



Product: MMP47 Briquettes
Date Prepared: June 11, 2010

Miller and Company LLC
9700 West Higgins Road
Rosemont, IL 60018

Emergency Telephone Number: 847-696-2677
Other Information Calls: 847-696-2400

The subject product is a mechanical blend of the following ingredients:

<u>Component</u>	<u>% in Mixture</u>
<u>90% SiC Grain</u>	<u>10 – 70%</u>
<u>SiC Low Grade</u>	<u>0 – 40%</u>
<u>SiC Mid Grade</u>	<u>0 – 60%</u>
<u>Iron Silicon Fines</u>	<u>0 – 15%</u>
<u>Portland Cement</u>	<u>10 – 15%</u>

Custom blended per chemical analysis of specific ingredients inventoried at time of blending so as to meet customer specifications.

Since the mixture presents no greater hazard than any of the individual components, and since the burden of information lies with the primary producer, the data sheets for the individual components are attached and will satisfy the requirements of the standard for a data sheet for the mixture. This interpretation comes from an OSHA field directive to compliance officers, "Appendix A, Clarifications and Interpretations of the Hazard Communication Standard (HCS)," OSHA CPL 2-2.38B, 15 August 1988.

MATERIAL SAFETY DATA SHEET

SECTION I : PRODUCT IDENTIFICATION

PRODUCT NAME : Silicon Carbide
TRADE NAME(S) : Silicon Carbide / De Oxo Sil CAS #409-21-2
CHEMICAL FORMULA : SiC
SUPPLIER'S NAME : Miller and Company LLC

ADDRESS : Miller and Company LLC
9700 W. Higgins Road, Suite 1000
Rosemont, IL 60018

EMERGENCY TELEPHONE NO : 800-424-9300 (Chemtrec)
TELEPHONE NO FOR INFORMATION : 847-696-2400
DATE PREPARED : September 10, 1997
REVIEWED AND UPDATED 10-01-03
BY SUDHIR GUPTA – VICE PRESIDENT
PRODUCT/MARKET GROUP

SECTION II : HAZARDOUS INGREDIENTS INFORMATION

PERCENT HAZARDOUS COMPONENTS CAS OSHA PEL* ACGIH TLV

80%-100% Silicon Carbide (409-21-2)	10 MG/M3	10 MG/M3
	(5 MG/M3 Respirable dust fraction)	
< 4% Graphite (Synthetic) (None)	10 MG/M3	10 MG/M3
	(5 MG/M3 Respirable dust fraction)	
< 1% Free Si (7440-21-3)	10 MG/M3	10 MG/M3
	(5 MG/M3 Respirable dust fraction)	
< 7%***Free SiO ₂ (14808-60-7)	0.1 MG/M3	0.1 MG/M3 **

* O.S.H.A. Final PEL limits effective 06/03/93.

** As quartz - To the best of our knowledge the SiO₂ present is in the form of alpha quartz.

*** The percent of respirable dust fraction has not been determined. This should be measured using established industrial hygiene methods.

SECTION III : PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT : Decomposes at 2972 degrees C
Sublimes at 2700 degrees C
VAPOR PRESSURE : NA
VAPOR DENSITY : NA
PH : NA
SPECIFIC GRAVITY (H₂O = 1) : 3.217
MELTING POINT : See Boiling Point
EVAPORATION RATE : NA
SOLUBILITY IN WATER : Insoluble

APPEARANCE AND ODOR : Dull Grey Crystal - No odor

SECTION IV : FIRE AND EXPLOSION HAZARD DATA

FLASH POINT : NA
FLAMMABLE LIMITS : NA
LEL : NA
OEL : NA
EXTINGUISHING MEDIA : NA
SPECIAL FIRE FIGHTING PROCEDURES : NA
UNUSUAL FIRE AND EXPLOSION HAZARDS : None (material is NOT combustible)

SECTION V : REACTIVITY DATA

STABILITY : Stable
CONDITIONS TO AVOID : None
INCOMPATIBILITY : NA
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS : None
HAZARDOUS POLYMERIZATION : Will not occur
CONDITIONS TO AVOID : None

