

Durastrength® 4000

Multifunctional Acrylic Impact Modifier

PRODUCT DESCRIPTION

Durastrength® 4000 acrylic impact modifier represents the newest, low cost technology that imparts excellent impact properties to rigid PVC products and provides outstanding processability. Durastrength® 4000 impact modifier can be used in place of alternative non-acrylic impact modifiers while maintaining the processing advantages of traditional acrylic impact modifiers.

TYPICAL PHYSICAL PROPERTIES

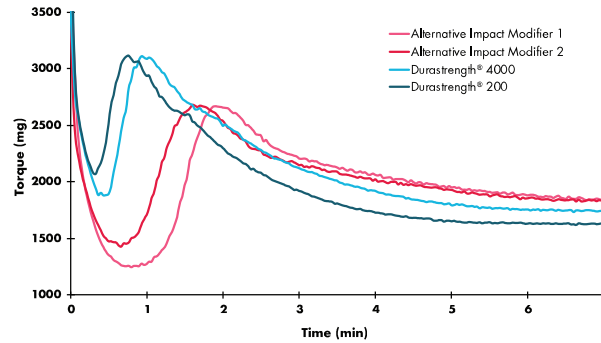
| | |
|-------------------|--------------------|
| Physical Form | White Powder |
| Specific Gravity | 1.47 |
| Bulk Density | 0.50 g/cc |
| Particle Size | 15% Max on 50 Mesh |
| Percent Volatiles | 1.2% Max |

PRODUCT BENEFITS

1. Excellent impact resistance that is equivalent to or better than alternative non-acrylic impact modifiers.

2. Faster fusion than alternative non-acrylic impact modifiers without the need for additional processing aids.

Torque Rheometer Fusion (175 °C, 75rpm and 100 cc sample size)



3. Substrate applications utilizing Durastrength® 4000 impact modifier maintain important mechanical properties for final PVC product performance.

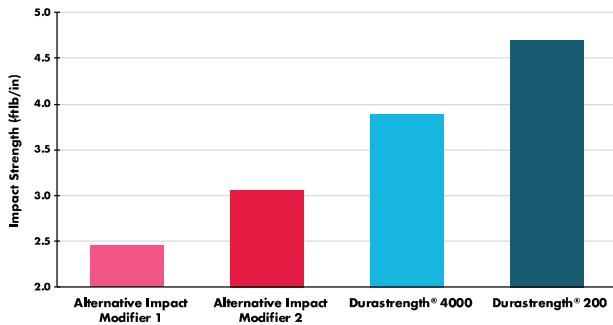
Mechanical Property Performance (Tensile and HDT Evaluation)

| Impact Modifier | Young's Modulus (psi)* | Tensile Stress @ Yield (psi)* | Heat Deflection Temp. (IC)** |
|-------------------------------|------------------------|-------------------------------|------------------------------|
| Alternative Impact Modifier 1 | 431893 | 6388 | 65 |
| Alternative Impact Modifier 2 | 445543 | 6488 | 66 |
| Durastrength® 4000 | 471580 | 6397 | 65 |
| Durastrength® 200 | 445731 | 6336 | 66 |

* Evaluation followed ASTM D-638
** Evaluation followed ASTM D-648
Impact modifiers tested at 4.5 phr

4. Durastrength® 4000 impact modifier has traditional acrylic characteristics such as a low melt viscosity which when employed in a vinyl formulation results in good stability, smooth processing, and high output rates.

Impact Resistance [Izod Impact Performance (Siding Substrate Formulation @ 4.5phr Modifier)]



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

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
www.arkema.com/en/products/contact

In US:

Arkema Inc.
Coating Resins
410 Gregson Dr
Cary, NC 27511
Tel: +1 (877) 331-6696
www.arkema.com/en/products/contact

In Asia:

Arkema Pte Ltd.
10, Science Park Road, #01-01A,
The Alpha Singapore Science Park II,
Singapore 117684 Tel: +65 6419 9199
www.arkema.com/en/products/contact

VISIT US AT OUR WEBSITE

www.additives-arkema.com
www.arkema.com

Arkema France - Société Anonyme immatriculée au R.C.S. de Nanterre (France) sous le numéro 319 632 790
DURASTRENGTH - 4000 4686Z/09/2017/pdf - ResAdd - Photo: Getty Images - Design: www.designpark.com

The statements, technical information and recommendations contained herein are believed to be accurate as of the date hereof. Since the conditions and methods of use of the product and of the information referred to PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE CONCERNING THE GOODS DESCRIBED OR THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be applicable when such product is used in combination with other materials or in any process. The user should thoroughly test any application before commercialization. Nothing contained herein constitutes a license to practice under any patent and it should not be construed as an inducement to infringe any patent and the user is advised to take appropriate steps to be sure that any proposed use of the product will not result in patent infringement. See SDS for Health & Safety Considerations. Arkema has implemented a Medical Device Policy regarding the use of Arkema products in medical device applications that are in contact with the body or circulating bodily fluids: (<http://www.arkema.com/en/social-responsibility/responsible-product-management/medical-device-policy/index.html>). Arkema has designated Medical grades to be used for such medical device applications. Products that have not been designated as medical grades are not authorized by Arkema for use in medical device applications that are in contact with the body or circulating bodily fluids. In addition, Arkema strictly prohibits the use of any Arkema products in Medical Device applications that are implanted in the body or in contact with bodily fluids or tissues for greater than 30 days.

The Arkema trademarks and the Arkema name shall not be used in conjunction with customers' medical devices, including without limitation, permanent or temporary implantable devices, and customers shall not represent to anyone else, that Arkema allows, endorses or permits the use of Arkema products in such medical devices. It is the sole responsibility of the manufacturer of the medical device to determine the suitability (including biocompatibility) of all raw materials, products and components, including any medical grade Arkema products, in order to ensure that the final end-use product is safe for its end use; performs or functions as intended; and complies with all applicable legal and regulatory requirements (FDA or other national drug agencies) It is the sole responsibility of the manufacturer of the medical device to conduct all necessary tests and inspections and to evaluate the medical device under actual end-use requirements and to adequately advise and warn purchasers, users, and/or learned intermediaries (such as physicians) of pertinent risks and fulfill any postmarket surveillance obligations. Any decision regarding the appropriateness of a particular Arkema material in a particular medical device should be based on the judgment of the manufacturer, seller, the competent authority, and the treating physician.

Clearstrength® and Plastistrength® are registered trademarks of Arkema.
Biostrength® and Durastrength® are registered trademarks of Arkema Inc.
Responsible Care® is a registered trademark of the American Chemistry Council Inc.
2019 Arkema Inc. All rights reserved.

arkema.com

ARKEMA
INNOVATIVE CHEMISTRY

Headquarters: Arkema France
420, rue d'Estienne d'Orves
92705 Colombes Cedex - France
Tel. : 33 (0)1 49 00 80 80
Fax : 33 (0)1 49 00 83 96
arkema.com