



# SANHO CHEMICAL CO., LTD.

NO. 1 CHUNG SHAN S. RD., LU-CHU, KAOSHIUNG, TAIWAN.  
TEL : 886-7-6962211~3      [http : // www.sanho.com.tw](http://www.sanho.com.tw)  
FAX : 886-7-6976993 (Sales)      E-mail : sanho@sanho.com.tw  
FAX : 886-7-6961782 (Export)      E-mail : sanho@so-net.net.tw

## TOHMIDE RS-640

TOHMIDE RS-640 is a high viscosity reactive polyamide hardner designed for use with liquid epoxy resins. This product has good adhesion with variety metal materials and specifically designed for use in multiply wood material adhesives where high peel strengths are required.

### 1. SALES SPECIFICATION

Appearance	: Brown viscous liquid
Viscosity (25°C)	: 10,000 ~ 14,000 mPa · s
Colour (Gardner)	: 13 以下
Amine Value (JIS)	: 360 ± 20
Specific Gravity (25 / 25°C)	: 0.96
Flash point (°C)	: 232

### 2. RECOMMENDED MIXING RATIO

50~200 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 : 100 gram

Room Temperature : 23°C

Epoxy / TOHMIDE RS-640	65 / 35	50 / 50	35 / 65
Peak Exothermic Time	60	50	200
Peak Exothermic Temperature	42.5	58	90
Gelling Time	90	70	160

### 4. MECHANICAL PHYSICAL PROPERTIES

Employed Bisphenol-A type epoxy resin whose epoxy equivalent weight is about 190.

Curing time=7 days at 23°C



# SANHO CHEMICAL CO., LTD.

NO. 1 CHUNG SHAN S. RD., LU-CHU, KAOSHIUNG, TAIWAN.  
 TEL : 886-7-6962211~3 [http : // www.sanho.com.tw](http://www.sanho.com.tw)  
 FAX : 886-7-6976993 (Sales) E-mail : sanho@sanho.com.tw  
 FAX : 886-7-6961782 (Export) E-mail : sanho@so-net.net.tw

Epoxy / TOHMIDE RS-640		70 / 30	60 / 40	50 / 50
Tensile Strength	(kgf/mm <sup>2</sup> )	2.7	3.8	2.9
Flexural Strength	(kgf/mm <sup>2</sup> )	3.2	3.3	2.4
Flexural Modulus	(kgf/mm <sup>2</sup> )	8.2×10 <sup>2</sup>	9.4×10 <sup>2</sup>	6.5×10 <sup>2</sup>
Compressive Strength	(kgf/mm <sup>2</sup> )	1.9	3.4	3.2
Izod Impact Strength	(kgf-cm/cm)	1.0	1.9	6.4
Rockwell Hardness	(M Scale)	-4	11	27
Heat Distortion Temperature	(°C)	28.5	32	31.5

## 5. LAP SHEAR STRENGTH

The resin mix of TOHMIDE RS-640 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 RS-640	7 / 3	6 / 4	5 / 5	4 / 6	3 / 7
Lap Shear Strength ( kgf/cm <sup>2</sup> )	216	200	220	235	185

## 6. CHEMICAL RESISTANCE OF THE CURED PRODUCTS

Percentage increase in weight of the cured products of TOHMIDE RS-640 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		
	7/3	6/4	5/5	7/3	6/4	5/5	7/3	6/4	5/5
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
Metyl-isobutyl-ketone	4.2	1.7	1.1	9.9	3.8	2.4	15.3	6.8	11.2