

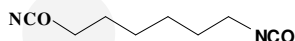
Hexamethylene Diisocyanate (HDI)

Description and synonyms

- Monomeric aliphatic diisocyanate or Hexamethylene-1,6-diisocyanate or 1,6-diisocyanatohexane
- CAS number: 822-06-0

Chemical Structure

- $C_8H_{12}N_2O_2$ or



Molecular Weight

$M_r = 168,2$

Specifications

(valid for the product manufactured in Pont-de-Claix, France)

| | |
|-----------------------|-------------------|
| Colour | ≤ 15 HAZEN (APHA) |
| Hydrolysable chlorine | 0.035 % maximum |
| Total chlorine | 0.1 % maximum |
| Assay | 99.5 % minimum |

The analytical methods are available upon request

Physical Properties

| | |
|--------------------------------|-------------------------------------|
| Appearance | Colourless clear liquid |
| Odour | Pungent, tear exciting |
| Bulk density at 25°C | 1050 kg/m ³ |
| Specific heat at 20°C | 1.76 kJ/kg |
| Temperature of crystallization | - 67°C |
| Boiling point under 1.33 KPa | 122°C |
| Boiling point under 1013 hPa | 261°C |
| Vapour pressure at 20°C | 2.2 10 ⁻³ mbar (0.22 Pa) |
| Vapour pressure at 30°C | 7.2 10 ⁻³ mbar (0.72 Pa) |
| Self-ignition temperature | 454°C |
| Flash point (closed cup) | 130°C approx. |
| Vapour density (air = 1) | 6 |

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| | |
|---|-----------------------|
| Concentration of saturated vapour at 20°C | 46 mg/m ³ |
| Concentration of saturated vapour at 30°C | 137 mg/m ³ |

Applications

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

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.
- HDI is treated in Toxicological Data Sheet N° 164 of the INRS (Institut National de Recherche et de Sécurité)

Packaging and transport

Packaging (please contact our sales team for more details)

- Deliveries of 800 kg net weight pallets (4 drums of 200 kg net weight).
- Other packaging: upon request

Transport

- Regulated. For more precise details, please consult the safety data sheet

Hexamethylene Diisocyanate (HDI)

Storage conditions and shelf-life

- HDI 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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