



VORANOL 3010

Polyether Polyol

VORANOL* 3010 polyether polyol is a glycerine initiated, nominal 3000 molecular weight heteropolymer triol. It is a general purpose product that is used in the commercial manufacture of a wide range of flexible polyurethane slabstock foams worldwide.

Typical applications for the foam made from VORANOL 3010 include furniture, bedding, quilting and many other forms of general padding.

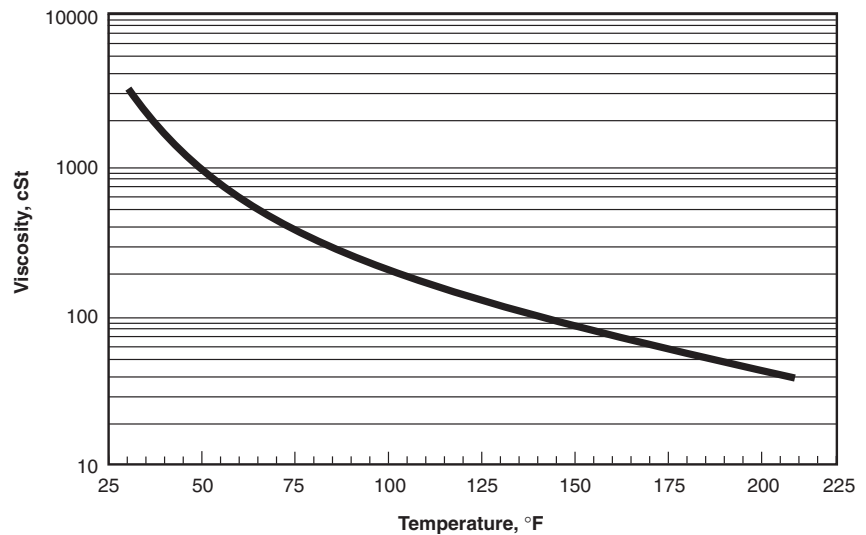
Sales Specifications¹

Hydroxyl number55.1-57.8
 Water, max. %0.06
 ALPHA color, max.....35
 pH (1 Water/10 Methanol)7.7-9.3
 Viscosity @ 25°C, cSt420-480

Typical Properties²

Antioxidant PackageBHT based
 Density, lbs./gal 77°F8.450
 gm/cc 25°C1.012
 Specific Gravity
 gm/cc, 25/25°C1.016
 Flash Point (PMCC)430°F/221°C
 Specific Heat (cal / gm °C)
 20°C0.400
 60°C0.443
 100°C0.487
 Thermal Conductivity (gm cal / cm sec °C)
 25°C36.5 x 10⁻⁵
 40°C30.9 x 10⁻⁵
 100°C28.3 x 10⁻⁵
 Refractive Index, 25°C1.4520
 Electrical Conductivity
 Mhos/cm3.19 x 10⁻¹¹
 Vapor Pressure, mm Hg
 25°C< 0.01

Viscosity vs. Temperature²



Viscosity, cSt			
32°F	77°F	100°F	210°F
3000	450	225	38

CAS # 009082-00-2

¹Specifications are revised periodically. Check with your sales representative for any recent updates.

²Not specification items.

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Safety Considerations

Most VORANOL polyols generally present no significant hazard in use when simple precautions are followed. However, some VORANOL polyols are hazardous and before working with these systems it is necessary to understand the hazards involved in handling all of the components and to establish and follow safe work procedures. Material Safety Data Sheets, product literature and safe handling and storage information are available for the polyurethane components supplied by Dow. Recommendations for handling, storage and disposal of any ingredient not furnished by Dow should be acquired from the supplier.

Toxicity and First Aid

Skin and Eyes

When working with VORANOL polyols, avoid contact of polyol with eyes or skin. Safety glasses are suggested for use with most polyols, however, some VORANOL polyols require that chemical workers' goggles be worn. Skin contaminated with polyols should be washed with

soap and plenty of water. If polyol contacts eyes, flush with plenty of low pressure flowing water. If irritation occurs from contact with polyols, get medical attention.

Ingestion

Polyols are low to very low in acute oral toxicity. If a polyol is swallowed, give large amounts of water to dilute. Obtain medical attention.

Inhalation

VORANOL polyols typically do not present a significant problem from inhalation. If any ill effects should occur, get the affected person to fresh air and obtain medical attention.

Fire and Explosion

VORANOL polyols also will burn under certain conditions and can explode if heated to decomposition in a confined area. VORANOL polyols are Class IIIB Combustible Liquids under OSHA. Polyol fires can be extinguished with water fog, carbon dioxide or dry chemicals. Polyol fires not involving isocyanate may be extinguished with alcohol foam. Personnel fighting isocyanate fires or polyol fires involving isocyanate

should wear pressure demand, self-contained breathing apparatus and full protective clothing as protection against nitrogen dioxide fumes and isocyanate vapors.

Spills and Disposal

Waste polyol should be burned in an adequate incinerator. Landfill disposal of polyols is not recommended because of the chemical's water solubility. Waste disposal of either isocyanate or polyol should always be in accordance with federal, state and local environmental laws and regulations.

Customer Notice

Dow encourages its customers to review their applications of Dow products from the standpoint of human health and environmental quality. To help ensure that Dow products are not used in ways for which they were not intended or tested, Dow personnel are willing to assist in dealing with ecological and product safety considerations. Your Dow representative can arrange the proper contacts.

For additional information in Asia Pacific, call (852) 2879-7333.

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We don't succeed unless you do.