Polyvion®

Product Name : Polyvion® ISO-M 31

CAS number : Mixture

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

Business Unit : Polyurethane

1. Product Description

Polyvion® ISO-M 31 is a blocked aliphatic polyisocyanate based on hexamethylene diisocyanate (HDI) chemistry, supplied as a solvent-borne product with approximately 75% non-volatile content.
It is designed for lightfast one-component (1K) polyurethane stoving coatings. Upon thermal deblocking, the released isocyanate groups react with suitable hydroxyl-functional resins to form durable crosslinked networks, providing good flexibility, adhesion, and weather stability.

2. Typical Applications

Polyvion® ISO-M 31 is typically used in:

- One-component polyurethane stoving coatings
- Industrial baking finishes
- Coil and can coatings
- Automotive primer surfacers and topcoats
- Additive for conventional stoving systems to improve flexibility and adhesion

Actual suitability and performance depend on resin selection, formulation design, catalyst choice, and curing profile 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	%	~73–77	ISO 3251

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Property	Unit	Typical Value	Test Method
Viscosity (23–25 °C)	mPa·s	~2,800–3,300	ISO 3219
Color (Hazen)	–	≤60	EN 1557
Free NCO content	%	≤0.2	ISO 11909
Blocked NCO content	%	~11.1	Calculated
Density (20 °C)	g/cm³	~1.06	ISO 2811
Flash point	°C	~45	DIN 53213
Equivalent weight	g/eq	~380	Calculated

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

4. Recommended Use

Polyvion® ISO-M 31 is used with hydroxyl-functional polyols in 1K stoving PU systems, curing at 160–200 °C or lower with catalysts. Formulation and baking conditions must be validated by the user.

5. Packaging & Logistics

Polyvion® ISO-M 31 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® ISO-M 31 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; solidification at low temperature is reversible by gentle heating.

Under recommended storage conditions, the product maintains its properties for at least 9 months from shipment. Refer to the SDS for detailed handling instructions and PPE requirements.

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