



**ISOLENE® 40-S**

ISOLENE® 40-S is a low molecular weight liquid polymer derived from synthetic polyisoprene rubber. It offers the performance of natural rubber, with the added benefit of lighter color and none of the natural impurities inherent in natural rubber products.

ISOLENE® 40-S is a lower viscosity liquid than the other ISOLENE® liquid rubber products. It is a translucent, honey-colored liquid in bulk form and virtually clear in a thin film.

Technology / Base	Polyisoprene
Type of Product	Elastomer
Appearance / Color	Light Amber
Typical Viscosity Range	36,000 to 55,000 cps @ 38°C
Consistency	Liquid

**Features and Benefits**

ISOLENE® 40-S provides many performance properties in adhesive formulations and other compounds.

- Softens the resin
- Improves low-temperature tack
- Improves the resistance to bleed through
- Acts as an efficient vehicle for powdered additives and curatives into a rubber compound
- ISOLENE® liquid synthetic rubber cures by the same mechanism as polyisoprene rubber. It can replace rubber 1:1. A slight increase in curative levels may provide optimum performance when using levels above 15-20 phr of ISOLENE®.

**Recommended For**

ISOLENE® 40-S is ideal for pressure sensitive adhesive (PSA) formulations based on block copolymers.

Typical applications include the following:

- Rubber and polymer processing aid.
- Reactive vehicle for powdered additives.
- Rheology modifier for lubricants.
- Polymer base for molding and tooling systems.
- Polymer base for electrical encapsulants.
- Production of pressure sensitive adhesives.
- UV curable polymers.

H.B. Fuller offers a Compounding Guide with starting point formulas for these and other applications.

**Handling**

ISOLENE® products are viscous polymers. Heating the drums lowers the viscosity for easier handling. Vent the drums before heating to avoid pressure build up.

Avoid exposing ISOLENE® products to temperatures above 121°C (250°F). The polymer may form a skin and it may darken.

ISOLENE® polymers can be compounded with virtually any type of rubber processing equipment. Processing requirements vary with the desired finished properties and with the other formulation ingredients

**Storage and Shelf Life**

Store in a dry environment to prevent damage to the packaging. The liquid rubber products are stable over a wide temperature range. They are not damaged by freezing temperatures or occasional short-term exposure to temperatures of 66°C (150°F). The shelf life is a minimum of two years if stored properly in an unopened container.



### Typical Packaging

ISOLENE® 40-S is available in the following standard packages:

- 34 Lb. steel pail
- 350 Lb. steel drum

### Safety and Disposal

Prior to working with this or any product consult product label and Safety Data Sheet (SDS) for necessary health and safety precautions.

### Technical Data

Property	Typical Value	Test Method
Specific Gravity	0.92	ASTM D1875
Density (lb/gal)	7.7	ASTM D1875
Avg Molecular Wt.	32,000	GPC
Volatiles (Wt %)	0.87	ASTM D1416
Ash (Wt %)	0.1	ASTM D1416
Unsaturation (Mole %)	92	Ozone Analysis
Solids (%)	100	
Color, Gardner	8 Max	Visual
Glass transition temp. (Tg. °C)	-65	

### Viscosity

ISOLENE® 40-S is a low molecular weight grades of synthetic polyisoprene. They are viscous liquids at typical processing temperatures. The following table indicates the viscosity (cp) at typical conditions.

Temperature	Viscosity (cP)
25°C/77°F	120,000
38°C/100°F	40,000
52°C/125°F	15,000
66°C/150°F	7,000
80°C/175°F	3,300
93°C/200°F	2,300
121°C/250°F	1,000
149°C/300°F	500

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