SECTION VI : HEALTH HAZARD DATA

ROUTE(S) OF ENTRY : Inhalation
HEALTH HAZARDS : Physical irritation may lead to extensive
fibrosis and progressive lung disease
CARCINOGENICITY:
NPT? No IARC MONOGRAPHS? No OSHA REGULATED? No
SIGNS AND SYMPTOMS OF EXPOSURE : Respiratory Distress coughing
and shortness of breath
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE :
Any respiratory condition
EMERGENCY AND FIRST-AID PROCEDURES : Remove from area of dust exposure.
If dust gets in eyes, flush immediately
with large quantities of clean cool water.

SECTION VII : PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED :
Sweep, shovel or vacuum material. Avoid excessive exposure to dust.
WASTE DISPOSAL METHOD : May be landfilled in accordance with state,
federal and local regulations.
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING :
Minimize generation of dust.
OTHER PRECAUTIONS : Particles may be sharp and cause cuts and abrasions
to skin and eyes.
Use gloves and security glasses.

SECTION VIII : CONTROL MEASURES

RESPIRATORY PROTECTION : NIOSM approved dust respirator
recommended-required above PEL concentr.
VENTILATION : Local exhaust recommended
PROTECTIVE GLOVES : Recommended
EYE PROTECTION : Recommended
OTHER PROTECTIVE CLOTHING OR EQUIPMENT : None
WORK/HYGIENIC PRACTICES :

SECTION IX : SARA TITLE III REPORTING

To the best of our knowledge this product does not contain any substances requiring reporting on the SARA. Title III. Section 313 list.

MATERIAL SAFETY DATA SHEET

SECTION I : PRODUCT IDENTIFICATION

PRODUCT NAME : Silicon Carbide(Low-Grade)
TRADE NAME(S) : CAS #409-21-2
CHEMICAL FORMULA : SiC
SUPPLIER'S NAME : Miller and Company LLC

ADDRESS : Miller and Company LLC
9700 W. Higgins Road, Suite 1000
Rosemont, IL 60018

EMERGENCY TELEPHONE NO : 800-424-9300 (Chemtrec)
TELEPHONE NO FOR INFORMATION : 847-696-2400
DATE PREPARED : September 19, 1994
REVIEWED AND UPDATED 10-01-02
BY SUDHIR GUPTA – VICE PRESIDENT
PRODUCT/MARKET GROUP

SECTION II : HAZARDOUS INGREDIENTS INFORMATION

PERCENT HAZARDOUS COMPONENTS CAS OSHA PEL* ACGIH TLV

10%- 30% Silicon Carbide (409-21-2)	10 MG/M3	10 MG/M3 (5 MG/M3 Respirable dust fraction)
10%- 60% Graphite (Synthetic) (None)	10 MG/M3	10 MG/M3 (5 MG/M3 Respirable dust fraction)
> .01% Free Si (7440-21-3)	10 MG/M3	10 MG/M3 (5 MG/M3 Respirable dust fraction)
> 1% ***Free SiO ₂ (14808-60-7)	0.1 MG/M3	0.1 MG/M3 **
> .2% CaO (1305-78-8)	5 MG/M3	2 MG/M3
> 1% Al ₂ O ₃ (1344-28-1)	10 MG/M3	10 MG/M3

* O.S.H.A. Final PEL limits effective 06/03/93.

** As quartz - To the best of our knowledge the SiO₂ present is in the form of alpha quartz.

*** The percent of respirable dust fraction has not been determined. This should be measured using established industrial hygiene methods.

