

Durastrength® 320

Acrylic Impact Modifier

PRODUCT DESCRIPTION

Durastrength® 320 is an acrylic impact modifier that imparts excellent impact properties to rigid vinyl products. It was designed to give the impact resistance necessary to pass critical impact test procedures, while maintaining excellent weatherability, processability and flow properties of Durastrength® 200 impact modifier.

TYPICAL PHYSICAL PROPERTIES

Physical Form	White Powder
Specific Gravity	1.09
Bulk Density	0.43 g/cc
Particle Size	15% on 50 Mesh
Percent Volatiles	1.2% Max

PRODUCT BENEFITS

1. Durastrength® 320 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.
2. The unique chemical composition of Durastrength® 320 impact modifier imparts excellent room and low-temperature impact resistance.
3. Because of the low-melt viscosity of Durastrength® 320 impact modifier, extrusion temperatures are lower, resulting in enhanced compound stability and output.
4. Vinyl formulations employing Durastrength® 320 impact modifier exhibit reduced melt viscosity which helps to reduce extrusion pressures, prolonging screw and barrel life.
5. The low melt viscosity of Durastrength® 320 impact modifier allows higher output without increasing extruder amps.

SUGGESTIONS FOR USE

Durastrength® 320 impact modifier is recommended for use in lead, tin and mixed-metal stabilized profile applications where enhanced room and cold-temperature impact resistance is required. As with all impact modifiers for PVC, proper formulation is required to develop the proper shear and mixing during extrusion so that impact properties are optimized. Durastrength® 320 impact modifier is also ideally suited for vinyl siding, fencing, pipe, conduit and injection molded goods. Its low-melt viscosity and rapid fusion characteristics are ideal for difficult injection molding applications.

Customers should evaluate Durastrength® 320 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

Window Profile

PVC Resin (K-65 to K-67)	100.0 phr
Methyl Organotin Stabilizer	1.0 – 1.5
Ester Lubricant	1.0 – 1.5
Oxidized Polyethylene Wax	0.1 – 0.2
Durastrength® 320 Impact Modifier	4.5 – 5.5
Plastistrength® 550 Process Aid	1.0 – 1.5
Plastistrength® 770 Process Aid	0.5 – 0.7
Calcium Carbonate (0.7 µm)	0.0 – 5.0
Titanium Dioxide	9.0 – 10.0

Custom Injection Molding

PVC Resin (K-55)	100.0 phr
Butyl Organotin Stabilizer	2.0 – 2.5
Paraffin Wax (165°F mp)	1.0 – 1.5
Calcium Stearate	1.5 – 2.0
Durastrength® 320 Impact Modifier	8.0 – 12.0
Plastistrength® 550 Process Aid	1.5 – 2.0
Plastistrength® 770 Process Aid	0.5 – 1.0
Calcium Carbonate (0.7 µm)	0.0 – 5.0
Titanium Dioxide	2.0 – 5.0

Ribbed Pipe

PVC Resin (K-67)	100.0 phr
Butyl Organotin Stabilizer	0.8 – 1.2
Calcium Stearate	0.8 – 1.5
Paraffin Wax (165°F mp)	0.1 – 1.5
Oxidized Polyethylene Wax	0.1 – 0.25
Durastrength® 320 Impact Modifier	4.5 – 5.5
Plastistrength® 530 Process Aid	1.0 – 2.0
Plastistrength® 570 Process Aid	0.75 – 1.0
Calcium Carbonate (0.7 µm)	10.0 – 20.0
Titanium Dioxide	1.0 – 2.0

PACKAGING

Durastrength® 320 impact modifier is packaged in 50 lb bags and 1000 lb and 1800 lb bulk bags.

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

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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