

Safety Data Sheet acc. to OSHA HCS

Date of issue: 03/24/2025

Reviewed on 03/24/2025

1 Identification

- **Product identifier**
- **Trade name:** SPARFIRE LC 32 FF ALM
- **Other means of identification**
- **Article number:** 697D
- **Restrictions** Restricted to industrial or professional use.
- **Application of the substance / the mixture**
Unshaped refractory material
Refractory Material
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
HarbisonWalker International
2000 Park Lane Drive, Suite 400
Pittsburgh
Pennsylvania
15275
USA
- **Information department:**
SDS.information@calderys.com
+33 1 49 55 38 57
- **Emergency telephone number:**
CHEMTREC EMERGENCY
1-800-424-9300
US/CAN ONLY

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Carcinogenicity 1A

H350 May cause cancer. Route of exposure:
Inhalation.

Specific target organ toxicity (repeated exposure) 1H372 Causes damage to the lung through
prolonged or repeated exposure. Route of
exposure: Inhalation.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms**



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
Quartz (SiO₂)

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silicon carbide

barium sulphate, natural

Hazard statements

H350 May cause cancer. Route of exposure: Inhalation.

H372 Causes damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.

Precautionary statements

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P314 Get medical advice/attention if you feel unwell.

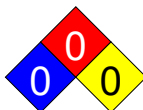
P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Information pertaining to particular dangers for man and environment:

Classification system:

NFPA ratings (scale 0 - 4)



Health = 0

Fire = 0

Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = *0

Fire = 0

Reactivity = 0

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Classification according to (d)(1)(ii) of § 1910.1200

The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.

Hazards not otherwise classified

There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

3 Composition/information on ingredients

Chemical characterization: Mixtures

Description: Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

14808-60-7	Quartz (SiO ₂)	10–30%
1344-28-1	aluminium oxide	10–30%

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65997-16-2	Alumina cement	≥5- <10%
409-21-2	silicon carbide	1-5%
7631-86-9	Silica, amorphous	1-5%
7727-43-7	barium sulphate, natural	1-5%
7789-75-5	calcium fluoride	0.5-1.5%

Additional information:

The product may contain, in some of the raw materials, crystalline silica as a trace element (quartz, cristobalite, trydimite). Process of the product may generate respirable crystalline silica. Long term exposure to crystalline silica can cause lung injury (silicosis). IARC and NTP have determined that crystalline silica inhaled from occupational exposure sources can cause cancer in humans. Risk of injury is dependent on the duration and level of exposure.

The exact chemical identity and/or percentage (concentration) of the composition has been withheld as a trade secret.

4 First-aid measures

Description of first aid measures

General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

After inhalation: Supply fresh air; consult doctor in case of complaints.

After skin contact: Generally the product does not irritate the skin.

After eye contact: Rinse opened eye for several minutes under running water.

After swallowing: If symptoms persist consult doctor.

Most important symptoms and effects, both acute and delayed

Breathing crystalline silica can cause lung disease, including silicosis and lung cancer.

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents: Use fire fighting measures that suit the environment.

Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

Advice for firefighters

Protective equipment: Mouth respiratory protective device.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

Environmental precautions: Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

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· Protective Action Criteria for Chemicals
· PAC-1:

14808-60-7	Quartz (SiO ₂)	0.075 mg/m ³
1344-28-1	aluminium oxide	15 mg/m ³
409-21-2	silicon carbide	45 mg/m ³
7631-86-9	Silica, amorphous	18 mg/m ³
7727-43-7	barium sulphate, natural	15 mg/m ³
7789-75-5	calcium fluoride	15 mg/m ³
1309-48-4	magnesium oxide	30 mg/m ³
14808-60-7	Respirable Fraction of Crystalline silica.	0.075 mg/m ³

· PAC-2:

14808-60-7	Quartz (SiO ₂)	8.3 mg/m ³
1344-28-1	aluminium oxide	41 ppm
409-21-2	silicon carbide	500 mg/m ³
7631-86-9	Silica, amorphous	200 ppm
7727-43-7	barium sulphate, natural	170 mg/m ³
7789-75-5	calcium fluoride	170 mg/m ³
1309-48-4	magnesium oxide	120 mg/m ³
14808-60-7	Respirable Fraction of Crystalline silica.	8.3 mg/m ³