SECTION III : PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT : Decomposes at 2972 degrees C
Sublimes at 2700 degrees C
VAPOR PRESSURE : NA
VAPOR DENSITY : NA
PH : NA
SPECIFIC GRAVITY (H₂O = 1) : 3.217
MELTING POINT : See Boiling Point
EVAPORATION RATE : NA
SOLUBILITY IN WATER : Insoluble
APPEARANCE AND ODOR : Dull Grey Crystal - No odor

SECTION IV : FIRE AND EXPLOSION HAZARD DATA

FLASH POINT : NA
FLAMMABLE LIMITS : NA
LEL : NA
OEL : NA
EXTINGUISHING MEDIA : NA
SPECIAL FIRE FIGHTING PROCEDURES : NA
UNUSUAL FIRE AND EXPLOSION HAZARDS : None (material is NOT combustible)

SECTION V : REACTIVITY DATA

STABILITY : Stable
CONDITIONS TO AVOID : None
INCOMPATIBILITY : NA
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS : None
HAZARDOUS POLYMERIZATION : Will not occur
CONDITIONS TO AVOID : None

SECTION VI : HEALTH HAZARD DATA

ROUTE(S) OF ENTRY : Inhalation
HEALTH HAZARDS : Physical irritation may lead to extensive
fibrosis and progressive lung disease
CARCINOGENICITY:
NPT? No IARC MONOGRAPHS? No OSHA REGULATED? No
SIGNS AND SYMPTOMS OF EXPOSURE : Respiratory Distress coughing
and shortness of breath
MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE :
Any respiratory condition
EMERGENCY AND FIRST-AID PROCEDURES : Remove from area of dust exposure.
If dust gets in eyes, flush immediately
with large quantities of clean cool water.

SECTION VII : PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED :

Sweep, shovel or vacuum material. Avoid excessive exposure to dust.

WASTE DISPOSAL METHOD : May be landfilled in accordance with state,
federal and local regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING :

Minimize generation of dust.

OTHER PRECAUTIONS : Particles may be sharp and cause cuts and abrasions
to skin and eyes.

Use gloves and security glasses.

SECTION VIII : CONTROL MEASURES

RESPIRATORY PROTECTION : NIDSM approved dust respirator
recommended-required above PEL concentr.

VENTILATION : Local exhaust recommended

PROTECTIVE GLOVES : Recommended

EYE PROTECTION : Recommended

OTHER PROTECTIVE CLOTHING OR EQUIPMENT : None

WORK/HYGIENIC PRACTICES :

SECTION IX : SARA TITLE III REPORTING

To the best of our knowledge this product does not contain any substances requiring reporting on the SARA, Title III, Section 313 list.

MATERIAL SAFETY DATA SHEET

SECTION I : PRODUCT IDENTIFICATION

PRODUCT NAME : Silicon Carbide(Mid-Grade)
TRADE NAME(S) : CAS #409-21-2
CHEMICAL FORMULA : SiC
SUPPLIER'S NAME : Miller and Company LLC

ADDRESS : Miller and Company LLC
9700 W. Higgins Road, Suite 1000
Rosemont, IL 60018

EMERGENCY TELEPHONE NO : 800-424-9300 (Chemtrec)
TELEPHONE NO FOR INFORMATION : 847-696-2400
DATE PREPARED : September 19, 1994
REVIEWED AND UPDATED 10-01-02
BY SUDHIR GUPTA – VICE PRESIDENT
PRODUCT/MARKET GROUP

SECTION II : HAZARDOUS INGREDIENTS INFORMATION

PERCENT HAZARDOUS COMPONENTS CAS OSHA PEL* ACGIH TLV

30%- 70% Silicon Carbide (409-21-2)	10 MG/M3	10 MG/M3
	(5 MG/M3 Respirable dust fraction)	
10%- 30% Graphite (Synthetic) (None)	10 MG/M3	10 MG/M3
	(5 MG/M3 Respirable dust fraction)	
> .1% Free Si (7440-21-3)	10 MG/M3	10 MG/M3
	(5 MG/M3 Respirable dust fraction)	
> 1% ***Free SiO ₂ (14808-60-7)	0.1 MG/M3	0.1 MG/M3 **
> .1% CaO (1305-78-8)	5 MG/M3	2 MG/M3
> 1% Al ₂ O ₃ (1344-28-1)	10 MG/M3	10 MG/M3

* O.S.H.A. Final PEL limits effective 06/03/93.

