



Name of the product

Fusite®

Revision Date: March 2024 Version: 2.0/EN

SECTION 1: Identification

1.1. Product identifier

Trade name

Fusite®

▼ Other names / Synonyms

Ferrodolime®, Ferro QL, Ferro/Dolo QL

1.2. Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses of the substance or mixture

Used in refractory materials, shotcrete or gunitite mixtures .
Restricted to professional users.

Uses advised against

None known.

1.3. Details of the supplier of the safety data sheet

Company and address

Carmeuse Americas

11 Stanwix Street, 21st Floor
PA 15222 Pittsburgh
USA

Phone: (412) 995-5500

Fax: (412) 995-5594

<https://www.carmeuse.com/>

Contact person

Carmeuse Americas

Website: <https://www.carmeuse.com/na-en>

1.4. Emergency telephone number

Infotrac: (800) 535-5053 (24hr/7days a week)

See also section 4 "First aid measures".

SECTION 2: Hazard(s) identification

OSHA/HCS status

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

2.1. Classification of the substance or mixture

Skin Irrit. 2; H315, Causes skin irritation.

Eye Dam. 1; H318, Causes serious eye damage.

STOT SE 3; H335, May cause respiratory irritation.

Carc. 1A; H350i, May cause cancer by inhalation.

STOT RE 1; H372, Causes damage to organs through prolonged or repeated exposure.

2.2. Label elements

Hazard pictogram(s)



Signal word

Danger

Hazard statement(s)

Causes skin irritation. (H315)

Causes serious eye damage. (H318)

May cause respiratory irritation. (H335)

May cause cancer by inhalation. (H350i)

Causes damage to organs through prolonged or repeated exposure. (H372)



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Precautionary statement(s)

General

-

Prevention

- Obtain special instructions before use. (P201)
- Do not breathe dust. (P260)
- Wash hands and exposed skin thoroughly after handling. (P264)
- Wear eye protection/protective gloves. (P280)

Response

- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)
- IF exposed or concerned: Get medical advice/attention. (P308+P313)
- Immediately call a POISON CENTER/doctor. (P310)
- Get medical advice/attention if you feel unwell. (P314)

Storage

- Store in a well-ventilated place. Keep container tightly closed. (P403+P233)

Disposal

- Dispose of contents/container in accordance with local regulation (P501)

Additional labelling

- Restricted to professional users.

2.3. Other hazards

Additional warnings

- This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

SECTION 3: Composition/Information on Ingredients

3.1. Substances

- Not applicable. This product is a mixture.

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
Calcium oxide	CAS No.: 1305-78-8	>55%	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335	
Magnesium oxide	CAS No.: 1309-48-4	<34%	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	
Diiron trioxide	CAS No.: 1309-37-1	<12%	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	
Silica-crystalline quartz	CAS No.: 14808-60-7	0.1-2.0%	Carc. 1A, H350i STOT RE 1, H372	

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

- Crystalline Silica is reported as total silica and not just the respirable fraction. There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

SECTION 4: First-aid measures



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4.1. Description of first aid measures

General information

If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid).

Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners.

If skin irritation occurs: Get medical advice/attention.

Eye contact

If in eyes: Flush eyes with plenty of water or salt water (20-30 °C) for at least 30 minutes and continue until irritation stops. Remove contact lenses. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately and continue flushing during transport.

Ingestion

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

Burns

Not applicable.

4.2. Most important symptoms and effects, both acute and delayed

The product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

IF exposed or concerned:

Get immediate medical advice/attention.

Information to medics

Bring this safety data sheet or the label from this product.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Some metal oxides

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Help Line on 1-800-222-1222 (24/7) in order to obtain further advice.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid direct contact with spilled substances.

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.



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6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

6.3. Methods and material for containment and cleaning up

Limit spillage, sweep up and shovel into appropriate containers for disposal. Store in suitable, closed containers for disposal.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid direct contact with the product.

Avoid contact during pregnancy and while nursing.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

No special conditions required.

Recommended storage material

Always store in containers of the same material as the original container.

Storage temperature

No specific requirements

Incompatible materials

Water

Strong acids

reactive fluoridated compounds

reactive brominated compounds

reactive powdered metals

Organic acid anhydrides

interhalogen compounds

aluminum powder

reactive phosphorous compounds

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Calcium oxide

Long term exposure limit (OSHA Table Z-1) (mg/m³): 5

Long term exposure limit (ACGIH TLV) (mg/m³): 2

Long term exposure limit (NIOSH REL) (mg/m³): 2

Magnesium oxide

Long term exposure limit (ACGIH TLV) (mg/m³): 10 (Inhalable)

Long term exposure limit (NIOSH REL) (mg/m³): 10

Diiron trioxide

Long term exposure limit (OSHA Table Z-1) (mg/m³): 10

Long term exposure limit (ACGIH TLV) (mg/m³): 5 (resp.)

