

VORANOL 220-056N

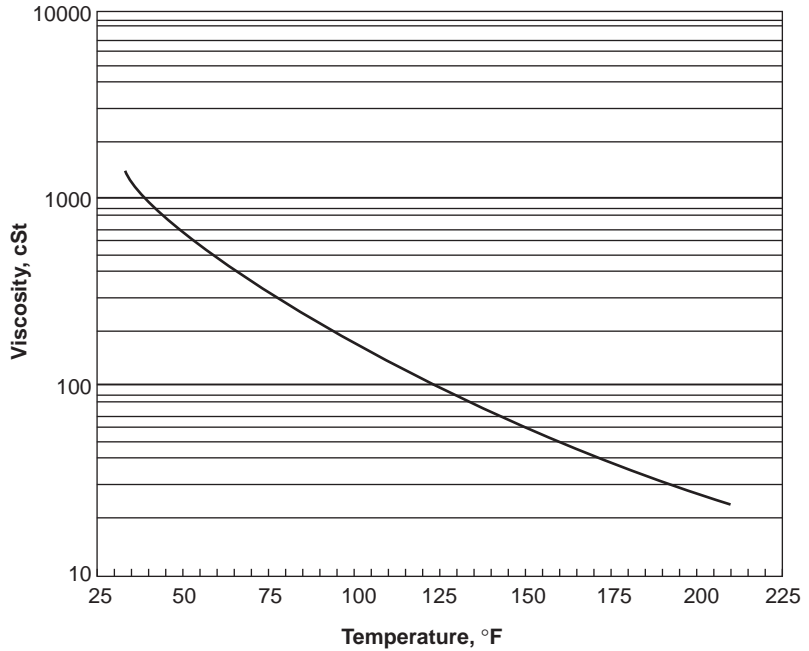
Polyether Polyol

VORANOL* 220-056N polyether polyol is a propylene glycol initiated, 2000 molecular weight homopolymer diol. The product has been specially neutralized for use in the production of prepolymers intended for sealant applications. VORANOL 220-056N can be easily blended with other polyols and additives giving almost unlimited options in performance and processing in typical sealant formulations.

Typical Properties¹

Hydroxyl Number	56
Water, max. %	0.04
APHA color, max	15
Acid Number, max (mg/g)	0.03
Unsaturation, max (meq/g)	0.04
Density, lbs/gal 77°F	8.3404
lbs/gal 100°F	8.2640
gm/cc 25°C	0.9994
gm/cc 50°C	0.9807
gm/cc 75°C	0.9631
gm/cc 100°C	0.9449
Specific Gravity	
gm/cc, 25/25°C	1.0023
gm/cc, 100/100°C	1.0344
Flash Point (PMCC)	390°F/199°C

Viscosity vs. Temperature¹



Viscosity, cSt			
32°F	77°F	100°F	210°F
1400	300	160	23

CAS # 025322-69-4²

¹ Typical Properties; not to be construed as specifications.

² Please consult your Dow representative for more detailed information regarding regulatory status.

Safety Considerations

Most VORANOL polyols generally present no significant hazard in use when simple precautions are followed. However, some VORANOL polyols are hazardous. Before working with VORANOL polyols 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 materials 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 adverse effects should occur, get the affected person to fresh air and obtain medical attention.

Fire and Explosion

VORANOL polyols will burn under certain conditions and can explode if heated to decomposition temperature 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 the U.S. and Canada, call 1-800-441-4DOW (4369).

Notice: No freedom from any patent owned by Dow or others is to be inferred. Because use conditions and applicable laws may differ from one location to another and may change with time, Customer is responsible for determining whether products and the information in this document are appropriate for Customer's use and for ensuring that Customer's workplace and disposal practices are in compliance with applicable laws and other governmental enactments. Dow assumes no obligation or liability for the information in this document. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

Published August 2001.



We don't succeed unless you do.