



ONGRONAT® ISOCYANATES

ONGRONAT® 2100

# TECHNICAL DATA SHEET

## Product

ONGRONAT® 2100 a mixture of 4,4'-methylenediphenyldiisocyanate and homologues.  
The average functionality is 2.6 - 2.7.

## Appearance

ONGRONAT® 2100 is a solvent free dark-brown low viscosity liquid at room temperature.

## Application area

ONGRONAT® 2100 is a general purpose polymeric MDI for the manufacture of rigid insulating foams, semi-rigid integral skin, structural foams, elastomers and adhesives.

## Typical property range

NCO content	: 30.0 - 32.0	wt%	ASTM D5155
Viscosity (at 25 °C)	: 170 - 230	mPa.s	ASTM D4889
Acidity as HCl	: max. 0.05	wt%	BorsodChem method PAK 11

## Other physical properties

Density (at 25 °C)	: 1.23	g/cm <sup>3</sup>
Flash point	: >200	°C

## Transport and packaging

In road tankers, 1000 l containers, 250 kg non-returnable metal drums, or in metal cans under nitrogen blanket.

## Storage

Normal processing temperature is between 20-25 °C.

It is recommended to store ONGRONAT® 2100 within this temperature range, under these conditions the quality will be maintained for max. six months.

The material can also be stored within the temperature range of 10-30 °C without affecting its quality.

During storage below 10 °C the quality of ONGRONAT® 2100 may deteriorate, because the 4,4'-methylenediphenyldiisocyanate can partly crystallize. The product can be liquefied again by cautiously heating it up (up to 70 °C) as rapidly as possible, but during this re-melting procedure sediment may be generated.



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If product is not consumed immediately after re-melting, it is necessary to arrange for storing it at the recommended temperature. During transportation the temperature must be kept above 10 °C.

Storage at a temperature above 30 °C is not recommended since discolouration and formation of insoluble solids (dimerization) may occur which can lead to a viscosity increase and a decrease of NCO content.

Above 150 °C a slow, exothermic decomposition reaction takes place which becomes extremely fast above 250 °C, so care must be taken to avoid this thermic effect.

The material must be kept dry at all times; therefore it must be protected from water ingress and atmospheric moisture. In order to protect the material from atmospheric moisture a dry inert gas blanket (nitrogen) with a dew point of -40 °C must be applied into the containers (drums or storage tanks). Dry air is not recommended for this purpose because it could cause oxidation and due to this, the colour of the product can become darker.

## Safety precautions

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All activities related to isocyanate handling are potential sources of danger; therefore special care must be taken when working with it.

Handle the material with care. Avoid contact with water and damp. Avoid contact with the skin and eyes. Do not inhale the vapours of the product.

Detailed safety information available in the specific Material Safety Data Sheet.



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