

Water Dispersible Polyisocyanate

Technical Data Sheet

Name: Aquolin[®] 166
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Product Description

Aquolin[®] 166 is a hydrophilically modified polyisocyanate, with high functionality, low viscosity, good dispersibility and long pot life. It can be used with various hydroxyl-functionalized dispersions for 2k solutions. An appropriate amount of Aquolin[®] 166 in waterborne polyurethane adhesive can enhance the bonding strength, heat resistance and hydrolysis resistance significantly, thus it is applicable for various waterborne adhesive applications such as footwear, automotive interior and 3D lamination.

Aquolin[®] 166 can be diluted with the solvents, such as propylene glycol methyl ether acetate (PMA), propylene glycol diacetate (PGDA), butyl acetate, etc. Only PU grade solvents (< 0.05% water) should be used and the solvents must be tested in advance by the user to determine suitability.

Product Features

1. High functionality with low viscosity
2. Good dispersibility
3. Long pot life

Characteristic Data*

Property	Value	Unit	Method
Appearance	Transparent to light yellow liquid		
NCO content	21.5-22.5	wt %	GB 12009.4-2016
Viscosity (25°C)	700-1700	mPa·s	GB/T 2794-2013 (Brookfield LV,63#/30rpm)
Color APHA	<60		GB/T 1722-1992
Monomeric isocyanate	≤0.1	wt %	GB/T 18446-2009
Flash point	~226	°C	GB/T 5208-2008
Density	~1.16	g/cm ³	GB/T 4472-2011

*Property values represent typical results only and are not to be considered as specifications, subject to specific COA

Storage

Aquolin[®] 166



The product should be stored in dry conditions above 5°C and below 35°C with the integrity of the packaging, and prevent direct sunlight. The validity of this product is for 12 months, performance assessment is recommended before use after shelf life. The product should be protected from freezing during storage. Water dispersible polyisocyanates are very moisture-sensitive and react with water to form carbon dioxide and insoluble ureas. The generation of carbon dioxide can lead to dangerous increases in pressure. The containers must always be kept tightly closed and the access of water in all forms must be prevented. It is suggested to use up once the package is open.

Disclaimer: Wanhua Chemical Group Co., LTD. recommends that customers should check with Materials Safety Data Sheet (MSDS) for details about safety instructions. We also suggest that you contact the suppliers of other materials used in our recommended formulations and consult appropriate health and safety regulations prior to use. The information contained herein is believed to be reliable. However, nothing in this technical sheet should be considered as a representation of warranty, express or implicit, regarding the product characteristics, application, quality, safety, merchantability or fitness for a particular purpose. Nothing contained herein is to be considered as permission, recommendation, nor as an inducement to practice any patented invention without permission of the patent owner.