** As quartz - To the best of our knowledge the SiO₂ present is in the form of alpha quartz.

*** The percent of respirable dust fraction has not been determined. This should be measured using established industrial hygiene methods.

SECTION VII : PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED :

Sweep, shovel or vacuum material. Avoid excessive exposure to dust.

WASTE DISPOSAL METHOD : May be landfilled in accordance with state,
federal and local regulations.

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING :

Minimize generation of dust.

OTHER PRECAUTIONS : Particles may be sharp and cause cuts and abrasions
to skin and eyes.

Use gloves and security glasses.

SECTION VIII : CONTROL MEASURES

RESPIRATORY PROTECTION : NIDSM approved dust respirator
recommended-required above PEL concentr.

VENTILATION : Local exhaust recommended

PROTECTIVE GLOVES : Recommended

EYE PROTECTION : Recommended

OTHER PROTECTIVE CLOTHING OR EQUIPMENT : None

WORK/HYGIENIC PRACTICES :

SECTION IX : SARA TITLE III REPORTING

To the best of our knowledge this product does not contain any substances requiring reporting on the SARA, Title III, Section 313 list.

Material Safety Data Sheet for PORTLAND CEMENT

Section 1 - IDENTIFICATION

Product Names: Illinois Portland Cement - Types I, III, Product

MSDS Information

This MSDS was produced in May 1999 and supersedes and replaces any prior versions.

Product Code

Standard Industrial Classification: 3241

Chemical Family

Calcium compounds. Calcium silicate compounds and other calcium compounds containing iron and aluminum make up the majority of this product. Major compounds:

3CaO·SiO ₂	Tricalcium silicate	CAS#12168-85-3
2CaO·SiO ₂	Dicalcium silicate	CAS#10034-77-2
3CaO·Al ₂ O ₃	Tricalcium aluminate	CAS#12042-78-3
4CaO·Al ₂ O ₃ ·Fe ₂ O ₃	Tetracalcium aluminoferrite	CAS#12068-35-8
CaSO ₄ ·2H ₂ O	Calcium sulfate dihydrate or Gypsum	CAS#7778-18-9

Chemical Name and Synonyms

Portland cement. Also known as hydraulic cement.

Formula

This product consists of finely ground portland cement clinker mixed with a small amount of calcium sulfate.*

Supplier/Manufacturer

Illinois Cement Company
1601 Rockwell Road
LaSalle, Illinois 61301

Emergency Contact Information

Eugene Hodges, 815-224-2112

*Trace Elements

Portland cement is made from materials mined from the earth and is processed using energy provided by fuels; and therefore may contain trace amounts of naturally occurring materials which might be detected during chemical analysis. For example: Portland cement may contain up to 0.75% insoluble residue, of which <0.1% may be free crystalline silica. Other trace constituents may include potassium and sodium sulfate compounds, chromium compounds, and nickel compounds.

Section 2 - COMPONENTS

<u>Hazardous Substances</u>	<u>OSHA PEL (8-Hour TWA)</u>	<u>ACGIH TLV-TWA (1995 - 1996)</u>	<u>NIOSH REL (8-Hour TWA)</u>
Portland Cement Clinker (CAS#65997-15-1) Nominal 95% by weight	50 million particles/ft ³	10mg total dust/m ³	
Calcium sulfate (CAS#7778-18-9) [Gypsum (CAS#13397-24-5)] Nominal 5% by weight	5mg respirable dust/m ³ 10mg total dust/m ³	10mg total dust/m ³	
Calcium Oxide (CAS#1306-78-8) (Free Lime) < 4% by weight	5mg/m ³	2mg/m ³	
Magnesium Oxide (CAS #1309-48-4) < 5% by weight	15mg total dust/m ³	10mg total dust/m ³	

Section 3 - HAZARDS IDENTIFICATION/TOXICOLOGICAL INFORMATION

Emergency Overview:

Portland cement is a light gray powder that poses little immediate hazard. A single short term exposure to the dry powder is not likely to cause serious harm. However, exposure of sufficient duration to wet portland cement can cause serious, potentially irreversible tissue (including skin or eye) destruction in the form of chemical (caustic) burns, including third degree burns. The same type of tissue destruction can occur if wet or moist areas of the body are exposed for sufficient duration to dry portland cement.

