VORANOL™ CP 450
Polyol

Description VORANOL™ CP 450 Polyol is a glycerine initiated propoxylated homopolymer polyether triol with a molecular weight of 450 for multi-purpose usage in rigid coating, casting and adhesive applications. It is also used in rigid foams.

Benefits VORANOL™ CP 450 Polyol offers a balanced combination of viscosity and OH number which enables its use as main component in formulations for rigid foamed and non foamed applications.

Typical Properties	Nominal Value	Unit	Test Method
Hydroxyl Number, as KOH	370.0 to 396.0	mg KOH/g	ASTM D4274
Viscosity (Kinematic) (25°C)	300 to 360	cSt	ASTM D445
Water, max.	0.050	wt%	ASTM D4672
Acid Number, max.	0.050	mg KOH/g	Dow Method
Colour, max. (APHA)	30		ASTM D4890
pH (1 Water / 10 Methanol)	6.0 to 8.0		Dow Method
Potassium & Sodium, max.	10	ppm	Dow Method
Specific Gravity (25°C)	1.09		ASTM D4669

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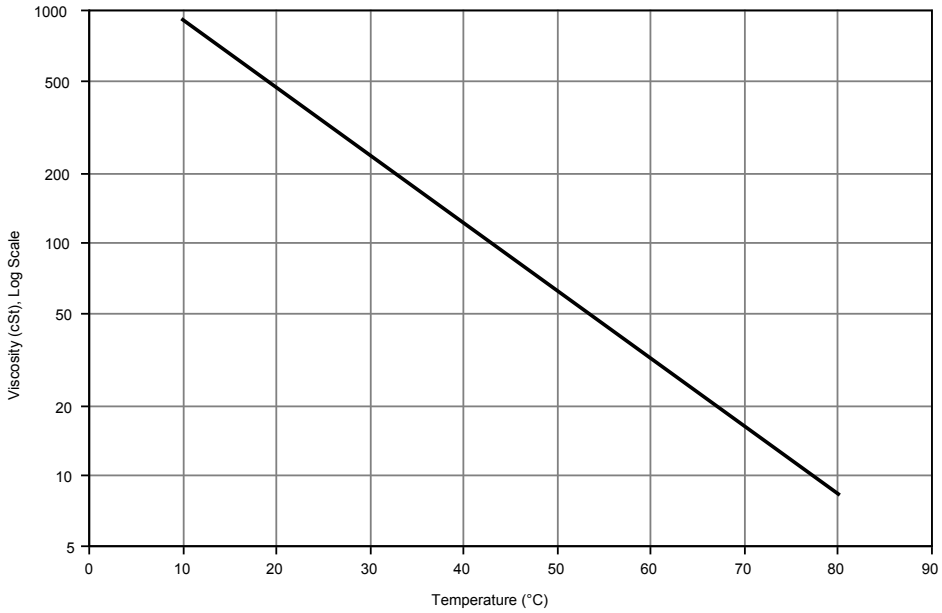
Viscosity (Kinematic) vs. Temperature



Notes

These are typical properties only and are not to be construed as specifications. Users should confirm results by their own tests.

For other physical properties including, but not limited to: Boiling and Melting point, Vapor Pressure, Flash Point and Thermal Expansion, please see section 9 of the Material Safety Data Sheet (MSDS). For Storage / shelf life information see section 7 of the MSDS and for CAS numbers see section 3.

Safety Considerations

Before working with Dow polyurethane materials it is necessary to understand the hazards involved in handling all of the components and to establish and follow safe work procedures. Safety Data Sheets (SDS), 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.

Safety Data Sheets are available from The Dow Chemical Company (Dow) to help customers satisfy their own handling, safety and disposal needs, and those required by locally applicable health and safety regulations. SDS are updated regularly. Therefore, please request and review the most current SDS before handling or using any product. Copies of the SDS are available on request through Dow Customer Information Group (CIG) CUSTINFOGRP@dow.com or through the nearest Dow Sales office.

Safety Precautions

Most Dow Polyols generally present no significant hazard during use when simple precautions are followed. However, some polyols may present certain hazards.

All persons who work with these materials must know and follow proper safe handling procedures.

Handling

Avoid contact with eyes, skin, or clothing. Workers should wear appropriate eye protection. Safety glasses are considered a minimum requirement. If there is the possibility of exposure to the eyes, chemical workers' goggles must be worn.

When working with Dow polyols, avoid contact of polyol with eyes or skin. Safety glasses are suggested for use with most polyols. However, some Dow polyols require that chemical workers' goggles be worn.

Please review the SDS for the specific product and your country for this information.

Toxicity

Most Dow polyols generally present no significant hazard during use when simple precautions are followed. However, some polyols may present certain hazards. See SDS for specific information.

Fire and Explosion

Polyols are stable under normal conditions. Hazardous polymerization may occur with isocyanates. Polyols are organic materials that will burn under the right conditions of heat and oxygen supply. Store and handle polyols away from open flame or high heat sources. While polyols have no known explosion limits, if heated to decomposition in a confined area, they may generate sufficient volatile gases to be an explosion hazard. Fires can be extinguished with water, fog or other conventional means. Fire fighters should wear positive pressure, self-contained breathing apparatus.

Caution: Polyurethanes or polyisocyanurates produced from this product may present a fire risk in certain applications if exposed to fire and/or excessive heat, e.g. welding and cutting torches, in the presence of oxygen or air.

Spills and Disposal

Spills can be covered with a commercial absorbent or sand, shoveled into open, properly labeled containers and removed from the work area for decontamination.

The preferred method of disposal is to incinerate under controlled conditions in accordance with all local and national environmental laws and regulations.

First Aid Procedure

Inhalation

Alone, Dow 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 prompt medical attention.

Eye contact

Flush eyes with water for at least 15 minutes. Obtain prompt medical attention.

Skin contact

Skin contaminated with polyols should be washed with soap and plenty of water. If irritation occurs from contact with polyols, get prompt medical attention.

Ingestion

If a polyol is swallowed, give large amounts of water to dilute, but never give fluids or induce vomiting if patient is unconscious or is having convulsions. Obtain medical attention.

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Product Stewardship

The Dow Chemical Company and its subsidiaries ("Dow") has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our Product Stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our Product Stewardship program rests with each and every individual involved with Dow products ─ from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

Customer Notice

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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a. long-term or permanent contact with internal bodily fluids or tissues. "Long-term" is contact which exceeds 72 continuous hours;
b. use in cardiac prosthetic devices regardless of the length of time involved ("cardiac prosthetic devices" include, but are not limited to, pacemaker leads and devices, artificial hearts, heart valves, intra-aortic balloons and control systems, and ventricular bypass-assisted devices);
c. use as a critical component in medical devices that support or sustain human life; or
d. use specifically by pregnant women or in applications designed specifically to promote or interfere with human reproduction.

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To the best of our knowledge, the information contained herein is accurate and reliable as of the date of publication, however we do not assume any liability for the accuracy and completeness of such information.

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www.dowpolyurethanes.com

This document is intended for use within Europe

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