



SAFETY DATA SHEET
(Complies with OSHA 29 CFR 1910.1200)

SECTION I: PRODUCT IDENTIFICATION

Ecomaterials Inc.
700 Third Line,
Oakville, ON, L6L 4B1, Canada

Emergency Telephone Number
1-877-589-0694

Product Information Telephone Number
1-877-589-0694

SDS: DURAMAX ABRASIVES™

Revision: January 2019

Obtain current SDS from www.ecomaterials.net

Product:

DURAMAX ABRASIVES™

Manufactured by Ecomaterials Inc.

PRODUCT USE: ABRASIVE BLASTING

SECTION II - HAZARD IDENTIFICATION

Hazard-determining components of labeling: Trace metals: beryllium & cadmium

2.1 Classification of the substance or mixture

Carcinogen – Category 1

Eye Irritant – Category 2A

Specific Target Organ Toxicity Single Exposure – Category 3 (respiratory)

Specific Target Organ Toxicity Repeat Exposure – Category 1 (respiratory & renal)

Acute Toxicity Oral – Category 4

2.2a Signal word DANGER!

2.2b Hazard Statements

May cause cancer through chronic inhalation of dust.

Causes serious eye irritation if particles or dust get in eyes.

Causes skin irritation.

May cause respiratory irritation.

Causes damage to lungs and kidneys through prolonged or repeated inhalation of dust.

Harmful if swallowed.

2.2c Pictograms



Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Wear protective gloves, eye protection, and protective clothing.

Do not eat, drink or smoke when using this product.

Wash thoroughly after handling.

Do not breathe dust or swallow.

Do not get on skin.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Wash contacted hands, skin and hair thoroughly after handling.

Immediately seek medical advice or attention if symptoms are significant or persist.

Dispose of contents/containers in accordance with all regulations.

2.3 Additional Information

The intended use of this product is abrasive blasting for cleaning and modification of surfaces. Canadian & US government agencies warn that workers must be protected from hazardous dust levels including toxic metals which may be generated from the underlying substrate and coatings being blasted. Read government recommendations and regulations, including: "OSHA® FactSheet – Protecting Workers from the Hazards of Abrasive Blasting Materials". Read other guidance and all applicable regulations. Before use, consider not only the information in this SDS about this product but also the hazards associated with the process and substrate and coatings which may generate hazardous dust.

Ensure that this product is used in compliance with all government regulations. In most situations, worker safety training plus engineering & administrative controls are required. Establish a comprehensive personal protective equipment (PPE) program including, but not limited to protecting, eyes, face, skin, feet, breathing and hearing. Before use, review this SDS carefully for further warnings and safety information, available online at www.ecomaterials.net. The requirements of workplace and other safety regulations are not limited to the information included on the label and the SDS. Evaluate and take appropriate precautions for hazards arising from dust and other conditions created from the material being abraded.

2.3a HNOC – Hazards not otherwise classified: Not applicable

2.3b Unknown Acute Toxicity: None

SECTION III - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Slag, Steel Making	100%	65996-71-6
<u>Hazardous Components</u>	<u>% by Weight*</u>	<u>CAS</u>
Iron Oxides, various	each 10 to 30%	1309-37-1 1309-38-2 1345-25-1
Magnesium Oxide, various	each 0 to 20%	1309-48-4 1344-43-0
Aluminum Oxide	0 to 10%	1344-28-1
Calcium Oxide	0 to 10%	1305-78-8
Crystalline Silica	< 0.1%	14808-60-7
Beryllium, Arsenic, Cadmium, (Oxides)	trace	various

*Composition ranges are provided due to naturally occurring variability.

SECTION IV – FIRST AID MEASURES

4.1 Description of the first-aid measures**General information:**

After inhalation: Remove person to fresh air and keep comfortable for breathing.

After skin contact: Rinse skin with water.

After eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

After swallowing: Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed

Inhalation: May cause respiratory tract irritation. May cause damage to lungs and kidneys through inhalation of dust. Causes damage to organs through prolonged or repeated inhalation. This product may contain minor amounts of crystalline silica. Prolonged or repeated inhalation of respirable silica from this product or from the blasted substrate may cause silicosis.

Skin contact: Causes mechanical skin irritation.

Eye Contact: Causes eye irritation if particles or dust get in eye.

Ingestion: Harmful if swallowed. Ingestion of large quantities may cause discomfort and/or distress, nausea or vomiting.

4.3 Indication of immediate medical attention and special treatment needed:

Immediately seek medical attention if symptoms are significant or persist.

SECTION V - FIRE FIGHTING MEASURES

5.1 Flammability of the Product: Non-flammable and non-combustible

5.2 Suitable extinguishing agents: Treat for surrounding material

5.3 Special hazards arising from the substance or mixture: None

5.3a Products of Combustion: None

5.3b Explosion Hazards in Presence of Various Substances: Non-explosive in presence of shocks

SECTION VI – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Wear personal protective equipment (See section VIII). Keep unprotected persons away.

