



# BAPOLENE®

## HIGH DENSITY POLYETHYLENE BAPOLENE® 2040 BLOW MOLDING

**Description:** *Bapolene® 2040* is a copolymer high density polyethylene resin that offers superior modulus, top-load resistance and ESCR. It complies with US FDA 21CFR177.1520<sup>1</sup>.

**Application:** Household bottles, personal care articles, and toys.

*Values reported are typical and should not be interpreted as specification.*

All data are based on compression-molded plaques.

GENERAL PROPERTIES	NOMINAL VALUE	ASTM TEST METHOD
Melt Index <sup>2</sup> , g/10 min.	0.30	D-1238
Density, g/cm <sup>3</sup>	0.955	D-4883
ESCR F50, 100% IGEPAL, Condition B, Hours	35	D-1693
Tensile Strength @ Yield, psi (MPa)	4,200 (29)	D-638
Elongation @ Break, %	500	D-638
Flexural Modulus Tangent, psi (MPa)	180,000 (1,241)	D-790

<sup>1</sup> End use and/or migration limitations may apply.

<sup>2</sup> 190°C/2,160 g

THIS PRODUCT DATA SHEET EFFECTIVE NOVEMBER 2011 SUPERSEDES ALL DATA PREVIOUSLY PUBLISHED

### BAMBERGER POLYMERS

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## Bamberger Polymers, Inc.

Two Jericho Plaza, Suite 109  
Jericho, New York 11753

# MATERIAL SAFETY DATA SHEET

## SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Copolymer High Density Polyethylene  
Covers the following grade(s): **Bapolene 2040**

**Product use:** Various Consumer products & Industrial applications.

**Supplier:** Bamberger Polymers, Inc.  
Two Jericho Plaza, Suite 109  
Jericho, NY 11753

**Business Phone:** (800) 888-8959

## SECTION 2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS #	% Wt.
Ethylene-1- hexene-1 or,	25213-02-9	≤ 100
Ethylene-1-butene	25087-34-7	≤ 100

*\*Compositions are typical values not specifications*

## SECTION 3 HAZARD IDENTIFICATION

Handling and/or processing of this material may generate dust which may cause mechanical irritation of the eyes, skin, nose and throat. High dust concentrations have a potential for combustion or explosion.

### Potential Health Effects - Routes of Exposure

#### **Skin**

No significant irritation expected. Heated material can cause serious thermal burns. At high process temperatures, fumes may cause irritation of the nose and throat.

#### **Eyes**

Possible mechanical irritation may manifest itself as local redness with possible discomfort. Heated material can cause thermal burns. When heated, vapors formed may irritate eyes. Material is dusty and may scratch surface of eye.

#### **Inhalation**

Exposure to high concentration of airborne particles may cause upper respiratory tract irritation. If heated, the product may form fumes which could cause irritation of the respiratory tract, coughing, nausea, and shortness of breath.

#### **Ingestion**

May cause choking, diarrhea, nausea, or discomfort in the abdominal region.

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## SECTION 4 FIRST AID MEASURES

### Eye Contact

Flush eyes with clean, cold, low-pressure running water for at least 15 minutes. Seek immediate medical attention.

### Skin Contact

If molten material contacts skin, immediately flush skin with large amounts of cold water. No attempt should be made to peel polymer from the skin or to remove clothing attached with molten material. Thermal burns require immediate medical attention.

### Inhalation

Remove victim to well-ventilated area. If not breathing, provide artificial respiration by trained personnel. If difficulty breathing, provide give oxygen and seek medical attention.

### Ingestion

If swallowed, do not induce vomiting. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately.

## SECTION 5 FIRE FIGHTING MEASURES

Item	Comment
Flammability	May be combustible at high temperature.
Products of Combustion	Combustion can produce carbon dioxide, hydrocarbons, and other harmful products.
Fire/Explosion Hazards	Material is not explosive as defined by established regulatory criteria.
Extinguishing Media	High dust concentrations have potential for combustion or explosion. IN case of fire, use water spray (fog), foam, dry chemical or CO <sub>2</sub> . DO NOT use water jet.
Firefighting Protection	Wear NIOSH-approved positive pressure, self-contained breathing apparatus (SCUBA) and full protective gear.

## SECTION 6 ACCIDENTAL RELEASES MEASURES

### Personal Precautions

Eliminate all ignition sources and contain spill. Granules spilled on the floor can cause slipping. Fine dust clouds may form explosive mixtures with air. Do not touch or walk through spilled material. Use suitable protective equipment.

### Environmental and Clean-Up Methods

If emergency personnel are unavailable, vacuum or carefully collect spilled material(s), and place in an appropriate container for disposal. Recovered material should be packaged, labeled, transported, and disposed of in conformance to consistent with all applicable laws and regulations. If heated material is spilled, allow to cool before proceeding with cleanup methods. Avoid creating dusty conditions and prevent wind dispersal. Avoid contact of spilled material with soil and prevent runoff from entering sewers and waterways.

