

Specialty Lubricant

Description

ADVALUBE™ E-2100 is a highly efficient, ester-based external lubricant suitable for all processes of rigid Vinvl.

General Characteristics

Properties	Typical Values	
Appearance	Ivory powder	
Melting Range °C	52 - 64	
Saponification Value	260 - 280	
Hydroxyl Value	15 Max	
Bulk Destiny	0.580	
Color (Gardner)	3 Max	

Benefits

ADVALUBE™ E-2100 is an external lubricant, with optimal release effect, even at high temperature; it is compatible with Vinyl and all the related additives. In rigid calendering, tin-stabilized ADVALUBE™ E-2100 avoids stickiness on the rolls, maintaining the correct thickness of the sheet and ensuring perfect clarity.

Applications

- Vinyl calendered film and sheet
- Vinyl extruded sheet
- · Vinyl bottles

Typical Dosage

Dosage levels of between 0.2 - 0.6 phr are recommended.

Handling & Safety

Follow good manufacturing and handling practices. Store in cool, dry, well-ventilated area. Shelf life is 24 months.

Packaging

- 55 pound (25kg) PE bags on 2200 pound pallets
- · Other packaging available

PMC Biogenix 1231 Pope St. Memphis, TN 38108 USA Customer Service 800 641 2152

to the pertinent Material Safety Data Sheets for the products mentioned herein. All sales are subject to PMC Biogenix's standard terms and conditions of sale, copies of which are available upon request and which are part of PMC Biogenix's invoices and/or order acknowledgements. Except as expressly provided in PMC Biogenix's standard terms and conditions of sale, no warranty, expressed or implied, including warranties of merchantability or fitness for a particular purpose, is made with respect to the products described herein. Nothing contained herein shall constitute permission or recommendation to practice any invention covered by a patent without a license from the owner of the patent.

or +1 901 325 4930

Fax 800 641 2153

The information contained herein is correct to the best of our knowledge. Your attention is directed

(330) 798-9300



Specialty Lubricant

Specific Applications

Vinyl Window Profile Formulation		
Vinyl Resin (K = 66 - 67)	100.0 phr	
ADVASTAB™ TM-181FS	1.2 - 1.4	
Calcium Stearate	0.8 - 1.0	
Paraffin Wax (165°F)	0.5 - 0.8	
ADVALUBE™ B-3310	1.0 - 1.2	
ADVALUBE™ E-2100	0.4 - 0.6	
Polyethylene Oxidized	0.15	
Process Aid	1.0	
Lubricating Process Aid	0.5	
Acrylic Impact Modifier	4.0 - 6.0	
TiO ₂	8.0 - 10.0	
CaCO₃ (Ultra-Fine)	5.0	

Vinyl Window Blind Profile		
Vinyl Resin (K = 60 - 61)	100.0 phr	
ADVASTAB™ TM-181FS	1.2 - 1.4	
Calcium Stearate	0.8 - 1.1	
Paraffin Wax (165°F)	0.5 - 0.7	
ADVALUBE™ E-2100	0.4 - 0.6	
Process Aid	1.0	
Lubricating Process Aid	0.5	
Acrylic Impact Modifier	4.0 - 6.0	
TiO ₂	6.0 - 8.0	
CaCO₃ (Ultra-Fine)	5.0	

Alternative Tin Stabilizers:

ADVASTAB™ TM-186 - Thioglycolate for improved early color ADVASTAB™ TM-286SP - Reverse ester for low cost at low levels Thermolite® 385 - Butyltin mixed mercaptide for excellent stability

PMC Biogenix 1231 Pope St. Memphis, TN 38108 USA

Customer Service 800 641 2152 or +1 901 325 4930 Fax 800 641 2153 The information contained herein is correct to the best of our knowledge. Your attention is directed to the pertinent Material Safety Data Sheets for the products mentioned herein. All sales are subject to PMC Biogenix's standard terms and conditions of sale, copies of which are available upon request and which are part of PMC Biogenix's invoices and/or order acknowledgements. Except as expressly provided in PMC Biogenix's standard terms and conditions of sale, no warranty, expressed or implied, including warranties of merchantability or fitness for a particular purpose, is made with respect to the products described herein. Nothing contained herein shall constitute permission or recommendation to practice any invention covered by a patent without a license from the owner of the patent.

