

# MICA

## Products for Plastics

QUALITY MINERAL PRODUCTS ENRICHING OUR DAILY LIFE

Mica is a naturally occurring phyllosilicate, that is available in a wide range of particle sizes. Micronized, flaked, wet ground, dry ground and non-delaminated grades are available.

Imerys works actively with customers to develop new and innovative solutions to solve their technical challenges. As a global leader in white minerals, Imerys brings its unique knowledge, technology and unrivaled depth of application expertise to improve the value of our customers' products. Our engineers, scientists and technologists, utilizing the latest in testing and analytical processes and equipment, are engaged in applied research, product development and investigation of mineral applications at laboratories in England, Brazil and the United States.

Imerys' R&D resources are focused on specific markets. This approach ensures in-depth expertise and a single-minded focus on solutions for our customers. By working collaboratively with the academic and scientific communities in conjunction with our customers, Imerys is able to provide solutions that keep our customers on the forefront of mineral technology. The goal is to develop the most effective processes and materials for each application, supported by the best possible technical service and advice.



muscovite • phlogopite • mica

performance minerals north america

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### Mica Benefits:

Mica provides several benefits to plastics composites, mostly as a result of its high aspect ratio and its isotropic and flat morphology. The following table lists the more important composite properties improved by addition of mica.

#### Composite Property

Heat Deflection Temperature (HDT)  
 Flexural Modulus  
 Tensile and Flexural Strength  
 Shrinkage  
 Coefficient of Linear Thermal Expansion (CLTE)  
 Warpage  
 Creep  
 Chemical Resistance  
 Barrier Properties  
 Surface Finish

#### Change Produced by Mica

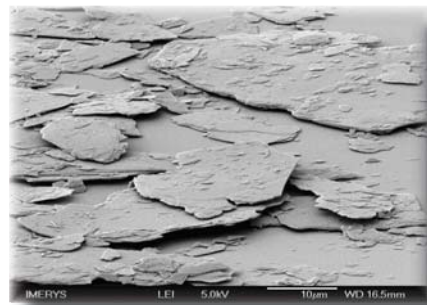
Increased more than any other mineral  
 Increased more than any other mineral  
 Increased-particularly with silane modified grades  
 Greatly reduced versus pure resin values  
 Greatly reduced  
 Essentially eliminated versus glass fibers  
 Greatly reduced  
 Very high  
 Greatly increased  
 Correct grades give class 'A' surface

#### Kings Mountain Muscovite Mica

Grades		L 135	100 K	L 140	4 K	WG 325
Particle Size Distribution	d <sub>50</sub> (µm)	250	130	65	54	33
Color	L Value	81	77	82	82	82
Surface Area	(m <sup>2</sup> ·g <sup>-1</sup> )	1.2	2.5	2.7	3.6	4.7
Bulk Density	lbs.ft <sup>-3</sup>	14	18	12	16	12
Product Type		White Flake Mica	Dry Ground Mica	White Flake Mica	Dry Ground Mica	Wet Ground Mica

#### Suzorite Phlogopite Mica

	60 HK	150 S	200 HK	325 HK	400 HK
Particle Size Distribution	320	190	60	30	15
Surface Area	0.6	0.8	1.9	3.3	5.1
Bulk Density	16	15	15	13	12
Product Type	Flake Mica	Dry Ground Mica	Dry Ground Mica	Micronized Mica	Micronized Mica



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