

CI NEOPROOF POLYUREA

High Elongation Two-component Hybrid Polyurea Spray System

CCI Neoproof Polyurea system is a high elongation two-component hybrid polyurea spray system, specifically formulated for crack-bridging applications. Polyurea-based systems are characterized by their fast cure and high-performance properties and are therefore used in various coating and non-coating applications (waterproofing, protective, sealing, etc.). It can be applied to a thickness of 1 mm to 5 mm in a single application.

Advantages

- ✓ High flexibility
- ✓ Fast cure, treated surfaces can return to service fast, or can be fast further processed
- ✓ Relative moisture and temperature insensitivity
- ✓ Good adhesion to a variety of substrates
- ✓ Excellent physical and mechanical properties
- ✓ Good film-forming characteristics
- ✓ 100% solids, low VOC

Typical Properties	Hardener	Resin	Unit
Chemical nature	Diisocyanate	Formulated Amine blend	
Density (25 °C)	1.13	1	g/cm ³
Viscosity (25 °C)	1800	1175	m

Processing Conditions

It is recommended to adjust the chemicals to the optimal temperature and to stir **CCI Neoproof Polyurea** Resin component before use to ensure homogeneous colour and indicated reactivity and viscosity during processing.

Typical Properties	Value	Unit
Mix ratio Hardener / Resin	1:1	pbv *
Processing Temperature	Minimum 80	°C
Pressure	Minimum 180	bar

*pbv = parts by volume

Typical System Properties	CCI Neoproof Polyurea	Unit	Standard
Type	Hybrid Polyurea		-
Gel time	4	seconds	-
Tack free time	6	seconds	-
Hardness	25	Shore D	DIN 53505
Tensile	12	MPa	DIN 53504
Elongation	570	%	DIN 53504

Working and Cleaning Procedures

Detailed working and cleaning procedures are available on request.

Substrate Preparations – general recommendations

The spray systems should only be applied to clean, dry and sound surfaces. Remove all dust, oil, grease and loose rust or any other foreign material to ensure adequate adhesion.

Concrete

The concrete shall be completely cured (for minimal 28 days). Laitance, release agents and salts need to be removed by high pressure water jetting or sandblasting. Other substrate cleaning can be consulted via SSPC-SP13, NACE 6. A primer is generally needed to achieve adequate adhesion. Please respect the recoat window recommendation from your supplier.

Metal/Steel

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. If priming is needed, this should be done as soon as possible after the sandblasting to prevent any flash rusting. If 8 hours are exceeded, sandblasting needs to be repeated.

Handling and Storage

Conditions for safe storage and handling

CCI Neoproof Polyurea hardener (HA) and **CCI Neoproof Polyurea** resin (RE) components must be stored in accordance with local regulations.

CCI Neoproof Polyurea Hardener (HA)

Containers of **CCI Neoproof Polyurea** hardener (HA) component should be kept properly closed and stored indoors in a well-ventilated area under normal factory conditions. Storage at temperatures ranging from 20°C to 25°C provides a convenient viscosity for handling.

Storage at low temperature is not recommended because it may lead to some crystallization; this material must therefore be protected from frost. If under abnormal storage conditions some crystallization does occur, the material should be melted according to the procedures given in the publication PU 181-15E. Storage at temperatures above 50°C is not recommended, since this can lead to the formation of insoluble solids and also the viscosity buildup increases on extended storage.

Under the recommended storage conditions and if protected from humidity and contaminants, i.e., in properly sealed drums, containers, etc., **CCI Neoproof Polyurea** hardener (HA) component has a storage life of 6 months at the customer.

In case of storage in bulk containers, please contact our Sales Representative for further details. Detailed information on how to obtain optimum bulk storage conditions is available in the ISOPA document guidelines for Safe Loading/Unloading, Transportation & Storage of MDI.

Reaction with atmospheric moisture is prevented by storing **CCI Neoproof Polyurea** hardener (HA) component in carefully sealed containers under a dry air atmosphere. During handling, the product must be protected from water ingress and from atmospheric moisture. Containers should be re-sealed immediately after each sampling. The reaction of diisocyanates with water leads to the formation of insoluble ureas and carbon dioxide gas, which can lead to pressure build-up in closed containers. Containers used for **CCI Neoproof Polyurea** hardener (HA) must therefore be absolutely dry.

The precautions are necessary when handling **CCI Neoproof Polyurea** hardener (HA) component, i.e., MDI, and the decontamination procedures recommended to be used in case of spillage, are described fully in the publication PU 193-1E; MDI-based compositions: Hazards and safe-handling procedures. Should it prove necessary to melt **CCI Neoproof Polyurea** hardener (HA), procedures are given in the publication PU 181-15E; Recommended melting procedures for MDI-based diisocyanates.

CCI Neoproof Polyurea Resin (RE)

CCI Neoproof Polyurea resin (RE) component should be stored in temperatures ranging from 20°C to 25°C in carefully sealed containers under a dry air atmosphere. Containers should be re-sealed immediately after each sampling. Under recommended storage conditions, **CCI Neoproof Polyurea** resin (RE) component has a storage life of 6 months at the customer.

Packaging

438 kg kit. [Part A (Hardener) – 225 kg and Part B (Resin) – 213 kg]. Available in White and Grey colours.

Safety

Protective measures

In all cases use appropriate personal protective equipment (see Section 8 of the SDS's).

Advice on general occupational hygiene

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands before eating, drinking and smoking.

Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 of the SDS's for additional information on hygiene measures.

Before use, refer to the Material Safety Data Sheet (MSDS). The MSDS is available on www.ccichemicals.in or contact us at info@ccichemicals.in.

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