



SANHO CHEMICAL CO., LTD.

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TOHMIDE 280-B

TOHMIDE 280-B is a low viscosity. Reactive polyamide hardener designed for use with liquid epoxy resins. It has been designed specifically for use in sealant and adhesive applications where high flowability and excellent peel strength are required.

1. SALES SPECIFICATION

Appearance	: Brown viscous liquid
Viscosity (mPa · s 25°C)	: 500 ~ 1,000
Colour (Gardner)	: 12 Max.
Amine Value (JIS)	: 285±15
Specific Gravity (25 / 25°C)	: 0.96

2. RECOMMENDED MIXING RATIO

80~120 parts to 100 parts of Bisphenol-A type epoxy resin whose epoxy equivalent weight is about 190.

3. CURING CHARACTERISTICS

Epoxy resin	: Employed Bisphenol-A type epoxy resin whose epoxy equivalent weight is about 190.
Total mass	: 200 gram
Room Temperature	: 23°C

Epoxy / TOHMIDE 280-B	100 / 80	100 / 100	100 / 120	
Peak Exothermic Time	77	74	68	200
Peak Exothermic Temperature	69	91	92	90

4. MECHANICAL/PHYSICAL PROPERTIES

Employed Bisphenol-A type epoxy resin whose epoxy equivalent weight is about 190.
Curing time=7 days at 23°C

Epoxy / TOHMIDE 280-B	80 / 20	75 / 25	70 / 30
Tensile Strength (kgf/mm ²)	5.7	7.0	6.9
Flexural Strength (kgf/mm ²)	10.4	10.6	10.2
Flexural Modulus (kgf/mm ²)	2.9×10 ²	2.9×10 ²	2.7×10 ²
Compressive Strength (kgf/mm ²)	10.5	9.9	9.3
Izod Impact Strength (kgf-cm/cm)	2.3	3.1	4.2
Rockwell Hardness (M Scale)	66	67	66
Heat Distortion Temperature (°C)	46	49	51



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5. LAP SHEAR STRENGTH

The resin mix of TOHMIDE 255 and the same epoxy resin as employed above was applied to hold mild steel plates at 22~23°C, whose surface were treated by sand-blast. LAP SHEAR STRENGTH was measured as follow after leaving the bonded steel plates at 22~23°C for 7 days.

Epoxy / TOHMIDE 255	80 / 20	70 / 30	60 / 40
Lap Shear Strength (kgf/cm ²)	187	171	166

6. CHEMICAL RESISTANCE OF THE CURED PRODUCTS

Percentage increase in weight of the cured products of TOHMIDE 255 and the same epoxy resin as employed above were measured as follow after curing them at an ambient temperature , and immersing into following chemical substances.

Immersion time (days)	1 day			7 days			30 days		
	80/20	75/25	70/30	80/20	75/25	70/30	80/20	75/25	70/30
Epoxy / TOHMIDE 255									
Tap Water	0.16	0.11	0.22	0.41	0.46	0.37	1.2	1.5	2.3
5% solution of Salt	1.14	0.20	0.27	0.36	0.40	0.35	1.2	1.3	2.4
10% solution of Caustin soda	0.12	0.18	0.19	0.34	0.36	0.31	1.1	1.2	1.7
10% solution of Ammonia	0.14	0.12	0.20	0.38	0.37	0.38	1.2	1.4	2.4
5% solution of Surfrucic Acid	0.21	0.71	6.4	0.51	3.5	10.2	1.5	7.1	48.3
5% solution of Hydrochloric Acid	0.15	0.61	1.9	0.44	1.1	2.1	1.2	3.0	12.1
Kerocene	0.02	0.07	0.06	0.11	0.23	0.13	0.23	0.43	0.35
Isopropylalcohol	0.37	0.62	1.7	0.79	1.2	2.4	1.4	2.4	12.4
Metyliso butylietone	4.2	1.7	1.1	9.9	3.8	2.4	15.3	6.8	11.2