ASHINE INDUSTRIES INC.

SAFETY DATA SHEET

DATE: JAN. 01, 2018

SECTION 1: INDENTIFICATION OF THE SUBSTANCE AND COMPANY INFORMATION

1.1 PRODUCT IDENTIFIER:
Zirconia Silicate beads
CAS NUMBER: 10101-52-7

1.2 DETAILS OF THE SUPPLIER OF THE SUBSTANCE AND THE SAFETY DATA SHEET:
Ashine Industries Inc.
5 Orchid Court
Toronto, ON M2L 2X8 Canada
Tel: 416 493 5187
Fax: 416 493 4657
EMAIL: ashine@ashine.com
Website: www.ashine.com

1.3 EMERGENCY TELEPHONE NUMBER
TELEPHONE: 416 493 5187

SECTION 2: HAZARDS INDENTIFICATION

2.1 CLASSICATION OF THE SUBSTANCE:
ZIRCONIA SILICATE BEADS
EU CLP CLASSIFICATION (1272/2008): Not hazardous
GHS CLASSIFICATION: Not hazardous
US OSHA CLASSIFICATION (29CFR1910.1200): Not hazardous

2.2 LABEL ELEMENTS:
Not hazardous in accordance with the Globally Harmonized System (GHS) for the classification and Labeling of Chemicals

2.3 OTHER HAZARDS:
When used in surface treatment, dust generated may cause breathing difficulty. Proper mask is recommended.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 MIXTURES

Mixture of substances listed below

HAZARDOUS INGREDIENT	(%) WEIGHT PERCENTAGE	CAS NUMBER	HAZARD PICTOGRAM	HAZARD STATEMENT AND RISK
Zirconum Dioxide ZrO_2	60% - 70%	1314-23-4	None	Not hazardous, substance with a community workplace exposure limit
Silicon Dioxide SiO_2	25% - 35%	14808-60-7	Yes	Crystalline Silica (Silicon oxide) can be carcinogenic. The silicon oxide in the material is free of Crystalline silica and does not pose danger to human body.
Aluminum oxide Al_2O_3	<10%	1344-28-01	None	Not hazardous

SECTION 4: FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

GENERAL INFORMATION:
No special measures are required

INHALATION:
Bring to fresh air or provide oxygen treatment if affected person has difficulty breathing.
Consult doctor in case of complaints

SKIN CONTACT:
Brush off loose particles and dust from skin. Wash exposed area with soap and water.
If skin irritation is experienced, consult a doctor.

EYE CONTACT:
Remove eye contact lens if present. Flush opened eyes thoroughly with water.
If symptoms persist, consult a doctor.

INGESTION:
Rinse out mouth with water, then drink plenty of water. Do not induce vomiting.
Consult doctor if there is complaint

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Main route of exposure is inhalation.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Use common sense if any complaints occurred.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA SUITABLE EXTINGUISHING MEDIA:
Use any extinguishing method / media which are suitable for the surrounding condition

UNSUITABLE EXTINGUISHING MEDIA:
None

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:
No relevant information available

5.3 ADVICE FOR FIRE-FIGHTERS:
Wear full fire-fighting gear

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:
Ensure adequate ventilation and fresh air. Avoid dust formation and avoid buried by the substance. Use respiratory protective device for dust. Wear protective clothing. Avoid substance into eyes.

6.2 ENVIRONMENTAL PRECAUTIONS:
Avoid the substance enters water supply, sewer or ground surface.

6.3 METHODS AND MATERIAL FOR CONTAINMENT:
Pick up the substance with shovel or other mechanical loader. Place the substance in suitable container for disposal.

SECTION 7: HANDLING AND STORAGE

7.1 PRECAUSTIONS FOR SAFE HANDLING:
Avoid breathing substance dust. Use adequate ventilation when handling the substance. Avoid direct contact with skin and eyes. After handling, wash thoroughly to clean up.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY IMCOMPATIBILITIES:
No special storage required

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 CONTROL PARAMETERS
No applicable specific control parameters.

8.2 EXPOSURE CONTROLS:
APPROPRIATE ENGINEERING CONTROLS:
Use adequate general and local ventilation to maintain exposure below the occupational exposure limits.

