

DuPont™ Starblast®

BLASTING ABRASIVE

DuPont™ Starblast® blasting abrasives are a loose blend of coarse and fine staurolite sands that are uniformly sized and have clean, rounded surfaces. Mined from DuPont mineral deposits in Northeast, Florida, the naturally occurring sands are washed to ensure freedom from dirt, dust, and ultrafines.

Applications

Starblast® is a general-purpose staurolite abrasive used in steel fabrication and bridge maintenance to remove rust, mill scale, and weathered coatings. Starblast® XL, at less than 1% free crystalline silica, meets the most stringent industry and military specifications.

Starblast® and Starblast® XL offer the same product advantages, such as:

- greater blasting visibility due to considerably less dust generation
- lower labor costs through faster, more efficient cleaning
- less material costs due to reusability
- more uniform blasting pattern
- guaranteed to contain <5% free silica, typically <3%, Starblast® XL guaranteed <1%
- rounded to subangular grains result in less abrasive embedment
- electrically nonconductive
- California Air Resources Board certified
- Starblast® XL is QPL approved form MIL-A22262A-SH

Physical and Mineral Properties of Starblast® and Starblast® XL Abrasives

Typical Screen Analysis

U.S. Sieve No.*	Sieve Opening, µm	Retained on Sieve, %
40	420	3
50	300	13
70	212	25
100	150	36
140	106	18
200	75	3
270	53	<1
PAN	<53	<1
Grit #54/90	—	—

* U.S. Sieve Series according to ASTM E-11-70.

Physical Properties

	Range
Bulk Density (compacted)	143–148 lb/ft ³ (2290–2370 kg/m ³)
Bulk Density (loose)	128 lb/ft ³ (2080 kg/m ³)
Specific Gravity	3.6–3.85
Hardness (Mohs)	6.5–7.0

Mineral Composition

	Starblast® Typical, %*	Starblast® XL Typical, %*
Staurolite Minerals (FeAl ₅ Si ₂ O ₁₂ OH)	87	90
Titanium Minerals (Fe ₂ Ti ₂ O ₇)	6	6
Kyanite (Al ₂ SiO ₅)	2	1
Zircon (ZrSiO ₄)	3	2
Quartz (Free Silica)	2	0.8

*This column gives typical analyses based on historical production performance. DuPont does not express or imply any warranty guaranteeing that future production will demonstrate or continue to possess these typical properties.



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Personal Safety

DuPont™ Starblast® abrasives, as shipped, do not pose any inhalation health hazard, because Starblast® contains essentially no particles in the respirable size range. However, if during handling or use, Starblast® particles are broken down to a size that can be inhaled, the dust may be harmful to the respiratory system.

DuPont staurolite abrasive products may contain up to 5% crystalline silica (quartz). Long-term overexposure to respirable crystalline silica may cause silicosis. The U.S. Department of Labor (OSHA)* has ruled that an employee's exposure to particulates, not otherwise regulated, should not exceed 5 mg/m³ (respirable dust), 15 mg/m³ (total dust), 8-hr time weighted average (TWA). When these limits might be exceeded, employees should wear dust masks or respirators approved by NIOSH for such dusts.

Packaging

Starblast® abrasives are available in 22.7-kg (50-lb) multiwall paper bags, 4,000-lb bulk bags, and in bulk carloads and truckloads. Department of Transportation (DOT) Hazard Classification:* NOT REGULATED.

* Due to changing governmental regulations, such as those in the Department of Transportation, Department of Labor, U.S. Environmental Protection Agency, and the Food and Drug Administration, references herein to governmental requirements may be superseded. Each user should consult and follow the current governmental regulations, such as: Hazards Classifications, Labeling, Food Use Clearances, Worker Exposure Limitations, and Waste Disposal Procedures for the products described in this literature.

DuPont Titanium Technologies

www.titanium.dupont.com

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