

Technical Datasheet

be FCOWISE™

PRODUCT DESCRIPTION

CYMEL® 1130 resin is a methylated/n-butylated melamine crosslinker with a high extent of alkylation. Its hydrophobic nature makes for improved wetting and adhesion on metal substrates, and improved humidity and salt spray resistance. CYMEL® 1130 resin is insoluble in water but shows excellent compatibility and stability with water-soluble backbone polymers and is an excellent crosslinker for anodic electrodeposition coatings.

BENEEITS

- · Good salt spray resistance
- · High Solids
- Water Insoluble

APPLICATION AREAS

- Electrocoating finishes
- Automotive coatings
- High solids coatings

PHYSICAL PROPERTIES

Property	Range	Method		
Appearance	Clear Liquid	ASTM E284		
Non-volatile by wt.	96-100%	DIN 55671 (Foil, 45 min/45°C)		
Viscosity, 23°C	3000 - 6000 mPa∙s	DIN EN ISO 3219		
Free formaldehyde	< 0.1%	Sulfite Titration		
Color, APHA	≤ 70	DIN EN ISO 6271		

SOLUBILITY

Alcohols	Complete
Esters	Complete
Ketones	Complete
Aromatic hydrocarbons	Complete
Aliphatic hydrocarbons	Partial
Water	Insoluble

COMPATIBILITY

Acrylic resins	Very good	
Alkyd resins	Very good	
Epoxy resins	Very good	
Polyester resins	Very good	

4.1./10.04.2021 (replaces all provious versions)

BACKBONE POLYMER SELECTION

CYMEL® 1130 resin contains a combination of methoxymethyl and nbutoxymethyl functional sites making it a highly effective crosslinker for backbone polymer resins containing hydroxyl, carboxyl, or amide functional groups, such as those found on alkyd, polyester, or acrylic resins. The effective equivalent weight of CYMEL* 1130 typically ranges from 150 -225, however, its optimum loading should be determined experimentally for each formulation with consideration of the performance properties to be optimized.

CATALYSIS

Because of its high extent of alkylation, CYMEL® 1130 resin responds best to sulfonic acid catalysts, like CYCAT® 4040 catalyst or CYCAT® 600 catalyst. Generally, 0.5 to 1.0% of CYCAT® 4040 catalyst on total resin solids of the formulation is sufficient to provide good cure at normal baking schedules (15 - 20 minutes at 120 - 150°C) in solvent-borne systems. Water-borne systems generally require temperatures of 150°C or higher to effect cure. Higher concentrations of catalyst might be necessary if there are basic pigments or additives present in the formulation.

FORMULATION STABILITY

The stability of formulated systems containing CYMEL® 1130 resin can be enhanced by the addition of primary alcohols, amines or a combination of these. Low molecular weight primary alcohols, such as ethanol and nbutanol, are most effective. Recommended amines are DMEA or 2-AMP at a concentration of 0.5 - 1.0% on total resin solids. Package stability can also be enhanced by the use of a blocked acid catalyst such as CYCAT® 4045 catalyst. For waterborne systems, pH should be adjusted to 7.5 - 8.5 to achieve optimum stability.

STORAGE STABILITY

CYMEL® 1130 resin has a she life of 1800 days from the date of manufacture when stored at temperatures below 32°C. Although low temperatures are not detrimental to stability, its viscosity will increase, possibly making the resin difficult to pump or pour. The viscosity will reduce again on warming, but care should be taken to avoid excessive local heat, as this can cause an irreversible increase in viscosity.

4.1 / 19.04.2021 (replaces all previous versions)			wondwide contact into: www.aimex.com						
	Disclaimer: allnex Group co	mpanies ('allnex') e	xclude all liability w	ith respect t	o the use made b	y anyone of	the information	contained he	erein. The

Page

e information contained herein represents allnex's best knowledge but does not constitute any express or implied guarantee or warranty as to the accuracy, the completeness or relevance of the data set out herein. Nothing contained herein shall be construed as conferring any license or right under any patent or other intellectual property rights of allnex or of any third party. The information relating to the products is given for information purposes only. No guarantee or warranty is provided that the product and/or information is suitable for any specific use, performance or result. Any unauthorized use of the product or information may infringe the intellectual property rights of allnex, including its patent rights. The user should perform his/her own tests to determine the suitability for a particular purpose. The final choice of use of a product and/or information as well as the investigation of any possible violation of intellectual property rights or misappropriation of trade secrets of allnex and/or third parties remain the sole responsibility of the user

Marldwide Centert Informational and

Notice: Trademarks indicated with *, TM or * as well as the allnex name and logo are registered, unregistered or pending trademarks of Allnex Netherlands B.V. or its directly or indirectly affiliated allnex Group companies. ©2020 allnex Group. All Rights Reserved.