PERSONAL PROTECTIVE MEASURES:
No respiration protection gear is necessary if the concentration of the substance dust is below exposure limits. For eye protection, use safety glasses with side shields or goggles. No special protective clothing is necessary. If substance deposits on body or hands, use water to wash them off thoroughly.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	**Granular, beads, free flow**	**SPECIFIC GRAVITY**	**3.85 g/mm³**
COLOR	**White**	**SOLUBILITY**	**none**
ODOR	**Odorless**	**Viscosity**	**Not Available**
PH VALUE	**Neutral**	**EVAPORATION RATE**	**Not Available**
MELTING POINT	**2,500° C**	**VAPOR DENSITY**	**None**
FREEZING POINT	**Not Available**	**FLASH POINT**	**Not Available**
AUTO IGNITION TEMPERATURE	**None**	**DECOMPOSITION TEMPERATURE**	**None**
EXPLOSIVE PROPERTY	**None**	**PARTITION COEFFICIENT**	**Not Available**
FALMABILITY (SOLID, GAS)	**None**	**BOILING POINT**	**Not Available**

SECTION 10: STABILITY AND CHEMICAL PROPERTIES

10.1 REACTIVITY
It is a very inert inorganic substance

10.2 CHEMICAL STABILITY
It is stable and will not react with other material under normal use or storage.

10.3 POSSIBILITY OF HAZARDOUS REACTIONS
Not Known

10.4 CONDITIONS TO AVOID
Not Known

10.5 INCOMPATIBLE MATERIALS
Not Known

10.6 HAZARDOUS DECOMPOSITION PRODUCTS
No decomposition will occur. But when the substance is used to machine other materials, hazardous material may occur due to the property of the material being machined.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

INHALATION
Breath the dust may cause irritation to nose, throat and upper respiration tract.

SKIN CONTACT
May cause skin irritation

EYE CONTACT
May cause eye irritation or injury

INGESTION
Not toxic. But swallow the substance may cause stomach disturbances.

CHRONIC HEALTH EFFECTS:
Prolonged inhalation of the substance dust may cause adverse lung effects.

ACUTE TOXICITY VALUES:
No sign of acute toxicity in animal inhalation studies.

GERM CELL MUTAGENNICITY
The substance is not expected to present a risk of genetic damage.

CARCINOGENICITY
The substance is not listed as a carcinogen by OSHA.

DEVELOPMENT AND PRODUCTIVITY TOXICITY
No specific data is available. This substance is not expected to present a risk of adverse reproductive or development toxicity.

SPECIFIC TARGET ORGAN TOXICITY
No increased mortality or cancer morbidity was observed in epidemiological study of workers exposed to the substance.

SECTION 12: ECOLOGICAL INFORMATION

12.1 TOXICITY:
There is no information about the Aquatic toxicity

12.2 PRESISTENCE AND DEGRADABILITY:
None available

12.3 BIOACCUMULATIVE POTENTIAL:
None available

12.4 MOBILITY IN SOIL

None available

12.5 OTHER ADVERSE EFFECTS:
None Available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS
Dispose the substance with all local and national regulations. Contact waste processors for recycling information and disposal information. Do not dispose it together with household garbage. Do not dispose it into sewer system.

SECTION 14: TRANSPORTATION INFORMATION

14.1 UN NUMBER
US DOT: None, Canadian TDG: None

14.2 UN PROPER SHIPPING NAME
Not regulated

14.3 HAZARD CLASS
Not classified as dangerous for transportation

14.4 ENVIRONMENTAL HAZARDS
None

14.5 SPECIAL PRECAUSTIONS
None

SECTION 15:REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS SPECIFIC TO THE SUBSTANCE
TSCA (Toxic Substance Control Act)
Zirconia silicate bead is listed on the TSCA inventory under CAS# 10101-52-7

CANADA (DSL/NDSL)
Listed - DSL

SECTION 16: OTHER INFORMATION

16.1 Concentration of airborne particles are risky to human respiration and gastrointestinal system. Use good industrial practice, such as good ventilation or masking can reduce the risk.

The health risk from inhalation of dust particle varies, depending on the type of particles, the particle concentration, exposure length. There is small percentage of impurities in the substance.

The particles from the impurity have different risk level. Check related information and regulation to address the risk.

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