



SAFETY DATA SHEET

Fuse Master Super Spray

SDS conform REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), Annex II - EU

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Date issued 1.1.2017

1.1. Product identifier

Product name Super Spray
 Chemical name Suspended Glass Frit
 Synonyms Not Applicable
 CAS no. Not Applicable
 Product Type Liquid with powdered frit

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

Use of the substance/preparation Applied and fused at 1350F / 732C to glass substrates.

1.3. Details of the supplier of the safety data sheet

Manufacturer

Company name Fusion Headquarters
 Address 15500 NE Kincaid Rd.
 Postcode 97132
 City Newberg
 State OR.
 Country USA
 Tel 503-538-5281
 Fax 503-538.6527
 E-mail office@fusionheadquarters.com
 Website <http://www.fusionheadquarters.com/>

1.4. Emergency telephone number

Emergency telephone Poison Control 1-800-222-1222

Recommended use Industrial use.

Restrictions on use Reserved for industrial and professional use.

SECTION 2: Hazards identification

2.1. Classification of substance or mixture

GHS Classification Not a hazardous substance or mixture. Non flammable.

GHS Label elements Not a hazardous substance or mixture. Non flammable.

Inhalation The product may contain breathable dust. Prolonged inhalation of a high concentration of dust may affect lung function. To use in complete safety, respect exposure limits.

Hazard Pictograms (CLP)

2.2. Other hazards

Other hazards

Not known.



SECTION 3: Composition/information on ingredients

3.1. Substances

Substance	Identification	Classification	Contents
Frit	(65997-18-4)	Glass frit	20-22 %
Ethyl Alcohol	(64-17-5)	F:R11	.25-02.5
Isopropyl Alcohol	(67-63-0)	F:R11	.25-02.5
Methyl Isobutyl	(108-10-1)	F:R11	Less than 1

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.
Skin contact	Remove contaminated clothes and rinse skin thoroughly with water.
Eye contact	Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Particulates may cause abrasive eye injury. Take to hospital or eye specialist.
Ingestion	NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Do not induce vomiting. Rinse mouth with water. Contact physician if larger quantity has been consumed. Get medical attention if any discomfort continues.

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

Information for health personnel	Treat Symptomatically. Do not give victim anything to drink if he is unconscious.
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4.3. Indication of any immediate medical attention and special treatment needed

Specific details on antidotes	No recommendation given.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
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Improper extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
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5.2. Special hazards arising from the substance or mixture

Fire and explosion hazards	Non Flammable, combustible or explosive..
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Hazardous combustion products	Non Flammable.
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5.3. Advice for firefighters

Fire fighting procedures	No specific fire fighting procedure given. None required.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal protection measures	Ensure adequate ventilation Follow safe handling advice and personal protective equipment recommendations.
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6.2. Environmental precautions

Environmental precautionary measures Avoid discharge into drains, water courses or onto the ground.

6.3. Methods and material for containment and cleaning up

Cleaning method Sweep up and shovel into suitable containers for disposal. Clean contaminated floor and objects thoroughly while observing environmental regulations.

6.4. Reference to other sections

Other instructions Information regarding exposure / personal protection and disposal, see section 8 and 13.

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Handling Do not generate dust. Do not breathe dust. Do not rely on your sight to determine if dust is in the air. Respirable glass dust may be in the air without a visible dust cloud. Use adequate exhaust ventilation and dust collection to reducedust and respirable glass dust levels to below the permissible exposure limit ("PEL") or other applicable limit (if lower than the PEL). Maintain and test ventilation and dust collection equipment. Use all available work practices to control dust exposures, such as water sprays. Practice good housekeeping. Do not permit dust to collect on walls, floors, sills, ledges, machinery, or equipment. Keep airborne dust concentrations below permissible exposure or other applicable limits

Where necessary to reduce exposures below the PEL or other applicable limit (if lower than the PEL), wear a respirator approved for silica / glass frit containing dust when using, handling, storing or disposing of this product or bag. See Section 8, for further information on respirators. Do not alter the respirator. Do not wear a tight-fitting respirator with facial hair such as a beard or mustache that prevents a good face to face piece seal between the respirator and face. Maintain, clean, and fit test respirators in accordance with applicable standards. Wash or vacuum clothing that has become dusty.

Protective Safety Measures

Advice on general occupational hygiene Provide easy access to water supply and eye wash facilities.

7.2. Conditions for safe storage, including any incompatibilities

Storage Keep bottle closed when not being used. Store bottle in a vertical position with the cap up.

