KALENE® 800

KALENE® 800 is a low molecular weight liquid polymer derived by the depolymerization of butyl rubber. It vulcanizes at either ambient or elevated temperature with the standard curatives for butyl rubber.
KALENE® 800 is light gray and contains no solvents or additives. KALENE® 800 has the lower viscosity of the two KALENE® grades available and is the preferred liquid butyl rubber for coatings applications.
KALENE® 800 provides gas impermeability, chemical resistance, moisture resistance, good electrical properties, and excellent vibration/sound damping qualities.

Technology / Base	Butyl
Type of Product	Elastomer
Appearance / Color	Light Gray
Typical Viscosity Range	800,000 to 1,150,000 cps @ 66° C
Consistency	Viscous Liquid

Features and Benefits

KALENE® 800 offers the performance benefits of butyl rubber and the processing convenience of a liquid. It makes convenient bases for sealants, coatings, and adhesives. These coatings have higher solids than those based on butyl rubber because the KALENE® products are liquids.

KALENE® elastomer's butyl properties impart chemical resistance to a wide variety of sealants and adhesives. It is ideal for applications requiring chemical and moisture resistance.

KALENE® products also provide tack to pressure sensitive adhesives and improve the adhesion of butyl-based adhesives and sealants. Since they cure by the same mechanism as butyl rubber, they become part of the polymer matrix.

Recommended For

Typical applications include the following:
- A base polymer for chemical and moisture resistant tank linings and coatings.
- A base polymer for underwater marine coatings.
- A base polymer for water resistant roof coatings or other construction sealants.
- A non-fugitive reactive plasticizer and processing aid for high molecular weight butyl polymers.
- Polymer base for molding and tooling systems.
- Polymer base for electrical encapsulants.
- Production of pressure sensitive adhesives.

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

Handling

KALENE® products are high viscosity polymers. Heating the drum lowers the viscosity for easier handling. Vent the drums before heating to avoid pressure build up.
KALENE® liquid 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

KALENE® 800 is available in the following standard packages:

- 100 Lb. release coated fiber keg
- 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.	36,000	GPC
Volatiles (Wt %)	0.3	ASTM D1416
Ash (Wt %)	0.1	ASTM D1416
Unsaturation (Mole %)	2.5 - 3.5	Ozone Analysis
Solids (%)	100	ASTM D1416

Viscosity

KALENE® 800 is a low molecular weight grade of butyl rubber. It is a viscous liquid at typical processing temperatures. The table below indicates the viscosity (cP) when heated to typical processing temperatures.

Temperature	Viscosity (cP)
66°C/150°F	800,000
93°C/200°F	150,000
121°C/250°F	40,000
149°C/300°F	16,000

Many systems require both butyl rubber properties and much lower viscosity. The standard method is to dissolve butyl rubber in solvent. KALENE® products are much more soluble than butyl rubber, so they produce adhesives, sealants, and coatings with a lower volatile content (VOC). The viscosity at 25°C of KALENE® 800 in common solvents is shown below:

Solids Content	Visc in Toluene (cP)	Visc in Mineral Spirits (cP)
10%	15	25
50%	380	1,200
90%	900,000	1,500,000

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