Section 1: CHEMICAL PRODUCT AND COMPANY INDENTIFICATION

Product Name:	Blue Edge Retention
Part Number:	BLUEEDGE (all sizes)
Relevant Use:	Industrial Use / Molding Compound
Manufacturer:	Sturbridge Metallurgical Services Inc.
City, State, Zip	Sturbridge MA 01566
Phone Number	508-347-5288
Emergency Phone:	**CHEMTREC 1-800-424-9300**

Section 2: Hazard(s) Identification

Hazardous classification of the substance or mixture:

Hazard Class	Category code
Carcinogen	1A
Acute aquatic toxicity	3
Chronic Aquatic toxicity	3A

Pictogram:

Signal word: Danger

Hazard Statements:
H350-May cause cancer
H402- Harmful to aquatic life.
H412-Harmful to aquatic life with long lasting effects
H232-May form combustible dust concentrations in air

Precautionary Statements:
P202-Do not handle until all safety precautions have been read and understood
P264- Wash skin thoroughly after handling.
P273- Avoid release to the environment.
P280- Wear protective gloves/ protective clothing/ eye protection/ face protection.

Disposal statement:
P501-Dispose of contents in accordance with local, state, federal and international regulations.

Other hazards: High concentration of airborne dust may form an explosive mixture with air. Ensure that good housekeeping practices are followed, as well as applicable guidelines such as National Fire Protection Association (NFPA) 654 “Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids.

Section 3: Composition/Information on Ingredients

Substance
Not Applicable

Mixture

Chemical Name	CAS No.	% Concentration	Classification (GHS-US)
Tert-butyl perbenzoate	614-45-9	1-3	Skin Irritant 2, H315 Aquatic Acute 2, H401
Titanium (IV) oxide	13463-67-7	0.1 – 1	Carcinogen 2, H351
Quartz	14808-60-7	0.1-1	Carcinogen 1A, H350

Section 4: First-Aid Measures

First-aid measures general
Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation
Call a POISON CENTER or doctor/physician if you feel unwell. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact
Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact
Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.

First-aid measures after ingestion
Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER or doctor/physician if you feel unwell. Obtain emergency medical attention.

Most important symptoms and effects, both acute and delayed
Symptoms/injuries after inhalation: May cause cancer

Section 5: Fire-Fighting Measures

Suitable extinguishing media
Foam. Dry powder. Carbon dioxide. Water spray. Sand

Special hazards arising from the substance or mixture
Explosion hazard: high concentration of airborne dust may form an explosive mixture with air

Advice for firefighters
Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. Do not enter fire area without proper protective equipment, including respiratory protection.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures
General measures; Remove ignition sources. No open flames. No smoking.

Environmental precautions
Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the

environment.

Methods and materials for containment and cleaning up
On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

Reference to other sections
See Heading 8. Exposure controls and personal protection.

Section 7: Handling and Storage

Additional hazards when processed
Avoid breathing fumes from molding or other processes involving heat. Avoid breathing dusts from cutting, machining or deflashing operations. Guard against dust accumulation of this material. High concentrations of airborne dust may form explosive mixture with air. As with all chemicals, good industrial hygiene practices should be followed when handling this material.

Precautions for safe handling
Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Conditions for safe storage, including any incompatibilities
Proper grounding procedures to avoid static electricity should be followed.
: Keep only in the original container. Keep container closed when not in use. Keep cool. Keep only in the original container in a cool, well ventilated place away from Strong bases. Strong acids. Sources of ignition. Direct sunlight.
Storage temp ≤ 25 °C. Store in cool, dry place.

Section 8: Exposure Controls/Personal Protection Exposure Limits

Component	CAS No.	ACGIH TLV	OSHA PEL
BLUE		Not applicable	Not applicable
Quartz	14808-60-7	0.025 R	
Tert-butyl perbenzoate	614-45-9	Not applicable	Not applicable
Titanium (IV) oxide	13463-67-7	10 mg/m^3	15 mg/m^3

Personal protective equipment
Avoid all unnecessary exposure

Eye/hand protection-Chemical goggles or safety glasses. Wear protective gloves.

Respiratory protection- Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. Wear appropriate mask. : Do not eat, drink or smoke during use.

Section 9: Physical and Chemical Properties

Physical state: Solid
Appearance: Blue colored granules
Color: Blue
Odor: Characteristic odor. Mild odor
Odor Threshold: No data available

pH: No data available
Melting Point: No data available
Freezing Point: No data available
Boiling Point: No data available
Flash Point: No data available
Relative evaporation rate: No data available
Flammability (solid, gas): No data available
Explosion limits: No data available
Explosive properties Mixtures of fine dust and air can create an explosion hazard
Oxidizing properties No data available
Vapor pressure: No data available
Relative density: 1.8 - 1.9
Relative vapor density at 20°C No data available
Specific gravity / density 1.8 – 1.9 g/cm^3
Solubility Negligible in water
Water: Solubility in water of component(s) of the mixture
: < 0.1 g/100ml • : • : 0.01 g/100ml • : < 0.01 g/100ml • : • : < 0.1 g/100ml • : 0.0040 g/100ml • : 0.01 g/100ml • : < 0.00001 g/100ml • : 0.15 g/100ml • : < 0.01 g/100ml
Log Pow No data available
Log Kow No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity: No data available