6.2 Methods and material for containment and cleaning up:

Do not allow to enter sewers/ surface or ground water. Dispose of unwanted materials and containers properly in accordance with all regulations.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND STORAGE

7.1 Handling

Ensure that this product is used in compliance with all government regulations.

In most situations, worker safety training plus engineering & administrative controls are required. Establish a comprehensive personal protective equipment (PPE) program including, but not limited to protecting, eyes, face, skin, feet, breathing and hearing. Before use, review this SDS carefully for further warnings and safety information, available online at www.ecomaterials.net. The requirements of workplace and other safety regulations are not limited to the information included on the label and the SDS. Evaluate and take appropriate precautions for hazards arising from dust and other conditions created from the material being abraded.

Obtain special instructions before use. NIOSH-certified, type CE, blasting airline respirators with positive pressure blasting helmet are recommended for all people in the vicinity of blasting operations. The respirator must cover the wearer's head, neck and shoulders. Comply with government respiratory protection standards. Do not breathe dust or swallow. Do not get on skin. Required personal protection equipment includes but is not limited to: eye/face and hearing protection; long leather gloves; safety shoes; protective clothing/apron. Do not eat, drink, or smoke when using this product. Dust remains in the air after blasting is completed; therefore, continue all safety precautions until the area is clean and ventilated. Prevent inhalation of dust from contaminated clothing and equipment. Wash contaminated clothing. Wash contacted hands, skin and hair thoroughly after handling.

7.2 Storage

Requirements to be met by storerooms and receptacles: Keep product dry for use.

Information about storage in one common storage facility: Not required.

Further information about storage conditions: Keep out of the reach of children.

SECTION VIII – EXPOSURE CONTROL MEASURES / PERSONAL PROTECTION

8.1 Components with limit values that require monitoring at the workplace:**EXPOSURE LIMITS**

Chemical Name	OSHA PEL mg/m³	ACGIH TLV mg/m³
Iron Oxides, various	5 (fume), 5 (resp)	5 (resp)
Magnesium Oxide, various	15	10
Aluminum Oxide	5 (Resp) 15 (Total)	10
Calcium Oxide	2	2
Crystalline Silica	0.05	0.025 (resp)
Beryllium Oxide	0.2 µg/m ³	0.2 µg/m ³
Arsenic Trioxide	0.01 as As	0.01 as As
Cadmium Oxides	0.005 as Cd	0.01 (total dust) 0.002 (resp)

8.2 Exposure Controls

Do not use compressed air to clean as this will create dust in the air. When collecting waste and dust for disposal, consider controlling exposure; consider: wind, other activities and number of people in the vicinity. Dust remains in the air after blasting is completed; therefore, continue all safety precautions until the area is clean and ventilated. See regulations and guidance and employ wet collection or HEPA control of waste collection wherever feasible.

8.3 General protective and hygienic measures

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Provide accommodations for end-of-shift showers and change areas with separate storage facilities for street clothes, protective clothing and equipment. Keep contaminated clothing and equipment out of the clean change area. Prevent inhalation of dust from contaminated clothing and equipment. Wash contaminated clothing before reuse. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

8.3a Personal protective equipment

Required personal protection equipment includes but is not limited to: eye/face and hearing protection; long leather gloves; safety shoes; protective clothing/apron and respiratory protection.

Workers who are blasting or exposed to the dust remaining in the air from blasting operations must wear NIOSH-certified, type CE, blasting airline respirator with positive pressure blasting helmet for all people in the vicinity of blasting operations. The respirator must cover the wearer's head, neck and shoulders. Comply with all US-OSHA and Canadian Respiratory Protection standards. Wear eye/face protection. Wear protective gloves/clothing. Additional required equipment includes, but is not limited to: hearing protection, long leather gloves, aprons and safety boots.

Workers who are not exposed to the dust from blasting (for example, pouring bags of media into a hopper) must wear a NIOSH N-95 particulate respirator, eye protection, and protective gloves/clothing when handling product.

SECTION IX - PHYSICAL/CHEMICAL CHARACTERISTICS

General Information

Appearance	Form: Granular Solid Color: Black Odor: None
Melting Point	> 1000 C
pH-value at 20°C (68 °F):	Not applicable
Boiling point/Boiling range:	Not applicable
Flash point:	Not applicable
Auto igniting:	Product is not self-igniting under 250 C
Vapor pressure at 21°C (70°F)	Not applicable
Density at 25°C (77 °F):	3.0 to 4.0 g/cm ³ typical
Solubility in / Miscibility with Water:	Insoluble at 20 C
VOC content:	0 g/L VOC

SECTION X – STABILITY AND REACTIVITY

10.1 Reactivity

No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

Stable under normal storage conditions. Keep in dry storage. Avoid strong acids

10.3 Possibility of hazardous reaction

No dangerous reaction known under conditions of normal use.

