

POLYTHIOL QE-340M

(Quick Curing Agent for Epoxy Resin)

Description

POLYTHIOL QE-340M is a mercaptan-terminated polymer used as a liquid curing agent with unique rapid-cure characteristics for epoxy resins.

Typical Properties

POLYTHIOL QE-340M offers excellent properties in curing of epoxy resin in combination with amines or polyamines.

Polymer Properties

	POLYTHIOL QE-340M	Product A*
Appearance	Yellow tinted clear liquid	Yellow tinted clear liquid
Specific Gravity	1.17 (25°C)	1.15 (25°C)
Viscosity	13.9 Pa·s(25°C)	12.2 Pa·s(25°C)
Thiol content	12 wt%	12 wt%

Curing Properties

	POLYTHIOL QE-340M	Product A*
Cure speed (min., 20°C)		
Gel time/tack free time	4.5/16	3/20
Tensile Shear Strength (kgf/cm ²)		
5°C 1 hour	77	76
5°C 3 hours	103	100

Formulation: Epikote 828/POLYTHIOL/DMP-30=10/8/1

Substrate: Soft steel plate Compounding scale: 20g

*Product A Similar product from other supplier

Note: This information contained in this data sheet represents the best information currently available to us. However, no warranty is made with respect to its completeness and we assume no liability resulting from its use. It is advised to make their own tests to determinate the safety and suitability of each such product or combination for their own purposes.

◆ Properties of QE-340M/Epoxy Systems with Increasing EH-30 Level

Epoxy Resin ¹	100	100	100	100	100	100
QE-340M	80	80	80			
Product A ²				80	80	80
EH-30 ³	2	5	10	2	5	10
Hardness, Shore D ⁴						
5°C · 15min	1	10	20			
30min	10	60	75	10	70	70
1hr	65	75	85	63	75	80
2hr	65	80	85	68	78	80
3hr	65	80	85	70	78	80
4hr	70	80	85	70	78	80
24hr	65	76	82	70	78	80
23°C · 15min	2	20	30	0	15	35
30min	10	50	80	5	45	80
1hr	20	70	80	12	63	83
2hr	25	75	83	16	72	83
3hr	25	75	83	18	73	82
4hr	25	75	83	18	72	83
24hr	32	75	83	25	75	83
Tensile Lap Shear Strength ⁵						
5°C · 30min	0	22	39	0	42	49
1hr	33	66	77	52	73	76
3hr	72	101	103	69	86	100
24hr	106	119	86	95	48	41
23°C · 30min	25	28	49	20	28	49
1hr	31	41	120	25	40	118
3hr	41	92	90	26	68	89
24hr	41	101	70	41	121	70

1 Epikote 828 WPE 185-200

2 Product A Similar product from other supplier

3 EH-30 2, 4, 6-Tri(dimethylaminomethyl)phenol

4 Hardness sample size ϕ 85*8mm (50g mass)

5 Mild Steel – Mild Steel (20g mass) unit : kg/cm²

◆ Properties of QE-340M/Epoxy Systems with Polyamide

Epoxy Resin ¹ QE-340M	100 80	100	100 75	100
Product A ² Polyamide ³ EH-30 ⁴		80 1	25	75 25
Gel Time @23°C (min) ⁵	14	10	4	4.5
Tack Free Time @23°C (min)	24	48	4	4
Gel Time @5°C (min)	40	20	7.5	8
Tack Free Time @5°C (min)	24	48	5	7
Hardness, Shore D ⁶ @23°C				
15min	2	0	20	11
30min	3	0	40	20
1hr	7	3	50	30
2hr	8	4	55	40
3hr	9	5	57	47
4hr	10	5	60	52
5hr	11	6	60	50
1day	10	6	63	63
7day	40	46	70	70
@5°C				
15min	0	0	0	0
30min	0	0	7	5
1hr	13	13	14	12
2hr	28	19	20	20
3hr	33	23	23	23
4hr	33	25	25	25
5hr	35	28	28	28
1day	35	28	45	45
7day	45	38	60	60

1 Epikote 828 WPE 185-200

2 Product A Similar product from other supplier

3 Polyamide

4 EH-30 2, 4, 6-Tri(dimethylaminomethyl)phenol

5 20g mass

6 Hardness sample size ϕ 55*10mm (50g mass)