Potential Health Effects:

Potential effects resulting from eye contact:

Exposure to airborne dust may cause immediate or delayed irritation or inflammation.

Eye contact by larger amounts of dry powder or splashes of wet portland cement may cause effects ranging from moderate eye irritation to chemical burns and blindness. Such exposures require immediate first aid (see Section 4) and medical attention to prevent significant damage to the eye.

Potential effects resulting from skin contact:

Discomfort or pain cannot be relied upon to alert a person to a hazardous skin exposure. Consequently, the only effective means of avoiding skin injury or illness involves minimizing or avoiding skin contact, particularly contact with wet cement. Persons exposed to wet cement may not feel discomfort until hours after the exposure has ended and significant injury has occurred.

Exposure to dry portland cement may cause drying of the skin with consequent mild irritation or more significant effects attributable to aggravation of other conditions. Dry portland cement contacting wet skin or exposure to moist or wet portland cement may cause more severe skin effects including thickening, cracking or fissuring of the skin. Prolonged exposure can cause severe skin damage in the form of (caustic) chemical burns.

Some individuals may exhibit an allergic response upon exposure to portland cement, possibly due to trace amounts of chromium.

The response may appear in a variety of forms ranging from a mild rash to severe skin ulcers. Persons already sensitized may react to their first contact with the product. Other persons may first experience this effect after years of contact with hydraulic cement products.

Potential effects resulting from inhalation:

Portland cement may contain trace amounts (<0.1%) of free crystalline silica. Prolonged exposure to respirable free crystalline silica may aggravate other lung conditions. It also may cause delayed lung injury including silicosis, a disabling and potentially fatal lung disease.

Exposure to portland cement may cause irritation to the moist mucous membranes of the nose, throat, and upper respiratory system. It may also leave unpleasant deposits in the nose.

Potential effects resulting from ingestion:

Although small quantities of dust are not known to be harmful, ill effects are possible if larger quantities are consumed. Portland cement should not be eaten under any circumstances.

Carcinogenic Potential:

Portland cement is not listed as a carcinogen by IARC, NTP, or OSHA. It does, however, contain trace amounts (<0.1%) of substances listed as carcinogens by some of these organizations. Crystalline silica is now classified by IARC as a known human carcinogen (Group 1). NTP has characterized respirable crystalline silica as "reasonably anticipated to be (a) carcinogen".

Medical Conditions Which May Be Aggravated By Inhalation or Dermal Exposure:

- Pre-existing upper respiratory and lung diseases.
- Unusual (hyper) sensitivity to hexavalent chromium (chromium +6) salts.

Section 4 - FIRST AID

Eyes

Immediately flush eyes thoroughly with water. Continue flushing eyes for at least 15 minutes, including under lids, to remove all particles. Call physician immediately.

Skin

Wash skin with cool water and pH-neutral soap or a mild detergent intended for use on skin. Seek medical treatment in all cases of prolonged exposure to wet cement, cement mixtures, liquids from fresh cement products, or prolonged wet skin exposures to dry cement.

Inhalation of Airborne Dust

Remove to fresh air. Seek medical help if coughing and other symptoms do not subside. (Inhalation of gross amounts of portland cement requires immediate medical attention.)

Ingestion

Do not induce vomiting. If conscious, have the victim drink plenty of water and call a physician immediately.

Section 5 - FIRE & EXPLOSION DATA

Flash Point	None
Lower Explosive Limit	None
Upper Explosive Limit	None
Auto Ignition Temperature	Not combustible
Extinguishing Media	Not combustible
Special Fire Fighting Procedures	None (Although portland cement poses no fire-related hazards, a self-contained breathing apparatus is recommended to limit exposure to combustion products when fighting any fire.)
Hazardous Combustion Products	None
Unusual Fire and Explosion Hazards	None

Section 6 - ACCIDENTAL RELEASE MEASURES

Collect dry material using a scoop. Avoid actions that cause dust to become airborne. Avoid inhalation of dust and contact with skin. Wear appropriate personal protective equipment as described in Section 8.

