Polyvion®

Product Name : Polyvion® HDI-T 33

CAS number : Mixture

Chemical Type : Aliphatic Polyisocyanate (HDI trimer, solvent-borne)

Business Unit : Polyurethane

1. Product Description

Polyvion® HDI-T 33 is a solvent-borne aliphatic polyisocyanate crosslinker based on hexamethylene diisocyanate (HDI) trimer chemistry.

It is designed for use as the hardener component in lightfast two-component polyurethane (2K PU) systems. When reacted with suitable hydroxyl-functional resins, it provides coatings with excellent weathering resistance, chemical resistance, gloss retention, and mechanical durability.

2. Typical Applications

Polyvion® HDI-T 33 is typically used as a crosslinker in:

- Automotive OEM and refinish coatings
- Transportation and industrial finishing coatings
- Plastics coatings
- High-performance clear coats

Actual suitability and performance depend on resin selection, NCO/OH ratio, formulation design, and processing conditions applied by the user.

3. Key Characteristics (Typical)

Property	Unit	Typical Value	Test Method
Physical state	–	Liquid	Visual
Appearance	–	Clear to slightly yellow	Visual
Non-volatile matter	%	~89–91	ISO 3251

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Property	Unit	Typical Value	Test Method
NCO content	%	~19.3–19.9	ISO 11909
Viscosity (23 °C)	mPa·s	~400–700	ISO 3219
Color (Hazen)	–	≤40	EN 1557
Monomeric HDI	%	<0.10	ISO 10283
Density (20 °C)	g/cm³	~1.12–1.14	ISO 2811
Flash point	°C	~50	DIN 53213
Equivalent weight	–	~214	Calculated

Note: Typical values are indicative only and do not constitute a specification.

4. Recommended Use

Polyvion® HDI-T 33 is intended for use with hydroxyl-functional polyacrylate or polyester polyols in 2K PU systems.

The NCO/OH ratio, curing temperature, pot life, and application parameters should be optimized and validated by the user. Strict moisture control is required during storage, formulation, and application, as isocyanates react with water.

5. Packaging & Logistics

Polyvion® HDI-T 33 is supplied in sealed steel drums or equivalent industrial packaging, subject to confirmation at the quotation stage.

The product is offered under standard Incoterms such as FOB, CFR, or CIF, as specified in the quotation. Indicative lead times are provided at quotation and confirmed upon order acceptance.

6. Handling & Storage

Polyvion® HDI-T 33 should be stored in its original, tightly closed containers in a cool, dry, and well-ventilated area, protected from moisture, heat, and foreign materials.

Recommended storage temperature: 0–30 °C. Storage at elevated temperatures may result in increased color and viscosity. Refer to the SDS for detailed handling instructions and PPE requirements.

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