7.3. Specific end use(s)

Specific use(s) Not entered.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters**

Component	OSHA PEL	ACGIH TLV	NIOSH REL
Glass Frit	<u>10 mg/m³</u> %SiO ₂ + 2 TWA (respirable dust)	0.025 mg/m ³ TWA (respirable dust)	0.05 mg/m ³ TWA (respirable dust)
	<u>30 mg/m³</u> %SiO ₂ + 2 TWA (total dust)		

8.2. Exposure controls

Use adequate general or local exhaust ventilation to maintain concentrations in the workplace below the applicable exposure limits listed above.

Safety signs



Respiratory protection

Respiratory protection: If it is not possible to reduce airborne exposure levels to below the OSHA PEL or other applicable limit with ventilation, use the table below to assist you in selecting respirators that will reduce personal exposures to below the OSHA PEL. This table is part of the OSHA Respirator Standard 29CFR1910.134(d).

Assigned protection factor (APF) means the workplace level of respiratory protection that a respirator or class of respirators is expected to provide to employees when the employer implements a continuing, effective respiratory protection program as specified by the Standard. For example, an APF of 10 means that the respirator should reduce the airborne concentration of a particulate by a factor of 10, so that if the workplace concentration of a particulate was 150 ug/m3, then a respirator with an APF of 10 should reduce the concentration of particulate to 15 ug/m3. In addition a cartridge change-out schedule must be developed based on the concentrations in the workplace.

Type of respirator ^{1, 2}	Quarter	Half	Full	Helmet/	Loose-fitting
1. Air-Purifying Respirator	5	30	50	.....	.....
2. Powered Air-Purifying Respirator	.....	50	1,000	425/1,000	25
3. Supplied-Air Respirator (SAR) or					
Type of respirator ^{1, 2}	Quarter mask	Half mask	Full facepiece	Helmet/ hood	Loose-fitting facepiece
• Demand mode	.....	10	50	.....	.....
• Continuous flow mode	.....	50	1,000	425/1,000	25
• Pressure-demand or other positive-pressure mode	.....	50	1,000	.....	.....
4. Self-Contained Breathing (SCBA)					
• Demand mode	.....	10	50	50	.....
• Pressure-demand or other positive-pressure mode (e.g., open/closed	.....	.....	10,000	10,000	.....

Hand protection

Hand protection

Use protective gloves. Chemical resistant gloves required for prolonged or repeated contact.

Eye / face protection

Eye protection

Use safety goggles or face shield in case of splash risk.

Skin protection

Skin protection (except hands)

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene / Environmental

Specific hygiene measures

Wash hands after contact.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance (physical state, color, etc.): White powder in clear liquid.

Odor: None.

Boiling	Specific Gravity (H ₂ O =1):
212+ F	Approximately 1.5
Vapor Pressure (mm Hg.):	Percent Volatile By Volume (%):
33 @20C	20%
Vapor Density (air=1):	Evaporation Rate (BuAc = 1):
Heavier than air	Similar to H ₂ O

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity Not reactive under normal conditions of use.

10.2. Chemical stability

Stability Stable under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not known.

10.4. Conditions to avoid

Conditions to avoid Avoid generation of dust in handling and use.

Incompatible materials

Materials to avoid

Avoid contact with oxidising agents (e.g. nitric acid, peroxides, chromates, fluorine, chlorine trifluoride, and oxygen difluoride and hydrofluoric acid.). Strong acids.

10.5. Hazardous decomposition products

Hazardous decomposition products
corrosive gas,

Silica / glass frit will dissolve in hydrofluoric acid and produce a silicon tetrafluoride.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Potential acute effects

Acute effects of exposure:

Inhalation: Inhalation of dust may cause respiratory tract irritation. Symptoms of exposure may include cough, sore throat, nasal congestion, sneezing, wheezing and shortness of breath.

Ingestion: Ingestion is an unlikely route of exposure. If dust is swallowed, it may irritate the mouth and throat.

Skin contact: May dry the skin.

Eye contact: Particulates may cause abrasive injury.

Chronic effects: Prolonged inhalation of respirable crystalline silica may cause lung disease, silicosis, lung cancer and other effects as indicated below.

