



UCAR™ VAGH

Solution Vinyl Resin

Description

UCAR™ VAGH Solution Vinyl Resin is a high molecular weight, hydroxyl-functional, partially-hydrolyzed vinyl chloride/vinyl acetate resin. It is supplied as a powder.

Introduction

UCAR VAGH Solution Vinyl Resin is crosslinkable with amino resins and polyisocyanates and is also compatible with a wide variety of resins including alkyds and acrylics. This resin has good adhesion to vinyl, cellulosic and treated polyester and PE substrates. UCAR VAGH Resin has a high T_g which imparts good sandability in vinyl/alkyd/urea wood sealers. It is cited in FDA regulations for use in food contact applications and is also heat-sealable.

Typical Applications

- Flexible Packaging and Binder in Magnetic Tape
- General Metal and Container Coatings
- Wood Finishes and Paper Coatings
- Industrial Maintenance
- Marine and Maintenance Coatings

Typical Properties

Property ⁽¹⁾	Value	Method
Molecular Weight	27,000	Dow M
Hydroxyl Value	76	Dow M
Hydroxyl Equivalent Weight, (g/eq)	738	Dow M
Inherent Viscosity, (dL/g)	0.53	ASTM D-1243
Specific Gravity	1.39	ASTM D-792
Glass Transition Temperature, (°C)	79	Dow M
Solution Viscosity @ 25°C, (mPa.s)	1,000 ⁽²⁾	Dow M
K-Value	35	Calculated
Degree of Polymerization	455	Calculated
Composition, % by Weight		
Vinyl Chloride	90	
Vinyl Acetate	4	
Vinyl Alcohol	6	

(1) Typical properties, not to be construed as specifications.

(2) 30% solids in MEK.

Safety and Handling

The Dow Chemical Company provides its customers with a product specific Material Safety Data Sheet (MSDS) or Safety Data Sheet (SDS) to cover potential health effects, safe handling, storage, use and disposal information. Dow strongly encourages its customers to review the MSDS on its products and other materials prior to their use.

UCAR™ VAGH Solution Vinyl Resin is normally supplied as a powder in multi-ply paper bags. It may also be supplied in bulk rail cars or hopper trucks. The resin should be stored in dry place in its original closed packaging. This resin has a shelf life of approximately twelve months when stored at 24°C (75°F) and low humidity. Storage at higher temperatures or conditions of high humidity may result in some product discoloration.

For further handling information consult the Dow brochure, *UCAR Solution Vinyl Resin Storage and Handling*, Form. No. 322-00054.

Product Stewardship

The Dow Chemical Company 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 of our Product Stewardship philosophy by which we assess the health and environmental information on our products and then take the appropriate steps to protect employee and public health and the environment. The Dow Chemical Company has enduring commitments to Responsible Care® in the management of chemicals worldwide. Our Product Stewardship program rests with every individual involved with Dow products from the initial concept and research to the manufacture, sale, distribution, and disposal of each product.

Customer Notice

Dow encourages its customers and potential users of Dow products to review their applications for such 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 available to assist customers in dealing with ecological and product safety considerations. Your Dow sales representative can arrange for the proper contacts. Dow literature, including Material Safety Data Sheets or SDS should be consulted prior to the use of Dow products.

Medical Application Policy

Dow will not knowingly sell or sample any product or service ("Product") into any commercial or developmental application that is intended for:

- (a) permanent (Long term) contact with internal body fluids or internal body tissues. Long term is a use which exceeds 72 continuous hours (except 30 days for PELLETHANE™ Polyurethane Elastomers);
- (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.

Additionally, all Products intended for use in pharmaceutical applications must pass the then current Pharmaceutical Liability Guidelines. For additional information please contact your regular Dow representative.

