



HUBER GROUND CALCIUM CARBONATE (GCC)

NIOSH Rock Dust Partnership Meeting

November 19, 2018

Huber Carbonates Rock Dust Offerings

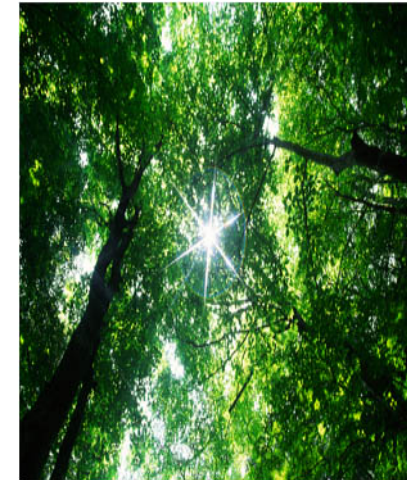
J.M. Huber Corporation

Broadly diversified multi-national portfolio:

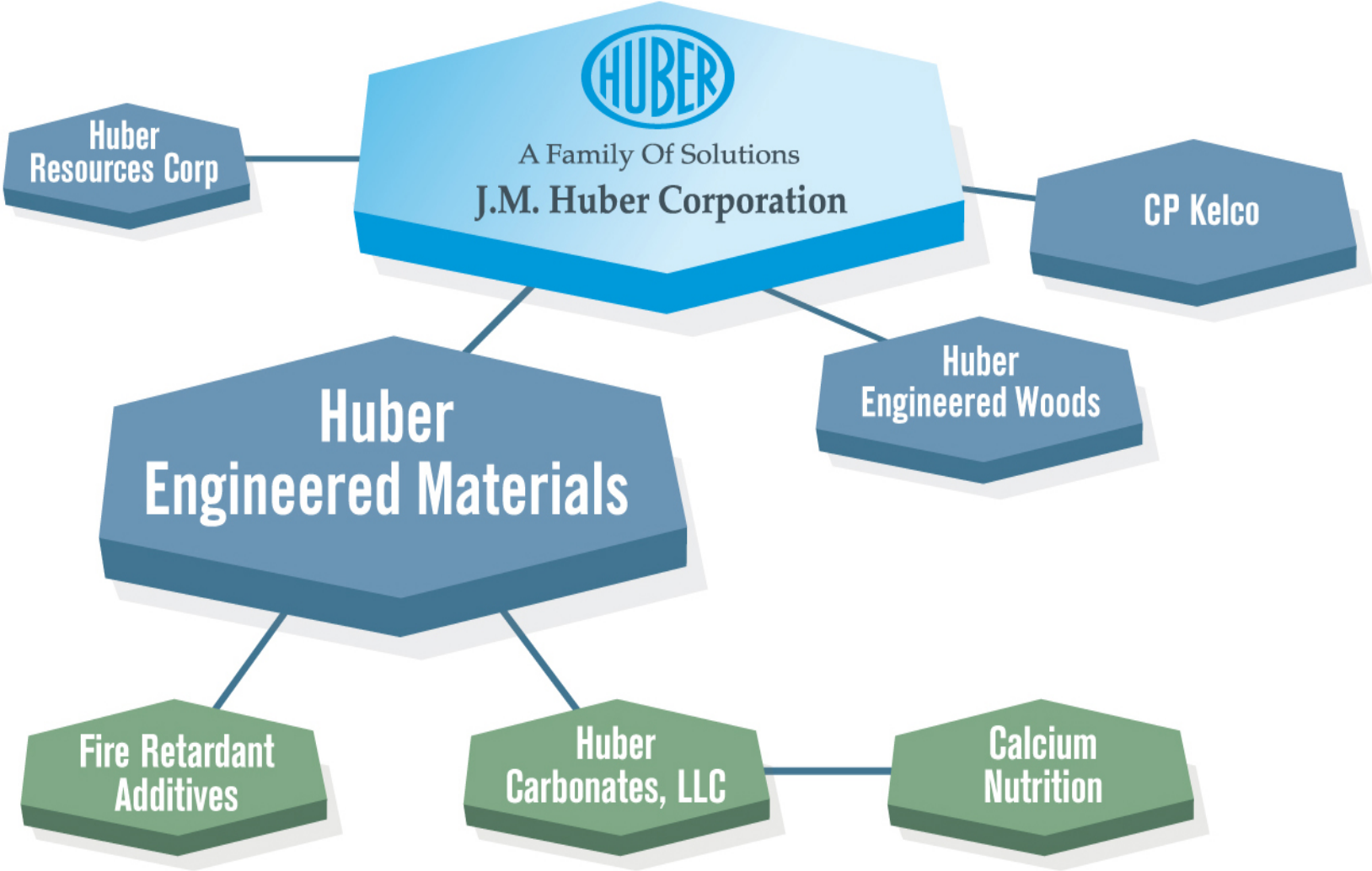
- Engineered Materials
- Natural Resources
- Technology-Based Services