A. SILICOSIS

Silicosis can exist in several forms, chronic (or ordinary), accelerated, or acute:

Chronic or Ordinary Silicosis is the most common form of silicosis, and can occur after many years (10 to 20 or more) of prolonged repeated inhalation of relatively low levels of airborne respirable glass frit dust. It is further defined as either simple or complicated silicosis. Simple silicosis is characterized by lung lesions (shown as radiographic opacities) less than 1 centimeter in diameter, primarily in the upper lung zones. Often, simple silicosis is not associated with symptoms, detectable changes in lung function or disability. Simple silicosis may be progressive and may develop into complicated silicosis or progressive massive fibrosis (PMF). Complicated silicosis or PMF is characterized by lung lesions (shown as radiographic opacities) greater than 1 centimeter in diameter. Complicated silicosis or PMF symptoms, if present, are shortness of breath and cough. Complicated silicosis or PMF may be associated with decreased lung function and may be disabling. Advanced complicated silicosis or PMF may lead to death. Advanced complicated silicosis or PMF can result in heart disease secondary to the lung disease (cor pulmonale).

Accelerated Silicosis can occur with prolonged repeated inhalation of high concentrations of respirable glass frit over a relatively short period; the lung lesions can appear within five (5) years of initial exposure. Progression can be rapid. Accelerated silicosis is similar to chronic or ordinary silicosis, except that lung lesions appear earlier and progression is more rapid.

Acute Silicosis can occur after the repeated inhalation of very high concentrations of respirable glass frit over a short time period, sometimes as short as a few months. The symptoms of acute silicosis include progressive shortness of breath, fever, cough, weakness and weight loss. Acute silicosis is fatal.

B. CANCER

IARC - The International Agency for Research on Cancer ("IARC") concluded that "crystalline silica (glass frit) in the form of quartz or cristobalite dust is *carcinogenic to humans (Group 1)*". For further information on the IARC evaluation, see IARC Monographs on the Evaluation of Carcinogenic Risks to Humans, Volume 100C, "A Review of Human Carcinogens: Arsenic, Metals, Fibres and Dusts " (2011).

NTP classifies "Silica, Crystalline (respirable size)" as Known to be a human carcinogen.

C. AUTOIMMUNE DISEASES

Several studies have reported excess cases of several autoimmune disorders -- scleroderma, systemic lupus erythematosus, rheumatoid arthritis -- among silica-exposed workers.

D. TUBERCULOSIS

Individuals with silicosis are at increased risk to develop pulmonary tuberculosis, if exposed to tuberculosis bacteria. Individuals with chronic silicosis have a three-fold higher risk of contracting tuberculosis than similar individuals without silicosis.

E. KIDNEY DISEASE

Several studies have reported excess cases of kidney diseases, including end stage renal disease, among silica-exposed workers. For additional information on the subject, the following may be consulted: "Kidney Disease and Silicosis", *Nephron*, Volume 85, pp. 14-19(2000).

F. NON-MALIGNANT RESPIRATORY DISEASES

The reader is referred to Section 3.5 of the NIOSH Special Hazard Review cited below for information concerning the association between exposure to crystalline silica and chronic bronchitis, emphysema and small airways disease. There are studies that disclose an association between dusts found in various mining occupations and non-malignant respiratory diseases, particularly among smokers. It is unclear whether the observed associations exist only with underlying silicosis, only among smokers, or result from exposure to mineral dusts generally (independent of the presence or absence of crystalline silica (glass frit), or the level of crystalline silica in the dust).

Sources of information:

The ***NIOSH Hazard Review - Occupational Effects of Occupational Exposure to Respirable Crystalline Silica (glass frit)*** published in April 2002 summarizes and discusses the medical and epidemiological literature on the health risks and diseases associated with occupational exposures to respirable crystalline silica. The *NIOSH Hazard Review* is available from NIOSH - Publications Dissemination, 4676 Columbia Parkway, Cincinnati, OH 45226, or through the NIOSH web site, www.cdc.gov/niosh/topics/silica, then click on the link "NIOSH Hazard Review: Health Effects of Occupational Exposure to Respirable Crystalline Silica".

The US Occupational Safety and Health Administration (OSHA) published a summary of respirable crystalline silica health effects in connection with OSHA's Proposed Rule regarding occupational exposure to respirable crystalline silica. The summary was published in the September 12, 2013 Federal Register, which can be found at www.federalregister.gov/articles/2013/09/12/2013-20997/occupational-exposure-to-respirable-crystalline-silica.

Numerical measures of toxicity:

Crystalline Silica - glass frit (quartz): LD50 oral rat >22,500 mg/kg

Delayed effects / repeated exposure

Sensitisation	Not known.
Chronic effects	None known.

Carcinogenic, Mutagenic or Reprotoxic

Carcinogenicity	Not known.
Mutagenicity	Not known.
Teratogenic properties	Not known.
Reproductive toxicity	Not known.

SECTION 12: Ecological information**12.1. Toxicity**

Ecotoxicity Glass frit is not known to be ecotoxic.

