Con-Fume®

SAFETY DATA SHEET

January 2018

1. IDENTIFICATION

Product Identifier:
Con-Fume

Recommended use: Cement additive for Portland cement-based concrete materials.
Restrictions on use: For professional use only

Manufacturer's Name: Kryton International Inc.
Address: 1645 E. Kent Avenue, Vancouver, BC, Canada, V5P 2S8
Telephone Number: 1-604-324-8280
FAX Number: 1-604-324-8899
Web Site: www.kryton.com

Emergency Telephone Number:
Kryton International Inc. 1.800.267.8280 (Business Hours, 8:00am-4:30pm Pacific Time)
Call a poison center or doctor/physician in your country

BC, Canada: BC Drug and Poison Information Centre 604.682.5050
US: American Association of Poison Control Centers 1.800.222.1222

Date SDS Updated: January 15, 2018
SDS Updated by: Research Center, Kryton International Inc.

Date SDS Prepared: October 24, 2006
SDS Prepared by: Cementec Industries Inc.
159, 3953 –112 Avenue SE, Calgary, Alberta, T2C 0J4

2. HAZARD IDENTIFICATION

Emergency Overview:

- A solid grey-powder material that is not flammable and combustible at room temperatures.
- This product is relatively non-toxic and does not pose an immediate hazard to the health of emergency response personnel or to the environment in an emergency situation.

Potential Health Effects:

- Acute exposure to iron oxide (Fe2O3) dust or fume can cause x-ray changes (siderois or iron pigmentation) in the lungs as a result of long-term exposure.
- Siderosis is a benign condition and is not associated with pulmonary fibrosis.
- Silicon carbide dust may cause mild irritation of the upper respiratory tract on acute overexposure.
- Chronic overexposure to particulates of respirable size may cause lung inflammation, difficult breathing, chest pain, coughing, and pneumoconiosis or possible fibrotic changes in the lungs.
- Prolonged overexposure to respirable crystalline silica in excess of the TLV may result in irreversible fibrosis of the lungs (silicosis.)

Potential Environmental Effects:

- The product has a high degree of intrinsic chemical stability and is relatively non-toxic in the environment.
- This material is normally stored in closed containers.

Label Elements

GHS08

DANGER

Hazard Statements:

H316 Causes mild skin irritation
H320 Causes eye irritation
H373 May cause damage to respiratory organs through prolonged or repeated exposure

3. COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	Approximate Percent by Weight	C.A.S. Number	Occupational Exposure Limits (OELs) (also see footnote		LD50/LC50 Species and Route
Silicon Dioxide (amorphous)	89-96	69012-64-2	OSHA PEL ACGIH TLV NIOSH REL	30 mg/m3/ %SiO2 (total) 10 mg/m³/ %SiO2+2 (resp) Withdrawn due to insufficient data 6 mg/m	>22,000 mg/kg rat -oral >15,000 mg/kg mouse-oral
Iron Oxide	0.2 –2	1309-37-1	OSHA PEL ACGIH TLV NIOSH REL	10 mg/m3 (total) 5 mg/m3 (resp) None established	No Data
Silicon Carbide	2	409-21-2	OSHA PEL ACGIH TLV NIOSH REL	10 mg/m³ (total) 5 mg/m³ (resp) 10 mg/m³ (total) 3 mg/m³ (resp) 10 mg/m³ (total) 5 mg/m³ (resp)	No Data
Aluminum Oxide	0.2 - 2	1344-28-1	OSHA PEL ACGIH TLV NIOSH REL	15 mg/m3 (total) 5 mg/m3 (resp) 10 mg/m³ None established	No Data
Silicon dioxide (crystalline quartz)	1 - 2	14808-60-7	OSHA PEL ACGIH TLV NIOSH REL	30 mg/m³ / %SiO2+2 (total) 10 mg/m³/ %SiO2+2 (resp) 0.025 mg/ m³ (resp) 0.05 mg/ m³ (resp)	500 mg/kg bw /Quartz 10-200 µ) rat-iv

This product also contains other minor constituents including calcium, magnesium, potassium and sodium minerals each less than approximately 1% by weight (calculated as their respective oxides.)

NOTE: OELs for individual jurisdictions may differ from OSHA PELs. Check with local authorities for the applicable OELs in your jurisdiction.

