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Eraspray ESM610D

SPRAY - POLYUREA

TECHNICAL DATASHEET

Eraspray ESM610D is a two component, spray-in-place, solvent free, flexible and 100% solids polyurea elastomer system.

This product has a very fast reaction profile as it is formulated for spray application through plural component spray equipment.

Eraspray ESM610D is a fast curing, textured surface, multipurpose material designed for commercial and industrial applications requiring high chemical resistance, abrasion resistance, impact protection and sealing for cementitious, metal and/or wood surfaces at temperatures up to 170°C.

Eraspray ESM610D is based on aromatic polyurethane/polyurea chemistry and will change colour with long term exposure to U.V. light. A U.V. stable paint system can be applied for colour retention.

Application

Eraspray ESM610D is ideally suited to sealing, protecting and waterproofing roofs, banded areas, floors, tanks, pipes, concrete etc. **Eraspray ESM610D** can be used as a hard coat for protecting friable surfaces such as polyurethane foam and polystyrene, from outdoor exposure.

Product Specification

	ISOCYANATE PREPOLYMER (A)	POLYOL CURATIVE (B)
Specific Gravity at 20°C	1.15	1.08
Viscosity at 20°C (cps)	600	110
Appearance	Amber liquid	Brown liquid

Reaction Profile (60°C)

Isocyanate Prepolymer (A)	(pbv)	100
Polyol Curative (B)	(pbv)	100
Mixing Time	(secs)	3
Gel Time	(secs)	6

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Cure Details

Curing rate of this product is dependant on the ambient and surface temperatures. As the temperature increases, the curing time decreases. The product continues to cure overnight and it is advisable not to walk on it for 24 hours.

Typical Physical Properties

		ESM610D	TEST METHOD
Hardness	(Shore D)	60 ± 3	AS1683.15
Tensile Strength	(MPa)	22	AS1683.11
Angle Tear Strength, Die C	(kN/m)	78.5	AS1683.12
Trouser Tear Strength	(kN/m)	32	AS1683.12
Elongation	(%)	160	AS1683.11
DIN Abrasion Resistance 10N	(mm ³)	150 – 160	AS1683.21
Cured Specific Gravity	(g/cm ³)	1.033	AS1683.4
Colour		Off White	-

Processing Information

Eraspray ESM610D must be sprayed, using high pressure plural component dispensing equipment. Drums of components should be pre-heated to at least 25°C prior to mixing or dispensing. Mix polyol thoroughly with a rotary power mixer before use.

Plural Component Processing Conditions:

Equipment Pressure		2000 psi minimum
Component A (Iso)		
Hose Temperature	(°C)	60
System Temperature	(°C)	60+
Component B (Polyol)		
Hose Temperature	(°C)	60
System Temperature	(°C)	60+

Application Conditions

Substrates should be clean and dry. Avoid contact with water or moisture as it may react with the components and affect the finished results. A dryer should be installed in the air line to eliminate moisture.

Primer is not normally required for direct to metal applications but should be used if high bonding is required. For application to other surfaces, please consult Era Polymers for technical advice.

Product Handling

All persons using spray components should be trained in their use and be familiar with the product MSDS's.

Provide additional ventilation and/or breathing apparatus if used in confined spaces, as required to maintain safe working conditions.

Component A (isocyanate)

This is a potential respiratory sensitiser. Persons who suffer from hypersensitivity of the respiratory tract (e.g. asthmatics and chronic bronchitis sufferers) should avoid handling this product. Avoid contact with the eyes or skin and breathing the vapour.

Component B (polyamine blend)

This contains polyamines.

Avoid contact with the eyes or skin. If eye contact occurs, flush thoroughly with water and consult a physician.

Wear appropriate personal protective equipment when servicing equipment.

Storage

Components should be stored at temperatures between 15°C and 25°C. Containers should be tightly closed

Polyamine blends may settle and separate over time, hence, they should be remixed if not used within 1 month of delivery.

Chemical Resistance

MATERIAL	RESISTANCE
Acetic Acid (10%)	Excellent
Acetic Acid (concentrate)	Poor
Acetone	Poor
Alcohol	Excellent
Ammonium Hydroxide	Poor
Automotive Gasoline	Good
Automotive Oil	Excellent
Aviation J P Fuel	Excellent
Benzene	Good
Boric Acid	Excellent
Brine Solution	Excellent
Citric Acid (10%)	Excellent
Diesel Fuel	Good
Formic Acid (5%)	Excellent
Formic Acid (10%)	Poor
Hydrochloric Acid (5%)	Excellent
Hydrochloric Acid (45%)	Fair
Hydrogen Peroxide (10%)	Excellent
Kerosene	Excellent
Lactic Acid (10%)	Fair
Linseed Fatty Acid	Excellent
Nitric Acid (10%)	Excellent
Phosphoric Acid (50%)	Excellent
Potash Lye (20%)	Excellent
Saline Solution (30%)	Excellent