### Personal Protection

Personnel should wear proper safety equipment.

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## SECTION 7 HANDLING AND STORAGE

### Handling

No smoking. Keep away from open flame or sources of ignition. There is a risk of being splashed with molten materials. At high temperatures, potentially toxic/irritating fumes may result from heated material - do not inhale fumes or vapor from molten product. Use with adequate ventilation. When handling hot material, wear protective gloves, clothing and face shield that are able to withstand the temperature of the molten product. After handling, always wash hands thoroughly with soap and water. Pneumatic conveying and other mechanical handling can generate combustible dust and static electrical charges.

Earth all equipment. High dust concentrations have a potential for combustion or explosion. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material.

### Storage

Keep container dry, tightly closed, and stored in a well-ventilated area. Avoid contact or proximity to strong oxidizing agents. Pallet stock slippage and forklift truck maneuvers can cause injury. It is recommended that adequate procedures covering storage handling of pallets are implemented and based on good manufacturing practices.

## SECTION 8 PHYSICAL AND CHEMICAL PROPERTIES

Trait	Comment
Physical State	Solid
Odor	Odorless to faint odor
Color	White to translucent to off-white
Specific Gravity	0.905 - 0.980
Solubility (in water)	Insoluble

## SECTION 9 STABILITY AND REACTIVITY

### Chemical Stability and Reactivity

Stable.

### Conditions to avoid

Excessive temperatures, strong oxidizers, and all possible sources of ignition (spark or flame).

### Incompatibility

Strong oxidizing materials, fluorine, halogens, benzene, aromatic and chlorinated hydrocarbons, nitric and perchloric acids and others.

### Decomposition products

Combustion can produce carbon monoxide and/or carbon dioxide and other harmful products. Decomposition can yield traces amount of hydrocarbons. Degradation products may include, among others, aldehydes, alcohols, and organic acids.

### Hazardous polymerization

Not expected to occur.

## **SECTION 10 EXPOSURE CONTROLS AND PERSONAL PROTECTION**

### **Control Measures**

Use enclosures around process, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If high concentrations of airborne matter or fumes are generated, use ventilation to ensure levels are kept below the exposure limit. Clothing and shoes should be dusted before re-used.

### **Personal protection**

#### **Eyes**

Safety glasses with side shields are required as minimum requirements. Use full-face respirator if a high dust concentration is generated.

#### **Skin**

Minimize contact. The use of heat-resistant protective gloves and clothing and face shield is good industrial practice and recommended.

#### **Respiratory**

Product processing may produce dust, vapor or fumes. To minimize risk of overexposure to dust, vapor or fumes it is recommended to use process enclosures and a local exhaust system, and that the working area is properly ventilated. If ventilation is inadequate, use certified respirator that will protect against dust/mist. Do not consume food in the work area.

#### **Hands**

Use of heat-resistant protective gloves, clothing and face shield capable of withstanding temperature of molten product, is good industrial practice. The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves. Since even the best chemically resistant glove will break down after repeated chemical exposures, gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Consult your supervisor or standard operating procedures for special handling directions.

***Consult local authorities for acceptable exposure limits.***

## **SECTION 11 TOXOLOGICAL INFORMATION**

This product is not considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard.

## **SECTION 12 ECOLOGICAL INFORMATION**

### **Ecotoxicity**

No testing has been performed by the manufacturer.

### **Bio-degradability**

Not inherently biodegradable.

### **Mobility**

This product is expected to float on water, and is not likely to move rapidly with surface or groundwater flows due to its low water solubility. This material is insoluble in water.

### **Other Information**

Wildlife may ingest pellets or bags. Although not toxic, such materials may obstruct the digestive system.

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## SECTION 13 DISPOSAL CONSIDERATIONS

### Waste Information

Avoid contact of spilled material and/or runoff with soil and surface waterways. Consult an environmental professional to determine if local, regional or national regulations would classify spilled or contaminated materials as hazardous waste. Use only approved transporters, recyclers, and treatment, storage or disposal facilities. Dispose of in accordance with all applicable Federal, State and local control regulations.

*Consult your local or regional authorities.*

## SECTION 14 TRANSPORT INFORMATION

Polyethylene, other than liquid, is not regulated.

Regulatory Authority	Shipping Description
DOT (USA)	Not regulated as a hazardous material or dangerous goods for transportation.

This information is *not* intended to convey all specific regulatory or operational requirements/information relating to this product. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

## SECTION 15 OTHER INFORMATION

Regulatory Authority	Status
TSCA	All ingredients on TSCA list.

### Label requirements

This product has been evaluated and does not require any hazard warning on the label under established regulatory criteria.

### HMIS:

Health	0
Fire Hazard	1
Reactivity	0

### NOTICE

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