12.2. Persistence and degradability

Persistence and degradability Glass frit is not known to be degradable.

Bioaccumulative potential Will not bio-accumulate.

12.3. Mobility in soil

Mobility Glass frit is not mobile in soil.

12.4. Results of PBT and vPvB assessment

PBT assessment results This substance is not classified as PBT or vPvB.

12.5. Other adverse effects

Other adverse effects / Remarks None known.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**

Specify the appropriate methods of disposal Discard any product, residue, disposable container or liner in full compliance with national regulations.

SECTION 14: Transport information

14.1. UN number none

14.2. UN proper shipping name

ADR Not regulated

IMDG Not regulated

ICAO/IATA Not regulated

14.3. Transport hazard class(es)

ADR None

Hazard no. None

RID None

ADN None

IMDG None

ICAO/IATA None

14.4. Packing group

ADR None

RID None

IMDG None

ICAO/IATA None

14.5. Environmental hazards

Comments Not relevant

14.6. Special precautions for user

EmS None known

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Ship type required Not determined

Pollution category Not determined

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

TSCA Status: All ingredients are listed on the EPA TSCA inventory or exempt.

RCRA: This product is not classified as a hazardous waste under the Resource Conservation and Recovery Act, or its regulations, 40 CFR §261 et seq.

CERCLA: This product is not classified as a hazardous substance under regulations of the Comprehensive Environmental Response Compensation and Liability Act (CERCLA), 40 CFR §302.

Emergency Planning and Community Right to Know Act (SARA Title III): This product contains the following chemicals subject to SARA 302 or SARA 313 reporting: None above the de minimus concentrations.

Clean Air Act: This product is not processed with or does not contain any Class I or Class II ozone depleting substances.

California Proposition 65: Crystalline silica / glass frit (airborne particles of respirable size) is classified as a substance known to the State of California to be a carcinogen.

California Inhalation Reference Exposure Level (REL): California established a chronic non-cancer effect REL of 3 µg for silica (crystalline, respirable / glass frit). A chronic REL is an airborne level of a substance at or below which no non-cancer health effects are anticipated in individuals indefinitely exposed to the substance at that level.

Massachusetts Toxic Use Reduction Act: Silica, crystalline/ glass frit (respirable size, <10 microns) is "toxic" for purposes of the Massachusetts Toxic Use Reduction Act.).

Pennsylvania Worker and Community Right to Know Act: glass frit is a hazardous substances under the Act, but it is not a special hazardous substance or an environmental hazardous substance.

Texas Commission on Environmental Quality: The Texas CEQ has established chronic and acute Reference Values and short term and long term Effects Screening Levels for crystalline silica / glass frit (quartz). The information can be accessed through www.tceq.texas.gov.

CANADA

Domestic Substances List: glass frit is not a naturally occurring substance, and is not on the Canadian DSL.

WHMIS Classification: D2A, because of the crystalline silica content of the material.

OTHER NATIONAL INVENTORIES

Australian Inventory of Chemical Substances (AICS): All of the components of this product are listed on the AICS inventory or exempt from notification requirements.

China: All of the components of this product are listed on the IECSC inventory or exempt from notification requirements.

Japan Ministry of International Trade and Industry (MITI): All of the components of this product are existing chemical substances as defined in the Chemical Substance Control Law Registry Number 1-548.

Korea Existing Chemicals Inventory (KECI) (set up under the Toxic Chemical Control Law): Listed on the ECL.

New Zealand: All of the components of this product are listed on the HSNO inventory or exempt from notification requirements.

Philippines Inventory of Chemicals and Chemical Substances (PICCS): Listed for PICCS.

Taiwan: All of the components of this product are listed on the CSNN inventory or exempt from notification requirements.

SECTION 16: Other information

Hazard symbol



Hazardous Material Information

System (HMIS): Health *

Health *

Flammability 0

Physical Hazard 0

Protective Equipment E

* Chronic hazard: For further information on health effects, see Sections 2, 8 and 11 of this SDS.

National Fire Protection Association

(NFPA): Health 0

Flammability 0

Instability 0

Fusion Headquarters Disclaimer

The information and recommendations contained herein are based upon data believed to be up to- date and correct. However, no guarantee or warranty of any kind, express or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects that may be caused by purchase, resale, use or exposure to our material. Customers and users of this material must comply with all applicable health and safety laws, regulations, and orders. In particular, they are under an obligation to carry out a risk assessment for the particular work places and to take adequate risk management measures in accordance with the national implementation legislation of EU Directives 89/391 and 98/24.