

# DURASTRENGTH®

TDS/TECHNICAL DATA SHEET

## Durastrength® 510

### Multifunctional Acrylic Impact Modifier

#### PRODUCT DESCRIPTION

Durastrength® 510 acrylic impact modifier imparts excellent impact properties and faster fusion to rigid vinyl products at lower acrylic use levels. Based on the unique chemistry of Durastrength® 200 impact modifier which has been the leading impact modifier used in exterior durable building products for over 35 years, Durastrength® 510 impact modifier offers outstanding room and low-temperature impact in combination with unsurpassed ease of processing. The unique properties of Durastrength® 510 impact modifier make it especially suitable for vinyl siding and fence substrate formulations where high filler levels and high production rates put maximum stress on the formulation. Due to its unique process aid functionality, Durastrength® 510 impact modifier eliminates the need for added process aid in formulations that it is used to modify.

This efficiency typically enables a reduction in total acrylic level needed in most formulations.

#### TYPICAL PHYSICAL PROPERTIES

Physical Form	White Powder
Specific Gravity	1.09
Bulk Density	0.50 g/cc
Particle Size	10% Max on 50 Mesh
Percent Volatiles	1.2% Max

#### PRODUCT BENEFITS

1. For today's high output extrusion and large extruders, the low melt viscosity and fusion promoting characteristics of Durastrength® 510 impact modifier allows for smooth processing and excellent impact properties at low use levels, even when the formulation contains high levels of filler.
2. Durastrength® 510 impact modifier has been extensively tested for long-term weather resistance, retaining excellent impact resistance and color. Similar weathering benefits are seen in translucent applications.
3. The chemical composition of Durastrength® 510 impact modifier imparts excellent low-temperature impact.
4. The wide processing window of Durastrength® 510 impact modifier assures a consistently flawless surface finish.

#### PACKAGING

Durastrength® 510 impact modifier is packaged in 20 kg bags and 1000 lb bulk bags.

#### STARTING FORMULATION RECOMMENDATIONS

Rigid Siding Capstock	
PVC Resin (K-65 to K-67)	100.0 phr
Butyl Organotin Stabilizer	0.8 – 1.2
Calcium Stearate	1.0 – 1.5
Paraffin Wax (165°F mp)	1.0 – 1.5
<b>Durastrength® 510 Impact Modifier</b>	<b>4.0 – 6.0</b>
Plastistrength® 770 Process Aid	0.0 – 0.5
Titanium Dioxide	9.0 – 10.0
Rigid Siding Substrate	
PVC Resin (K-65 to K-67)	100.0 phr
Butyl Organotin Stabilizer	0.8 – 1.2
Calcium Stearate	1.0 – 1.5
Paraffin Wax (165°F mp)	1.0 – 1.5
Oxidized Polyethylene Wax	1.0 – 0.2
<b>Durastrength® 510 Impact Modifier</b>	<b>4.0 – 5.0</b>
Calcium Carbonate (0.7µm)	0.0 – 1.0
Titanium Dioxide	2.0 – 5.0
Window Profile	
PVC Resin (K-65 or K-67)	100.0 phr
Methyl Organotin Stabilizer	1.0 – 1.5
Internal Lubricant	1.0 – 1.2
External Lubricant	1.0 – 1.5
Oxidized Polyethylene Wax	1.0 – 0.2
<b>Durastrength® 510 Impact Modifier</b>	<b>5.0 – 6.0</b>
Plastistrength® 770 Process Aid	0.5 – 1.5
Calcium Carbonate (0.7µm)	0.0 – 5.0
Titanium Dioxide	9.0 – 10.0

#### SUGGESTIONS FOR USE

Durastrength® 510 impact modifier is recommended for applications such as vinyl siding and window profiles where good outdoor weathering and impact resistance are critical properties. Durastrength® 510 impact modifier shows excellent processability, leading to optimized fusion and impact properties at reduced loadings of total acrylics.

