Safety Data Sheet

Tech-Mix® Black Blast

Version 4.3

TCC Materials
2025 Centre Pointe Boulevard, Suite 300
Mendota Heights, MN 55120-1221

Emergency Telephone Number:
651-688-9116
Information Telephone Number
651-688-9116

Revision Date
June 2018

Section 1: Product Identification

Product Type: Coal Slag Blasting Abrasive

Product Name:
Tech-Mix® Black Blast

Section 2: Hazard Identification

OSHA (29 CFR 1910.1200) Hazard Classification of Coal Slag (CAS # 68476-96-0)

Specific Target Organ Toxicity (STOT) - Repeated Exposure, Category 2 (Respiratory System)

GHS LABEL ELEMENTS
Symbol(s)

Signal Word
WARNING

Hazard Statement(s)
May cause damage to respiratory system, lungs (pulmonary fibrosis) through prolonged or repeated exposure.

Precautionary Statement(s)
Prevention

Do not breathe dusts.

Response

Get medical advice/attention if you feel unwell.

Disposal

Dispose of contents in accordance with federal, state/provincial and local regulations.

Hazards not otherwise classified: None known.
Unknown Acute Toxicity Statement (Mixture): None known.

Section 3: Hazardous Ingredients/Composition

Component	Percent %	CAS
Amorphous Fused Silicon Dioxide	48-50	60676-86-0
Aluminum oxide	18-22	1344-28-1
Iron oxide	18-22	1309-37-1
Calcium Oxide	5-7	1305-78-8
Potassium Oxide	1-2	12136-45-7
Titanium Oxide	0-1	13463-67-7
Magnesium Oxide	0-1	1309-48-4
Sodium Oxide	0-1	1313-59-3
Crystalline Silica as Quartz	0-0.1	14808-60-7
Crystalline Silica as Cristobalite	0-0.1	14464-46-1
Beryllium	0-0.0005	7440-41-7

Section 4: First Aid Measures

Description of Necessary Measures

Inhalation:

Remove to fresh air. Get immediate medical attention if you feel unwell.

Skin:

Product is not a skin sensitizer. Wash skin thoroughly with water and soap. Remove contaminated clothing. Get medical advice/attention if symptoms occur.

Eye contact:

Immediately flush eyes with plenty of water for at least several minutes. Remove contact lenses, if present and easy to do. Do not rub eyes. Continue rinsing. If irritation persists, get medical attention.

Ingestion:

If a large amount is swallowed, rinse out mouth. Give water to drink. Do NOT induce vomiting. Get medical attention if symptoms occur.

Most Important Symptoms/Effects, Acute and Delayed (Chronic)

Acute Effects

INHALATION: Excessive exposure to high concentrations of dust may cause irritation to the mucous membranes of the upper respiratory tract.

EYE: Excessive exposure to high concentrations of dust may cause irritation to the eyes.

SKIN: Skin contact with dusts may cause irritation or dermatitis.

INGESTION: Ingestion of dust may cause nausea and/or vomiting.

Chronic Effects

Prolonged and repeated inhalation exposure to excessive concentrations of dusts may cause pulmonary fibrosis.

Immediate Medical Attention and Special Treatment: Treat symptomatically.

Section 5: Fire Fighting Measures

Suitable (and Unsuitable) Extinguishing Media

Use extinguishing agents appropriate for surrounding fire.

Specific Hazards Arising from the Chemical

Not applicable for solid product.

Hazardous combustion products

None known.

Special Protective Equipment and Precautions for Firefighters

Wear full protective firefighting gear including self-contained breathing apparatus (SCBA) for protection against possible exposure to fumes and/or smoke from the fire. Do not release runoff from fire control methods to sewers or waterways.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

For spills involving finely divided particles, clean-up personnel should be protected against contact with eyes and skin. If material is in a dry state, avoid inhalation of dust. Fine dry material should be removed by vacuuming or wet sweeping methods to prevent spreading of dust. Avoid use of compressed air to air sweep surfaces. Do not release into sewers or waterways.

Methods and Materials for Containment and Cleaning Up

Collect spilled material in appropriate, labeled container for recovery or disposal in accordance with federal, state/provincial, and local regulations.

Section 7: Handling and Storage

Precautions for Safe Handling

Do not breathe dust. Wear protective gloves/clothing and eye/face protection, as applicable. Emergency safety shower and eye wash stations should be present.

Conditions for Safe Storage, including any Incompatibilities

Store away from incompatibles such as strong acids and bases.