Long term exposure limit (NIOSH REL) (mg/m³): 5 (dust and fume)

Silica-crystalline quartz

Long term exposure limit (ACGIH TLV) (mg/m³): 0.025 (resp.) for α-quartz and cristobalite

Long term exposure limit (NIOSH REL) (mg/m³): Potential occupational carcinogen; 0.05



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Part 1910 - Occupational Safety and Health Standards (29 CFR 1910.1000 TABLE Z-1 - Limits for Air Contaminants)

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

Do not recirculate outlet air that contain the substances.

Apply standard precautions during use of the product. Avoid inhalation of gas or dust.

Airborne gas and dust concentrations must be kept at a minimum and below current limit values (see above).

Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure emergency eyewash and showers are clearly marked.

Ensure that eyewash stations and safety showers are located within easy reach.

Hygiene measures

Take off contaminated clothing and wash it before reuse.

Measures to avoid environmental exposure

- All ventilation systems should be filtered before discharge to atmosphere.
- Avoid releasing to the environment.
- Contain the spillage. Any large spillage into watercourses must be alerted to the regulatory authority.

Individual protection measures, such as personal protective equipment

Generally

Appropriate footwear, additional skin & eye protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Equipment

Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Wear an appropriate NIOSH approved respirator if concentration levels exceed the safe exposure limits.

Skin protection

Since calcium oxide is classified as irritating to skin, dermal exposure has to be minimised as far as technically feasible. Protective standard working clothes fully covering skin, full length trousers, long sleeved overalls, with close fittings at openings and shoes resistant to caustics and avoiding dust penetration are required to be worn.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products. Considering the parameters specified by the glove manufacturer. The time to breakthrough for any glove material may be different per glove manufacturer. In the case of mixtures, the

protection time of the gloves cannot be accurately estimated.

Eye protection

Do not wear contact lenses. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn: chemical splash goggles and/or face shield.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties



PRODUCT SAFETY DATA SHEET

Conforms to OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200 / revised 2012)

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Physical state

Solid

Colour

Dark gray

Odour

None, Hydrocarbon

Odour threshold (ppm)

Not applicable

pH

-

pH in solution

12.5 at 25°C (%)

Density (g/cm³)

Testing not relevant or not possible due to the nature of the product.

-

Relative density

2.0-2.8

Kinematic viscosity

Not applicable

Particle characteristics

Particle size: Variable

Phase changes

Melting point (°F)

4658

Melting point (°C)

2570

Boiling point (°F)

2850

Boiling point (°C)

5162

Vapour pressure

Not applicable

Relative vapour density

Not applicable

Decomposition temperature (°F)

Not applicable

Evaporation rate (n-butylacetate = 100)

Not applicable

Data on fire and explosion hazards

Flash point (°F)

No data available

Flammability (°F)

No data available

Auto-ignition temperature (°F)

No data available

Explosion limits (% v/v)

Not applicable

Solubility

Solubility in water

Negligible in water but reacts with water to produce Ca(OH)₂ and heat Soluble in acids, glycerin, and sugar solutions

n-octanol/water coefficient (LogK_{ow})

Testing not relevant or not possible due to the nature of the product.

Solubility in fat (g/L)

Testing not relevant or not possible due to the nature of the product.



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9.2. Other information

Sensitivity to shock

No

Evaporation rate (n-butylacetate = 100)

Not applicable

Other physical and chemical parameters

No data available.

Oxidizing properties

Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

Water

Strong acids

reactive fluoridated compounds

reactive brominated compounds

reactive powdered metals

Organic acid anhydrides

interhalogen compounds

aluminum powder

reactive phosphorous compounds

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Product/substance	Calcium oxide
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	3059 mg/kg

Product/substance	Silica-crystalline quartz
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	22500 mg/kg

Skin corrosion/irritation

Causes skin irritation.

Serious eye damage/irritation

Causes serious eye damage.

Respiratory sensitisation

Based on available data, the classification criteria are not met.

Skin sensitisation

Based on available data, the classification criteria are not met.



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Germ cell mutagenicity

Based on available data, the classification criteria are not met.

Carcinogenicity

May cause cancer by inhalation.

