



FOSECO

Foseco Metallurgical Inc.

Corporate Offices

20200 Sheldon Road Cleveland, Ohio 44142



Material Safety Data Sheet

KALMINEX* 21

Number: MSDS-12139

Revision: 4

Preparation Information:

Site: All

Contact Trevor Hardy at (440)826-4548 for further Product Information or medical emergency during normal business hours.

Section 1: Product and Company Identification:

Product Name:

KALMINEX* 21

Chemical Name:

N/A

Formula:

MIXTURE

CAS Number:

N/A

Product Use:

Exothermic sleeve for molten metal.

Supplier Information:

Supplier Name:

Foseco Metallurgical Inc.

Supplier Phone:

(440)826-4548

Supplier Address:

20200 Sheldon Rd.
Cleveland, OH 44142

Manufacturer Information:

Manufacturer Name:

Foseco Metallurgical Inc.

Manufacturer Phone:

(440)826-4548

Manufacturer Address:

20200 Sheldon Rd.
Cleveland, OH 44142

Emergency Contact Information:

CHEMTREC (800) 424-9300 (USA)
CANUTEC (613) 996-6666 (CANADA)

Section 2: Composition Information on Ingredients

Ingredient:	CAS No.	% Weight:
Potassium Aluminum Fluoride	60304-36-1	1-5
Aluminum	7429-90-5	5-10
Crystalline Silica (Quartz)	14808-60-7	1-5
Mullite	1302-93-8	40-70
Cristobalite (Crystalline Silica)	14464-46-1	1-5
Phenol Formaldehyde Polymer	9003-35-4	5-10
Fiber glass wool	N/A	0.5-1.5
Aluminosilicate Fiber	142844-00-6	5-10
This product may also contain a breaker		

core. The breaker core is comprised of non-respirable silica sand bonded with an organic binder. The breaker core is considered to be non-hazardous.

Section 3: Hazards Overview

Emergency Overview:

N/A

Potential Health Effects:

Fibers may produce transitory irritation of skin. Can cause skin, eye and mucous membrane irritation. Excessive inhalation of fluoride dust and fume can cause nose bleeds.

Chronic Health Hazards:

NIOSH lists eyes, respiratory system, CNS, skeleton, kidneys, skin as target organs for fluorides. Prolonged and or repeated inhalation of dust from product may cause silicosis of the lungs. Prolonged inhalation of aluminum dust may cause pulmonary fibrosis and may be implicated in Alzheimer's disease.

Medical Conditions Generally Aggravated by Exposure:

Pre-existing skin and respiratory ailments.

Routes of Entry:

Eyes?	Skin?	Inhalation?	Ingestion?	Other?
Yes	Yes	Yes	No	N/A

Carcinogenicity:

NTP?	IARC?	OSHA?	WHMIS?	Other?
Yes	Yes	N/A	N/A	N/A

Details:

IARC has determined there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica and so is categorized as a Group 1 carcinogen. NTP has classified respirable crystalline silica as a known human carcinogen and ACGIH has classified it as a suspected human carcinogen. IARC categorizes aluminosilicate fiber as a Group 2B carcinogen. i.e. A material, which is possibly carcinogenic to humans.

Section 4: First Aid Measures

Eye Contact:

Flush with copious amounts of water. Consult physician if symptoms persist.

Skin Contact:

Wash with soap and water. Consult physician if irritation persists.

Inhalation:

Remove person to fresh air. Consult physician if problems persist.

Ingestion:

If person is conscious drink milk. Do not induce vomiting. Refer to physician immediately.

Section 5: Fire-fighting Measures:

Flash Point:	Auto-Ignition:	LEL:	UEL:
N/A	N/A	N/A	N/A

NFPA Hazard Classification:

Health:	Flammable:	Reactivity:	Special Hazard:
1	1	1	N/A

HMIS Hazard Classification:

Health:	Flammable:	Reactivity:	PPE:
1	1	1	B

Extinguishing Media:

Do not use water. Isolate fire with sand or other inert material.

Special Fire Fighting Procedures:

Product contains granular aluminum which at high temperatures can react with water to form hydrogen gas. Due to possibility of

toxic fume if involved in fire, wear self contained breathing apparatus.

Unusual Fire and Explosion Hazards :

SENSITIVITY TO MECHANICAL IMPACT: N/A

SENSITIVITY TO STATIC DISCHARGE: N/A

OTHER: N/A

Section 6: Accidental Release Measures

Pick up large pieces. Sweep up or vacuum remainder. Avoid generating dust. Wear protective equipment as listed below.

Section 7: Handling and Storage

Store below 150 Deg. F in dry area. Keep container covered when not in use. Product generates high temperatures when ignited. Avoid contact with caustics, acid or acid fume which could react to produce toxic and or flammable fume.