Section 8: Exposure Controls/Personal Protection

Occupational Exposure Limits:

	OSHA (US)	OSHA Mexico*	ACGIH	NIOSH
Iron oxide (1309-37-1)	10 mg/m^3 TWA (fume) 15 mg/m^3 (total dust) 5 mg/m^3 TWA (respirable fraction)	5 mg/m^3 TWA LMPE-PPT 10 mg/m^3 STEL [LMPE-CT] (as Fe)	5 mg/m^3 TWA (respirable factor)	5 mg/m^3 TWA (as Fe, dust and fume)
Amorphous Fused Silicon Dioxide (60676-86-0)	80 mg/m^3 / %SiO_2 TWA			6 mg/m^3 TWA
Calcium oxide (1305-78-8)	5 mg/m^3 TWA	2 mg/m^3 TWA LMPE-PPT	2 mg/m^3 TWA	2 mg/m^3 TWA 25 mg/m^3 IDLH
Aluminum oxide (1344-28-1)	15 mg/m^3 TWA (total dust) 5 mg/m^3 (respirable fraction)	10 mg/m^3 TWA LMPE-PPT		

Appropriate Engineering Controls

Local exhaust ventilation should be used to control the emissions of air contaminants below recommended exposure limits. General dilution ventilation may assist with the reductions of air contaminant concentrations. Emergency eye wash stations and deluge safety showers should be available in the work area.

Individual Protection Measures, such as Personal Protective Equipment
Respiratory protection

Seek professional advice prior to respirator selection and use. Follow OSHA respirator regulations (29 CFR 1910.134) and, if necessary, use only a NIOSH-approved respirator. Select respirator based on its suitability to provide adequate worker protection for given working conditions, level of airborne contaminations, and presence of sufficient oxygen. Concentration in air of the various contaminants determines the extent of respiratory protection needed.

Half-face, negative-pressure, air-purifying respirator equipped with P100 filter is acceptable for concentrations up to 10 times the exposure limit. Full-face, negative-pressure, air-purifying respirator equipped with P100 filter is acceptable for concentrations up to 50 times the exposure limit. Protection by air-purifying

negative-pressure and powered air respirators is limited. Use a positive-pressure-demand, full-face, supplied air respirator or self-contained breathing apparatus (SCBA) for concentrations above 50 times the exposure limit. If exposure is above the IDLH (immediately dangerous to life of health) for any of the constituents, or there is a possibility of an uncontrolled release or exposure levels are unknown, then use a positive-demand, full-face, supplied air respirator with escape bottle or SCBA.

WARNING! Air-purifying respirators both negative-pressure, and powered-air do not protect workers in oxygen-deficient atmospheres.

Eye/Face protection

Wear eye protection/face protection. Chemical goggles, face shields, or glasses should be worn to prevent eye contact. Contact lenses should not be worn where particulate exposure to this material is likely.

Skin protection

Persons handling this product should wear appropriate clothing to prevent skin contact. Take off contaminated clothing and wash before reuse. Contaminated work clothing should not be allowed out of the workplace. Wear protective gloves.

Section 9: Physical and Chemical Properties

Physical State:	Coarse Solid
Appearance:	Black, granular shiny solid
Color:	Black
Physical Form:	Solid
Odor:	No characteristic odor
Odor Threshold:	Not available
pH:	Not Available
Melting Point:	Not Available
Boiling Point:	Not Applicable
Melting Point:	Not Available
Boiling Point:	Not Applicable
Flash Point:	Not Applicable
Decomposition:	Not Available
Evaporation Rate:	Not Available
OSHA Flammability Class:	Non-Flammable
LEL:	Not Available
UEL:	Not Available
Vapor Pressure:	Not Applicable
Vapor Density (air = 1):	Not Applicable
Density:	Not Available
Specific Gravity (water = 1):	Not Available

Water Solubility: Marginal
Log KOW: Not Available
Coeff. Water/Oil Dist: Not Available
Viscosity: Not Available

Other Property Information
No additional information is available.

Section 10: Stability and Reactivity

Reactivity
No reactivity hazard is expected.
Chemical Stability
Coal Slag is stable at normal temperatures and pressure.
Possibility of Hazardous Reactions
None known.
Conditions to Avoid
Storage with incompatible materials. Flames and ignition sources where dust can accumulate.
Incompatible Materials
Strong acids or bases.
Hazardous Decomposition
Oxides of carbon and metal oxides may be released at elevated temperatures.

Section 11: Toxicological Information

Acute Toxicity Values:

Coal Slag	Oral LD50 Rat Dermal LD50 Rabbit	>2,000 mg/kg >2,000 mg/kg
Iron Oxide	Oral LD50 Rat	>10,000 mg/kg
Amorphous Silicon Dioxide	Oral LD50 Rat Dermal LD50 Rabbit	>5,000 mg/kg >2,000 mg/kg
Aluminum Oxide	Oral LD50 Rat	>5,000 mg/kg
Calcium Oxide	Oral LD50 Rat	>2,000 mg/kg

No **Skin (Dermal) Irritation** data has been determined for Coal Slag as a mixture. The following is available for components:
Calcium Oxide and Iron Oxide: Moderately irritating.

No **Eye Irritation** data has been determined for Coal Slag as a mixture or its individual components.

