

## Thermolite® 140 Butyltin PVC Heat Stabilizer

### DESCRIPTION

**Thermolite® 140** is a butyltin mercaptide PVC heat stabilizer created for today's high output extrusion rates. It is specially designed for co-extruded siding, profile and fence substrate as well as the more demanding pipe applications where good stability and color hold are needed. **Thermolite® 140** heat stabilizer imparts excellent early color and good dynamic stability to PVC formulations.

### GENERAL CHARACTERISTICS

Properties	Typical Values
Form	Clear Oily Liquid, Yellow
Color (Gardner)	2
Viscosity, cs (@25°C)	30
Specific Gravity (@25°C)	0.92
Refractive Index (@25°C)	1.49
% Tin	8.5

### BENEFITS

The outstanding performance of **Thermolite® 140** heat stabilizer offers significant advantages in the production of high quality, rigid PVC products at high output rates. The advantages of using **Thermolite® 140** heat stabilizer in PVC formulations include:

- Outstanding cost/performance ratio.
- Excellent initial and long-term color hold.
- Outstanding dynamic term stability.
- Low amperage and back pressure for high extrusion rates.
- Approved for potable water applications on the NSF-PPI Generic Range Formulation.

### APPLICATIONS

**Thermolite® 140** heat stabilizer can be used in many rigid PVC applications. It has proven to be especially effective for use in extrusion of all sizes of pipes, co-extruded siding, profiles and fencing substrate formulations.

### PACKAGING

Available in Totes or Intermediate Bulk Container (IBC).

### SAFETY & HANDLING

**Thermolite® 140** stabilizer may be handled with the same normal precautions as other butyltin mercaptide stabilizers and organic liquids. In case of contact with skin, thoroughly wash with soap and water. In case of contact with eyes, flush with water and get medical attention immediately. Use with adequate ventilation and avoid excessive or prolonged exposure to the vapors.

We recommend that the material is stored in a cool, dry environment in a tightly closed container and used within 6 months after delivery. Iron or non-stainless steel should be avoided for piping, valves, and pumps. Teflon® gaskets are recommended. No part of the stabilizer handling system wetted by liquid should contain copper.

#### In US

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**TYPICAL FORMULATIONS**

<b>Rigid Siding Substrate</b>	<b>Use Level (phr)</b>
PVC Resin (K-65)	100.0
<b>Thermolite® 140</b>	0.8 – 1.2
PMC Biogenix Calcium Stearate	1.0 – 1.5
<b>CrystalWax® 2054</b> (165°F mp)	1.0 – 1.5
Oxidized Polyethylene Wax	0.1 – 0.2
Acrylic Impact Modifier	4.0 – 5.0
Calcium Carbonate	7.0 – 18.0
Titanium Dioxide	0.5 – 1.0

<b>Potable Water Pipe</b>	<b>Use Level (phr)</b>
PVC Resin (K-65)	100.0
<b>Thermolite® 140</b>	0.3 – 0.6
PMC Biogenix Calcium Stearate	0.4 – 0.8
<b>CrystalWax® 2054</b> (165°F mp)	0.8 – 1.2
Oxidized Polyethylene Wax	0.1 – 0.2
Calcium Carbonate (3.0 µm)	0.3 – 5.0
Titanium Dioxide	0.5 – 1.0

<b>Sewer Pipe</b>	<b>Use Level (phr)</b>
PVC Resin (K-65)	100.0
<b>Thermolite® 140</b>	0.3 – 0.6
PMC Biogenix Calcium Stearate	0.6 – 0.8
<b>CrystalWax® 2054</b> (165°F mp)	1.2 – 1.5
Oxidized Polyethylene Wax	0.1 – 0.2
Acrylic Impact Modifier	2.0
Calcium Carbonate (3.0 µm)	10.0 – 30.0
Titanium Dioxide	0.75 – 1.0



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## ENVIRONMENTAL AND SAFETY INFORMATION

BEFORE HANDLING THIS MATERIAL, READ AND UNDERSTAND THE MSDS (MATERIAL SAFETY DATA SHEET) FOR ADDITIONAL INFORMATION ON PERSONAL PROTECTIVE EQUIPMENT AND FOR SAFETY, HEALTH AND ENVIRONMENTAL INFORMATION. For Environmental, Safety & Toxicology information, contact our Customer Service Department at 1-855-638-2549 (1-855-METALIX) to request a Material Safety Data Sheet.

## MORE TECHNICAL INFORMATION AVAILABLE

Ask your PMC account manager for further information about other high quality PMC plastics additives for use in PVC resins, PVC alloys and other polymer systems. PMC offers its **Center for Vinyl Innovation (CVI)** where our field experienced technical staff maintains a full array of PVC testing capabilities to assist vinyl processors solve a range of formulation and processing problems. Set up a visit to the CVI to learn more about how PMC's technologists can help improve your vinyl processing applications.

## PMC ORGANOMETALLIX THERMOLITE® AND ADVASTAB® HEAT STABILIZERS

PMC Organometallix offers a full range of Methyltin, Butyltin and Octyltin heat stabilizers. Our **Thermolite®** and **ADVASTAB®** heat stabilizers are designed for use in the production of rigid, semi-rigid and cellular PVC products. Organometallix has developed PVC heat stabilizers specifically for extruded siding, profiles and pipe, injection molding, blow molded bottles and calendered or extruded sheet. Organometallix offers a full line of stabilizers that meet FDA requirements for food contact grade PVC packaging as well as a full line of NSF authorized stabilizers for PVC potable water pipe & fittings.

## PMC BIOGENIX ADVAPAK®, ADVALUBE®, ADVAWAX®, KEMAMIDE® AND KEMESTER® LUBRICANTS

PMC Biogenix offers a wide range of metallic stearates, specialty lubricants and other additives designed for all grades of polymer processing, including PVC pipe and profile extrusions, compounding, film and sheet and injection-molding applications. Biogenix brands are widely recognized. **ADVAWAX®** synthetic waxes are used in bottles, films and cellular PVC profile extrusions. **ADVALUBE®** specialty ester-based internal and external lubricants are designed for rigid PVC profile extrusion, calendered film and sheet, and blow molding applications. **ADVAPAK®** is family of multi-functional one-pack systems (OPS) combining heat stabilizer and lubricant technology designed for efficient extrusion of all types of PVC pipe and moldings. **Kemamide®** synthetic waxes find uses as slip agents and anti-block additives that provide excellent bloom control and secondary mold-release in polyolefins and engineering polymers such as nylon, PS and ABS. **Kemester®** lubricants are a range of glycerol esters and specialty esters that function as boundary lubricants, mold-release agents, emulsifiers, anti-stats, anti-fogs, and emollients in automotive plastics, etc.

## PMC CRYSTAL BAION® AND CRYSTALWAX® LUBRICANTS

PMC Crystal manufactures **Baion®** and **CrystalWax®**, a broad range of standard paraffin and polyethylene wax blends along with options of including specialty lubricants produced by PMC Biogenix. Crystal lubricants are also available in custom formulations to meet specific customer requirements. Several **Baion®** products are fully authorized by NSF for use in PVC potable water systems. **Baion®** and **CrystalWax®** products find uses in PVC siding, window profiles, fencing, decking and trim applications to highlight a few.



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