Section 10: Stability and Reactivity

Reactivity: No data available
Chemical stability: Stable under recommended storage conditions.
Possibility of hazardous reactions: Not established
Conditions to avoid: Direct sunlight. Extremely high or low temperatures
Incompatibilities: Strong acids. Strong bases
Hazardous Decomposition Products: May include; aromatic hydrocarbons, carbon monoxide, carbon dioxide, particulate matter, and other organic compounds. fume. Carbon monoxide. Carbon dioxide.

Section 11: Toxicological Information:

Acute Toxicity – Not classified
Tert-butyl perbenzoate

LD50 oral rat	> 2000 mg/kg (Rat)
LD50 dermal rat	>2000 mg/kg (Rat)
LC50 inhlation rat (mg/l)	>20 mg/l/4h (Rate)

Titanium (IV) oxide

LD50 oral Rat	> 10000 mg/kg (> 5000 mg/kg bodyweight; Rat; Rat; Experimental value; Experimental value,> 5000 mg/kg bodyweight; Rat; Rat; Experimental value; Experimental value)
LD50 dermal rabbit	> 10000 mg/kg (Rabbit; Experimental value,Rabbit; Experimental value)
LC50 inhalation rat (mg/l)	> 6.8 mg/l/4h (Rat; Experimental value,Rat; Experimental value)

Skin corrosion/irritation: Not classified

Serious eye damage/irritation: Not classified
Respiratory or skin sensitization: Not classified
Germ cell mutagenicity: Not classified.
Carcinogenicity: May cause cancer

Quartz

IARC group	1 – Carcinogenic to humans

Titanium (IV) oxide

IARC group	2B – Possibly carcinogenic to humans

Reproductive toxicity: Not classified
Specific target organ toxicity: - single exposure Not classified
Specific target organ toxicity: - repeated exposure Not classified
Aspiration hazard: No data available
Potential adverse human health effects and symptoms: Based on available data, the classification criteria are not met
Symptoms/injuries after inhalation: May cause cancer by inhalation

Section 12: Ecological Information

Ecology – water: Harmful to aquatic life. Harmful to aquatic life with long lasting effects

Tert-butyl perbenzoate

LC50 fish 1	8.6 mg/l (96 h; Brachydanio rerio)
EC50 Daphnia 1	16.7 mg/l (48 h; Daphnia magna)
LC50 fish 2	6 mg/l (96 h; Poecilia reticulata)
EC50 Daphnia 2	25.3 mg/l (24 h; Daphnia magna)
Threshold limit algae 1	1.3 mg/l (72 h; Algae)

Titanium (IV) oxide

LC50 fish 1	> 1000 mg/l (96 h; Pimephales promelas)
EC50 Daphnia 1	< 1000 mg/l (432 h; Daphnia magna; Static system)
LC50 fish 2	> 1 g/l (96 h; Leuciscus idus
EC50 Daphnia 2	< 500 mg/l (720 h; Daphnia magna; Static system)
Threshold limit algae 1	61 mg/l (72 h; Pseudokirchneriella subcapitata)

Persistence and degradability
Blue: May cause long term adverse effects in the environment
Quartz: Biodegradability not applicable
Tert-butyl perbenzoate: Readily biodegradable in water. **ThOD** 2.14g $O_{2/g\ substance}$
Titanium (IV) oxide: Biodegradability: not applicable

Bioaccumulative potential:
Blue: Not established
Quartz: Not applicable
Tert-butyl perbenzoate: No bioaccumulation data available
Titanium (IV) oxide: No bioaccumulation data available

Mobility in soil:
No data available

Other:
Avoid release to the environment

Section 13: Disposal Considerations

Dispose in a safe manner in accordance with all local/national regulations. Dispose of contents/container in accordance with all federal, state, and local health and environmental regulations.
Avoid release to the environment.

Section 14: Transportation Information

Department of Transportation (DOT, United States of America)
Not regulated for transport

Section 15: Regulatory Information

US Federal Regulations
Quartz: Listed on the United States TSCA (Toxic Substances Control Act) inventory
Tert-butyl perbenzoate: Listed on the United States TSCA (Toxic Substances Control Act) inventory
Titanium (IV) oxide: Listed on the United States TSCA (Toxic Substances Control Act) inventory

International Regulations
Canada: No additional information available

EU- Regulations
No additional information available

National Regulations
Quartz: Listed on IARC (International Agency for Research on Cancer)
Titanium (IV) oxide: Listed on IARC (International Agency for Research on Cancer)

US State Regulations: No additional information available

Section 16: Other Information

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