Scrape up wet material and place in an appropriate container. Allow the material to "dry" before disposal. Do not attempt to wash portland cement down drains.

Dispose of waste material according to local, state and federal regulations.

Section 7 - HANDLING AND STORAGE

Keep portland cement dry until used. Normal temperature and pressure do not affect the materials.

Promptly remove dusty clothing or clothing which is wet with cement fluids and launder before reuse. Wash thoroughly after exposure to dust or wet cement mixture or fluids.

Section 8 - EXPOSURE CONTROL/PERSONAL PROTECTION**Skin Protection**

Prevention is essential to avoiding potentially severe skin injury. Avoid contact with unhardened (wet) portland cement products. If contact occurs, promptly wash affected area with soap and water. Where prolonged exposure to unhardened portland cement products might occur, wear impervious clothing and gloves and boots to eliminate skin contact.

Respiratory Protection

Avoid actions that cause dust to become airborne. Use local or general ventilation to control exposures below applicable exposure limits. Use NIOSH/MSHA-approved respirators in poorly ventilated areas when dust causes discomfort or irritation, or where there is an applicable exposure limit (Advisory: Respirators and filters purchased after July 10, 1998 must be certified under 42 CFR 84).

Ventilation

Use local exhaust or general dilution ventilation to control exposure below applicable limits.

Eye Protection

When engaged in activities where cement dust or wet cement or concrete could contact the eye, wear safety glasses with side shields or goggles. In extremely dusty environments and unpredictable environments, wear unvented or indirectly vented goggles to avoid eye irritation or injury. Contact lenses should not be worn when working with portland cement or fresh cement products.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Gray or White powder
Odor	No distinct odor
Physical state	Solid (powder)
pH (in water)(ASTM D 1293-95)	12 to 13
Solubility in water	Slightly soluble (0.1 to 1.0%)
Vapor pressure	Not applicable
Vapor density	Not applicable
Boiling point	Not applicable (i.e. > 1000°C)
Melting point	Not applicable
Specific gravity (H ₂ O = 1.0)	3.15
Evaporation rate	Not applicable

Section 10 - STABILITY AND REACTIVITY**Stability**

Stable

Conditions To Avoid

Unintentional contact with water.

Incompatibility

Wet portland cement is alkaline. As such it is incompatible with acids, ammonium salts and aluminum metal.

Hazardous Decomposition

Will not spontaneously occur. Adding water results in hydration and produces (caustic) calcium hydroxide.

Hazardous Polymerization

Will not occur.

Section 11 - TOXICOLOGICAL INFORMATION - See Section 3**Section 12 - ECOLOGICAL INFORMATION****Ecotoxicity**

No recognized unusual toxicity to plants or animals.

Relevant Physical and Chemical Properties

(See Sections 9 and 10).

Section 13 - DISPOSAL

Dispose of waste material, including bags, according to local, state, and federal regulations.

Section 14 - TRANSPORTATION DATA**Hazardous Materials Description/Proper Shipping Name**

Portland cement is not hazardous under U.S. Department of Transportation (DOT) regulations.

Section 15 - OTHER REGULATORY INFORMATION

Status Under USDOL-OSHA Hazard Communication Rule 29 CFR 1910.1200

Portland cement is considered a "hazardous chemical" under this regulation, and should be part of any hazard communication program.

Status Under CERCLA/Superfund 40 CFR 117 and 302(v)

Not listed.

Hazard Category Under SARA (Title III) Section 311 and 312

Portland cement qualifies as a "hazardous substance" with delayed health effects.

Status Under SARA (Title III) Section 313

Not subject to reporting requirements under Section 313.

Status Under TSCA (as of May 1997)

Some substances in portland cement are on the TSCA inventory list.

