

# HYPRO® 2000X168LC VTB Methacrylate-Terminated Polybutadiene

## Product Description

HYPRO® 2000X168LC polymer has improved lower color and offers better viscosity stability with age and temperature than HYPRO® 2000X168 VTB (vinyl-terminated polybutadiene). It is the reaction product of glycidyl methacrylate and HYPRO® 2000X162 carboxyl-terminated polybutadiene (CTB).

HYPRO® 2000X168LC polymer is a low-molecular-weight, methacrylate-functional liquid synthetic rubber. It is a 100% solids reactive polymer used primarily as an additive in acrylic adhesives, sealants, coatings and composites.

## Benefits & Features

HYPRO® 2000X168LC VTB polymer is commonly used at 5% to 20% of total solids in (meth)acrylate adhesives, sealants, coatings and resin systems. It is miscible with the pre-reacted systems, and it forms rubber domains when cured. These micron-size rubber particles provide the key performance benefits. The key property improvements in acrylic adhesives sealants and coatings are:

- Low-temperature properties
- Impact and crack resistance
- T-peel and lap shear adhesion
- Durability (fatigue resistance)
- Thermal cycling tolerance

The benefits in polymethylmethacrylate (PMMA) composites are:

- Reactive toughening agent
- Better compatibility with silica reinforcement

In vinyl ester resins, HYPRO 2000X168LC VTB polymer doubles the elongation and fracture toughness of rubber-modified systems.

## Applications

HYPRO® reactive liquid polymers (RLPs) set the industry standard for rubber-toughening epoxy, acrylic, vinyl ester and unsaturated polyester in neat resins, adhesives, coatings and composites.

HYPRO® 2000X168LC polymer is designed for free-radical-cured systems. It reacts into the cured polymer matrix via the vinyl functionality of the methacrylate moieties. The polybutadiene backbone provides toughness, flexibility, low-temperature properties, and impact resistance to the cured formulation. It also contributes excellent resistance to moisture, brine, acids and bases

## Typical Properties

Property	HYPRO® 2000X168LC VTB
Gardner color	4
Brookfield Viscosity, cP at 27°C	100,000
Functionality	1.9
Molecular Weight, g/mol	4,450
Acid number	4.5
Specific Gravity at 25°C	0.929
Tg, °C	-80

## Storage

**HYPRO® 2000X168LC VTB** material should be stored in a dry place, in the sealed original containers, at temperatures between **+2C and +8C (+35.6°F and 46.4°F)**. Under these storage conditions, the product has a shelf life of **12 months** (from date of manufacture). The products should not be exposed to direct sunlight.

### Precautionary Statement

Huntsman Advanced Materials Americas LLC maintains up-to-date Safety Data Sheets (SDS) on all of its products. These sheets contain pertinent information that you may need to protect your employees and customers against any known health or safety hazards associated with our products. Users should review the latest SDS to determine possible health hazards and appropriate precautions to implement prior to using this material.

#### First Aid!

Refer to SDS as mentioned above.

**KEEP OUT OF REACH OF CHILDREN**

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### **Customer Support Center:**

**Huntsman Corporation**  
10003 Woodloch Forest Dr  
The Woodlands, TX 77380  
Tel: +1 (888) 564-9318  
Fax: +1 (281) 719-6416  
[www.huntsman.com](http://www.huntsman.com)