Arcol® HS-200

Characterization

Arcol HS-200 polyol is a premium high-load polymer polyol with the highest polymer solids content of commercial polyols.

Specification

Property	Value	Unit of measurement	Method
Hydroxyl number	23.5 - 27.5	mg KOH/g	
Water content	max. 0.06	wt. %	

Other data*

Property	Value	Unit of measurement	Method
Nominal solids level	49	wt. %	
Appearance	White, viscous liquid		
Viscosity at 25°C	4,210	cps	
Specific gravity at 20°C	1.06		
Flash point PMCC	213 - 232	°C	
Bulk density at 20°C	8.99	lb/gal	

*These values provide general information and are not part of the product specification.

Properties / Applications

Arcol HS-200 polyol is used in the manufacture of high load flexible foams. It is designed to provide the highest polymer content at the lowest viscosity. It also helps to control the rise time to give greater process latitude and the potential for improved foam yield and reduced scrap. As with any product, use of HS-200 in a given application must be tested (including but not limited to field testing) in advance by the user to determine suitability.

Storage

Arcol HS-200 polyol is slightly hygroscopic and may absorb water. Containers should be kept tightly closed and protected from contamination with moisture and foreign materials, which can adversely affect processing.

This polyol can become quite viscous at low temperatures. For ease of handling, storage temperatures between 20°C (68°F) and 60°C (140°F) are recommended.

The shelf life is twelve months after receipt of material by customer, when stored in sealed original containers under conditions stated above.

Edition 2015-04-29

Arcol® HS-200

Polyol Use Level Comparisons of HS-200 to HS-100 and UHS-150

	Example 1		Example 2		Example 3	
	Conventional Foam		Conventional Foam		High Resilience Foam	
	1.4 (pcf) density / 47 (25% IFD)		2.0 (pcf) density / 35 (25% IFD)		2.3 (pcf) density / 45 (25% IFD)	
Arcol Polyol F-3040	50	55	85	85		
Ultracel Polyol U-3000					50	56.5
Arcol Polyol UHS-150			15			
Arcol Polyol HS-100	50				50	
Arcol Polyol HS-200		45		15		43.5
Water	4.5	4.5	3.3	3.3	1.95	1.95
Mondur Isocyanate TD 80	52.50	52.53	39.90	39.90	24.52	24.35
Index (100 A/B)	105	105	100	100	105	105

Notes:

When using Arcol HS-200 polyol as a replacement for Arcol HS-100 polyol in conventional formulations, the amount of polymer polyol needs to be adjusted (reduced) by approximately 10% to compensate for the higher solids in HS-200. To calculate the amount of HS 200 needed multiply the amount of HS-100 by 0.9 (90%) and increase the amount of base polyol to 100 minus the amount of HS-200. The amount of isocyanate may need to be adjusted slightly depending on the base polyol used. Typically no other formulation changes are needed. See example 1 above.

When using HS-200 as a replacement for Arcol UHS-150 polyol in conventional or High Resilience formulations typically no adjustments to the formulation are needed. See example 2 above.

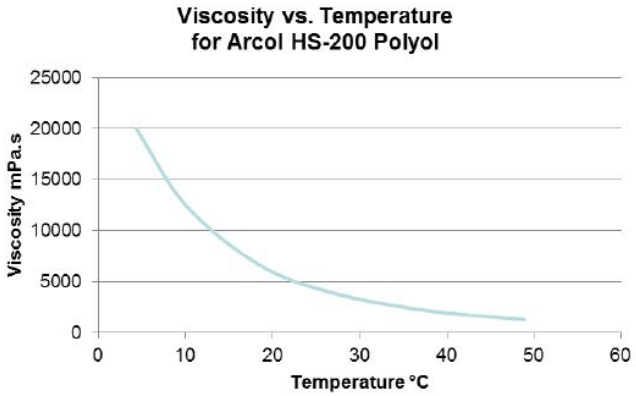
When using HS-200 as a replacement for HS-100 in Ultracel U-3000 polyol formulations the amount of polymer polyol needs to be adjusted (reduced) to compensate for the higher solids in HS-200 and solids present in U-3000. To calculate the amount of HS-200 needed multiply the amount of HS-100 by 0.87 (87%) and increase the amount of U-3000 polyol to 100 minus the amount of HS-200. The amount of isocyanate will need to be adjusted slightly. Typically no other formulation changes are needed. See example 3 above.

It is advisable to calibrate the polyol stream when switching to HS-200 to account for the difference in viscosity.

Arcol® HS-200

Chart/Table/Graph

Viscosity vs. Temperature for Arcol HS-200 Polyol



Data presented in this chart is derived from a single sample and may vary from the typical properties information, which represents values derived by averaging data from various samples.

Health and Safety Information

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling this product. Before working with this product, you must read and become familiar with the available information on its risks, proper use, and handling. This cannot be overemphasized. Information is available in several forms, e.g., safety data sheets and product labels. For further information contact your Covestro LLC representative or the Product Safety and Regulatory Affairs Department in Pittsburgh, PA.

The manner in which you use and the purpose to which you utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether our products, technical assistance and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.

This product is not designated as “Medical Grade” and therefore shall not be considered a candidate for the manufacture of a medical device or of intermediate products for medical devices, which are intended under normal use to be brought into direct contact with the patient's body (e.g., skin, body fluids or tissues, including indirect contact to blood). If the intended use of the product is for the manufacture of a medical device or of intermediate products for medical devices, Covestro LLC must be contacted in advance, in writing, to provide its agreement to sell such product for such purpose. Nonetheless, any determination as to whether a product is appropriate for use in a medical device or intermediate products for medical devices must be made solely by the purchaser of the product without relying upon any representations by Covestro LLC. For further information, please see the "Guidance on Use of Covestro Products in a Medical Application" document which can be located at www.productsafetyfirst.covestro.com

Editor: Covestro LLC
1 Covestro Circle
Pittsburgh, Pennsylvania 15205
United States
www.covestro.com

Contact:
General Information
Tel. 1-844-646-0545

Edition 2015-04-29