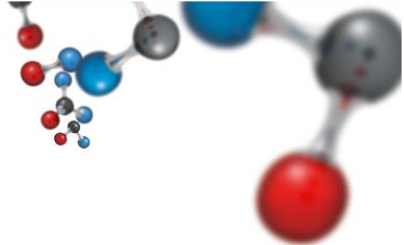


# TECHNICAL DATA SHEET (TDS)

## ONGRONAT® 3650



- **Product description:** ONGRONAT® 3650 is a mixture of 4,4'-methylene diphenyl diisocyanate and 2,4'-methylene diphenyl diisocyanate
- **Appearance:** Colourless to pale yellow transparent liquid above room temperature, free from any solids
- **Features & benefits of the end product produced using ONGRONAT® 3650:** Weather, chemical and abrasion resistance, Flexibility, High strength, Durability, High bonding
- **Industry:** Construction; Transport; Clothing & Footwear; Furniture, Bedding & Decoration
- **Applications:** ONGRONAT® 3650 is specifically offered for applications where a 2,4' isomer rich monomeric MDI is required that is processed into a prepolymer

### SPECIFICATIONS

Property	Value	Dimension	Test method
NCO	min. 33.4	wt%	ASTM D5155
Acidity	max. 50	ppm	BorsodChem Method PAK 126
Hydrolyzable Chlorine Content	10 – 50	ppm	BorsodChem Method PAK 15

### OTHER PROPERTIES\*

Property	Value	Dimension
Density (at 25°C)	1.20	g/cm <sup>3</sup>
Viscosity (at 25°C)	13 - 15	mPa.s
Flash point	>200	°C
Melting point	<20	°C

\*Values given in the „OTHER PROPERTIES” section are only typical ones and they are not to be considered as part of the specification.

### PACKING, STORAGE & TRANSPORT

Packing and transport: ONGRONAT® 3650 can be loaded and transported in tank road tankers, 1000 l containers, 225 kg non-returnable metal drums, or in metal cans under nitrogen blanket. The loading temperature of ONGRONAT® 3650 is 40-50 °C in bulk and 25-40 °C in the case of drummed product, or in IBCs. Please note that based on the distance of the destination the delivery temperature may differ from the loading temperature, but still remains in the range of 25-50 °C in the case of bulk product. ONGRONAT® 3650 packed in drums or IBCs needs to be transported in the range of 25-40 °C. Therefore cold shocks and prolonged exposure of the containers (drums or IBCs) to intensive sunlight needs to be avoided. ONGRONAT® 3650 is shipped according to the above temperature ranges in the lack of any special requirement.

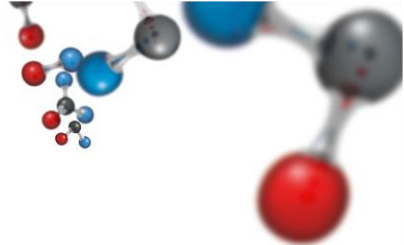
Storage: It is recommended to store the product within the temperature range of 25 – 50 °C. Stored within this temperature range and under a nitrogen blanket (dew point: -40°C), ONGRONAT® 3650 preserves its quality for 6 months from the date of its production. During storage below 25 °C the

quality of ONGRONAT® 3650 may deteriorate due to the partial crystallization of its 4,4' methylene-diphenyl-diisocyanate content. If crystallization occurs, the crystals need to be molten by heating the product to 70 °C in a controllable way, but as fast as possible. The time required by the complete remelting depends on the power of the heating equipment. During the remelting procedure the product needs to be checked visually on a regular basis whether the complete melting of the crystals has already been achieved. After the complete melting of the product storage in the recommended temperature range needs to be ensured. If partial crystallization occurs due to the low storage temperature and timely remelting is not ensured the product may suffer permanent quality deterioration resulting in the formation of solid deposition in the bottom of storage tanks (drums or IBCs) that can not be removed by further heating.

The product must not be stored above 50°C as its colour can change and unwanted dimerization may occur that leads to the decrease of the NCO content.

# TECHNICAL DATA SHEET (TDS)

## ONGRONAT® 3650



The product must not come into contact with water. In order to prevent water (moisture) ingress, nitrogen is used usually (dew point of -40 °C) to displace the air from the drums or containers. It is not advised to use dry air as an inert blanket for the above purpose because due to contact with air or oxygen the colour of the product may change to yellow due to the oxidation. Since carbon dioxide (CO<sub>2</sub>) is soluble in isocyanates, it is not recommended to be used as an inert gas either.

### SAFETY PRECAUTIONS

Handle the material with care. Avoid contact with water and moisture. Reaction with water always results formation of CO<sub>2</sub> and therefore increase of pressure in the closed storage container. Avoid contact with skin and eyes. Do not inhale the vapours of the product. Detailed safety information available on the [www.borsodchem-group.com](http://www.borsodchem-group.com) website and in the specific Safety Data Sheet.

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Technical Data Sheet (TDS)  
ONGRONAT® 3650

[www.borsodchem-group.com](http://www.borsodchem-group.com)

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