ELASTOSEAL IN

POLYUREA COATING FOR INDUSTRIAL AND HEAVY-DUTY APPLICATIONS

DESCRIPTION

ELASTOSEAL IN is a two component 100% solids, pure, industrial grade sprayable polyurea coating designed to perform well for protecting and waterproofing concrete, steel and many other substrates in industrial environment. This highly cross-linked polyurea coating possess a unique balance of high tensile strength, elongation, and hardness. This balance of physical properties contributes to its resistance to abrasion, tearing and results in outstanding waterproofing, flexibility, wear and impact resistance.

BASIC USE

- Chemical Plants
- Power Plants
- Airports
- Marine Environments
- Cold store Facilities
- Livestock Facilities
- Warehouse Floors
- Paper and Pulp Mills
- Industrial and Manufacturing Facilities
- Water and Waste Water Treatment
- Secondary Containment
- Landfill Containment
- Structural Steel
- Parking Garage Decks

FEATURES & BENEFITS

- Excellent elongation properties
- Excellent corrosion protection
- 100% solids with 0% VOC's
- Resistance to solvents, acids, and caustics
- Fast reactivity and cure time with no catalysts
- Low permeability
- Seamless, resilient, will not result cracking
- Almost immediate return to service

TECHNICAL INFORMATION:

Typical Engineering Data

The following results were developed under laboratory conditions.

Solid content	100% solids by volume
Volatile Organic Compounds	0 grams/liter
Mixing Ratio	1:1 by volume
Tensile strength	21 N/mm² (ASTM D412)
Elongation	300% (ASTM D412)
100% modulus	10 N/mm² (ASTM D412)
200% modulus	15 N/mm² (ASTM D412)
Flexibility 3mm mandrel	pass (ASTM D1737)
Tear Strength Die C	400 pli (ASTM D624)
Bond Strength to Concrete	>1.5 N/mm² (ASTM D4541)
Bond Strength to Steel	>3.0 N/mm² (ASTM D4541)
Abrasion resistance	10 mg (ASTM D4060) (Using CS17 wheel at 1kg load 1000 cycles)
Hardness Shore A	95 +/- 5 (ASTM D2240)
Hardness Shore D	40 +/- 5 (ASTM D2240)

PROCESSING REQUIREMENTS

ELASTOSEAL IN must be applied using a plural two component, hot spraying machine

Recommended Thickness	Min: 1.5mm Max: No Limit
Processing Temperature Part A Part B	 70 - 80°C 70 - 80°C
Hose Temperature	70 up to 80°C
Spray temperature	70 up to 80°C
Pressure	2500 psi
Gel time	5-15 second @ 23°C (depend on the substrate temperature)
Tack Free	15-30 seconds @ 23°C (depend on ambient temperature)
Over Coating	0-8 hours
Curing time	1 hour: Foot Traffic loading 2 hours: Mechanical loading 24 hours: Chemical loading
Application temperature	5 up to 50°C
Application Relative Humidity	98%

COVERAGE	**ELASTOSEAL IN** would cover 1mm/liter/m² approximately.
COLOR	**ELASTOSEAL IN** is available in Gray color. Other colors available upon request.

Note: Higher humidity levels do not prevent correct polymerization but may make adhesion increasingly difficult to substrates due to the potential for condensation on surface.

CHEMICAL RESISTANCE (ASTM D 3912)

Diesel fuel	A
Toluene	E
Motor oil	C
Hydraulic fluid	A
Water (room temp.)	A
Water (82° C 14 days)	A
10% NaCl/water (room temp.)	A
10% NaCl/water (50° C 14 days)	A
10%Sugar/water	A
Sulphuric acid 5%	A
Sulphuric acid 10%	A
Hydrochloric acid 5%	A
Hydrochloric acid 10%	A
Phosphoric acid 10%	A
Ammonium hydroxide 10%	A
Ammonium hydroxide 20%	A
Sodium hydroxide 10%	A
Sodium hydroxide 20%	A
Sodium hydroxide 50%	C
Potassium hydroxide 10%	A
Potassium hydroxide 20%	C

A	No visible damage
B	Slight surface change
C	Slight surface discolor, no hardness loss
D	Swelling <48 hours
E	Swelling <24 hours

DIRECTION FOR USE:

Surface Preparation:

All surfaces shall be dry and clean, free from any dirt, grease, oil, pollution fallout, smoke, wax, form release agents, surface chemicals, or other foreign contaminants which could interfere with proper adhesion. Surfaces shall be free of sharp projections, ridges, and loose aggregate.

The actual surface preparation procedures which are to be followed on a specific project will vary depending upon service conditions, condition of the substrate, and the presence of existing paints, coatings or other contaminants. The following surface preparation procedures and recommendations are provided for guideline use only.

