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Product Information

Non-yellowing Polyisocyanate

CORONATE HXR

1. CHEMICAL CHARACTERIZATION

HDI based modified polyisocyanate, containing isocyanurate.

2. FORM

Approximately 100 % solid content.

3. USES

Hardener for two-component, non-yellowing type of polyurethane paints with excellent weathering ability.

4. CHARACTERISTICS

	CORONATE HXR
Appearance	Pale yellow liquid
NCO Content (%)	21.6 -- 22.1
Solid Content (%)	100
Viscosity at 25 °C (mm^2/s)	1,700 -- 3,300
Color (APHA No.)	< 40
Monomer HDI (wt%)	< 0.2

5. FEATURES

CORONATE HXR is hardeners for non-yellowing type of PU paints, with superior performance to biuret or adducts types of hardeners.
CORONATE HXR is widely accepted in the paint industry for various applications, such as motorbike parts, automotive refinishing, wood finishes, etc. This is because of its resistance to high heat, high solubility in solvents and good compatibility with polyols.

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6. APPLICATIONS

The combination of CORONATE HXR with acrylic polyols produces non-yellowing type of paint with excellent weathering ability and resistance against ultra-violet rays, by which its original color could be long sustained. This two-component type of paint is applied for automotive refinishes, industrial purposes, etc.
The combination of CORONATE HXR with alkyd polyols results in two-component type of paint, which is applied for industrial purpose, wood finishes, etc.
The addition of CORONATE HXR to some nitro-cellulose based or polyurethane-based paints distinctively improve their physical properties, such as chemical resistance to solvents. However, it is necessary to test the compatibility for each combination, and great care should be taken during testing.

Physical properties of film (acryl polyol)

	CORONATE HXR
Dry ability tack free time (min) dry through time (hr)	 45 20
Pencil hardeness	H
Erichsen value (mm)	9
Impact resistance (g x cm)	1000 x 30
Flexibility (2mmφ)	Pass
Adhesion (cross cut)	100 / 100

Polyol: Acrydic : A-801 (DIC); NCO / OH = 1.0 / 1.0 (mol)
Solid Content : 35 % (D/D solvent)
Dry Time : 25 °C × 7 days
Film : Clear, film thickness 40μ(dry)

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7. HANDLING INSTRUCTIONS

・STORAGE CONDITIONS

CORONATE HXR should always be kept in a closed container at room temperature for long period of storage. This is to prevent any contact with moisture in the air, since this product is a chemical compound and is highly active with hydroxyl groups. This product should be stored indoors at room temperature (15 – 25 °C).

・AT THE TIME OF USE / RE-PACKING

The reaction of water with the NCO groups in this product causes not only the formation of insoluble products such as urea groups, but also CO_2 gas, which increases the pressure in a closed container, thus resulting in an expansion of the container.

The operation for partial use of this product or emptying of a drum should be carried out with great care in order to prevent any contamination with moisture. The operation to transfer this product into another container should be done under a dry atmosphere, then sealed with dry nitrogen before sealing.

・DILUTION WITH SOLVENTS

When this product has to be diluted with solvents, the water content of the solvent should be as low as possible and great care should be taken during dilution in order to prevent contamination with water. In addition, this operation should be carried out under a dry atmosphere.

In case of this product needs to be diluted with the desired solvent, the Dilution Stability Test of the final formulation under the application conditions is strongly recommended.

There is a possibility of precipitation, generation of gel-type substance or haze, if the dilution formulation was inappropriate.

Please note that all the dilution work is under customer's responsibility.

8. SAFETY PRECAUTIONS

・Care must be taken when handling CORONATE HXR as it contains active isocyanate and solvent.
・Please refer to SDS concerning its hazards, proper use, and handling before working with this product.
・This product is flammable. Therefore, the use of fire is prohibited in the work area.
・Appropriate safety measures and protective equipment such as goggles and gloves, should be used when working with this product in order to prevent contact with skin.
・CORONATE HXR is mainly applied for spray coatings. A protective mask

should be worn in order to prevent inhalation of spraying mist.

・CORONATE HXR contains below 0.2% of free isocyanate. This value does not increase even if this product is stored over a long period.

STANDARD PACKING

CORONATE HXR	220 kgs (200L iron drum)
	20 kgs (18L tin can)

IMPORTANT:

All the data described herein are reference values as results of tests conducted by Tosoh Corporation, with considerable caution, based on technical information which is considered to be reliable. Nothing contained herein is a representation, guarantee or warranty as to the use of such information for certain purposes or conflicts with any intellectual property rights in relation to that use.

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