

SSF-6 Product Safety Information:

HAZARD IDENTIFICATION:

Emergency Overview: This product is normally not considered hazardous as shipped. Avoid eye contact or inhalation of dust from the product. When this product is used in a welding process, the most important hazards are welding fumes and heat.

Classification of the Substance/Mixture

CLP/GHS Classification (1272/2008):

Skin Irritation, Category 2

Eye Irritation, Category 2A

Hazardous to the Aquatic Environment -- Acute Hazard, Category 1

EU Classification (67/548/EEC):

Irritant (Xi), Dangerous for the Environment (N), R36/37/38, R50

Labeling:

Signal Word: Warning

Hazard Statements:

H315--Causes skin irritation

H319--Causes serious eye irritation

H400--Very toxic to aquatic life

Precautionary Statements:

P210--Keep away from heat/sparks/open flames/hot surfaces --No smoking

P264 – Wash skin and hair thoroughly after handling.

P273 – Avoid release to the environment.

P280--Wear gloves/eye protection/face protection

P302+P352--IF ON SKIN: Wash with plenty of soap and water

P305+P351+P338--IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.

P332+P313--IF skin irritation occurs: Get medical advice/attention

P337+P313--If eye irritation persists: Get medical advice/attention

P362--Take off contaminated clothing and wash before reuse

P391 – Collect spillage.

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

FIRST AID MEASURES:

Inhalation: Remove to fresh air immediately or administer oxygen. Get medical attention immediately.

Skin: Flush skin with large amounts of water and soap. If irritation develops and persists, get medical attention.

Eye: Flush eyes with water for at least 15 minutes. Get medical attention.

Ingestion: Obtain medical attention immediately if ingested. Rinse mouth.

FIRE-FIGHTING MEASURES:

Suitable Extinguishing Media: Not applicable. Non-combustible; inherent fire retardant

Unsuitable Extinguishing Media: Not applicable

Specific Hazards Arising From Chemical: 29 CFR 1910. 120 (Non Flammable Solid). Boric oxide fumes. Tin oxides, Copper oxides, Carbon oxides, Zinc/zinc oxides, Borane/boron oxides, Potassium oxides, Silver/silver oxides

Protective Equipment: Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

ACCIDENTAL RELEASE MEASURES:

Cleaning Measures: Solid objects may be picked up and placed into a container. Liquids or pastes should be

scooped up and placed into a container. Wear proper protective equipment while handling these materials. Do not discard as refuse.

HANDLING AND STORAGE:

Precautions for Safe Handling: Keep away from heat. Keep away from sources of ignition. Empty containers pose a fire risk; evaporate the residue under a fume hood. Ground all equipment containing material. Do not breathe dust. Keep away from incompatibles such as oxidizing agents, acids, alkalis. Dispose of according to Federal, State, Local and OSHA regulations.

Conditions for Safe Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area. Do not store above 25°C (77°F).

EXPOSURE CONTROLS/ PERSONAL PROTECTION:

Engineering Controls: The usual precautionary measures for handling chemicals should be followed. Keep away from food, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before break and at the end of the work. Store all protective clothing separately. Maintain an ergonomically appropriate working environment. Wear protective equipment. Keep unprotected persons away. Avoid causing dust.

Exposure limits: Use industrial hygiene equipment to ensure that exposure does not exceed applicable national exposure limits. Unless noted, all values are for 8 hour time weighted average.

Biological limits: No available data

Personal protection:

Respiratory protection: Use an air purifying dust respirator when welding or brazing in a confined space, or when local exhaust or ventilation is not sufficient to keep exposure values within safe limits.

Hands protection: Wear appropriate gloves to prevent skin contact.

EN 12477: Protection gloves for welders

Type B gloves are recommended when high dexterity is required as for TIG welding, while type A gloves are recommended for other welding processes. The contact temp (°C) is 100 and the threshold time (seconds) >15.

Eyes protection: Welder's helmet or face shield with color absorbing lenses. Shield and filter to provide protection from harmful UV radiation, infra red and molten metal approved to standard EN379. Filter shade to be a minimum of shade 9.

Skin protection: Heat-resistant protective clothing. Wear safety boots, apron, arm and shoulder protection. Keep protective clothing clean and dry. Clothing should be selected to suit the level, duration and purpose of the welding activity.

STABILITY AND REACTIVITY:

Chemical Stability: This product is stable under normal conditions. This product loses H₂O when heated

Hazardous Reactions: Contact with chemical substances like acids or strong bases cause generation of gas.

Conditions to Avoid: Not applicable.

