



Vinyl Acetate Monomer

VAM

Vinyl Acetate

Acetic Acid, Vinyl Ester

Acetic Acid, Ethenyl Acetate

Ethenyl Ester

1-Acetoxyethylene

$\text{CH}_3\text{COOCH}=\text{CH}_2$

General Description

Vinyl acetate monomer is a colorless liquid with a low flash point. It has a characteristic odor. Vinyl acetate monomer is soluble in most organic solvents including chlorinated solvents, but is not soluble in water. Vinyl acetate monomer is easily polymerized with acrylate esters to produce polymers. It is inhibited with hydroquinone.

Typical Properties⁽¹⁾

Molecular Weight	86.09
Apparent Specific Gravity at 20/20°C	0.9338
$\Delta\text{SP Gr}/\Delta\text{T}$ at 10 to 40°C, per °C	0.00128
Boiling Point at 760 mm Hg, °C	72.9
at 300 mm Hg, °C	47.0
at 10 mm Hg, °C	-18
$\Delta\text{BP}/\Delta\text{p}$, 750 to 770 mm Hg, per mm Hg	0.040°C
Vapor Pressure at 20°C, mmHg	92
Absolute Viscosity at 0°C, cP	0.54
Absolute Viscosity at 20°C, cP	0.41
Absolute Viscosity at 40°C, cP	0.33
Surface Tension at 25°C, dynes per cm	23.8
Freezing Point, °C	-92.8
Critical Data	
Temperature, °C	246
Pressure, atm	39.1
Volume, liter per mole	0.27
Heat of Vaporization at 1 atm	8.9
High Heat of Combustion, 25°C, BTU per lb	10,374
Refractive Index, n 20°C	1.3953
$\Delta n/D\Delta\text{T}$ at 20 to 40°C, per °C	0.00053
Solubility in Water at 20°C, % by wt	2.0
Solubility of Water In at 20°C, % by wt	1.0
Solubility in Organic Solvents at 25°C	
Acetone, Benzene, Ethyl Ether Heptane,	Complete
Methanol, Carbon Tetrachloride	
Vinyl Acetate ⁽²⁾⁽³⁾ , % by wt, minimum	99.9

Typical Properties⁽¹⁾

(Continued)

Acidity, % by wt, maximum, calculated as acetic acid	0.005
Nonvolatile Matter, % by wt, maximum	0.015
Hydroquinone Inhibitor, ppm	3 - 5
Acetaldehyde, % by wt, maximum	0.010
Water, % by wt, maximum	0.04
Color, Platinum-Cobalt, maximum	5
Suspended Matter	Substantially Free
Specific Gravity at 20/20°C	0.9335 to 0.9345
Distillation at 760 mm Hg, °C	
lbp, minimum	72.3
Dp, maximum	73.0

1. Typical properties; not to be construed as specifications. For details on analytical methods used in determining typical properties, contact your Dow representative.
2. CAS Number 108-05-04
3. EINECS 607-0233-00-0

Applications

Vinyl acetate monomer is a chemical building block used for a wide variety of industrial and consumer products. Polyvinyl acetate is used to produce paints, adhesives, coatings for flexible substrates and sizing for polyester fiber-fill insulation textiles. Polyvinyl alcohol can be used to produce adhesives, coatings and water soluble packaging films. Polyvinyl acetals are used to produce insulation for magnetic wire, inter-layers for safety glass, wash primers and coatings. Ethylene vinyl acetate co-polymers are used to produce flexible films, coatings, adhesives, moldings and insulation. Ethylene vinyl alcohol can be used to produce gas barrier layers in co-extruded packaging.

Safety and Handling Considerations

To obtain a Material Safety Data Sheet (MSDS or SDS) for vinyl acetate monomer or a Safe Handling Guide for vinyl acetate monomer, Form Number 769-00001, please contact us at the appropriate phone number for the location listed on the last page of this Technical Data Sheet or send your request via Email using the Contact Us form on www.dowvam.com.

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