No **Skin (Dermal)/Respiratory Sensitization** data has been determined for Coal Slag as a mixture or its individual components.

No **Aspiration Hazard** data has been determined for Coal Slag as a mixture or its individual components.

No **Germ Cell Mutangenicity** data has been determined for Coal Slag as a mixture or its individual components.

Carcinogenicity: Coal Slag **is no**t listed as a carcinogen by IARC, NTP, NIOSH, and OSHA. The following information was identified for the components:

Iron Oxide: ACGIH A4-Not Classifiable as a Human Carcinogen.
Beryllium: NTP and IARC – Know to be a Human Carcinogen.
Crystalline Silica: NTP and IARC – Known to be a Human Carcinogen.

No **Toxic Reproductive** data has been determined for Coal Slag as a mixture or its individual components.

No **Specific Target Organ Toxicity (STOT) following Single Exposure** data has been determined for Coal Slag as a mixture. The following information was identified for the components:

Calcium Oxide: Can cause respiratory tract infection, skin and eye irritation.

Specific Target Organ Toxicity (STOT) following Prolonged or Repeated Exposure data has been determined for Coal Slag as a mixture. The following information was identified for the components:

Coal Slag: Repeated or prolonged inhalation exposure to excessive concentrations of coal slag can cause lung fibrosis.
Iron Oxide: Repeated or prolonged inhalation exposure of excessive concentrations of iron oxide dust can cause a benign lung disease, called Siderosis.

Section 12: Ecological Information

Ecotoxicity (aquatic and terrestrial)

Coal slag is not classified as environmentally hazardous. However, this does not exclude the possibility that large amounts or frequent spills can have a harmful or damaging effect on the environment.

Persistence and Degradability

No data available for coal slag.

Bioaccumulative Potential

No data available for coal slag.

Mobility

No data available for coal slag.

Section 13: Disposal Considerations

Disposal Methods

Dispose of in accordance with federal, state, and local regulations. Observe safe handling procedures.

Section 14: Transportation

Coal Slag does not have a Transport Dangerous Goods (TDG) classification.

US Department of Transportation, DOT (49 CFR 172.101):

Shipping Name: Coal Slag is Not Regulated.

International Maritime Dangerous Goods (IMDG):

Shipping Name: Coal Slag is Not Regulated.

Section 15: Regulatory Information

Component Analysis

U.S. Federal Regulations

Coal Slag contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 311/312 (40 CFR 370.21), SARA Section 313 (40 CFR 372-65), CERCLA (40 CFR 302.4), and TSCA 12(b).

Aluminum oxide (1344-28-1)

SARA 313: 1.0 % de minimis concentration (fibrous forms)

SARA 311/312 Hazardous Categories

Acute Health: Yes **Chronic Health:** Yes **Fire:** No **Pressure:** No **Reactive:** No

U.S. State Regulations

WARNING: Cancer - www.P65Warnings.ca.gov

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA
Iron oxide	1309-37-1	Yes	Yes	Yes	Yes	Yes
Amorphous Silicon Dioxide	60676-86-0	Yes	Yes	Yes	Yes	Yes
Calcium oxide	1305-78-8	Yes	Yes	Yes	Yes	Yes
Aluminum oxide	1344-28-1	Yes	Yes	Yes	Yes	Yes
Titanium oxide	13463-67-7	Yes	Yes	No	Yes	Yes
Potassium oxide	12136-45-7	Yes	Yes	No	Yes	Yes
Magnesium oxide	1309-48-4	Yes	Yes	No	Yes	Yes
Sodium oxide	1313-59-3	Yes	Yes	Yes	Yes	Yes

Component Analysis - Inventory

Component	CAS	US	CA	EU	AU	PH	JP	KR	CN	NZ
Iron oxide	1309-37-1	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Amorphous Silicon Dioxide	60676-86-0	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Calcium oxide	1305-78-8	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Aluminum oxide	1344-28-1	Yes	DSL	EIN	Yes	Yes	Yes	Yes	Yes	Yes
Titanium oxide	13463-67-7	Yes	DSL	EIN	Yes	Yes	No	Yes	Yes	Yes
Potassium oxide	12136-45-7	Yes	DSL	EIN	Yes	Yes	No	Yes	Yes	Yes
Magnesium oxide	1309-48-4	Yes	DSL	EIN	Yes	Yes	No	Yes	Yes	Yes
Sodium oxide	1313-59-3	Yes	DSL	EIN	Yes	Yes	No	Yes	Yes	Yes

Section 16: Other Information

Web Sites with information about health effects from occupational exposure to the chemical substances contained in this product and associated engineering controls and personal protective equipment:

OSHA Website: http://www.osha.gov
NIOSH Website: http://www.cdc.gov.niosh
ACGIH Website: http://www.acgih.org
ATSDR Website: http://astdr.cdc.gov/toxprofiles

Additional information on the products is available at: www.tccmaterials.com

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