Section 8: Exposure Controls/Personal Protection:

Exposure Limits Ingredient	PEL-OSHA	TLV-ACGIN	
Aluminosilicate Fiber	15 mg/M3	0.2 fiber/cc	0.5 fiber/cc (Supplier Recommendation)
Potassium Aluminum Fluoride	2.5 mg/M3 as F	2.5 mg/M3 as F	N/A
Aluminum	15 mg/M3 (total)	1 mg/M3 (respirable)	N/A
Crystalline Silica (Quartz)	0.1 mg/M3 (respirable)	0.025 mg/M3 (respirable)	N/A
Mullite	15 mg/M3 (total)	10 mg/M3	N/A
Cristobalite (Crystalline Silica)	0.05 mg/M3 (respirable)	0.025 mg/M3 (respirable)	N/A
Phenol Formaldehyde Polymer	N/AV	N/AV	N/A
Fiber glass wool	15 mg/M3 (total)	1 fiber/cc	N/A

Details:

N/A

Respiratory Protection :

If PEL/TLV is exceeded, use NIOSH approved mask/respirator for above listed ingredients.

Ventilation

LOCAL: N/A

SPECIAL: N/A

MECHANICAL: As required to maintain levels below the listed PEL/TLVs.

ENGINEERING CONTROLS: N/A

Protective Equipment:

GLOVES: Cloth

EYE: Safety glasses with side shields

CLOTHING: As required to prevent prolonged exposure to skin.

Personnel Sampling Procedure :

N/A

Section 9: Physical and Chemical Properties

BOILING POINT (C): N/A

% VOLATILE BY VOL.: N/A

BULK DEN./SPEC. GRAV.: N/A

PH LEVEL: N/AV
COEF. H2O/OIL DIST.: N/A
MELTING POINT: N/AV
FREEZING POINT (C): N/AV
MOLECULAR WEIGHT: N/AV
ODOR THRESHOLD CONC.: N/A
VAPOR DENSITY (AIR=1): N/A
EVAPORATION RATE: N/A
SOLUBILITY IN WATER: Slight
VAPOR PRESSURE: N/A
APPEARANCE: Tan sleeve
ODOR: Slight fish odor

Section 10: Stability and Reactivity

Stability:
Stable

Avoid:
N/A

Incompatibility:

Oxidizing agents, caustic, acid and acid fume.

Hazardous Decomposition of By-products

CO, CO2 and traces of fluorides. Product also contain cured organic resins which decompose to yield small amounts of phenols, cresols, xylenols, HCHO and NH3.

Polymerization:
Will not occur

Avoid:
N/A

Section 11: Toxicological Information

Chemical Name	% Wt.	LD50	LC50
Potassium Aluminum Fluoride	1-5	>5 gm/Kg - oral rat (based on toxicity of sodium aluminum fluoride)	N/A

Other Studies:
N/A

Section 12: Ecological Information

Ecotoxicity:
N/AV

Environmental Fate:
N/AV

Section 13: Disposal Considerations

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

Section 14: Transport Information

International
N/A

United States
N/A

Canada
SHIPPING NAME: N/A
P.I.N/UN: N/A
PRIMARY CLASS: N/A
SUBSIDIARY CLASS: N/A
PACKING GROUP: N/A

European Community
N/A

Section 15: Regulatory Information

US Federal Regulations

TSCA

All components of this product are included on the EPA TSCA Chemical Substance Inventory.

SARA 311 and 312 Hazard Categories:

Immediate (Acute) Health Hazard:	Yes
Delayed (Chronic) Health Hazard:	Yes
Fire Hazard:	No
Reactivity:	No
Sudden Release of Pressure :	No

SARA Section 313 Notification:

This product contains a toxic chemical or chemicals subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372. The chemical(s) is/are listed below.

Chemical Name	CAS #	Standard Wt. %
Aluminum	7429-90-5	9.0

Ozone Depleting Substances :
N/A

Volatile Organic Compounds (VOC):
N/A

US State Regulation :
N/A

Canadian Regulation :

WHMIS CLASSIFICATION : D 2A: CHRONIC TOXIC EFFECTS

This Product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

European Regulation:
N/A

Other Regulation:
N/A

MITI:
N/A

Disclaimer

Please ensure that all persons coming into contact with this product are aware of the information contained in this MSDS Sheet. Information presented herein has been compiled from sources considered to be reliable and is accurate and reliable to the best of our knowledge and belief but is not guaranteed to be so. It is the user's responsibility to determine for himself the suitability of any material for a specific use and to adopt such safety precautions as may be necessary. If you need any further information from us to make the determinations which you must make to use this material safely, please contact the above named preparer.

* Trademark of the Foseco Group of Companies, used under License.

N/A is Not Applicable
N/K is Not Known
N/AV is Not Available

Document Revision History:

Revision: 4

Date Created: 08/10/2007

Last Approval Date: 09/23/2008

Date of Last Revision: 09/23/2008

Document Author:
Trevor Hardy

Document Manager:
Jackie Gerber

MSDS Status:

Revised Section 5, 8

CANADIAN LABEL C009, D101, D2 CAUTION R191, R072, R073, R084, P033, P156, P158, P187. FIRST AID F003, F044, F047, F046