OSHA -Occupational Safety and Health Administration; ACGIH -American Conference of Governmental Industrial Hygienists; NIOSH –National Institute for Occupational Safety and Health. OEL –Occupational Exposure Limit, PEL –Permissible Exposure Limit, TLV –Threshold Limit Value, REL –Recommended Exposure Limit, (resp) –respirable dust fraction as defined in Appendix D of the ACGIH TLV booklet.

Trade Names and Synonyms: Silica Fume

4. FIRST AID MEASURES

Eye Contact:
- The product is a powder, and may be a mechanical irritant in the eyes.
- Flush eyes with water until irritation is removed.

Skin Contact:
- Remove contaminated clothing and wash exposed area with soap and water.

Inhalation:
- Use adequate respiratory protection and remove victim from exposure area to fresh air.
- Medical oxygen may be administered, if available, where breathing is difficult. If irritation persists or cough or other symptoms develop, seek medical attention.

Ingestion:
- If swallowed, do not induce vomiting. Consult a physician if necessary.

5. FIREFIGHTING MEASURES

Fire and Explosion Hazards:
- The product is non-combustible and not an explosion hazard.

Extinguishing Media:
- Not applicable

Fire Fighting:
- As with any fire, fire fighters should be fully trained and wear full protective clothing including an approved, self-contained breathing apparatus which supplies a positive air pressure within a full face piece mask.

Flashpoint and Method:
- None

Upper and Lower Flammable Limit:
- Not applicable

Autoignition Temperature:
- Not applicable

6. ACCIDENTAL RELEASE MEASURES

Procedures for Cleanup:
- Ensure personal safety and control source of spillage.
- Clean up spilled material immediately, observing precautions in Section 8, Personal Protection and using methods that will minimize dust generation (e.g., vacuum solids, dampen material and shovel or wet sweep).
- Return uncontaminated spilled material to the process if possible.
- Place contaminated material in suitable labeled containers for recovery or disposal.

- Treat or dispose of waste material in accordance with all local, regional, and national requirements.

Personal Precautions:

- Persons responding to an accidental release should wear protective clothing, gloves and a dust respirator (see also Section 8).
- Close-fitting safety goggles may be necessary in some circumstances to prevent eye contact with dust.

Environmental Precautions:

- Care should be taken to prevent the spillage of this product to aquatic and terrestrial environments.
- Measures to control dust generation from product spills should be applied in dry dusty locations.

7. HANDLING AND STORAGE

Material is to be stored in suitable containers. Handle and open the container with care in accordance with good storage and handling practices. After handling, always wash hands thoroughly with soap and water

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective Clothing:
Gloves and coveralls or other work clothing are recommended to prevent prolonged or repeated direct skin contact. Appropriate eye protection should be worn where dust is generated. Safety type boots are recommended.

Ventilation:
Use adequate local or general ventilation to maintain the concentration of dust in the work environment well below recommended occupational exposure limits.

Respirators:
Where excessive dust is generated and cannot be controlled to within acceptable levels by engineering means, use appropriate NIOSH-approved respiratory protection equipment for very fine particulates.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Grey powder
Vapour Pressure: Not Applicable
Specific Gravity: Approximately 2.2
Solubility in Water: Negligible
Odour: None
Vapour Density: Not Applicable
Evaporation Rate: Not Applicable
Particle Size: $\leq$ 1 micron
Physical State: Solid
Boiling Point/Range: Not Applicable
Coefficient of Water/Oil Distribution: Not Applicable
pH: 6.30
Freezing/Melting Point/Range: Not determined
Odour Threshold: Not Applicable

10. STABILITY AND REACTIVITY

Stability and Reactivity:
This material is stable and non-reactive under normal room temperatures and pressures.

Incompatibilities:
Strong oxidizing agents. Material may react with strong oxidizers, halogens, unsaturated oils, and strong acids. Upon reaction with hydrofluoric acid, silicon tetraflouride, a toxic substance, is formed.

Hazardous Decomposition Products:
Product is non-combustible

11. TOXICOLOGICAL INFORMATION

General:
In the powder form in which this material is sold it is relatively non-toxic. Normal handling should not cause either acute or chronic health effects. This product has not undergone testing for either acute or chronic toxic effects.

Acute:
Acute exposure to iron oxide (Fe2O3) dust or fume can cause x-ray changes (sideroisisor iron pigmentation) in the lungs as a result of long term exposure. Siderosis is a benign condition and is not associated with pulmonary fibrosis. Airborne respirable dust may cause irritation to the nose, throat, and lungs.

Skin:
Components are probably not irritating to the skin. There is no human or animal information available.

