

Aradur[®] 14 Hardener

Product Description

Aradur[®] 14 is a benzyl alcohol free low viscosity Mannich base hardener, and functions as a low viscosity, low temperature rapid cure hardener with good chemical resistance.

Applications

- Flooring
- Epoxy aggregate
- Epoxy mortars
- Solvent-free maintenance coatings
- Tank linings for metal and concrete
- Light colored or clear topcoats

Features

- Low viscosity
- Low sensitivity to moisture
- Rapid cure, even at 40°F
- Good hardness
- Low color and good color retention
- Good resistances to water, dilute inorganic acids, alkali and solvents
- Can be used as accelerator

Typical Properties*

Property	Value
Appearance	Clear, no contamination
Color, Gardner, max	5
Viscosity @ 25°C, cP	400 - 600
H ⁺ active equivalent, g/eq.	75
Amine value, mg KOH/g	350 - 390
Density @ 20°C, g/cm ³	1.00
Flash point, closed cup, °C (°F)	130 (266)

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

Processing

The low viscosity of coatings and flooring systems based on Aradur[®] 14 facilitates their application by normal means. Aradur[®] 14 may be formulated with liquid bisphenol A and bisphenol F based epoxy resins including diluent modified versions.

Mix Ratio Formulations

Product	1	2
Araldite [®] GY 6010, ¹ pbw	100	-
Araldite [®] PY 313, ² pbw	-	100
Aradur [®] 14, pbw	40	40

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

²Reactive diluent modified bis A / F epoxy resin blend (epoxy eq. weight: 182 - 192)

Processing Data

Parameter	1	2	Test Method
Mix viscosity @ 23°C, cP	>4,000	1500	ASTM D4440 (ICI Cone & Plate)
Gel time, 100 g, 23°C, min	16	19	TECAM [®] gelation timer

Typical Physical Properties

Unless otherwise stated, the data were determined with typical production batches using standard test methods. They are typical values only, and do not constitute a product specification.

Property	1	2	Test Method
Dust-free time, hours @ 23°C / 50% R.H. @ 5°C / 80% R.H.	1.5 3.5	2.5 8.0	Gardner circular drying time recorder on 10 mil wet coating
Cure-through time, hours @ 23°C / 50% R.H. @ 5°C / 80% R.H.	2.0 6.0	4.0 16.0	Gardner circular drying time recorder on 10 mil wet coating
Film appearance @ 23°C / 50% R.H. @ 5°C / 80% R.H.	Glossy Glossy	Glossy Semi-gloss	Visual
Blushing @ 23°C / 50% R.H. @ 5°C / 80% R.H.	None None	None Blushing	Visual
Glass transition temperature,* T _g , °C	54	48	DSC
Pencil hardness*	3H	2H	ASTM D 3363
Cross hatch adhesion*	3	4	ASTM D 3359
Impact* (direct/reverse), in-lbs	20/10	25/10	ASTM D 2794

*After 7 day cure at 23°C; Dry film thickness, 5-6 mils.

Storage

Aradur® 14 Hardener is supplied in 418 pound steel drums. It should be stored in a dry place, in the sealed original container, at temperatures between 2°C and 40°C (36°F and 104°F). Under these storage conditions, the shelf life is **2 years** (from date of manufacture).

Precautionary Statement

Huntsman Advanced Materials Americas LLC maintains up-to-date Safety Data Sheets (SDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest MSDS to determine possible health hazards and appropriate precautions to implement prior to using this material.

First Aid!

Refer to SDS as mentioned above.

KEEP OUT OF REACH OF CHILDREN

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Main Offices:

Huntsman Corporation
10003 Woodloch Forest Dr
The Woodlands, TX 77380
888-564-9318

Huntsman Advanced Technology Center
8600 Gosling Rd.
The Woodlands, TX 77381
281-719-7400