

Advanced Materials

TECHNICAL DATA SHEET

Aradur® 3985 Epoxy Curing Agent

GENERAL

Modified polyamine adduct dissolved in water

Aradur® 3985 epoxy curing agent is supplied at 55% (by wt.) solids in water and contains no organic solvents or acetic acid. The curing agent is designed for use in the formulation of zero-VOC waterborne epoxy primers, sealers, coatings and floorings. Aradur 3985 epoxy curing agent is compatible with modified and unmodified epoxy resins. Formulations based on Aradur 3985 epoxy curing agent exhibit a “visible end” (gelation) of the usable life of the system. The product can also be used as a modifier for other waterborne curing agents that do not provide a “visible end” of pot life.

APPLICATIONS

- Low VOC waterborne primers, sealers and coatings.
- Floorings and mortars for civil engineering applications.

PROPERTIES

- Exhibits a “visible end” of pot life in waterborne systems
- Does not contain organic solvents or acetic acid
- Low odor
- Offers fast set times
- Rapid cure at low temperature and high humidity with adequate ventilation
- Low color and good color stability properties
- Good adhesion and corrosion resistance

TECH DATA*

Specified key data

Visual Appearance	Slightly hazy colloidal liquid
Color, Gardner, max.	≤6
H+ Active Equivalent Weight (g/eq.)	265 (as supplied)
Use Level with Araldite® GY 9708-3 Epoxy Resin (phr)	141
Amine Value (mg KOH/g)	170 - 210
Viscosity at 25°C (cP)	2,000 - 6,000
Solids Content, wt%	55 ± 2 % (in water)
Density at 25°C (g/cm ³ , lb/gal)	1.05, 8.8

*Typical properties are based on Huntsman's test methods. Copies are available upon request.

FORMULATIONS**Clear Coating Starting Formulation (Parts by Weight)**

Formulation No.	1	2
Araldite GY 9708-3 Epoxy Resin ¹	100	-
Araldite® GY 9513 Modified Epoxy Resin ²	-	100
Aradur 3985 Epoxy Curing Agent	141	131
Deionized Water	125	125

Mixed Viscosity Profile³, 25°C (KU)

- Initial	93	92
- 15'	115	104
- 30'	136	123
- 75'	Gel	Gel

Curing Properties⁴ @ 23°C / 50% Relative Humidity

Tack-free time (hr)	1.5	1.5
Cure-through time (hr)	3.5	4.0
Film Appearance	Semi-gloss	Semi-gloss

Curing Properties⁴ @ 10°C / 75% Relative Humidity

Tack-free time (hr)	4.0	4.0
Cure-through time (hr)	8.0	13.5
Film Appearance	Semi-gloss	Semi-gloss

¹ Standard bisphenol-A liquid epoxy resin (epoxy equivalent weight: 182 - 192)

² Modified bisphenol-A liquid epoxy resin (epoxy equivalent weight: 196 - 205)

³ Brookfield KU-1 viscometer

⁴ Tested by Gardner® Circular Drying Time Recorder on a 5 mil wet coating

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