PAGE 2 OF 4



Specialty Lubricant

Specific Applications

Vinyl Sheet/Film Formulations	High Gloss	Thermoforming Clear	Opaque
Vinyl Resin (K = 59 - 61)	100.0 phr	100.0 phr	100.0 phr
ADVASTAB™ TM-186	1.2 - 1.5	1.2 - 1.5	_
ADVASTAB™ TM-181FS	_	_	1.2 - 1.5
Calcium Stearate	_	_	1.5 - 2.0
Paraffin Wax	_	-	0.4
ADVALUBE™ E-2100	0.2 - 0.4	0.2 - 0.4	0.5
ADVALUBE™ F-1060L	0.6	0.6	_
Process Aid	1.0	1.0	1.5
MBS Impact Modifer (non-stress whitening)	5.0 - 10.0	-	_
MBS Impact Modifier	_	8.0 - 12.0	6.0 - 8.0
Pigment	_	_	5.0 - 9.0
Blue Toner*	As Needed	As Needed	_

^{*}To optimize blending, it is suggested that toner be added to the Vinyl resin prior to the addition of any other formulation ingredients.

PMC Biogenix 1231 Pope St. Memphis, TN 38108 USA Customer Service 800 641 2152 or +1 901 325 4930 The information contained herein is correct to the best of our knowledge. Your attention is directed to the pertinent Material Safety Data Sheets for the products mentioned herein. All sales are subject to PMC Biogenix's standard terms and conditions of sale, copies of which are available upon request and which are part of PMC Biogenix's invoices and/or order acknowledgements. Except as expressly provided in PMC Biogenix's standard terms and conditions of sale, no warranty, expressed or implied, including warranties of merchantability or fitness for a particular purpose, is made with respect to the products described herein. Nothing contained herein shall constitute permission or recommendation to practice any invention covered by a patent without a license from the owner of the patent.

Fax 800 641 2153



Specialty Lubricant

Environmental & 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 800-641-2152 or 901-325-4930 to request a Material Safety Data Sheet.

More Technical Information Available

Ask your PMC Biogenix account manager for further information about other high quality PMC Biogenix's additives for use in PVC resins, PVC alloys and other polymer systems. In addition, PMC Biogenix's Technical Service staff is available to assist compounders and processors to solve formulation and processing problems.

Thermolite® & 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 Organometallix has developed PVC heat stabilizers specifically for extruded siding, profiles and pipe, injection molding, blow molded bottles and calendered or extruded sheet. PMC Organometallix offers a full line of stabilizers that meet FDA requirements for food grade PVC packaging and a full line of NSF authorized stabilizers for PVC potable water pipe & fittings.

ADVAPAK™, ADVALUBE™ & ADVAWAX™ for Rigid PVC Lubrication

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.

Biogenix Lubricants

PMC Biogenix's lubricants include Calcium, Zinc, Lithium, and Magnesium stearates that meet FDA requirements for food 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

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.

PMC Biogenix 1231 Pope St. Memphis, TN 38108 USA Customer Service 800 641 2152 or +1 901 325 4930

The information contained herein is correct to the best of our knowledge. Your attention is directed to the pertinent Material Safety Data Sheets for the products mentioned herein. All sales are subject to PMC Biogenix's standard terms and conditions of sale, copies of which are available upon request and which are part of PMC Biogenix's invoices and/or order acknowledgements. Except as expressly provided in PMC Biogenix's standard terms and conditions of sale, no warranty, expressed or implied, including warranties of merchantability or fitness for a particular purpose, is made with respect to the products described herein. Nothing contained herein shall constitute permission or recommendation to practice any invention covered by a patent without a license from the owner of the patent.

Fax 800 641 2153

(330) 798-9300