

## HRPB 1000

### \*Product Specifications

Test Item	Unit	Test Method	Specification
Color(AHPA)	–	ASTM D1209	Max 50
Viscosity(100°C)	cSt	ASTM D445	175 ~ 205
Molecular Weight	–	GPC	900 ~ 1,050
Flash Point(COC)	°C	ASTM D92	Min 200
α-Vinylidene	Wt-%	13C NMR	Min 80
Total Vinylidene	Wt-%	13C NMR	Min 87
Acid Value	mgKOH/g	ASTM D974	Max 0.01
Water	Wt-ppm	ASTM D6304	Max 50

### Properties of DAELIM PolyButene

- Water-White Color (transparent viscous liquid)
- Non Odor & Non-Toxic & High Purity
- Tacky
- Hydrophobic & Inertness
- Excellent Stability of Oxidant and UV Light
- Superior Shear Stability
- Excellent Electrical Insulating Properties
- Great Water Repellency (very low moisture transmission rates)
- Outstanding Lubricity & Permanently Non-Drying
- Clean Decomposition & No Residue
- Low Pour Points & Superior Viscosity Index(VI)
- Non-Staining Characteristics (non-corrosive)

### \*\*Typical Value of HRPB 1000

Typical Properties	Unit	Test Method	Typical Value
Molecular Weight (Mn)	–	GPC(Gel Permeation Chromatography)	980
Kinetic Viscosity(40°C)	cSt	ASTM D445	4,200
Kinetic Viscosity(100°C)	cSt	ASTM D445	193
Flash Point(COC)	°C	ASTM D92(Cleveland Open Cup)	220
Flash Point(PM)	°C	ASTM D93B(Pensky-Martens)	170
α-Vinylidene	Wt-%	13C NMR	85
Color(AHPA)	–	ASTM D1209	15
Pour Point	°C	ASTM D97	-2
Loss on Heating	Wt-%	KS C2101	0.15
Water	Wt-ppm	ASTM D6304	30
Acid Value	mgKOH/g	ASTM D974	0.01
Total Sulfur	Wt-ppm	ASTM D2785	1
Dielectric Constant(80°C)	–	ASTM D924	2.18
Dielectric Breakdown Voltage(2.5mm)	kV	ASTM D149	50

#### Important Notice to User

The result on this technical data are reliable under the limited conditions and methods mentioned. It should be needed the user to get suitability for commercial use.

#### Application

- Additives
  - Lubricant Oil Additive(Dispersant), Fuel Oil Additive(Detergent)
  - Emulsifier(Explosive Emulsifier)
  - LOA/FOA & Emulsifier intermediate(polyisobutenyl succinic anhydride, PIBSA) prepared from HRPB
- Lubricants
- Caulks & Sealants

## Cautions and Recommendations

**Preliminary statement** For safe handling information on this product, consult the Material Safety Data Sheets (MSDS)

### \*Handling

- Wear protective gloves/ protective clothing/ eye protection/ face protection
- Maintain below flash point, protect to leak of liquid or vapor.
- Keep away from open flames, shut off the production of source of ignition (electricity/electricity sparks/heat/material of high-temperature)
- Ground/bond all container and receiving equipment, use equipment of prevention of explosion.
- Do not breathe vapor or mist when using this material. Avoid prolonged or repeated contact with skin. Avoid contact with eyes.
- Empty containers may contain harmful, flammable/combustible or explosive residue or vapors.
- Wash thoroughly after handling.

### Storage

- Keep container tightly closed in a cool, well-ventilated place.
- Keep container tightly closed before use.
- Avoid contact with incompatible materials.
- Keep away from heat, sparks, open flames, source of ignition.
- Suitable storage materials : mild steel/ carbon steel

### Hazards Identification

- GHS Classification : Not Classifiable
- GHS label elements
  - Hazard symbols : Not Classifiable
  - Signal word : Not Classifiable
  - Hazard statement : Not Classifiable
  - Precautionary statements : Not Classifiable
- Other hazards which do not result in classification
  - May causes irritation if contact with eyes, skin, mucous membranes.
  - If contact with non-refrigerated product, may causes burns.
  - NFPA Classification(0~4 steps) : Health=1, Flammability=1, Reactivity=0
  - HMIS Classification(0~4 steps) : Health=1, Flammability=1, Reactivity=0

## Health and Safety

**Health and Safety** Guidance on Health and Safety are available on the appropriate Material Safety Data Sheets (MSDS) that can be obtained from DAELIM Industrial Co., Ltd. representative.

Understand the Material Safety Data Sheets (MSDS) for additional information on personal protective equipment and for safety, health, environmental & toxicology information, first aid measures, ecological & regulatory information.

If additional information is required, please contact the below.

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### Visit Us at Our Website

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