- > **60 locations in 20 countries**
- > **4,000 employees**
- > **Strong financial health**



A Family Of Solutions



Huber Carbonates GCC Operations





Unacceptable Silica



Standard (Current) Offer for Rock Dust



MineBrite™ Rock Dust



HUBER ENGINEERED MATERIALS

Your Rock Dusting Solution For Mitigating Coal Dust Explosions



- Low silica content, well below MSHA requirements
- Particle size distribution within MSHA specifications
- High whiteness calcium carbonate provides a safe and bright work area
- Unlike quarry fines, MineBrite™ rock dust products are dry and free-flowing
- Fine particles enhance the caking potential on walls



MineBrite® Offerings

PROPERTY	MSHA Specification 30 C.F.R. § 75.2	Typical MineBrite™ Q200 Values*	Typical MineBrite™ Q100 Values*	Typical MineBrite™ Q60 Values*	Typical MineBrite™ G260 Values**
Passes 20 Mesh	100%	100%	100%	100%	100%
Passes 200 Mesh	>70%	99%	79%	78%	97%
Less than 10 Microns	–	25%	32%	30%	24%
Combustible Matter	<5%	0%	0%	0%	0%
Silica	<4%	2%	2%	2%	0.5%
Dry Brightness (Hunter)	–	>84	>83	>78	>88
Moisture	–	<0.20%	<0.20%	<0.20%	<0.20%

These typical properties cannot be considered as specifications.

* Produced in Quincy, Illinois ** Produced in Marble Hill, Georgia



NEW!

Technical Bulletin

Meets All Requirements
of Proposed Revisions to
30 CFR § 75.2

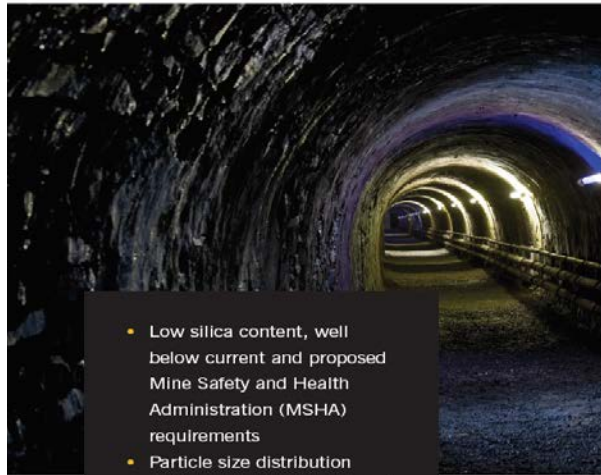


MineBrite™ Rock Dust



HUBER ENGINEERED MATERIALS

Introducing the MineBrite™ Rock Dust “T” Series for Mitigating Coal Dust Explosions



- Low silica content, well below current and proposed Mine Safety and Health Administration (MSHA) requirements
- Particle size distribution within current and proposed MSHA specifications
- High whiteness calcium carbonate provides a safe and bright work area
- MineBrite™ rock dust products are dry and free-flowing
- Surface-treated particles assure redispersibility when wetted and dried

The Office of Mine Safety and Health Research (OMSHR) will shortly propose a new set of specifications for rock dust under 30 CFR § 75.2. The new specifications significantly reduce acceptable particle sizes, tighten combustible matter and silica content and provide standards for testing and acceptance of the performance of the rock dust when wetted and dried.

Huber Engineered Materials has monitored the development and expected approval of these standards and in anticipation has developed two grades of MineBrite™ rock dust which meet all of the proposed requirements.

The new MineBrite products are:

- MineBrite™ QT Rock Dust (Produced in Quincy, IL)
- MineBrite™ GT Rock Dust (Produced in Marble Hill, GA)



MineBrite® T Properties

Comparison of Current and Proposed 30 CFR § 75.2 Specifications and MineBrite™ Rock Dust Typical Product Properties

Properties	Current MSHA Specification 30 CFR § 75.2 Standards	Proposed MSHA Specification 30 CFR § 75.2 Standards	MineBrite™ QT (Produced in Quincy, IL)	MineBrite™ GT (Produced in Marble Hill, GA)
Color	Light Colored	TBD*	White	Very White
Combustible Matter	<5%	<1%	<0.75%	<0.75%
% Passing 60 Mesh	No Specification	100%	100%	100%
% Passing 200 Mesh	70%	95%	99%	97%
Surface Area	No Specification	TBD*	>20,000 cm ² /cm ³	>18,000 cm ² /cm ³
Silica	<4% (<5% Approvable)	<4%	<2%	<1%
Disperses When Wetted and Dried	No Test Method	Yes	Yes	Yes

*TBD = Final Specification To Be Determined



MineBrite® T Status

- Production capable in Quincy IL
- Production capable in Marble Hill GA on 3 months notice
- Similar product with identical surface treatment commercially sold in Quincy currently:
 - Oil field drilling fluids
 - Moisture sensitive polymer systems
- Interest and small scale trial from rock dust customers
- Cost is substantially higher than traditional rock dust

