

MONNELI ARMATUREA H1

Hybrid Polyurea

Product Description

A hybrid hot spray coating technology which offers a fast cure, excellent abrasion resistance and provides a seamless coating used for various applications. It is a volatile free system which is applied in a 1:1 mix ratio with a plural component spray equipment.

ARMATUREA H1 is composed of Polyol Component (A), a Hybrid Polyurea Polyol and Isocyanate-Component (B), a Low function prepolymer.

Uses

ARMATUREA H1 can be used as a protective, elastomeric membrane coating for applications in or on:

- Industrial facilities
- Cold storage facilities
- Warehouse floors
- Below grade waterproofing
- Parking garage decks
- Water and waste water treatment
- Food processing facilities
- Pulp and paper mills
- Tank linings
- Pickup truck bedlining
- Bottling & canning factories
- Walkways and balconies
- Secondary containment
- Mining operations
- Landfill containment
- Bridge deck underlays
- Water parks & theme parks
- Sprayed on urethane foam
- Geotextile linings

Advantages

- Eco-friendly, low VOC
- Flexible, excellent elongation
- Excellent thermal stability
- Good chemical resistance
- Seamless, resilient, non-cracking elastomer
- Excellent corrosion protection
- Low perm rate
- Fast reactivity and cure time (No catalysts)
- Return projects to service in 60 Minutes

Instructions for Use

Surface Preparation

Concrete

The surface of the substrate shall be sound, clean and uncontaminated.

This preparation shall be such as to leave a sound expose surface free from dust, loose particles and any deleterious matter. If the surface is defective or has laitance, it must be cut back to a sound base.

New concrete or cementitious surfaces should be at least 28 days old and have moisture content not exceeding 5%. Old or existing surface should be refurbished mechanically to ensure clear and sound substrate. Concrete must have a minimum pull off strength of 1.5 N/mm².

Metal

The metal surface needs to be prepared by means of sand blasting to near white. The surface profile will ensure adequate mechanical adhesion. Solvent cleaning is needed to remove the oil and grease.

Priming

Concrete

A primer is generally needed to achieve an adequate adhesion. Monneli Ureaprime EP1 can be applied at 100microns DFT.

Metal/Steel

If priming is needed, this should be done within 8 hours after the sandblasting to prevent any flash rusting.

Machine Conditions

Mixing Ratio	1 : 1 (volume)
Component temperatures (Depends of weather condition)	70-75°C
Component pressure	120 - 180 bar

Mixing

Use 1:1 ratio pump, with appropriate material heaters, as required for individual application.

Environmental Conditions

Substrate and ambient temperatures	5°C - 35°C
Substrate moisture content	≤ 4%
Relative humidity	≤ 85%

Applications

ARMATUREA H1 must be spray applied using a plural-component spray equipment. For application guidelines, please contact Colmef.

Top Coat

The system is not UV resistant. Therefore, a proper top coat is needed for exposed application.

Cleaning

Clean equipment immediately after use. Cured product may be disposed of without restriction. The un-cured isocyanate and resin portions should be disposed of according to local government regulations.

Technical Data

Properties	Results
Viscosity at 25°C Polyol component Isocyanate component	450 cps 800 cps
Specific gravity at 25°C Polyol component Isocyanate component	1.02 1.11
A:B Ratio based on volume	100 : 100
Gel time	3-7 seconds
Tack free time	10-12 seconds
Color	Grey
Tensile strength (ASTM D412)	14N/mm ²
Elongation (ASTM D412)	> 320%
Tear strength (ASTM D624)	50 kN/m
Shore A hardness (ASTM D2240)	94
Taber abrasion, loss (ASTM D4060)	110 mg
Full cured at 23°C	2-3 days

All values are subject to 5-10 % tolerance

Applicable Standards

- ASTM D412
- ASTM D624
- ASTM D4060
- ASTM D2240

Packaging

400 Liter Kit: 200 Liters of Part A and 200 Liters of Part B

Coverage

2.0-2.5 kg/m² for a thickness of approx. 2.0-2.5 mm

Storage

ARMATUREA H1 should be kept properly stored indoors in a well-ventilated area under normally factory conditions, at temperatures of 20~25°C. Material is stable for 6 month when stored properly.

Health & Safety

The isocyanate component irritates the respiration system, eyes and skin. This can have allergic reactions if inhaled or when comes in contact with skin. The required measurements indicated in the safety data sheet should be noted during handling of isocyanate. The same procedure should also be applied during handling of the A system (polyol) considering the risk available. Please refer to MSDS for additional information.

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