

# DURASTRENGTH®

TDS/TECHNICAL DATA SHEET

## Durastrength® 200 Acrylic Impact Modifier

### PRODUCT DESCRIPTION

Durastrength® 200 is a general purpose acrylic impact modifier that improves the impact properties of rigid vinyl products. The unique chemistry of Durastrength® 200 impact modifier has made it the leading impact modifier used in exterior durable building products for over 35 years. Durastrength® 200 impact modifier offers outstanding long-term weather resistance, impact retention and low-temperature impact resistance in combination with unsurpassed ease of processing.

### TYPICAL PHYSICAL PROPERTIES

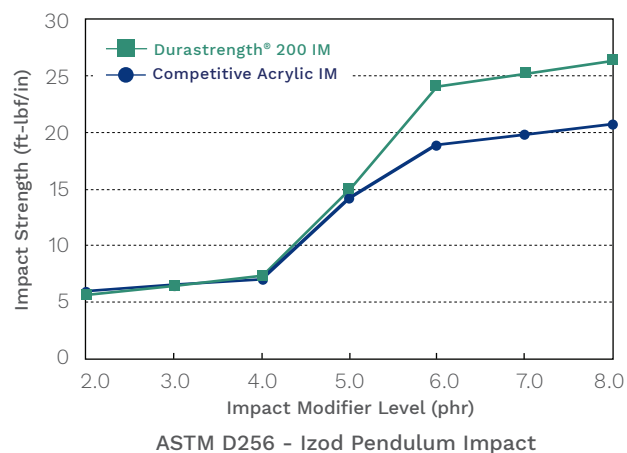
Physical Form	White Powder
Specific Gravity	1.13
Bulk Density	0.48 g/cc
Particle Size	10% Max on 50 Mesh
Percent Volatiles	1.2% Max

### PRODUCT BENEFITS

1. Durastrength® 200 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.

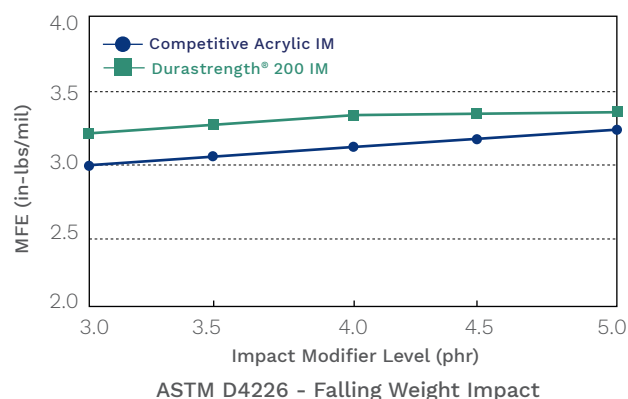
2. The chemical composition of Durastrength® 200 impact modifier is well known for its excellent room-temperature and low-temperature impact resistance as measured by both the Izod and Gardner impact tests.

#### Izod Impact Testing (22°C)



### PRODUCT BENEFITS

#### Dart Drop Impact Resistance (22°C)



3. Because of the low melt viscosity of Durastrength® 200 impact modifier, extrusion temperatures are lower, resulting in enhanced compound stability and output.

4. Vinyl formulations employing Durastrength® 200 impact modifier exhibit reduced melt viscosity which helps to reduce extrusion pressures, prolonging screw and barrel life.

5. The low melt viscosity of Durastrength® 200 impact modifier allows higher output without increasing extruder amps.

6. The wide processing window of Durastrength® 200 impact modifier assures a consistently flawless surface finish.

### SUGGESTIONS FOR USE

Durastrength® 200 impact modifier is recommended for applications such as vinyl siding, window profiles and fencing where good outdoor weathering and low-temperature impact resistance are critical properties. Durastrength® 200 impact modifier is also ideally suited for impact modification of pipe, conduit and injection molded goods. Its low melt viscosity and rapid fusion characteristics are ideal for custom injection molding applications. Use of Durastrength® 200 impact modifier in injection molding formulations imparts excellent flow and high gloss to finished products.

Durastrength® 200 impact modifier may be used in formulations serving many end-use applications, including some flexible PVC applications. Customers should evaluate Durastrength® 200 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	0.8 – 1.2
Calcium Stearate	1.0 – 1.5
Paraffin Wax (165°F mp)	1.0 – 1.5
Durastrength® 200 Impact Modifier	5.0 – 6.0
Plastistrength® 550 Process Aid	0.0 – 0.5
Plastistrength® 770 Process Aid	0.0 – 0.5
Titanium Dioxide	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	0.1 – 0.2
Durastrength® 200 Impact Modifier	4.0 – 5.0
Plastistrength® 530 Process Aid	0.5 – 1.0
Calcium Carbonate (0.7µm)	7.0 – 18.0
Titanium Dioxide	0.5 – 1.0

### Window Profile

PVC Resin (K-67)	100.0 phr
Methyl Organotin Stabilizer	1.0 – 1.5
Internal Lubricant	1.0 – 1.5
External Lubricant	1.0 – 1.2
Oxidized Polyethylene Wax	0.1 – 0.2
Durastrength® 200 Impact Modifier	5.0 – 6.0
Plastistrength® 550 Process Aid	1.0 – 1.5
Plastistrength® 770 Process Aid	0.5 – 1.0
Calcium Carbonate (0.7µm)	0.0 – 5.0
Titanium Dioxide	9.0 – 10.0

## STARTING FORMULATION RECOMMENDATIONS

### Custom Injection Molding

PVC Resin (K-55)	100.0 phr
Butyl Organotin Stabilizer	2.0 – 2.5
Calcium Stearate	1.5 – 2.0
Paraffin Wax (165°F mp)	1.0 – 1.5
Durastrength® 200 Impact Modifier	10.0 – 14.0
Plastistrength® 550 Process Aid	1.5 – 2.0
Plastistrength® 770 Process Aid	0.5 – 1.0
Calcium Carbonate (0.7µm)	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)	1.0 – 1.5
Oxidized Polyethylene Wax	0.1 – 0.25
Durastrength® 200 Impact Modifier	5.0 – 6.0
Plastistrength® 530 Process Aid	1.0 – 2.0
Plastistrength® 770 Process Aid	0.75 – 1.0
Calcium Carbonate (0.7µm)	10.0 – 20.0
Titanium Dioxide	1.0 – 2.0

## PACKAGING

Durastrength® 200 impact modifier is packaged in 25 kg small bags (50 bags per pallet), 22.7 kg small bags (40 bags per pallet), 453 kg big bag, \*small bag 20 kg\* (50 bags per pallet), and \*big bag 500kg.

\* same product from Vlissingen.

## 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:

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