

# Clearstrength® E-950

## MBS Impact Modifier for Engineering Resins

### PRODUCT DESCRIPTION

Clearstrength® E-950 is a new methylmethacrylate-butadiene-styrene (MBS) core-shell impact modifier designed to impart excellent ambient and cold temperature toughness to engineering polymers.

Clearstrength® E-950 impact modifier is produced using a proprietary technology resulting in improved impact performance consistency and stability under severe processing conditions.

Clearstrength® E-950 impact modifier is aimed to formulate polycarbonate, polyesters and a variety of polycarbonate blends, particularly PC/PBT.

### TYPICAL PHYSICAL PROPERTIES

Physical Form	White Powder
Specific Gravity	1.02
Bulk Density	0.39 g/cc
Particle Size	2% Max on 850 µm
Percent Volatiles	1.0% Max

Clearstrength® E-950 impact modifier is also available in pellet form; please refer to Clearstrength® E-952 impact modifier technical data sheet for more information.

### SUGGESTIONS FOR USE

Clearstrength® E-950 impact modifier is recommended for use in automotive applications, such as bumpers, front radiator grills and battery housing for electrical vehicles. Clearstrength® E-950 impact modifier is also designed for electrical and electronic applications including TV, monitor and mobile phone housing, home appliances and all polycarbonate and polyester blends applications where excellent impact strength and colorability are required.

The loading concentration depending on impact requirement is generally from 3 to 15%. Prospective clients should evaluate Clearstrength® E-950 impact modifier in their own laboratories to establish optimum conditions for use in their process and applications. Arkema's Technical Service Team is available to discuss your application requirements, provide formulations guidance and laboratory testing as needed.

### PACKAGING

Clearstrength® E-950 impact modifier is packaged in 20 kg bags (500 kg per pallet) and 700 kg bulk bags (700 kg per pallet).

### PRODUCT BENEFITS

#### Superior Low temperature Impact

Clearstrength® E-950 impact modifier allows to create products that can withstand impact at <-40°C and still remain ductile. Through optimized rubber particle size distribution brought by Arkema proprietary technology, Clearstrength® E-950 impact performance is remarkably consistent.

#### Improved Thermal Stability

Clearstrength® E-950 impact modifier provides improved impact retention compared to other high impact MBS when used under hot processing conditions.

#### Good Dispersion and Mechanical Properties Retention

Easily dispersed using conventional compounding techniques, Clearstrength® E-950 impact modifier imparts exceptional toughening while keeping good melt flow and modulus.

Property	PC/PBT (50/50)	PC/PBT + 12 % Clearstrength® E-950 IM
MVR, 280°C, 1.2 kg		13
Modulus (MPa)	2200	2100
Impact Energy* (kJ/m²)	23°C	6
	-30°C	ND**
	-40°C	ND**

Property	Neat PC	PC + 5 % Clearstrength® E-950 IM
MVR, 280°C, 1.2 kg	25	19
Modulus (MPa)	2200	2100
Impact Energy* (kJ/m²)	23°C	15
	-10°C	ND**
	-20°C	ND**

ISO 1133:2011 for MVR, Melt Volume-flow Rate

\*ISO 180:2000 type 1eA specifications for notched Izod impact tests.

\*\*Not Determined

## 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 at +1 (800) 331 7654 in the US, and at +33 (0)1 4900 8837 in Europe. 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.

### Vikoflex® Epoxy Plasticizers

The Vikoflex® line of epoxy plasticizers is derived from renewable resources, like epoxidized linseed oil, soybean and tall oil fatty acid esters for applications such as PVC plasticization, acid and mercaptan scavenging, specialty coatings, adhesives & urethanes, reactive diluents, PU flexible foam and intermediates for surfactants and lube & fuel additives.

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