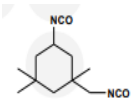
Technical Specification
Isophorone Diisocyanate (IPDI)

1. Basic Information

Product Name	**Isophorone Diisocyanate (IPDI)**
Structure Formula	
Molecular Formula	C12H18N2O2
Molecular Weight	M =222.28 g/mol
CAS No.	4098-71-9

2. Specifications

Colour	≤ 30 HAZEN (APHA)
Hydrolysable chlorine	< 200 ppm
Total chlorine	< 400 ppm
Assay	> 99.5 % by weight
NCO content	37.5 to 37.8% by weight

3. Physical Properties

Appearance	Clear liquid
Odour	Pungent
Bulk density	1058 kg/m3
Specific heat at 20°C	1.68 kJ/kg
Temperature of crystallization	< - 60°C
Boiling point under 1.33 KPa	158°C
Boiling point under 1013 hPa	310°C (decomposes)
Vapour pressure: at 20°C	0.04 Pa
Vapour pressure: at 50°C	0.9 Pa
Self-ignition temperature	430°C
Flash point (closed cup)	155°C
Vapour density (air = 1)	7.63
Concentration of saturated vapour at 20°C	<1 mbar
Concentration of saturated vapour at 100°C	1.7 mbar
Refractive index nD 25	1.483
Dynamic viscosity at 20°C	15 mPa.s

Applications

- IPDI is used in the chemical synthesis of aliphatic polyisocyanates and polyurethanes, such as aqueous dispersible polyurethane polymers (PUD) showing exceptional weathering resistance.

Hazardous properties and safety instructions

- Monomeric diisocyanates are reactive chemicals that must only be handled under very strictly controlled conditions. They are strongly irritating to the skin, eyes and the respiratory tract and act as skin and respiratory tract/lung sensitizers.
- Before handling this product, it is therefore very important to carefully read its safety data sheet.

Storage conditions and shelf-life

- IPDI is sensitive to moisture and should be kept in its original container or in a volume tank under dry nitrogen blanketing, for example.
- Appropriate storage for 12 months does not normally affect the product in any way if it is stored in its sealed original drums in proper storage conditions at temperatures below 40°C.

Warning to users

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