



# TSR 194

## TSR 194

### Description

TSR194 is epoxy modified silicone varnish, which is used as paint and paint additives. The drying temperature of this varnish is at 150 ~ 180 and resin film has good thermal, acid and water resistance.

### Typical Physical Properties

#### Mechanical properties

Tested Items	Test Conditions	Property	
		White Paint (A)	Aluminum Paint (B)
Hardness	Pencil	H ~ 2H	2H ~ 3H
	Sword Rocker	70	-
Ericksen	(mm)	4.5	6
Gross Cut Test	-	100/100	100/100
Impact Test	Du Pont Method (500g, 1/2 ')cm	30	30

#### Varnish Properties

Test Item	TSR 194
Appearance	Light Yellow, Transparent
Solid Content %	50
Viscosity (25), P( Pas)	1.8 ( 0.18 )
Density (25 )	1.0
Acid Value	0.2

#### Paint Film Properties

Properties of paint films by the mixing of TSR194 and titanium oxide (R-820) or aluminum paste are shown below:

Paint:

A: Titanium oxide (R-820) / solid resin component = 1 / 1

B: Aluminum/ solid resin component = 2 / 5

Tested piece -- Bondelite (L-40), Treated steel sheet (SPC-1, 0.5t)  
 Painting method - Spray Thickness of the paint films - (A) 40 – 50, (B) 20 – 30  
 Drying condition - 30 min. at 150

**Chemical resistance of white paints (A)**

Tested Items	Test Conditions		Property
Acid Resistance	10% H <sub>2</sub> SO <sub>4</sub> Immersion		Above 600
Alkali Resistance	10% NaOH Immersion		150
Solvent Resistance	Petroleum Benzine Immersion		Above 500
Solvent Water Spraying	5% NaCl (35)	Without Cut	Above 1000
Solvent Water Spraying	5% NaCl (35)	With Cut	Above 800

**Patent Status**

Nothing contained herein shall be construed to imply the nonexistence of any relevant patents or to constitute a permission, inducement or recommendation to practice any invention covered by any patent, without authority from the owner of the patent.

**Product Safety, Handling and Storage**

Gelation of the vanish may be induced by the mixing of large amount of aluminum powder, antimony oxide or cobalt green to TSR194. Please pay attention to this during use.

Customers should review the latest Material Safety Data Sheet (MSDS) and label for product safety information, safe handling instructions, personal protective equipment if necessary, and any special storage conditions required for safety. MSDS are available at [www.momentive.com](http://www.momentive.com) or, upon request, from any Momentive Performance Materials (MPM) representative. **For product storage and handling procedures to maintain the product quality within our stated specifications, please review Certificates of Analysis, which are available in the Order Center.** Use of other materials in conjunction with MPM products (for example, primers) may require additional precautions. Please review and follow the safety information provided by the manufacturer of such other materials.

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