10.4 Thermal decomposition / conditions to be avoided

No decomposition if used according to specifications.

10.5 Incompatible materials

None known

10.6 Hazardous Decomposition or By-products

None known

SECTION XI – TOXICOLOGICAL INFORMATION

11.1 Exposure Routes: Inhalation, skin contact, eye contact, or ingestion.

11.2 Symptoms related to physical/chemical/toxicological characteristics:

Inhalation: May cause respiratory tract irritation. Causes damage to lungs and kidneys through prolonged or repeated exposure. This product contains < 0.1% crystalline silica, typical.

Skin contact: May cause mechanical skin irritation.

Eye Contact: Causes serious eye irritation if particles or dust gets in eye.

Ingestion: Ingestion of large quantities may cause discomfort and/or distress.

11.3 Delayed, immediate and chronic effects of short-term and long-term exposure

Short Term

Skin Corrosion/Irritation: Not applicable

Serious Eye Damage/Irritation: Causes serious eye irritation if particles or dust gets in eye

Respiratory Sensitization: Not applicable

Skin Sensitization: Not applicable

Specific Target Organ Toxicity-Single Exposure: (Category 2) May cause respiratory irritation

Aspiration Hazard: Not applicable

Long Term

Carcinogenicity: May cause cancer through chronic inhalation.

Germ Cell Mutagenicity: Not applicable

Reproductive Toxicity: May cause birth defects or other reproductive or developmental harm through chronic inhalation.

Specific Target Organ Toxicity- Repeated Exposure: (Category 1) Causes damage to lungs and kidneys through prolonged/repeated exposure

Synergistic/Antagonistic Effects: Not applicable

SECTION XII – ECOLOGICAL INFORMATION

12.1 Ecotoxicity

For Product:

LC50/NOEC-96 Hours - >10,000 mg/L, Oncorhynchus mykiss (Freshwater).

EC50/NOEC-48 Hours – Not Available.

LC50/NOEC-96 Hours - >10,000 mg/L, Gasterosteus aculeatus (Saltwater).

EC50/NOEC-48 Hours – Not Available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential:

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

12.5 Other Adverse Effects

No further relevant information available.

SECTION XIII – DISPOSAL CONSIDERATIONS

13.1 Waste Disposal Method

The packaging and material may be land filled; however, material should be covered to minimize generation of airborne dust. This product is not classified as a hazardous waste under the authority of the RCRA (40CFR 261) or CERCLA (40CFR 117&302). Disposal must be made in accordance with all government regulations

13.2 Other disposal considerations

Packaging disposal must be made in accordance with all government regulations.

SECTION XIV – TRANSPORT INFORMATION

	DOT (U.S.)	TDG (Canada)
UN-Number	Not Regulated	Not Regulated
UN proper shipping name	Not Regulated	Not Regulated
Transport Hazard Class(es)	Not Regulated	Not Regulated
Packing Group (if applicable)	Not Regulated	Not Regulated

14.1 Environmental hazards:

Not applicable

14.2 Transport in bulk according to Annex II of Marpol 73/78 and the IBC Code

Not applicable

14.3 Special precautions for user

Do not handle until all safety precautions have been read and understood.

SECTION XV – OTHER REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislations specific for the chemical

Canada: This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations.

US: SDS prepared pursuant to the Hazard Communication Standard (29 CFR 1910.1200) HazCom 2012.

15.2 US Federal Information**SARA TITLE III**

Section 302 (EHS) TPQ (LBS) – Not Listed.

Section 304 EHS RQ (LBS) – Not listed.

CERCLA RQ (LBS) – Not listed.

Section 313 (TR) – Not listed.

RCRA: Crystalline silica (quartz) is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.

CERCLA: Crystalline silica (quartz) is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR §302.

Emergency Planning and Community Right to Know Act (SARA Title III): Crystalline silica (quartz) is not an extremely hazardous substance under Section 302 and is not a toxic chemical subject to the requirements of Section 313.

FDA: Silica is included in the list of substances that may be included in coatings used in food contact surfaces, 21 CFR §175.300(b)(3)(xxvi).

NTP: Respirable crystalline silica, primarily quartz dusts occurring in industrial and occupational settings, is classified as Known to be a Human Carcinogen.

OSHA Carcinogen: Crystalline silica (quartz) is not listed.

15.3 State Right to Know Laws

California Prop. 65 Components



WARNING: This product can expose you to chemicals including beryllium which is known to the State of California to cause cancer, and cadmium which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

15.4 Global Inventories

DSL All components of this product are on the Canadian DSL list.

TSCA No.: Crystalline silica (quartz) appears on the EPA TSCA inventory under the CAS No. 14808-60-7. All constituents are listed in the TSCA inventory.

SECTION XVI – OTHER INFORMATION

Last Updated: February 6, 2020

NOTE: The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to silica contained in our products.

Prepared by Ecomaterials Inc.

End of SDS