Technical Data Sheet

Revision Date：2021-7-16 NO.WHPU_0001

Name：WANNATE®MDI-100 Version：8.0

Application

WANNATE® MDI-100 is pure MDI. It is a white to light yellow- green crystal at room temperatures. When melted, it becomes a clear liquid， no mechanical impurities. WANNATE® MDI-100 can be widely used in the production of various polyurethane elastomers including cellular elastomers, thermoplastic elastomers, cast elastomers, synthetic leather, adhesives, coatings and sealants.

Typical Physical and Chemical Properties

Test Item(s)	**Specification(s)**
Appearance	Solid：White to light yellow- green crystal Liquid: Clear liquid，No mechanical impurities
MDI Purity /%	≥99. 6
2,4'-isomer/%	≤2. 0
4,4'-isomer/%	≥97. 0
Chromatic Number(APHA)	≤30
Cyclohexane insoluble/%	≤0. 2
Crystallization point /℃	≥38. 1
Hydrolysable chlorine，%	≤0. 003

Package(s)

210 L (55 gal.) steel drums

18L (5 gal.) pails

insulated tank lorry

Storage

Container: Freshly manufactured WANNATE® MDI-100 is a clear liquid when molten. As

WANNATE® MDI-100 is a reactive chemical, reaction with atmospheric moisture occurs easily and leads to the formation of insoluble ureas and carbon dioxide gas which can lead to pressure build-up in closed containers and increases in the viscosity of the product. Containers must therefore be absolutely dry and carefully sealed after purging with dry nitrogen.

Temperature: Extended storage will result in insoluble dimers. The rate of dimer formation varies with temperature. The lower the WANNATE® MDI-100 storage temperature the better is. It is best to store solid WANNATE® MDI-100 below -5℃. It is recommended melted liquid WANNATE® MDI-100 be stored at 44℃-46℃ and to use it up as soon as possible.

Recommended Melting Conditions

To ensure product quality, it is recommended the solid WANNATE® MDI-100 be quickly and evenly melted in a forced air oven equipped with rollers. The temperature of the hot-air oven should be within 70-80℃. The time it takes to melt MDI depends on many factors, like the temperature of the room, heat source, air circulation and ability to rotate the drum during heating. Prolonged heat-treatments will lead to the formation of insoluble dimer. It is necessary for the oven to reach 70-80℃ as quickly as possible before melting MDI and avoid excessive localized heating.

Water or steam is not recommended since water will react with MDI if there is any leakage. Only when the drums are intact could water be used to melt the product. Water temperature should be controlled at 70-80℃ and the melting time be less than 6 hours.

Shelf Life

Under recommended storage conditions, the shelf life of WANNATE® MDI-100 is 6 months since the date of production. Product stored past the expiration date may still be suitable for use as long as key physical and chemical properties are still within specification. Liquid WANNATE® MDI-100 delivered by insulated tank lorry has a shelf life of 10 days.

For more information about safety and environment, please refer to our MSDS or contact our customer service center.

Version information:

Date of first issue : June 6 ,2013
Date of 1st revise: Feb 6, 2015 Reason for revision : The need of product classification

Date of 2nd revise : May 5, 2015 Reason for revision: A change of company address
Date of 3rd revise : Aug.18, 2015 Reason for revision: Unified the template of TDS
Date of 4th revise: May 31, 2016 Reason for revision: Change of product standard
Date of 5th revise: June 30, 2017 Reason for revision: Change of company LOGO
Date of 6th revise: October 30, 2020 Reason for revision: Change of solid MDI -100 shelf life.
Date of 7th revise: July 16, 2021 Reason for revision: Change of melting conditions

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