



SANHO CHEMICAL CO., LTD.

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TOHMIDE 558-N

TOHMIDE 558-N is a solid-type fatty polyamide resin especially designed for HOT-MELT STRUCTURAL ADHESIVE uses. It has superior processing properties for its ready-to-apply nature due to the lower molten viscosity. Optimum application temperature of TOHMIDE 558-N is in the range of 180°C~200°C. TOHMIDE 558-N shows excellent adhesion onto various types of plastics, and steel, as well as onto many other surfaces, giving very tough bonding and sealing strength.

TOHMIDE 558-N may be applied either by hand or manually operated "hand-guns". An automatic dispensing equipment with a nozzle or a wheel applicator may also be benefited.

1. SALES SPECIFICATIONS OF TOHMIDE 558

Appearance	: Brown Pellets
Softening Point (°C)	: 160 ± 5°C
Viscosity (mPa·s/200°C)	: 500 ~ 800
Colour (Gardner)	: 12 Max.

2. SOLUBILITY

Solvent	Mixing Ratio(*)	TOHMIDE 558-N	Result (**)
Methanol / Toluene	1 / 1	25%	S
Isopropanol / Toluene	1 / 1	15%	S
Methanol / Chloroform	1 / 3	25%	S

* Mixing Ratio in Weight

** S means Stable more than one week

3. COMPATIBILITY (1)

Plasticizer	Concentration of plasticizer (% in weight)		
	10%	15%	25%
Phosphoric ester	C	C	C
Epoxidized fatty-acid ester	C	C	H
Rosin ester	C	C	C

COMPATIBILITY (2)

Plasticizer	Concentration of plasticizer (% in weight)		
	20%	50%	80%
Rosin	C	C	C
Ester gum	C	C	C
Rosin modified maleic resin	C	C	C
Phenol	C	C	C
Ethylene Vinyl Acetate	I	I	H

C : Compatible SH : Slight Turbid H : Turbid I : not Compatible



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4. OPEN TIME

OPEN TIME of TOHMIDE 558-N was measured by the following manner; Bonded two sheets of corrugated board at an ambient temperature by employing molten resin at 200°C of TOHMIDE 558-N, maintaining its glue speed at 167gr. per every mm to make 3mm width of bead on the board.

※ OPEN TIME measured : 22 ~ 23 second

5. MECHANICAL PROPERTIES

Hardness (Shore-A) : 96, at 23°C
Elongation, at 20°C : 150%
Tensile Strength, at 20°C : 49 kgf / cm²
Yield Point, at 20°C : 49 kgf / cm²

6. IMPACT RESISTANCE TEST AT LOW TEMPERATURE.

(by Du Pont Impact Test)

Impact resistance test was conducted as per follow : Dropping the plumb onto a specimen from a height of 20cm to measure the toughness of moulded TOHMIDE 558-N in disk shape.

Specimen employed : Cool-off TOHMIDE 558-N at pre-arranged minus 20°C for more than two hours after moulding the resin into the disk. Then, take out it without loss of time to implement the Du Pont Impact Test.

Plumb : 300gram in weight with its diameter 1.27mm on its tip.

※ Du Pont Impact Test Result at the low temperature : 4 / 5 (n = 5 pieces)

7. LAP SHEAR STRENGTH

Lap Shear Strength was measured varying respective temperature. Apply the molten resin of TOHMIDE 558-N onto the surface of sand-blasted steel plate which is pre-heated at 70°C.

Tensile Speed : 2mm per minute

	Test Temperature	Lap Shear Strength (kg · f / cm ²)
Fe-Fe (Sand-blasted Fe)	+ 23°C	44
	0°C	110
	- 30°C	50
Painted Fe-Painted Fe	+ 23°C	44
	- 30°C	19
Polypropylene sheet	+30°C	7.5
-Polypropylene sheet	- 30°C	5.5



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8. CREEP TEST

Apply the molten resin of TOHMIDE 558-N onto the surface of sand-blasted steel plate which is pre-heated at 70°C .

The temperature to the stress-rapture has been measured by increasing the temperature of the test samples at a rate of 2°C in every 10 minutes, loading the sheets to 500grs.

※Fe-Fe CREEP TEMPERATURE : 135°C

9. SURFACE COLOUR CHANGING OF THE MOLTEN RESIN OF TOHMIDE 558-N

40 minutes later : Spotted thin yellow colour

100 minutes later : Thin yellow colour over about 75% surface

200 minutes later : Dark yellow colour over whole surface

10. ELECTRIC PROPERTIES OF TOHMIDE 558-N

TOHMIDE 558-N provide excellent electric properties along with chemical and physical properties when the resin is applied to HOT-MELT use as the insulation or adhesives for various parts of electric or electronics instruments.

Surface resistively (ohm) : 1.3×10^{13}

Volume resistively (ohm) : 0.9×10^{10}

Dielectric constant : 60HZ---15, 10^3 HZ---8.0, 10^6 HZ----3.2.

Withstand voltage (kV/mm) : 18

11. HANDLING and SAFETY PRECAUTIONS

TOHMIDE 558N is virtually inert material and no special precautions are required in its handling.

TOHMIDE 558-N has hydrogroscopic property, so the resin should be stored in a cool and dry place.

Seal tightly a bag contained with rest of the TOHMIDE 558-N resin even after using them, and store it in a dry place.

12. PACKING

20 kg net in weight, in standard export bag.