

## **PRODUCT DATA SHEET**

### **RESINATE 200**

#### **Application and Description**

Resinate 200 is a liquid, dark brown mixture of diphenylmethane-4,4'-diisocyanate (MDI) with isomers and homologues of higher functionality. It is used in conjunction with polyols to produce rigid polyurethane foams it is also used in isocyanurate foam, paint, adhesives, structural foam, cellular integral skin foam, automotive bumper and interior parts, high-resilience foam and synthetic wood, etc. Due to its unique composition structure, RESINATE 200 can provide better flowability. It is, therefore, particularly suitable for the production which require strict flowability of systems.

#### **Typical Physical and Chemical Properties**

Appearance:	dark brown liquid
NCO Content:	30.2 – 32.5 by weight
Viscosity at 25°C:	150-250 mPa.S
Acidity:	Max 200 ppm HCl
Hydrolysable Chlorine:	≤0.2%
Density at 20°C	± 1.23 g/cm <sup>3</sup>

#### **Packaging**

Drums and IBC's.

#### **Storage**

Storage stability (ex works): 12 months if stored in moisture-tight containers.

Since RESINATE 200 is a reactive chemical, reaction with atmospheric moisture happens easily and leads to the formation of insoluble ureas and carbon dioxide gas, which can result in pressure build-up in closed containers and viscosity increase of the product. Containers must therefore be absolutely dry and carefully sealed after congested with nitrogen.

Containers of RESINATE 200 should be kept properly closed and stored indoors at ambient temperatures (10-30°C) in a well-ventilated area. Storage at low temperatures (below 5°C) may lead to some crystallization; this material must, therefore, be protected from frost. If crystallization does occur, the material should be heated to 70-80°C to melt it out, and should then be thoroughly agitated before use. Extended storage at temperatures above 50°C is not recommended to prevent from the formation of insoluble solids and viscosity increase.

#### **Safety**

RESINATE 200 is of low toxicity by inhalation and skin absorption. The very low volatility of RESINATE 200 means that it should be of little hazard for brief exposures under normal conditions, e.g. in cases of small spillages.

Nevertheless, RESINATE 200 is an isocyanate-based composition and should be of certain toxicity. It may cause mild eye irritation and slight skin irritation. It may pose problems of skin sensitization. PM -200 has a Ceiling Threshold Limit Value, TLV(C) of 0.02 ppm (0.2mg/M3).

It is important to note, however, that a vapour hazard will arise if the material is heated to temperatures above 40°C (for instance when melted), or if it is reacted in an unventilated space. Another hazard is the formation of air-borne droplets during spraying operations. Under such conditions, it is essential to wear a gas mask and a respirator since repeated inhalation of the vapour at levels above the TLV(C) could cause respiration sensitization.

Even under normal conditions, RESINATE 200 remains a reactive chemical and care should be taken when handling it to prevent its coming into contact with the skin and eyes. Suitable protective clothing such as glove, protective spectacles and work suit should be worn.

Splashes on the skin or in the eyes should be removed promptly by irrigation with clean water and the skin should be well washed with soap and water. Since RESINATE 200 is very easy to react with moisture and leads to the formation of carbon dioxide gas, containers must therefore be absolutely dry and sealed to protect from moisture and water. In case water splashes into the containers, be careful to avoid sealing it too tightly. It is important to leave holes to prevent containers from explosion.

## **Fire and Explosion Hazard**

The MDI series is classified as an IIIB combustible liquid by NFPA. It is combustible when there is oxygen and high temperatures. Explosion could occur when sealed or when water is present. Toxic fumes will form when MDI is burning. Fire fighters must wear full protective gear. Carbon dioxide, foam, or dry powder type fire extinguisher may be used. To avoid possible explosion, do not seal contaminated containers.

## **Spillage Handling**

In case of spillage, immediately isolate area, remove fire source and make sure the area has adequate ventilation. Spillage handling should be conducted by trained personnel. Small amounts spilled can be covered with sand and treated with 5% ammonia off site. Collect and recycle is recommended if a large amount is spilled. Contaminated floor may be cleaned by ammonia or detergent. Waste product should be handled according to local environmental law. For more information, please refer to our MSDS.

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