



BONDING AGENTS

Elastomer Technology

H.B. Fuller Elastomers produces specialty rubber intermediates for adhesives, sealants, coatings, and rubber compounds. The family of specialty intermediates provides both specialty properties and improved processing in a wide range of applications.

ISOLENE® LIQUID SYNTHETIC RUBBER

An extender for S-I-S block copolymers and can be cured via the polyisoprene backbone. ISOLENE® is used in block copolymer based pressuresensitive adhesives (PSA) systems. It is a reactive vehicle for rubber additives and curatives. It is a performance additive and processing aid for rubber compounds.



Pharmaceutical stoppers

KALENE® LIQUID BUTYL RUBBER

The base polymer and performance additive for the manufacture of moisture resistant coatings, marine and construction sealants, electrical encapsulants, pressure sensitive adhesives, and pharmaceutical and medical products based on butyl and halobutyl rubbers

KALAR® PARTIALLY CROSS-LINKED BUTYL RUBBER

Supplied in convenient pellet form. It is the foundation polymer for single component sealants, caulks, tapes, and automobile sound damping systems.

H.B. Fuller Elastomers are widely used by manufacturers of:

- Grinding wheels
- Brake linings
- Heavy-duty lubricants and oils
- Molded rubber products
- Automotive tires
- Off-road tires
- Pressure-sensitive adhesives (PSA)
- Hot melt adhesives
- Pressure sensitive tapes
- Moisture resistant coatings
- Sound damping systems
- Caulks and sealants

The H.B. Fuller Elastomer team of dedicated professionals is ready to serve your adhesive, sealant, coating or rubber compounding needs.

ISOLENE® LIQUID SYNTHETIC RUBBER

The ISOLENE® products are low molecular weight, liquid polymers of synthetic rubber. The chemical backbone is cis-1,4 polyisoprene. ISOLENE® liquid synthetic rubber is a translucent, honey-colored liquid in bulk volume and virtually clear in thin films. It offers all the benefits of liquid natural rubber.

TYPICAL APPLICATIONS:

- ISOLENE® products color, clarity, and solubility make them ideal for compounding pressure-sensitive adhesives (PSA), UV-curable polymer systems, and S-I-S and S-B-S block copolymer-based products.
- The ISOLENE® products are easily cross-linked with free-radical chemistry. They can be cured by ultraviolet (UV) light or E-beam radiation in PSA and other photosensitive systems.
- Since the ISOLENE® backbone is the same as natural rubber, it can be cured with conventional rubber curatives. The ISOLENE® products cure into the polymer matrix and remain non-fugitive in the final product.



Liquid Polymers	Polymer Structure	Unsaturation Mole %	Color	Glass Transition Temp, °C	Viscosity, cps @ Temp, °C	Flash Point, °C	Avg. Molecular Weight	Volatiles, %
ISOLENE® 40-S	synthetic polyisoprene	92	very light amber	-65	40,000 @ 38	240	32,000	0.87
ISOLENE® 400-S	synthetic polyisoprene	92	very light amber	-65	400,000 @ 38	265	65,000	0.47

KALENE® LIQUID BUTYL RUBBER

The KALENE® products are low molecular weight, liquid polymers of butyl rubber. They vulcanize at either ambient or elevated temperature with the standard curatives for butyl rubber. These liquid polymers contain no solvents or additives. H.B. Fuller Elastomers offers two grades that differ in molecular weight and viscosity. Both are extremely viscous liquids that require either heat or solvent to flow freely. KALENE® products provide gas impermeability, chemical resistance, moisture resistance, good electrical properties, and excellent sound damping qualities.

TYPICAL APPLICATIONS:

- The KALENE® products impart the performance benefits of butyl rubber and provide the processing convenience of a liquid.
- The KALENE® products can provide a polymer base for sealants, coatings and adhesives. These sealants, coatings and adhesives will have lower VOC's than those based on conventional baled butyl rubber because KALENE® products are liquids.
- KALENE® products impart chemical resistance to sealants, coatings and adhesive systems.
- KALENE® products provide excellent moisture resistance to sealants, coatings and adhesives systems used in both fresh water and salt water (marine) environments.
- The KALENE® products provide tack to pressure sensitive adhesives, and they improve the adhesion of butyl-based adhesives and sealants.
- The KALENE® products function as reactive plasticizers for conventional butyl to improve compounding efficiency. Since KALENE® products cure by the same mechanism as conventional butyl rubber, they become part of the polymer matrix and are non-fugitive.



Liquid Polymers	Polymer Structure	Unsaturation Mole %	Color	Glass Transition Temp, °C	Viscosity, cps @ Temp, °C	Flash Point, °C	Avg. Molecular Weight	Volatiles, %
KALENE® 800	poly (isobutyleneisoprene) polyisoprene	3.5	very light amber	-70	800,000 @ 66	163	36,000	0.3
KALENE® 1300	poly (isobutyleneisoprene) polyisoprene	3.5	very light amber	-70	1,300,000 @ 66	163	42,000	0.3

KALAR® CROSS-LINKED BUTYL RUBBER

The KALAR® products are partially cross-linked butyl rubber compounds. They are pelletized for easy handling. They feature the performance benefits of butyl rubber, the processing ease of pellets, and the ability to maintain their properties with a high level of fillers and plasticizers. The KALAR® products provide the base rubber or act as a performance additive for applications that require the properties of butyl rubber. These benefits include excellent chemical resistance, moisture and gas impermeability, good electrical properties and resistance to aging. They also impart excellent resistance to creep and flow.

TYPICAL APPLICATIONS:

The principal applications for KALAR® cross-linked butylare as sealants for commercial and industrial markets:

- Industrial sealant tape
- Architectural glazing tape
- Automotive windshield tape
- Automotive sealant and sound deadening compound
- Tire sealant
- Weather-proofing sealant tape

KALAR® products impart the benefits of butyl rubber to many other applications. These applications incorporate KALAR® products in concentrations that range from a few percent to the major part of the formulation:

- Hotmelt glazing compounds
- Solvent release coatings
- Caulks
- Construction adhesives
- Roof coatings



The processing advantages of pellets make the KALAR® products a convenient tool for compounders. They use KALAR® products in small concentrations in conventional systems:

- Processing aid for butyl rubber
- Enhance green strength in butyl and EPDM compounds

Polymers	Polymer Structure	Appearance	Color	Glass Transition Temp, °C	Mooney Viscosity, ML 1+3@127°C	Filler	Shelf Life, Months	Relative Degree of Cross-Link
KALAR® 5215	poly (isobutyleneisoprene)	Pellets	Off-White	-70	47-57	Non-Abrasive	12	Moderate
KALAR® 5246	poly (isobutyleneisoprene)	Pellets	Off-White	-70	30-40	Non-Abrasive	12	Low
KALAR® 5263	poly (isobutyleneisoprene)	Pellets	Amber	-70	55-65	None	12	High
KALAR® 5265	poly (isobutyleneisoprene)	Pellets	Amber	-70	45-58	None	12	Moderate
KALAR® 5275	poly (isobutyleneisoprene)	Pellets	Amber	-70	65-72	None	12	High
KALAR® 5277	poly (isobutyleneisoprene)	Pellets	Amber	-70	68-75	None	12	High
KALAR® 5280	poly (isobutyleneisoprene)	Pellets	Amber	-70	80-90	None	12	Very High
KALAR® 5281	poly (isobutyleneisoprene/EVA)	Pellets	Amber	-65	70-83	None	12	Very High



H.B. Fuller

Connecting what matters.™

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