Food Contact Applications

This product is cited in FDA regulations for use in food contact applications. When used unmodified for food contact applications, this product will comply with the U.S. Food, Drug, and Cosmetic Act as amended under Food Additive Regulations 21 CFR 175.105, 175.300(b)(3)(xv), 175.320, 175.380(a), 175.390(b)(2), 176.170(b)(2), 176.180(b)(1) and 177.1210(b). These CFR sections should always be consulted for the complete context before any conclusion is made as to the allowed regulated use

The starting monomers used to manufacture this UCAR™ Solution Vinyl Resin are listed on the list of monomers and other starting substances which may be used in the manufacture of plastics materials and articles, Annex II – Section A (authorized monomers) of European Commission Directive 2002/72/EC and subsequent amendments, relating to *Plastics Materials and Articles intended to come into contact with foodstuffs*.

®™ Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow

® Responsible Care is a registered service mark of American Chemistry Council in the United States

UCAR VAGH Solution Vinyl Resin

Form No. 322-00116-0306X-AM

Food Contact Applications (Cont.)

The starting monomers are also listed in Framework Resolution AP(2004)1 *on coatings intended to come into contact with foodstuffs (superseding Resolution AP (96)5)*. Note that the current Resolution AP (2004)1 is not yet a legal document, until implemented into national legislation in the respective member countries of the Council of Europe.

There are restrictions and/or defined migration limits for each monomer which must be met by the final cured coating under the appropriate conditions as defined in the EU Directives (82/711/EEC, 85/572/EEC, 97/48/EC). Please contact your Dow representative for further information and forthcoming EC directives and regulations regarding your particular application. Also consult the Dow brochure, *UCAR™ Solution Vinyl Resins Flexible Solutions for Coatings*, Form No. 322-00051-0902.

Regulatory Status

UCAR™ VAGH Solution Vinyl Resin is a polymer according to the definition in Directive 92/32/EEC (7th Amendment to Directive 67/548/EEC) and all starting materials and intentional additives are listed in the European Inventory of Existing Chemical Substances (EINECS).

For more information on the regulatory status of this product, please refer to the Material Safety Data Sheet (MSDS) or SDS for this product.

Chemical Inventory Listing

CAS Number ⁽¹⁾	025086-48-0	
Europe	EINECS	Polymer
United States	TSCA	025086-48-0
Canada	DSL	025086-48-0
Australia	AICS	025086-48-0
Japan	ENCS	(6)-92
Korea	KECL	KE-00035
Philippines	PICCS	025086-48-0
China	SEPA	025086-48-0

⁽¹⁾Please refer to the Material Safety Data Sheet (MSDS) or SDS for this product to ensure this CAS number is consistent with the product(s) you use.

Published March 2006

Contact Information:

North America: 800-441-4369
989-832-1426
Fax: 989-832-1465
Mexico: 95-800-441-4369
Brazil: 55 11 5188-9222
Europe: 800 3 694 6367
32 3 450 2240
Fax: 323 450 2815
Pacific: Except Indonesia & Vietnam
Toll Free Phone: 800 7776-7776
Toll Free Fax: 800 7776-7779
Pacific: All 60 3-7958-3392

<http://www.dow.com/svr/>

Notice: No freedom from any patent owned by Dow or others is to be inferred. Dow assumes no obligation or liability for the information in this document. The information provided herein is presented in good faith and is based on the best of Dow's knowledge, information, and belief. Since use conditions at non-Dow facilities are beyond Dow's control and governmental regulations may differ from one location to another and may change with time, it is solely the Buyer's responsibility to determine whether Dow's products are appropriate for the Buyer's use, and to assure the Buyer's workplace, use, and disposal practices are in compliance with laws, regulations, ordinances, and other governmental enactments applicable in the jurisdiction(s) having authority over Buyer's operations. Consequently, Dow assumes no obligation or liability for use of these materials and makes no warranty, express or implied. The user of the information provided is solely responsible for compliance with any applicable federal, state, provincial, and local laws. NO WARRANTIES ARE GIVEN; ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY EXCLUDED.