Reproductive toxicity

Based on available data, the classification criteria are not met.

STOT-single exposure

May cause respiratory irritation.

STOT-repeated exposure

Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard

Based on available data, the classification criteria are not met.

Long term effects

Carcinogenic effects: This product contains substances considered or proven to be carcinogenic. The carcinogenic effects may be triggered subsequent to exposure through inhalation, skin contact or ingestion.

The product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.

Other information

Diiron trioxide has been classified by IARC as a group 3 carcinogen.

Silica-crystalline quartz has been classified by IARC as a group 1 carcinogen.

SECTION 12: Ecological information

12.1. Toxicity

No data available.

12.2. Persistence and degradability

Based on available data, the classification criteria are not met.

12.3. Bioaccumulative potential

Based on available data, the classification criteria are not met.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. Other adverse effects

None known.

SECTION 13: Disposal considerations

RCRA Hazardous waste ("P" and "U" list) (40 CFR 261)

None of the components are listed

Specific labelling

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

	14.1	14.2	14.3	14.4	14.5	Other
	—UN / ID UN proper shipping name		Hazard class(es)	PG*	Env**	information:
DOT	-	-	-	-	-	-
IMDG	—	-	-	-	-	-
IATA	-	-	-	-	-	-

* Packing group



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** Environmental hazards

Additional information

Not dangerous goods according to DOT, IATA and IMDG.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No data available.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2. U.S. Federal regulations

TSCA (the non-confidential portion)

Calcium oxide is listed

Magnesium oxide is listed

Diiron trioxide is listed

Silica-crystalline quartz is listed

Clean Air Act

None of the components are listed

EPCRA Section 302

None of the components are listed

EPCRA Section 304

None of the components are listed

EPCRA section 313

None of the components are listed

CERCLA

None of the components are listed

State regulations

California / Prop. 65

None of the components are listed

Massachusetts / Right To Know Act

Calcium oxide is listed

Magnesium oxide is listed

Diiron trioxide is listed

Silica-crystalline quartz is listed

New Jersey / Right To Know Act

Calcium oxide / Substance number: 0325

Calcium oxide is on the Special Health Hazard Substance List

Magnesium oxide / Substance number: 1144

Diiron trioxide / Substance number: 1036

Silica-crystalline quartz / Substance number: 1660

Silica-crystalline quartz is on the Special Health Hazard Substance List

New York / Right To Know Act

Calcium oxide is listed

Calcium oxide is regulated with a Treshold Reporting Quantity (TRQ) of: 10 pounds

Magnesium oxide is listed

Magnesium oxide is regulated with a Treshold Reporting Quantity (TRQ) of: 100 pounds

Diiron trioxide is listed

Diiron trioxide is regulated with a Treshold Reporting Quantity (TRQ) of: 100 pounds



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Pennsylvania / Right To Know Act

Calcium oxide is listed

—
Magnesium oxide is listed

—
Diiron trioxide is listed

—
Silica-crystalline quartz is listed

15.4. Restrictions for application

Restricted to professional users.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

15.5. Demands for specific education

No specific requirements.

15.6. Additional information

Not applicable.

15.7. Chemical safety assessment

No

15.8. Sources

OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H315, Causes skin irritation.

H318, Causes serious eye damage.

H319, Causes serious eye irritation.

H335, May cause respiratory irritation.

H350i, May cause cancer by inhalation.

H372, Causes damage to organs through prolonged or repeated exposure.

The full text of identified uses as mentioned in section 1

None known.

Abbreviations and acronyms

ACGIH = American Conference of Governmental Industrial Hygienists

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CERCLA = Comprehensive Environmental Response Compensation and Liability Act

DOT = Department of Transportation

EINECS = European Inventory of Existing Commercial chemical Substances

EPCRA = Emergency Planning and Community Right-To-Know Act

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

HCIS = Hazardous Chemical Information System

HNOC = Hazards Not Otherwise Classified

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

NFPA = National Fire Protection Association

NIOSH = National Institute for Occupational Safety and Health

OECD = Organisation for Economic Co-operation and Development

OSHA = Occupational Safety and Health Administration

PBT = Persistent, Bioaccumulative and Toxic

RCRA = Resource Conservation and Recovery Act



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RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SARA = Superfund Amendments and Reauthorization Act
SCL = A specific concentration limit.
STEL = Short-term exposure limits
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TSCA = The Toxic Substances Control Act
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by HCS (29 CFR 1910.1200).

▼ The safety data sheet is validated by

Jason Ruckman

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: US-en

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