· PAC-3:

14808-60-7	Quartz (SiO ₂)	50 mg/m ³
1344-28-1	aluminium oxide	240 ppm
409-21-2	silicon carbide	3,000 mg/m ³
7631-86-9	Silica, amorphous	1200 ppm
7727-43-7	barium sulphate, natural	990 mg/m ³
7789-75-5	calcium fluoride	1,000 mg/m ³
1309-48-4	magnesium oxide	730 mg/m ³
14808-60-7	Respirable Fraction of Crystalline silica.	50 mg/m ³

· Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

This product contains quartz, cristobalite, and/or tridymite which may become airborne without a visible cloud. Avoid breathing dust. Avoid creating dusty conditions.

· Information about protection against explosions and fires:

Keep respiratory protective device available.

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- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
 The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
 At this time, the other constituents have no known exposure limits.

14808-60-7 Quartz (SiO₂)

PEL	Long-term value: 0.05* mg/m ³ *resp. dust; 30mg/m ³ /%SiO ₂ +2
REL	Long-term value: 0.05* mg/m ³ *respirable dust; See Pocket Guide App. A
TLV	Long-term value: 0.025* mg/m ³ *respirable particulate matter, A2

1344-28-1 aluminium oxide

PEL	Long-term value: 15*; 5** mg/m ³ *Total dust; ** Respirable fraction
REL	Long-term value: 10* 5** mg/m ³ as Al*Total dust**Respirable/pyro powd./welding f.
TLV	Long-term value: 1* mg/m ³ as Al; *as respirable fraction, A4

409-21-2 silicon carbide

PEL	Long-term value: 15* 5** mg/m ³ fibrous dust: *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV	Long-term value: 10* 3** mg/m ³ fibrous dust:0.1 f/cc A2, nonfibrous:*inh., **resp.

7727-43-7 barium sulphate, natural

PEL	Long-term value: 15* 5** mg/m ³ *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m ³ *total dust **respirable fraction
TLV	Long-term value: 5* mg/m ³ *inhalable fraction; E

7789-75-5 calcium fluoride

PEL	Long-term value: 2.5 mg/m ³ as F
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REL Long-term value: 2.5 mg/m³
as F

TLV Long-term value: 2.5 mg/m³
as F, A4; BEI

· **Regulatory information**

PEL: Guide to Occupational Exposure Values (OSHA PELs)

REL: Guide to Occupational Exposure Values (NIOSH RELs)

TLV: Guide to Occupational Exposure Values (TLV)

· **Ingredients with biological limit values:**

7789-75-5 calcium fluoride

BEI 2 mg/L
Medium: urine
Time: prior to shift
Parameter: Fluoride (background, nonspecific)

3 mg/L
Medium: urine
Time: end of shift
Parameter: Fluoride (background, nonspecific)

· **Regulatory information** BEI: Guide to Occupational Exposure Values (BEI)

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Appropriate engineering controls** No further data; see section 7.

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Wash hands before breaks and at the end of work.

Store protective clothing separately.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**

Protective gloves



The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· Eye protection:


Safety glasses

· Body protection:


Standard industrial clothing is sufficient for room temperature installations (ISO 6942). Do not shake out work clothes. Do not remove dust with compressed air.

9 Physical and chemical properties

· Information on basic physical and chemical properties
· General Information

· Physical state	Solid
· Color:	Grey
· Odor:	uncharacteristic
· Odor threshold:	Not determined.
· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	Undetermined.
· Flammability:	Not determined.
· Explosion limits:	
· Lower:	Not determined.
· Upper:	Not determined.
· Flash point:	Not applicable.
· Decomposition temperature:	Not determined.
· pH-value:	Not applicable.
· Viscosity:	
· Kinematic:	Not applicable.
· Dynamic:	Not applicable.
· Solubility in / Miscibility with	
· Water:	Insoluble.
· Partition coefficient (n-octanol/water):	Not determined.
· Vapor pressure:	Not applicable.
· Vapor pressure:	
· Density:	Not determined.
· Relative density	Not determined.
· Vapor density	Not applicable.
· Particle characteristics	Not determined.

