Jiangxi Yordo Molecular Chemical Co., Ltd.

Spark Industrial Park Economic Development Zone Yunshan

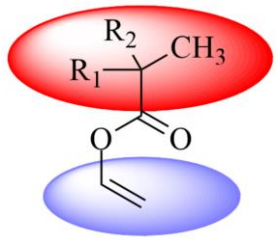
Yongxiu Jiangxi, CHINA

W10

Vinyl neodecanoate

Introduction:

Neodecanoic acid vinyl ester (W10) is a saturated monobasic fatty acid vinyl ester with highly branched chain on α - carbon. The structural formula is shown in the figure below:



Both R_1 and R_2 are alkyl with total 7 carbon atoms. The tertiary carbon structure has large steric hindrance, which is similar to umbrella structure. Therefore, it has good hydrophobicity, acid and alkali resistance, and UV resistance. Vinyl is easy to copolymerized with acrylics, vinyl acetate and other monomers for binary, ternary and multicomponent to form a copolymer tertiary carbon emulsion.

Applications:

Neodecanoic acid vinyl ester has high branched chain aliphatic structure, and has strong stereoprotective function for itself and adjacent monomers in polymer chain, which makes it have anti hydrolysis, especially alkali resistance. Moreover, the coating will not turn yellow due to degradation. The emulsion polymers based on new decane vinyl ester exhibit obvious wetting and scrubbing properties, and can also be used in high grade low VOC decorative paints and industrial paints.

Typical applications include:

- Industrial coatings
- Interior and exterior wall decoration coating
- Waterproof system
- Wood glue
- Pressure sensitive adhesive
- Building adhesives
- Dispersible powder and emulsion for cement mortar
- Textile and non-woven adhesives

Property	Test method	Unit	Value
Olefin unsaturation	--	mol/kg	**4.85 – 5.10**
Acid value	--	mgKOH/g	**⩽5.0**
Colour	GB3143	Pt-Co(hazen)	**≤ 35**
Water content	GB/T 606	%m/m	**≤ 0.1**
Appearance	**Visual**	--	**Clear liquid , free from suspended matter**

CAS reg.no. 51000-52-3

Specifications
Typical Properties

Property	Test method	Unit	Value
Molecular formula (theoretical)	--	--	$C_{12}H_{22}O_2$
Molecular weight (theoretical)	--	--	198
Polymerization inhibitor	--	mg/kg	5±2
Kinematic viscosity 20℃	ASTM D445	mm^2/s	2.2
Specific heat 20℃	--	kJ/kg ℃	1.97
Latent heat of evaporation 20℃	--	kJ /mol	48.9
Boiling point range *	ASTM D1160	℃	133-136
Flash point (PMCC)	ASTM D93	℃	75
Freezing point	ASTM D97	℃	＞-60
Miscibility with vinyl acetate	--	--	Completely miscible
Heat of polymerization	--	kJ/mol	96

* 100mmHg decompression measurement

Test Methods

GB standard is the national standard of the people's Republic of China. ASTM Standards are published by the American Society for Testing and Materials USA. ISO standards are published under the supervision of the International Standards Organisation. Local analytical methods may be used in technical preference to quoted specification test methods. However, the latter remain the reference method in the event of dispute.

Transport and Storage

The product is packed with 200 liter drums. Container are used when the product is transported in bulk. Please use Vinyl neodecanoate strictly according to our MSDS. For more information, contact the Operations Department of our company.

The information contained in this publication is, to the best of our knowledge, true and accurate, but any recommendations or suggestions which may be made are without guarantee, since the conditions of use are beyond our control.