Status Under the Federal Hazardous Substances Act

Portland cement is a "hazardous substance" subject to statutes promulgated under the subject act.

Status Under WHMIS

Portland cement is considered to be a hazardous material under the Hazardous Products Act as defined by the Controlled Products regulations (class E - corrosive material) and is therefore subject to the labeling and MSDS requirements of the workplace hazardous materials information system (WHMIS).

Section 16 - OTHER INFORMATION

Prepared By

Illinois Cement Company
1601 Rockwell Road
LaSalle, Illinois 61301

Revision Date

June 2003

Other Important Information

Portland cement should only be used by knowledgeable persons. Inexperienced product users must obtain proper training before using this product. A key to using the product safely requires the user to recognize that portland cement chemically reacts with water, and that some of the intermediate products of this reaction (that is, those present while a portland cement product is "setting") pose a far more severe hazard than does portland cement itself.

While the information provided in this material safety data sheet is believed to provide a useful summary of the hazards of portland cement as it is commonly used, the sheet cannot, and does not, anticipate and provide all of the information that might be needed in every situation. In particular, the data furnished in this sheet does not address hazards that may be posed by other materials mixed with portland cement products. Users therefore, should review other applicable material safety data sheets before working with this portland cement or working on portland cement products, for example, portland cement concrete. ILLINOIS CEMENT COMPANY MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION PROVIDED BY ILLINOIS CEMENT COMPANY, EXCEPT THAT THE PRODUCT SHALL CONFORM TO CONTRACTED SPECIFICATIONS. THE INFORMATION PROVIDED HEREIN WAS BELIEVED BY ILLINOIS CEMENT COMPANY TO BE ACCURATE AT THE TIME OF PREPARATION OR PREPARED FROM SOURCES BELIEVED TO BE RELIABLE, BUT IT IS THE RESPONSIBILITY OF THE USER TO INVESTIGATE AND UNDERSTAND OTHER PERTINENT SOURCES OF INFORMATION, TO COMPLY WITH ALL LAWS AND PROCEDURES APPLICABLE TO THE SAFE HANDLING AND USE OF PRODUCT, AND TO DETERMINE THE SUITABILITY OF THE PRODUCT FOR ITS INTENDED USE. BUYER'S EXCLUSIVE REMEDY SHALL BE FOR DAMAGES AND NO CLAIM OF ANY KIND, WHETHER AS TO PRODUCT DELIVERED OR FOR NON-DELIVERY OF PRODUCT, AND WHETHER BASED ON CONTRACT, BREACH OF WARRANTY, NEGLIGENCE, OR OTHERWISE SHALL BE GREATER IN AMOUNT THAN THE PURCHASE PRICE OF THE QUANTITY OF PRODUCT IN RESPECT OF WHICH DAMAGES ARE CLAIMED. IN NO EVENT SHALL ILLINOIS CEMENT COMPANY BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, WHETHER BUYER'S CLAIM IS BASED ON CONTRACT, BREACH OF WARRANTY, NEGLIGENCE OR OTHERWISE.



Material Safety Data Sheet

IRON-SILICON FINES

SECTION I – PRODUCT IDENTIFICATION

Trade Name:	IRON SILICON FINES
Chemical Formula:	N/A
Formula:	Mixture
Manufacturer's Name:	Miller and Company LLC
Address:	9700 W. Higgins Road Suite 1000 Rosemont, IL 60018
Phone:	847-696-2400
Emergency Phone:	Chemtrec 800-262-8200
Prepared by:	H. F. Linebarger
Date:	June 11, 2010

SECTION II – COMPOSITION

<i>Component</i>	<i>% by Weight</i>	<i>CAS No.</i>	<i>OSHA PEL¹ (mg/m³)</i>	<i>ACGIH TLV²</i>
Silicon	12 to 22	7440-21-3	10 5*	10
Iron	Balance (35 to 75)	7439-89-6	N/A	N/A
Portland Cement	10 to 15	65997-15-1	15 5*	10*
Carbon	3 to 6	64743-05-1	15 5*	10 3*
Manganese	0.1 to 3.0	7439-96-5	5	0.2
Alumina	0.1 to 2.0	1344-28-1	15 5*	2
Aluminum	0.1 to 1.2	7429-90-5	N/A	10
Nickel	0.05 to 0.20	7440-02-0	1	1.5*

