

Technical Data Sheet

EPIKURE™ Curing Agent 3378

Product Description

EPIKURE™ Curing Agent 3378 is a relatively low viscosity, modified amine adduct, light-colored epoxy curing agent which, when combined with epoxy resins, cures to clear, tack-free films under low-temperature and high humidity conditions.

Application Areas/Suggested Uses

- Primers and topcoats for non-potable water containers and related equipment
- Solvent-free marine coatings
- Tough, flexible, fast-setting, high-clarity adhesives

Benefits

- Fast, tack-free cures
- Long pot-life
- Good through- cure at low temperatures
- Good corrosion resistance
- Excellent clarity and low color
- Self-leveling properties

Sales Specifications

Property	Value	Unit	Test Method
Amine Value	245 - 265	mg/g	ASTMD2896
Color	3	Gardner	ASTMD1544
Viscosity at 25°C	2200 - 2800	cP	ASTMD2196

Typical Properties

Property	Value	Unit	Test Method
Density	8.5	lbs/gal	ASTMD1475
Equivalent Weight Approx.	114	AHEW	
Non-volatile materials	100.0	% by Weight	

Performance Properties

Table 1 / Properties of EPON™ Resin 828 cured with EPIKURE Curing Agent 3378.

	Method	Units	Value
EPON™ Resin 828		pbw	100
EPIKURE Curing Agent 3378		pbw	61
Handling Properties @ 25°C			
Gel Time ¹ , 100 gram mass		min	27
Cured State Properties			
Heat Deflection Temperature ²	ASTM D648	°C	44
Tensile Strength ³	ASTM D638	psi	8,739
Tensile Elongation		%	2.6
Tensile Modulus		ksi	496
Compressive Strength ⁴		psi	19,059
Compressive Modulus		ksi	804
Hardness ⁵		Durometer D	85
Cure Schedule @ 25°C (77 °F)		days	14
Chemical Resistance			
Water		%	0.1
5% Acetic Acid		%	0.2
50% Xylene/50% Isopropanol		%	1.0

¹ SHYODU Gel Timer

² HDT ASTM D648 (Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position)

³ ASTM D638 (Tensile Properties of Plastics)

⁴ ASTM D695 (Compressive Properties of Rigid Plastics)

⁵ ASTM D2240 (Standard Test Method for Rubber Property-Durometer Hardness)

⁶ Percent weight gain after immersion for 24 hours @ 25°C - specimen size 1/8" X 1" X 3"

Table 2 / Physical properties of HELOXY™ modified EPON Resin 828 cured with EPIKURE Curing Agent EC3378 at the following temperatures: 4, 10, 25 and 121° C.

Composition	Unit	1	2	3	4
EPON Resin 828	pbw	100	88	87	80
HELOXY Modifier 65	pbw		12		
HELOXY Modifier 8	pbw			13	
HELOXY Modifier 62	pbw				20
EPIKURE Curing Agent 3378	pbw	60	60	60	60

Handling Properties					
Gel time @ 25°C, 1 lb mass	minutes	23	26	30	25

Cure Conditions	@ 25° C (77°F), 50% Relative Humidity				
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Hardness ¹					
24 hours	Durometer D	86	70	53	50
2 days	Durometer D	86	78	67	61
7 days	Durometer D	99	95	85	84

Film Properties					
1 day		Clear, Tack-free			

Cure Conditions	@ 10° C (50°F), 50% Relative Humidity				
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Hardness					
24 hours	Durometer D	54	34	34	34

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Composition	Unit	1	2	3	4
2 days	Durometer D	77	63	50	41
7 days	Durometer D	92	80	61	53
14 days	Durometer D	92	84	70	53

Film Properties

1 day		Clear, Slight tack			
7 days		Clear, Tack-free			
Cure Conditions		@ 4 °C (40°F), 50% Relative Humidity			

Hardness

24 hours	Durometer D	35	33	33	33
2 days	Durometer D	85	57	55	47
7 days	Durometer D	94	89	74	65
14 days	Durometer D	95	91	86	73

Film Properties

1 day		Clear, Slight tack			
7 days		Clear, Tack-free			

Hardness @ 121 °C (250 °F)

1 hour	Durometer D	100	99	93	100
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Weight Loss, @ 121 °C (250 °F)

24 hours	%	3.37	3.51	3.19	3.49
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¹ ASTM D2240 (Standard Test Method for Rubber Property-Durometer Hardness

Safety, Storage & Handling

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Please refer to the Hexion web site for Shelf Life and recommended Storage information.

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Packaging

Available in bulk and drum quantities.

Contact Information

For product prices, availability, or order placement, please contact customer service:

www.hexion.com/Contacts/

For literature and technical assistance, visit our website at www.hexion.com

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