



## UCAR™ VYHH

Solution Vinyl Resin

### Description

UCAR™ VYHH Solution Vinyl Resin is a high molecular weight copolymer of vinyl chloride and vinyl acetate. It is supplied as a powder. The vinyl chloride content is about 86%.

### Introduction

UCAR VYHH Solution Vinyl Resin provides a good balance of chemical resistance, solubility, film strength and thermoplasticity. This resin is miscible with functionalized solution vinyl resins. UCAR VYHH Solution Vinyl Resin provides adhesion to PVC substrates.

### Typical Applications

- Adhesives
- Industrial Coatings
- Civil Engineering
- Inks and Overlacquers
- Marine and Maintenance
- FDA Approved for Food Contact Applications.

### Typical Properties

Property <sup>(1)</sup>	Value	Method
Molecular Weight	27,000	Dow M
Inherent Viscosity, (dL/g)	0.50	ASTM D-1243
Specific Gravity	1.35	ASTM D-792
Glass Transition Temperature, (°C)	72	Dow M
Solution Viscosity @ 25°C, (mPa.s)	600 <sup>(2)</sup>	Dow M
K-Value	46	Calculated
Degree of Polymerization	415	Calculated
Composition, % by Weight		
Vinyl Chloride	86	
Vinyl Acetate	14	

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

(2) 30 % solids 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™ VYHH 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.

UCAR VYHH has a shelf life of approximately twenty four 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 entitled, *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), 177.1200 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.

Also consult the Dow brochure, *UCAR Solution Vinyl Resins Flexible Solutions for Coatings*, Form No. 322-00051-0902. The starting monomers used to manufacture this UCAR™ Solution Vinyl Resin are listed in Annex II, Section A "List of authorized monomers and other starting substances" in Commission Directive 2002/72/EC, as amended, relating to plastic materials and articles intended to come into contact with foodstuffs.

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## Food Contact Applications (Cont.)

The starting monomers are also listed in the "Inventory list of substances used for the manufacture of surface coatings intended to come into contact with foodstuffs" of Council of Europe Resolution AP (2004)1.

There are restrictions and/or defined migration limits for each monomer which must be met by the final cured coating. Please contact your Dow representative for further information and forthcoming EC directives and regulations regarding your particular application.

## Regulatory Status

UCAR™ VYHH 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 <sup>(1)</sup>		9003-22-9
Europe	EINECS	Polymer
United States	TSCA	9003-22-9
Canada	DSL	9003-22-9
Australia	AICS	9003-22-9
Japan	ENCS	(6)-76 and (6)-82
Korea	KECL	KE-35350
Philippines	PICCS	9003-22-9
China	SEPA	9003-22-9

<sup>(1)</sup>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.

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