DURASTRENGTH® BY ARKEMA

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. Durastrength® 510 impact modifier has been extensively tested for long-term weather resistance, and retained impact resistance and color retention. Similar weathering benefits are seen in translucent applications.
4. The chemical composition of Durastrength® 510 impact modifier imparts excellent low-temperature impact.
5. 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.

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.

STARTING FORMULATION RECOMMENDATIONS

Rigid Siding Capstock	
PVC Resin (K-65 to K-67)	100.0 phr
Butyl Organotin Stabilizer	0.8 – 1.2
Paraffin Wax (165°F mp)	1.0 – 1.5
Calcium Stearate	1.0 – 1.5
Durastrength® 510 Impact Modifier	**4.0 – 6.0**
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
Durastrength® 510 Impact Modifier	**4.0 – 5.0**
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
Durastrength® 510 Impact Modifier	**5.0 – 6.0**
Plastistrength® 770 Process Aid	0.5 – 1.5
Calcium Carbonate (0.7µm)	0.0 – 5.0
Titanium Dioxide	9.0 – 10.0

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 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 and other polymer systems. Arkema produces a full line of impact modifiers, processing aids and epoxidized vegetable oils. 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 Modifiers

Clearstrength® MBS impact modifiers are designed for extreme impact or impact/clarity combination in PVC and Engineering Resins.

Biostrength® Additives

The 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

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