Customers should evaluate Durastrength® 510 impact modifier in their own laboratories to establish optimum conditions for use in their processes and applications. Arkema's Technical Service Team is available to discuss your application requirements, provide formulation guidance and laboratory testing as needed.

## ENVIRONMENTAL AND SAFETY INFORMATION

Before handling this material, read and understand the MSDS (Material Safety Data Sheet) / SDS (Safety Data Sheet) for additional information on safety, health and environmental information. The MSDS/SDS are available on our website [www.arkema.com](http://www.arkema.com) or upon request at our Customer Service Department. Arkema believes strongly in Responsible Care® as a public commitment.

## MORE TECHNICAL INFORMATION AVAILABLE

**Ask your Arkema account manager for further information on high quality Arkema additives for use in PVC, PC, PBT, ABS, PLA Epoxy, (meth)-acrylic and other polymer or thermosetting systems. Arkema produces a full line of impact modifiers and processing aids. In addition, Arkema's Technical Service staff is also available to assist compounders and processors with formulation and processing advice.**

### **Durastrength® Impact Modifiers**

Durastrength® acrylic impact modifiers deliver outstanding impact characteristics for outdoor durable applications in PVC and Engineering Resins.

### **Plastistrength® Process Aids**

Plastistrength® Process Aids offer producers a complete line of melt strengtheners and metal release agents for PVC and Engineering Resins. Plastistrength® process aids can improve fusion, surging, and aesthetics.

### **Clearstrength® Impact**

Clearstrength® Impact Modifiers are designed for extreme impact or impact/clarity combination in PVC and Engineering Resins. Clearstrength® Impact Modifiers provide superior toughening effect in epoxy and (meth)-acrylic resins.

### **Biostrength® Additives**

Biostrength® product line of impact modifiers, melt strengtheners and metal release agents are designed to improve properties and enhance processability of polylactic acid (PLA) and other biopolymers compounds.

## FOR MORE INFORMATION CONTACT

Please contact your local account manager or our headquarters:

### **In Europe**

ARKEMA  
Arkema Coating Resins  
420 Rue d'Estienne d'Orves  
92705 COLOMBES Cedex, France  
Tel: +33 (0) 149 008 080  
[plasticadditives.arkema.com/en/contact/](http://plasticadditives.arkema.com/en/contact/)

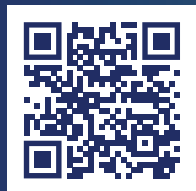
### **In US**

Arkema Inc.  
Coating Resins  
410 Gregson DrCary, NC 27511  
Tel: +1 (877) 331-6696  
[plasticadditives.arkema.com/en/contact/](http://plasticadditives.arkema.com/en/contact/)

### **In Asia**

Arkema Pte Ltd.  
10, Science Park Road, #01-01A,  
The Alpha Singapore Science  
Park II,  
Singapore 117684  
Tel: +65 6419 9199  
[plasticadditives.arkema.com/en/contact/](http://plasticadditives.arkema.com/en/contact/)

Don't hesitate to visit [plasticadditives.arkema.com](http://plasticadditives.arkema.com)



ASK QUESTIONS  
TO OUR EXPERTS



LIBRARY  
DOCS  
WEBINARS



WEB SERVICES  
TDS  
SAMPLING



PRODUCT  
SELECTORS  
BROCHURES

Clearstrength® and Plastistrength® are registered trademarks of Arkema. Biostrength® and Durastrength® are registered trademarks of Arkema. Responsible Care® is a registered trademark of the American Chemistry Council Inc. © 2022 Arkema Inc. All rights reserved.

Please consult Arkema's disclaimer regarding the use of our products on  
<http://www.arkema.com/en/products/product-safety/disclaimer/> (2022/06/23)

**ARKEMA**

[plasticadditives.arkema.com](http://plasticadditives.arkema.com)