CONCRETE SURFACES

Concrete which will be subjected to immersion conditions must be blast cleaned. Concrete subject to non-immersion conditions can either be cleaned to roughen the surface or acid etched, so long as the etching provides an even profile of 5 to 8 mils. The surface preparation utilized must remove all loose, weak or powdery concrete to expose all voids and provide the necessary profile for mechanical adhesion of the **ELASTOSEAL IN**.

Concrete surfaces which are contaminated with oil, grease, dirt, chemicals etc. shall be cleaned prior to blasting or acid etching with approved biodegradable chemical cleaner and water. Cleaning shall be accomplished using mechanical scrubbers and/or high-pressure power washing equipment as necessary to remove strongly adhering contaminants. Rinse thoroughly to remove all traces of the cleaner. When blasting, use an abrasive grit or sand of the type and gradation required to provide a minimum surface height profile of 5 to 8 mils. Blasting must produce an even profile. After blasting, all grit, dust, loose material, dirt and foreign objects shall be removed by sweeping or vacuuming.

Any resurfacing or repairs necessary to achieve a sound, consistent surface, free of blowholes, voids, cracks or spalling shall be completed prior to priming. Use **REPCON SHB, EPOMORT 100** or **Cemtec R44** to fill large voids and honeycombs and to resurface spalled areas. Blasting or acid etching is not necessary over surfaces which have been repaired with **REPCON SHB** or CEMTEC R44 Use epoxy injection, polyurethane sealants or other appropriate patching material for repairing cracks and/or large voids in the concrete surface. Patching and/or crack repair shall be completed in strict accordance with manufacturer's recommendations.

After repairs are completed and adequately cured, concrete surfaces shall be primed with one coat of ELASTOPOXY PRIMER HP depends on the nature of substrate, intended application etc.

STEEL SURFACES:

All sharp edges must be removed or rounded off in such a way that the specified film thickness can be uniformly built-up on all surfaces. The steel must be prepared to Sa 2 ½ (ISO 8501-1:2007) standard by blasting followed vacuuming.

COATING APPLICATION

ELASTOSEAL IN shall be applied using 1:1 ratio plural component suitable polyurea airless spray equipment such as Graco, Gusmer, Glascraft, etc. CMCI shall be consulted prior to application on the required pressure and heat of the individual component.

ELASTOSEAL IN shall be applied to concrete surfaces which have been previously primed It can also be applied to Fibreglass or wood surfaces previously primed or to polyurethane foam or expanded polystyrene surfaces with no primer required.

ELASTOSEAL IN should be applied in a cross directional method. On horizontal surface applications, a texture "stipple" coat can be applied for non-skid surfaces after achieving the initial desired film thickness.

PACKING & MIXING

ELASTOSEAL IN is a two component material available in 200 litre drums. Mix the drum containing polyamine (Part B) with a power mixer until the material is of uniform color and consistency. The components are blended when pumped under high pressure through the plural component sprayer equipment. When properly metered and mixed, the formulation will yield the desired color.

CLEAN UP

Clean equipment with Xylene or MEK. Do not leave the solvent in fluid hoses or pumps for prolonged periods. It can cause swelling and deterioration of hoses and corrosion in the pump.

SHELF LIFE & STORAGE

Shelf Life of Part A and Part B components in unopened containers is 12 months from date of shipment from CMCI factory. Material must be stored at temperatures between 50°F and 100°F. (10° C. and 38° C.) Do not open containers until ready to use the material.

LIMITATIONS & PRECAUTIONS

ELASTOSEAL IN components are affected by moisture prior to catalyzation and must be protected from moisture contamination. Keep all containers tightly closed during storage. After opening and if all components are not to be used, Containers must be purged with nitrogen gas or dry air and tightly sealed to protect the components from moisture contamination.

The theoretical coverage is based on smooth, non-porous surfaces. Actual volume required in the field to achieve the minimum dry film thickness will depend upon the surface texture, ambient weather conditions and spray technique of the applicator. It is the responsibility of the applicator to apply sufficient material to achieve the minimum dry mil film thickness.

Avoid breathing of vapour or spray mist. If used indoors, provide mechanical exhaust ventilation. During indoor spray operations, air line masks or positive pressure hose masks must be worn. Avoid contact with eyes and contact with skin.

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Quality Statement

CMCI manufactures its products at their manufacturing facility in Saudi Arabia as per the Quailty Procedures centified to conform with quality Management System described in ISO 9000 series

CMCI provides a comprehensive technical support system for its full range of high erformance construction products CMCI also offers full technical field support to consultants, Architects, contractors, applicators and End Users.

"High Quality Construction Chemicals"
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