



SANHO CHEMICAL CO., LTD.

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TOHMIDE 252

TOHMIDE 252 is an epoxy curing agent of polyaminoamide derived from polymerized fatty acid. TOHMIDE 252 is a low viscosity type epoxy curing agent ,and provide good tensile compressive and bending strength of the cured products The major application fields of TOHMIDE 252 are casting civil engineering and adhesives.

1. TYPICAL SPECIFICATION :

Appearance	: Brown Liquid
Viscosity(25°C)	: 100 ~ 400 mPa·s
Colour	: 10 Max.
Amine Value(JIS)	: 710 ± 20
Specific Gravity (25°C)	: 0.96
A.H.E.W	: 65

2. THE STANDARD MIXING RATIO :

25 ~ 40 parts to 100 parts of Bisphenol-A type epoxy resin whose epoxy equivalent weight is about 190.

3. CURING CHARACTERISTICS

Exothermic Reaction :

Epoxy resin	: Bisphenol-A type liquid epoxy resin whose epoxy equivalent weight is about 190.
Total mass	: 100g
Room temperature	: 23°C

Epoxy resin / TOHMIDE 252	80 / 20	75 / 25	70 / 30
Peak exothermic time. (min.)	73	64	58
Peak exothermic temp. (°C)	148	192	198
Gell Time (min.)	65	55	50

4. MECHANICAL PROPERTIES

Epoxy resin : Bisphenol-A type liquid epoxy resin whose epoxy equivalent weight is about 190.Precured at 23°C for 7days:



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Epoxy resin / TOHMIDE 252		80 / 20	75 / 25	70 / 30
Tensile Strength	(kgf/mm ²)	5.2	5.6	6.8
Bending Strength	(kgf/mm ²)	8.1	10.6	10.0
Flexural Modulus	(kgf/mm ²)	3.7×10^2	3.9×10^2	3.7×10^2
Compressive strength	(kgf/mm ²)	9.7	9.9	9.2
Izod Impact Strength	(kgf/cm-cm)	1.4	1.7	2.3
Rockwell Hardness	(M-scale)	72	79	78
Heat Distortion Temp	(°C)	46	51	53

5. LAP SHEAR STRENGTH

A resin mix of Tohmide252 and the same epoxy resin as employed above were cured at 22-23°C , and applied to bond mild steel plates whose surfaces were pre-treated by sand-blast. Thereafter, LAP SHEAR STRENGTH of the cured products were measured 7 days after bonding them at 22-23°C by the mixtured resins.

Epoxy resin / TOHMIDE 252	100 / 15	80 / 20	75 / 25	70 / 30	65 / 35
Lap shear strength (kgf/ cm ²)	175	161	154	147	164

6. CHEMICAL RESISTANCE

Percentage increase in weight of the cured products of Tohmide 252 and the same epoxy resin as employed above were measured as follow after being cured at 22-23°C for 7 days , and immersing them into respective chemical substances.

Unit : %

Epoxy / TOHMIDE 252 (Mixing Ratio by weight))	80 / 20			75 / 25			70 / 30		
	1	7	30	1	7	30	1	7	30
Tap Water	0.13	0.45	1.01	0.07	0.38	1.14	0.00	0.41	1.26
5% solution of Salt	0.09	0.38	0.90	0.03	0.35	1.00	0.08	0.39	1.06
10% solution of Caustin soda	0.08	0.33	0.75	0.00	0.24	0.70	0.03	0.28	0.98
10% solution of Ammonia	0.15	0.52	1.08	0.04	0.39	1.13	0.03	0.44	1.38
5% solution of Surfruic Acid	0.23	0.60	1.34	0.43	1.20	2.51	1.45	3.96	7.91
5% solution of Hydrochloric	0.32	0.63	1.30	0.85	1.60	2.82	2.57	5.59	9.50
Kerosene	0.04	0.05	0.12	0.04	0.06	0.13	0.07	0.07	0.12
Isopropylalcohol	0.45	0.88	1.17	0.34	0.75	1.16	0.72	1.30	2.24
Metyliso butyl-ketone	8.46	18.5	23.4	2.34	5.84	8.51	2.00	5.20	8.11