

TECHNICAL DATA SHEET

DUROSPRAY PU340 – Hybrid Polyurea

Sprayable Hybrid Polyurea System Predominantly Based On Polyether Chemistry

INTRODUCTION

DUROTECH Spray PU340 is a two-component Hybrid Polyurea sprayable elastomer designed for use through 1:1 volumetric spray equipment. This material can be applied to a wide variety of substrates at ambient temperature and its rapid reaction time produces a sprayed film which is touch dry in seconds. Generally used for conventional industrial waterproofing and corrosion prevention.

FEATURES

- Fast Installation
- Non-slumping
- Fast return to service
- Non-solvented high build
- Corrosion protection
- Chemical resistance
- Reduced noise transmission
- AS4858:2004 COMPLIANT – Class III



USES

- Wastewater systems (manholes, reservoirs)
- Pipeline protection (external and internal)
- Tank cofferdam
- Tank coating
- Bridges
- Waterproofing
- Coastal steel structures
- Conveyor belts
- Wearable lining for truck and train compartments
- Theme parks
- Corrosion prevention

POLYOL COMPONENT PROPERTIES

Product Reference	Durospray PU340
Appearance	Blue liquid at 25°C
Viscosity	350 – 650 cps at 25°C
Specific Gravity	1.01 – 1.03 at 25°C

PREPOLYMER COMPONENT PROPERTIES

Product Reference	Durospray PU340 Prepolymer
Appearance	Amber liquid at 25°C
Viscosity	1500 – 2500 cps at 25°C
Specific Gravity	1.11 – 1.13 at 25°C

MIXED COMPONENT PROPERTIES

Mixing Ratio	0.91 : 1 by weight (Polyol : Prepolymer) 1 : 1 by volume (Polyol : Prepolymer)
Gel Time	5 – 10 seconds (100 gms at 25 ° C)

CURED SYSTEM PHYSICAL PROPERTIES

Property	Test Method	Value	Unit
Shore Hardness	BS EN ISO 868	85 ± 3	°A
Tensile Strength	BS 903 Pt A2	12	MPa
Elongation at Break	BS 903 Pt A2	340	%
Angle Tear Strength	BS 903 Pt A3	40	N/mm
100% Modulus	BS 903 Pt A2	4.5	MPa
Cold Flex Temperature	BS 2782 Meth 150B	-50	°C
Density	BS 903 Pt A1	950	g/m ³

Values are typical properties and are not to be used for specification

APPLICATION

Surface Preparation: The surface must be clean, dry and free from loose particles, including dust, grease, coatings and curing compounds and other foreign matter. The substrate must be prepared by any way of degreasing, grinding or captive shot blasting to expose aggregate and provide a profile. Allow floor to dry if degreasing has been carried out.

Duroprime PU Primer M50 may be used to seal floor after cleaning or degreasing. Ensure floor is dry before applying the M50 Primer. Primer will lose adhesion properties over time. Ensure spray is applied within 12 hours.

The moisture content of substrate shall not be higher than 8% throughout and the temperature of the substrate must be 3°C above the current dew point.

Fill surface irregularities such as cracks and voids. Protect walls and columns against overspray using masking tape and polyethylene or plastic sheeting.

Mixing: Prior to spraying, the temperature of the components must be between 60-70°C. All mixing should be done using suitable polyurethane spray equipment.

COVERAGE

Allowing for 10% wastage, the average coverage for Durospray PU340 is 1.1kg/m² at 1mm DFT.

Note: When outdoors, avoid spraying in strong winds. Overspray may coat/damage unprotected surfaces.

PACKAGING

Available in 42kg and 420kg kits:

DUROSPRAY PU340 Polyamine 200kg drums, 20kg pails.

DUROSPRAY PU340 Prepolymer 220kg drums, 22kg pails

UNSUITABLE SUBSTRATES

Always use primers applicable to the substrate. The following surfaces are not suitable for polyurethane spraying.

- Polyethylene
- Polypropylene
- Waxed Polyester
- EPDM
- Teflon
- Silicone

PROCESSING DETAILS:

The following information is given as a guide to processing this product. It is recommended that optimum conditions for a specific application are determined experimentally. Our Technical Service Department can offer more detailed advice.

RECOMMENDED PROCESSING TEMPERATURES

- Store in a dry place and avoid contact with moisture.
- Avoid storage below 15°C (if possible) as this will cause components to freeze.
- Preheat the drums above 25°C before use.
- Spray temperature should be between 60 - 70°C.
- Ensure polyol is mixed before use as components settle over time.
- Do not apply on substrates below 15°C.

RECOMMENDED CURE CYCLE

24 – 48 hours at room temperature to reach full cure.

ADDITIONAL PROCESSING DETAILS

This product is designed for use through 1:1 volumetric spray equipment. For advice on suitable equipment and optimum procedures for use, please contact our Technical Service Department.

STORAGE AND HANDLING

Polyol Component	Store in tightly sealed containers at a temperature of 0 - 30 °C. Raise the processing temperature and mix well before use. Avoid contact with moisture.	Shelf Life: 12 Months
Isocyanate Component	Store in tightly sealed containers at a temperature of 0 - 30 °C. Avoid contact with moisture. Storage below the recommended Minimum temperature may result in freezing of the Isocyanate. If the Isocyanate does not fully melt out when raised to the processing temperature it may be necessary to re-melt at a temperature of 60 -70 °C.	Shelf Life: 12 Months

Note: Always follow 'ISOCYANATES - HAZARDS AND SAFE HANDLING PROCEDURES'.

More detailed information on the storage and handling of polyurethane components can be obtained by contacting our Technical Service Department.

HEALTH and SAFETY

Please observe the precautionary notices displayed on container. Use under well ventilated conditions. Avoid skin contact. Spillage on the skin should be removed immediately with suitable cleanser, soap and water. Eyes should be well flushed with water and seek medical attention immediately.

For the full health and safety hazard information and how to safely handle and use the product, please make sure you refer to relevant MSDS.