



PRODUCT STANDARDS

"BAKELITE" VINYL SOLUTION COATINGS RESIN VAGH - 1

VAGH - 1

DESCRIPTION VAGH-1 is a hydroxyl modified vinyl chloride-acetate resin compatible with a wide variety of other surface coating materials including various types of oleoresinous varnishes as well as drying and nondrying alkyds. VAGH-1 resin also is compatible with certain epoxy, ureaformaldehyde, and melamine resins, cross-linking with them through the hydroxyl groups to produce coatings with improved resistance to heat and chemicals. VAGH-1 is of special interest to formulators because this resin can be used to improve the properties of other vehicles. VAGH-1 resin films exhibit good color and excellent flexibility. Properly formulated coatings based on VAGH-1 produce films with excellent toughness and hardness, good adhesion to a variety of substrates, excellent resistance to abrasion, good gloss, and outstanding resistance to water, alcohols, aliphatics, inorganic acids, and mineral alkalies. Pigmented coatings of VAGH-1 resin have good color and retain their gloss under exterior exposures. VAGH-1 resin is chemically neutral, non-oxidizing, tasteless, and odorless.

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May 25, 1962

RESIN PROPERTIES

PROPERTY	TESTING METHOD	TYPICAL VALUE
Specific gravity	D792	1.36
Heating loss, 45 minutes at 105°C, per cent by weight	WC-160-H	2.0
Polyvinyl chloride, per cent by weight	WC-294-A	90
Polyvinyl alcohol, per cent by weight	WC-93-F	5.7
Lead, ppm	WC-20-B; or WC-20-D (instrumental)	< 5
Specific viscosity 1.0 gm/methyl isobutyl ketone/20.00°C	WC-609-L-1; WC-31-B-2	0.59
Inherent viscosity 0.2 gm/cyclohexanone/30°C	WC-31-B-4 D 1243, Method A	0.525
Viscosity, centipoises; 20% resin in 1:1 methyl isobutyl ketone: toluene/20.0°C	WC-31-L	400
Color, light transmission at 475 mμ, per cent; 18% resin/methyl isobutyl ketone	WC-5-K	80

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The recommendations, test results, property values, and suggestions for use herein are given in the case of these materials and serve as a guarantee of their performance. The property values given are those to be expected from the material at the time of manufacture. These values are not a guarantee of the testing methods as indicated. Property values are given to enable the user to select the material which best meets his requirements. The property values are closely controlled. If additional information is desired, contact the nearest Union Carbide Sales Office or the Union Carbide Plastics Technical Representatives, Union Carbide Corporation, 200 West 4th Street, New York, N.Y. 10014.

TESTING METHODS The properties described in this Plastics Product Standard are measured in accordance with current issues of the specified testing methods. Methods of the American Society for testing Materials are identified by the prefix letter "D". Standard Testing Methods of Union Carbide Plastics Company are identified by the prefix letters "WC". Details of the "WC-" methods are available on request.

PACKAGING The standard package for BAKELITE vinyl solution coatings resins is a four-ply multiwall Kraft paper bag containing 50 pounds of material.

LABELING All containers of BAKELITE vinyl solution coatings resins are plainly marked with the product number, lot number, and net weight. Shipments will be so addressed as to assure complete delivery to the purchaser.

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PRODUCT STANDARDS

"BAKELITE" VINYL SOLUTION COATINGS RESIN VAGH - 2

VAGH - 2

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May 25, 1962

DESCRIPTION VAGH-2 is a hydroxyl modified vinyl chloride-acetate resin compatible with a wide variety of other surface coating materials including various types of oleoresinous varnishes as well as drying and nondrying alkyds. It is a grade of VAGH designed particularly for applications requiring a resin with higher solution viscosity. VAGH-2 resin also is compatible with certain epoxy, urea-formaldehyde, and melamine resins, cross-linking with them through the hydroxyl groups to produce coatings with improved resistance to heat and chemicals. VAGH-2 is of special interest to formulators because this resin can be used to improve the properties of other vehicles. VAGH-2 resin films exhibit good color and excellent flexibility. Properly formulated coatings based on VAGH-2 produce films with excellent toughness and hardness, good adhesion to a variety of substrates, excellent resistance to abrasion, good gloss, and outstanding resistance to water, alcohols, aliphatics, inorganic acids, and mineral alkalies. Pigmented coatings of VAGH-2 resin have good color and retain their gloss under exterior exposures. VAGH-2 resin is chemically neutral, non-oxidizing, tasteless, and odorless.

RESIN PROPERTIES

PROPERTY	TESTING METHOD	TYPICAL VALUE
Specific gravity	D 792	1.36
Heating loss, 45 minutes at 105°C, per cent by weight	WC-160-H	2.0
Polyvinyl chloride, per cent by weight	WC-294-A	90
Polyvinyl alcohol, per cent by weight	WC-93-F	5.7
Lead, ppm	WC-20-B, or WC-20-D (instrumental)	< 5
Specific viscosity		
1.0 gm/methyl isobutyl ketone/20.00°C	WC-609-L-1; WC-31-B-2	0.61
Inherent viscosity	WC-31-B-4	0.543
0.2 gm/cyclohexanone 30°C	D 1243, Method	
Viscosity, centipoises 20 per cent resin in 1:1 methyl isobutyl ketone:toluene at 20.00°C	WC-31-L	530
Color, light transmission at 475 mμ, per cent; 18 per cent resin/methyl isobutyl ketone	WC-5-K	80

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The recommendations, test results, property values, and suggestions are offered herein as a guide in the use of these materials and are not a guarantee of their performance. The property values given are those to be expected in the product at the time of manufacture. These values are determined by standard testing methods as indicated. Properties more certain to be realized are measured with lesser frequency than others as is usual in large manufacturing plants. Values are closely controlled. If applications require continual verification of a certain property or properties, requirements should be specified with the Union Carbide Plastics Technical Representative. Union Carbide Plastics Company reserves the right to alter the formulation and to change the values of the product at any time.

TESTING METHODS The properties described in this Plastics Product Standard are measured in accordance with current issues of the specified testing methods. Methods of the American Society for Testing Materials are identified by the prefix letter "D". Standard Testing Methods of Union Carbide Plastics Company are identified by the prefix letters "WC". Details of the "WC-" methods are available on request.

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