1 Occupational Safety and Health Final Rule Permissible Exposure Limits
 2 American Conference of Governmental Industrial Hygienist Threshold Limit Values
 * Respirable fraction determined using industrial hygiene methods

SECTION III – PHYSICAL DATA

Appearance: Gray to Black
Size: Grain to Powder
Odor: None
Boiling Point: N/A
Melting Point: N/A
Vapor Pressure: N/A
Stability: Stable
Incompatible Materials: None
Neutralizing Chemicals: N/A

SECTION IV – HAZARDS IDENTIFICATION

This product does not represent a hazard to health, safety, or environment when handled and stored as advised. (Section VII).

SECTION V – HEALTH HAZARDS

Prolonged exposure of the skin to material can cause irritation, dermatitis, or chemical burns.

Airborne dust may cause irritation of the eyes. Inhalation of the dust may cause throat or lung irritation.

The product contains crystalline silica. Prolonged or repeated inhalation of crystalline silica can cause silicosis, a serious disabling and fatal lung disease.

Warning: Harmful if inhaled or ingested. This product contains about 0.05 – 0.2% nickel in the metallic state. The International Agency for research on Cancer has determined that “nickel and certain nickel compounds” are “probably carcinogenic to humans” but the nickel compounds responsible for the effect have not been specified. The American Industrial Hygiene Association has also concluded that there is no epidemiological evidence of increased risk of respiratory cancer in the refining of oxide nickel ores or “in any other specifically nickel occupational exposures.”

SECTION VI – FIRE AND EXPLOSION HAZARDS

In this form there are no unusual fire or explosion hazards.

Dust from the product suspended in air can cause dust deflagrations. Avoiding sparks or ignition in areas of accumulated dust or high levels of airborne dust reduce the possibility.

Class D fire. Use dry powder, dry sand, or CO₂ to smother fire. Fire may be isolated and allowed to burn itself out.

SECTION VII – PRECAUTIONS FOR SAFE HANDLING AND USE

Material should be kept away from strong acids or bases.

Avoid actions that may generate dust or cause an accumulation of dust.

The material may be landfilled in accordance with federal, state, and local regulations.

Material is best stored in a clean dry area.

In case of spill, shoveling, sweeping, or vacuuming material is recommended.

SECTION VIII – EXPOSURE CONTROL / PERSONAL PROTECTION

Protective gloves are recommended.

Eye protection, eye flushing facilities are recommended.

Wear an appropriate respirator in accordance with 29CFR 1910.134 or CSA Standard Z94.4 – M1982, for dust exposure that may exceed exposure limits. If adequate ventilation is not possible, then a self contained breathing apparatus or supplied respirator is recommended.

SECTION IX – TRANSPORT INFORMATION

Hazard Class: Not Regulated
I.D. Number and Initials: Not Regulated
Packing Group: Not Regulated
Label(s): Not Regulated

SECTION X – ECOLOGICAL INFORMATION

Material is not classified as dangerous for the environment.

SECTION XI – REGULATOR INFORMATION

OSHA (Occupational Safety and Health Administration)
Hazardous by definition of hazardous communication standard (29CFR 1910.1200)

TSCA (Toxic Substance Control Act)
Components of this product are listed in the TSCA Inventory

CERCLA (Comprehensive Response Compensation and Liability Act)
Not listed under 40CFR 302.4

RCRA (Resource Conservation / Recovery Act)
Not listed as a hazardous waste

SARA TITLE III (Superfund Amendments and Reauthorization Act)
311/312 Hazard Categories
Immediate health, Delayed health, Fire
313. Reportable Ingredients:
None

SECTION XII – OTHER INFORMATION

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