# 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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