· Other information
· Appearance:

 · **Form:** Solid in various forms

· Important information on protection of health and environment, and on safety.

 · **Ignition temperature:** Product is not selfigniting.

 · **Danger of explosion:** Product does not present an explosion hazard.

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- **Solvent content:**
- **VOC content:** 0.00 %
- **Solids content:** 100.0 %
- **Change in condition**
- **Evaporation rate** Not applicable.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

14808-60-7 Quartz (SiO₂)

Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

- **Interactive effects** No interactive effects between components are known.

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

14808-60-7	Quartz (SiO ₂)	1
409-21-2	silicon carbide	2A
7631-86-9	Silica, amorphous	3
7789-75-5	calcium fluoride	3

- **NTP (National Toxicology Program)**

14808-60-7	Quartz (SiO ₂)	K
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- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

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- **Alternative sources for toxicological information**
 No non-standard sources for toxicological information where used.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects**
- **Additional ecological information:**
- **General notes:**
 Water hazard class 1 (Self-assessment): slightly hazardous for water
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
 Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|-----------------|
| <ul style="list-style-type: none"> · UN-Number · DOT, IMDG, IATA | not regulated |
| <ul style="list-style-type: none"> · UN proper shipping name · DOT, IMDG, IATA | not regulated |
| <ul style="list-style-type: none"> · Transport hazard class(es) · DOT, ADN, IMDG, IATA · Class | not regulated |
| <ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA | not regulated |
| <ul style="list-style-type: none"> · Environmental hazards: | Not applicable. |
| <ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| <ul style="list-style-type: none"> · Special precautions for user | Not applicable. |

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 · **UN "Model Regulation":** not regulated

15 Regulatory information

 · **Safety, health and environmental regulations/legislation specific for the substance or mixture**

 · **Sara**

 · **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

 · **Section 313 (Specific toxic chemical listings):**

1344-28-1 aluminium oxide

7727-43-7 barium sulphate, natural

 · **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

 · **Hazardous Air Pollutants**

None of the ingredients is listed.

 · **Proposition 65**

 · **Chemicals known to cause cancer:**

 14808-60-7 Quartz (SiO₂)

14808-60-7 Respirable Fraction of Crystalline silica.

 · **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

 · **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

 · **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

 · **Carcinogenic categories**

 · **EPA (Environmental Protection Agency)**

7727-43-7 barium sulphate, natural

D, CBD(inh), NL(oral)

 · **TLV (Threshold Limit Value)**

 14808-60-7 Quartz (SiO₂)

A2

1344-28-1 aluminium oxide

A4

409-21-2 silicon carbide

A2

7789-75-5 calcium fluoride

A4

1309-48-4 magnesium oxide

A4

14808-60-7 Respirable Fraction of Crystalline silica.

A2

 · **NIOSH-Ca (National Institute for Occupational Safety and Health)**

 14808-60-7 Quartz (SiO₂)

14808-60-7 Respirable Fraction of Crystalline silica.

 · **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

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· **Hazard pictograms**



GHS08

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

Quartz (SiO₂)

silicon carbide

barium sulphate, natural

· **Hazard statements**

H350 May cause cancer. Route of exposure: Inhalation.

H372 Causes damage to the lung through prolonged or repeated exposure. Route of exposure: Inhalation.

· **Precautionary statements**

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P314 Get medical advice/attention if you feel unwell.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge on creation date. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Contact:** sds.information@calderys.com

· **Date of previous version** 07/02/2024

· **Version number of previous version:** 31

· **Date of preparation** 03/24/2025

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

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ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

BEL: Biological Exposure Limit

Carcinogenicity 1A: Carcinogenicity – Category 1A

Specific target organ toxicity (repeated exposure) 1: Specific target organ toxicity (repeated exposure) – Category 1

· *** Data compared to the previous version altered.**

US