

Product Data

Silicone Epoxy Varnish TSR194

TSR194 is a silicone modified epoxy varnish.

KEY FEATURES

- ◆ Excellent heat resistance
- ◆ Excellent water resistance
- ◆ Excellent acid resistance

TYPICAL APPLICATIONS

- ◆ Protective coating of heating equipments, stoves, household gas ranges ovens, incinerators, high-temperature devices

TYPICAL PROPERTY DATA

PROPERTIES		
Appearance		Light yellow, transparent
Specific gravity (25°C)		1.0
Viscosity (25°C)	Pa·s {P}	0.18 {1.8}
Solids content	%	50
Acid value		0.2

CARACTERISTICS OF THE PAINT FILM

Properties of paint films formed by the mixing of TSR194 and titanium oxide or aluminum paste are shown in the following tables.

White paint (A) :	Titanium oxide (R-820)/solid resin component=1/1 (by weight)	
Aluminum paint (B)	Aluminumu past/solid resin component=2/5 (by weight)	
Tested piece :	Bondelite (L-40), Treated steel sheet (SPC - 1, 0.5t)	
Painting method :	Spray	
Thickness of paint film	Paint (A): 40 - 50µm	Paint (B): 20-30µm
Drying condition	30 minutes at 150°C	

MECHANICAL PROPERTIES

TEST ITEM	TEST CONDITIONS	White paint (A)	Aluminum paint (B)
Hardness	Pencil	H-2H	H-3H
	Sword rocker	70	-
Ericksen	mm	4.5	6
Cross cut test		100/100	100/100
Impact test	Du Pont method (500g, 1/2") cm	30	30

CHEMICAL RESISTANCE OF White Paint (A)^{*1}

TEST ITEM	TEST CONDITIONS	Time h	
Acid resistance	10% H ₂ SO ₄ immersion	Above 600 ^{*3}	
Alkali resistance	10% NaOH immersion	Above 150	
Solvent resistance	Petroleum benzine immersion	Above 500	
Salt water resistance	5% NaCl (35°C)	Without cut	Above 1000
		With cut ^{*2}	Above 800

*1 Time until abnormality in the paint film is observed.

*2 Time until the width of the rust reaches 1mm.

*3 With drying for 30 minutes at 180°C, acid resistance improves to tolerance of above 1,000 hours.

PRECAUTIONS FOR USE

Gelatinization of the varnish may be induced by the mixing of a large amount of aluminum powder (paste), antimony oxide or cobalt green to TSR194. Pay attention to this during use.

HANDLING AND SAFETY

- ◆ Wear eye protection, protective gloves, and respiratory protection while handling the product.
- ◆ Since the product is flammable, strictly prohibit the use of devices that may cause fire.
- ◆ For electrostatic prevention, have the equipments and devices grounded.

STORAGE

- ◆ Avoid direct sunlight and store the product, after it has been tightly sealed, in a dark indoor area which has little moisture.
- ◆ Keep out of the reach of children

PACKAGING

- ◆ 1kg can available in case of 10
- ◆ 18 kg can available by the can
- ◆ 200kg drum available by the drum

FOR INDUSTRIAL USE ONLY

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Momentive Performance Materials Japan LLC

<http://www.momentive.com>

Technical Answer Center (Japan): Phone: +81-276-20-6182 FAX: +81-276-31-6259
Tokyo Head Office: Phone: +81-3-5544-3111 FAX: +81-3-5544-3122