



# SANHO CHEMICAL CO., LTD.

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## TOHMIDE 255

TOHMIDE 255 is a low viscosity. Fast setting reactive polyamide hardener. This hardener is designed for use with liquid epoxy resins to give room temperature cured. TOHMIDE255 is useful in reactive epoxy linings, thin bonding, mortars, castings, maintenance.

### 1. SALES SPECIFICATION

Appearance	: Brown viscous liquid
Viscosity (mPa·s /25°C)	: 300 ~ 600
Amine Value (JIS)	: 805 ± 20
Colour (Gardner)	: 10 Max.
Specific Gravity (25 / 25°C)	: 0.97

### 2. RECOMMENDED MIXING RATIO

25~40 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 255	80 / 20	75 / 25	70 / 30
Peak Exothermic Time	45	37	33
Peak Exothermic Temperature	157	178	176
Gelling Time	約 43	約 36	約 32

### 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 255	80 / 20	75 / 25	70 / 30
Tensile Strength (kgf/mm <sup>2</sup> )	5.7	7.0	6.9
Flexural Strength (kgf/mm <sup>2</sup> )	10.4	10.6	10.2
Flexural Modulus (kgf/mm <sup>2</sup> )	2.9×10 <sup>2</sup>	2.9×10 <sup>2</sup>	2.7×10 <sup>2</sup>
Compressive Strength (kgf/mm <sup>2</sup> )	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	75 / 25	70 / 30
Lap Shear Strength ( kgf/cm <sup>2</sup> )	136	148	138

## 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	0.09	0.09	0.08	0.34	0.43	0.49	0.74	1.02	1.25
5% solution of Salt	0.09	0.07	0.11	0.36	0.39	0.50	0.74	0.91	1.18
10% solution of Caustic soda	0.06	0.08	0.03	0.25	0.34	0.32	0.59	0.80	0.95
10% solution of Ammonia	0.10	0.09	0.12	0.35	0.39	0.59	0.72	0.84	1.23
5% solution of Sulfuric Acid	0.41	1.58	4.32	0.88	3.76	11.30	1.19	4.93	16.93
5% solution of Hydrochloric Acid	0.20	0.44	1.52	0.52	1.27	3.70	0.82	1.90	5.07
Kerosene	0.00	0.01	0.01	0.01	0.00	0.03	0.08	0.04	0.11
Isopropylalcohol	0.16	0.26	0.34	0.30	0.37	0.66	0.24	0.21	0.75
Methylisobutylketone	3.78	1.59	0.32	6.65	2.61	1.25	4.22	1.49	1.80