of dust before applying the coating. Ensure the over coating interval of the primer is maintained and followed.

3. Apply **Souplethane 6** coating using mono – component (Dual Feed) pump with a fixed ratio of 3:1 by volume for the base and hardener. Consult the Technical Department for any advice regarding the appropriate Spraying equipment.

4. Build the required coating thickness by multi passes spray technique.

5. After curing, the DFT of the coating shall be checked and holiday detection shall be carried out using a high voltage depending on the DFT of the applied coating. The Holiday detection voltage shall be based on 4 volts per micron. Any Holidays or visual defects shall be repaired and rechecked.

6. The complete coating shall be free from runs & sags and have a uniform surface finish. The final inspection shall then be carried out.

Repair Procedure:

Minor damages shall be repaired by the following repair method:

1. Mark the area to be repaired and restrict with a masking tape.
2. Abrade /wire brush the damaged area and feather the edges.
3. Clean the surface with Solvent SC 111.
4. Apply **Souplethane 6** to the same thickness of adjacent area and overlap the existing coating by 25mm.

PACKAGING

Souplethane 6	30kg or 90kg/pack
Souplethane C111	5 ltr. and 18 ltr. can
Souplethane P111/P112	1 ltr. /can
Rezkem Solvent SC111	18 ltr. /pail
Coverage	
Souplethane 6	1.3kg/m ² @1`mm DFT
Souplethane C111	6-8 m ² /ltr.
Souplethane P111/P112	15-20m ² /ltr.

CLEANING

Tools and equipment should be cleaned with **Rezkem SC111** cleaning solvent. Do not use the solvent for thinning, as it will inhibit the material properties.

STORAGE

Product should be kept in original unopened containers away from direct source of heat in shaded area at a temperature below 30°C. Souplethane-6 will have a shelf life in excess of 12 months.

FIRE

Souplethane 6 is non-flammable while **Souplethane Primers C111, P111, P112** and **Rezkem Solvent SC111** are all flammable products. Avoid formation of flames and sparks in their vicinity.

HEALTH & SAFETY

Souplethane 6, Souplethane Primers C111, P111, P112 and **Rezkem Solvent SC111** should not come in contact with skin and eyes. Some people are sensitive to resin. Use chemical goggles, PVC gloves and barrier cream. Avoid contact with skin and eyes when handling the products. Do not use solvent for skin remover of resin; instead a cream remover must be used before it gets harden. Should accidental eye contamination occur, wash thoroughly with plenty of water and seek medical advice. Ensure plenty of ventilation when using resin and solvent containing materials.

DISCLAIMER

This product is specially formulated and manufactured by Rezayat Protection Coatings Company Ltd (RPCCL) and sold subject to its standard terms and conditions. The information presented herein is accurate to the best of our knowledge. All technical properties quoted forthwith are from laboratory prepared samples and RPCCL reserve the right to alter any of the detail herewith without notice. The users are advised to ensure they possess the latest issue of the datasheet. The information given must not be taken in any way to form a specification. RPCCL will not accept any liability for any consequent or incidental damage arising out of use of the product. All guarantees offered are limited to replacement of defective material only. The use of the products outside of RPCCL recommendation is under user own risk.

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