Eye:
Dust particles may mechanically irritate the eyes and impair vision.

Inhalation:
Silicon carbide dust may cause mild irritation of the upper respiratory tract on acute overexposure. Chronic overexposure to particulates of respirable size may cause lung inflammation, difficult breathing, chest pain, coughing, and pneumoconiosis or possible fibrotic changes in the lungs. Prolonged overexposure to respirable crystalline silica in excess of the TLV may result in irreversible fibrosis of the lungs (silicosis) with symptoms of coughing, shortness of breath, wheezing and impaired pulmonary function. The IARC has classified inhalable crystalline silica as Group 1, with sufficient evidence that crystalline silica may be carcinogenic to humans.

Ingestion:
Not established.

12. ECOLOGICAL INFORMATION

The principle constituents of this product are chemically stable and, as such, it will be relatively inert in the environment. Material should, however, be kept in suitable containers and spilled material cleaned-up.

13. DISPOSAL CONSIDERATIONS

If material cannot be returned to process or salvage, dispose of in accordance with applicable regulations.
Material may be disposed of in a sanitary landfill.

14. TRANSPORT INFORMATION

PROPER SHIPPING NAME ..... Not regulated.
TRANSPORT CANADA CLASSIFICATION..... Not applicable.
US DOT HAZARD CLASSIFICATION ..... Not applicable.
TRANSPORT CANADA PRODUCT IDENTIFICATION NUMBER .... Not applicable.
US DOT PRODUCT IDENTIFICATION NUMBER..... ..... Not applicable.
MARINE POLLUTANT .... Not applicable.
IMO CLASSIFICATION..... ..... Not applicable.

15. REGULATORY INFORMATION

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

U.S.

INGREDIENTS LISTED ON TSCA INVENTORY ..... Yes
HAZARDOUS UNDER HAZARD COMMUNICATION STANDARD..... ..... Yes
CERCLA SECTION 103 HAZARDOUS SUBSTANCES.....No
SARA SECTION 302 EXTREMELY HAZARDOUS SUBSTANCE ..... No ingredients apply.
SARA SECTION 311/312 HAZARD CATEGORIES..... Chronic Health.
SARA SECTION 313 TOXIC RELEASE INVENTORY ..... No ingredients apply.
CALIFORNIA PROPOSITION 65 ..... This product contains chemical(s) known to the State of California to cause cancer: silica, crystalline

CANADIAN:

LISTED ON THE DOMESTIC SUBSTANCES LIST ..... Yes
LISTED ON THE NATIONAL POLLUTANT RELEASE INVENTORY.....No
WHMIS CLASSIFICATION: D-2A

16. OTHER INFORMATION

The information in this Safety Data Sheet is based on the following references:

American Conference of Governmental Industrial Hygienists, 1991, Documentation of the Threshold Limit Values and Biological

Exposure Indices, Sixth Edition plus supplements.

American Conference of Governmental Industrial Hygienists, 2006, Threshold Limit Values for Chemical Substances and Physical Agents and Biological Exposure Indices.

Canadian Centre for Occupational Health and Safety (CCOHS) CHEMpendium Chemical Information Data Base, Disk A2 (2000-2).

Clayton and Clayton, 1994, Patty's Industrial Hygiene and Toxicology, FourthEdition.

US National Library of Medicine, Toxicology Data Network, Hazardous Substances Data Bank; Web Site,

Industry Canada, SOR/88-66, Controlled Products Regulations, as amended.

Merck & Co., Inc., 1983, The Merck Index, An Encyclopedia of Chemicals, Drugs, and Biologicals, Tenth Edition.

Sax, N. Irving, 1989, Dangerous Properties of Industrial Materials, Seventh Edition.

Urben, P. G., 1995, Bretherick's Handbook of Reactive Chemical Hazards, Fifth Edition.

U.S. Department of Health and Human Services, National Institute for Occupational Safety and Health, 1990, NIOSH Pocket Guide to Chemical Hazards. CD-ROM Edition DHHS (NIOSH) Publication No 99-115, April 1999

Manufacture's notes

- The information on this data sheet reflects the currently available knowledge and is reliable provided that the product is used under the prescribed conditions and in accordance with the application specified on the packaging and/or in the technical guidance literature. Any other use of the product, including the use of the product in combination with any other product or any other process, is the responsibility of the user.
- It is implicit that the user is responsible for determining appropriate safety measures and for applying the legislation covering his own activities.

Date of last revision of this SDS: January 15, 2018