

## ADVASTAB® TM-181 FS

Methyltin Heat Stabilizer

### DESCRIPTION

**ADVASTAB® TM-181FS** thermal stabilizer is a high efficiency liquid methyltin mercaptide designed to stabilize rigid Vinyl and rigid Vinyl copolymers used for a wide variety of demanding applications. **ADVASTAB® TM-181FS** stabilizer provides good early color as well as excellent dynamic processing stability. Its good residual stability also allows for the efficient use of regrind. **ADVASTAB® TM-181FS** stabilizer is suitable for food packaging applications worldwide.

### APPLICATIONS AND FEATURES

Excellent stabilizer for clear rigid Vinyl and Vinyl copolymer blow molding formulations designed for food contact. Provides excellent clarity and good early color stability. Very effective stabilizer for injection molding of pipe fittings and other high quality parts intended for potable water uses. Excellent for calendered and extruded Vinyl sheet for food contact applications. Suitable for food packaging applications as defined by the US FDA, BedGgstV (Germany) and Commission Regulation (EU) No 10/2011 - plastics intended to come into contact with Food. Allows for efficient use of regrind.

### GENERAL CHARACTERISTICS

Properties	Typical Values
Form	Liquid
Viscosity, cs (@25°C)	50
Brookfield Viscosity #2 Spindle, cps (@25°C)	85
Specific Gravity (@25°C)	1.17
Refractive Index	1.509 ± 0.002
% Tin	18.7 (min.)
% Sulfur	12.0 ± 0.5
% Trimethyltin Compounds	< 0.1
Acid Value	3.0 (max.)
Color (% Transmission @ 440 nm)	80 (min.)
Appearance	Clear Liquid

### PACKAGING

Available in Totes or Intermediate Bulk Container (IBC)

### SAFETY & HANDLING

**ADVASTAB® TM-181FS** stabilizer is a liquid tin mercaptide thermal stabilizer and should be handled with normal precautions used in good industrial practices for organic liquids. Use adequate ventilation. Wear rubber gloves. Wear eye protection. In case of contact with the skin, wash thoroughly with soap and water. In case of contact with eyes, flush with water and get medical attention.

We recommend that the material is stored in a cool, dry environment in a tightly closed container and used within 6 months after delivery. Stainless steel is recommended for piping, valves, and pumps used to handle **ADVASTAB® TM-181FS** stabilizer. No wetted parts of the stabilizer handling and dispensing system should be made from iron, brass, copper, or bronze.

#### In US

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#### In Europe

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### STARTING FORMULATION RECOMMENDATIONS

Injection Molding (Fittings)	Use Level (phr)
PVC Resin (K-55 to K-58)	100.0
<b>ADVASTAB® TM-181FS</b>	1.5 – 2.0
PMC Biogenix Calcium Stearate	1.0 – 1.2
Paraffin Wax (165°F mp)	0.8 – 1.2
Acrylic Process Aid	1.0 – 2.0
MBS Impact Modifier	2.0 – 3.0
Calcium Carbonate (0.8 µm)	3.0 – 5.0
Titanium Dioxide	0.0 – 1.0

Weatherable Profile	Use Level (phr)
PVC Resin (K-65 to K-67)	100.0
<b>ADVASTAB® TM-181FS</b>	1.0 – 1.5
PMC Biogenix Calcium Stearate	1.2 – 2.0
Paraffin Wax (165°F mp)	1.0 – 1.2
Acrylic Process Aid	1.0 – 1.5
Acrylic Process Aid (Metal Release)	0.5 – 0.7
Acrylic Impact Modifier	4.5 – 5.5
Oxidized Polyethylene	0.1 – 0.2
Calcium Carbonate (0.8 µm)	0.0 – 5.0
Titanium Dioxide	10.0

Rigid Siding Capstock	Use Level (phr)
PVC Resin (K-65)	100.0
<b>ADVASTAB® TM-181FS</b>	1.0 – 1.5
PMC Biogenix Calcium Stearate	1.0 – 1.5
Paraffin Wax (165°F mp)	1.0 – 1.5
Acrylic Impact Modifier	4.0 – 5.0
Titanium Dioxide	9.0 – 10.0

Food Contact Grade Sheet	Use Level (phr)
PVC Resin (K-60)	100.0
<b>ADVASTAB® TM-181FS</b>	1.2 – 1.5
<b>ADVALUBE® F-1040 L*</b>	1.2 – 1.5
<b>ADVALUBE® E-2100</b>	0.1 – 0.5
EVA Co-Polymer	0.0 – 3.0
Acrylic Process Aid	1.5 – 2.0
Acrylic Process Aid (Metal Release)	0.7 – 1.0
MBS Impact Modifier	6.0 – 12.0
Toner	As Required

\*Limited geographic availability.



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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 Organometallic account manager for further information about other high quality PMC Organometallic's additives for use in PVC resins, PVC alloys and other polymer systems. PMC Organometallic produces a full line of heat stabilizers. In addition, PMC Organometallic's Technical Service staff is available to assist compounders and processors to solve formulation and processing problems.

## THERMOLITE® AND ADVASTAB® HEAT STABILIZERS

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

## ADVAPAK®, ADVALUBE® and ADVAWAX® for Rigid PVC Lubrication

PMC Biogenix offers a wide range of performance lubricants for PVC processing. **ADVALUBE®** and **ADVAWAX®** include every lubricant class from esters to amides to paraffin waxes. **ADVAPAK®** lubricants are custom formulations to meet specific customer requirements. **ADVALUBE®**, **ADVAWAX®** and **ADVAPAK®** products find uses in PVC pipe, siding, window profiles, film and sheet, molding, fencing, decking and trim applications.

## PMC BIOGENIX LUBRICANTS

PMC Biogenix's lubricants include Calcium, Zinc, Lithium, and Magnesium stearates that meet FDA requirements for food contact grade PVC packaging as well as NSF requirements for PVC potable water pipes & fittings. Our PVC lubricants such as **Industrene®**, **Hystrene®**, **Kemester®**, **Kemamide®** and heat stabilizers together offer a comprehensive PVC package for production of rigid, semi-rigid, foamed, and flexible PVC applications such as extrusion molding, injection molding, blow molding, calendering, siding, profiling, piping etc.

## CrystalWax® FOR RIGID PVC LUBRICATION

PMC Crystal manufactures a broad range of standard blends utilizing paraffin and polyethylene waxes along with the option of blending EBS, GMS and other lubricating esters produced by PMC Biogenix. **CrystalWax®** lubricants are also available in custom formulations to meet specific customer requirements. **CrystalWax®** formulations find uses in PVC siding, window profiles, fencing, decking and trim applications to highlight a few.



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