Incompatible Materials: Oxidizing agents. Reactions with strong reducing agents such as metal hydrides, acetic anhydride or alkali metals will generate hydrogen gas which could create an explosive hazard.

Hazardous Decomposition Products: Boric oxide fumes.

TOXICOLOGICAL INFORMATION:

Signs and Symptoms of Overexposure: Fumes and gases generated during use of this product, in conjunction with heating, welding, brazing or soldering procedures, can be dangerous to your health. Aggravation of pre-existing respiratory or allergic conditions may occur.

Acute Effects: Tin: May cause skin irritation. May cause eye irritation due to mechanical action. Inhalation of tin dust may cause respiratory tract and mucous membrane tract irritation due to mechanical action. It is poorly absorbed from the digestive tract. It can cause gastrointestinal tract disturbance which may be irritant or astringent on the stomach. Silver may cause argyria (a slate-grey or bluish discoloration of the skin and deep tissues due to the deposit of insoluble albuminate of silver) Signs and symptoms of zinc exposure are central nervous system depression, cough, chest pain and difficulty breathing. Exposure to high airborne concentrations can cause anesthetic effects. Toxicity reported for borates in humans: ingestion or absorption may cause nausea,

vomiting, diarrhea, abdominal cramps, and dermatous lesions on the skin and mucous membranes. Other symptoms include: circulatory collapse, tachycardia, cyanosis, delirium, convulsions and coma. Death has been reported to occur in infants from less than 5 grams and in adults from 5 to 20 grams.

Chronic Effects: Overexposure to welding fumes may affect pulmonary function. Chronic copper poisoning is typified by hepatic cirrhosis, brain damage and demyelization, kidney defect and copper deposition in the cornea as exemplified by humans with Wilson's disease. It has also been reported that copper poisoning has led to hemolytic anemia and accelerates arteriosclerosis, damage to the lungs, vomiting, diarrhea, abdominal pain and blood disorders. Excessive inhalation of zinc oxide fumes may produce symptoms known as "Zinc Shakes" which are flu-like and usually cease when the individual is removed from the source. Prolonged or repeated exposure can cause vomiting, diarrhea, lung irritation.

ECOLOGICAL INFORMATION:

Toxicity: No available data

Persistence and Degradability: No available data

Bio accumulative Potential: No available data

Mobility in Soil: No available data

Other Adverse Effects: No available data. Do not allow undiluted product or large quantities to reach ground water, water course, or sewage systems. Do not allow product to be released in the environment without proper governmental permits.

DISPOSAL CONSIDERATIONS:

Product: For product elimination, dispose of in accordance with EPA regulations.

Package: May be disposed in approved landfills provided local regulations are observed.

REGULATORY INFORMATION:

Safety, health and environment regulations/legislation specific for the substance or mixture: Read and understand the manufacturer's instructions, your employer's safety practices and the health and safety instructions on the label. Observe any federal and local regulations. Take precautions when welding and protect yourself and others.

Warning: Welding fumes and gases are hazardous to your health and may damage lungs and other organs. Use adequate ventilation. Electric shock can kill. Arc rays and sparks can injure eyes and burn skin. Wear correct hand, head, eye and body protection.

Chemical safety assessment: No

USA: Under the OSHA Hazard Communication Standard, this product is considered hazardous. This product contains or produces a chemical known to the state of California to cause cancer and birth defects (or other reproductive harm). (California Health & Safety Code § 25249.5 et seq.) United States EPA Toxic Substance Control Act: All constituents of this product are on the TSCA inventory list or are excluded from listing.

OTHER INFORMATION:

The information in this document is believed to be correct as of the date issued. However, no warranty is expressed to be implied regarding the accuracy or completeness of this information. This information and product are furnished on the condition that the person receiving them shall make his own determinations as to the suitability of the product for his particular purpose and on the condition that he assumes the risk of his use thereof.

Hazard Statements:

H228--Flammable solid

H302--Harmful if swallowed

H314--Causes severe skin burns and eye damage

H315--Causes skin irritation

H319--Causes serious eye irritation

H335--May cause respiratory irritation
H360--May damage fertility or the unborn child
H400 – Very toxic to aquatic life.
H410 – Very toxic to aquatic life with long lasting effects,
R-Phrases:
R11--Very flammable
R22--Harmful if swallowed
R34--Causes burns
R36-38--Irritating to eyes and skin
R36/37/38--Irritating to eyes, respiratory system, and skin
R50--Very toxic to aquatic organisms
R50/53 – Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R60--May impair fertility
R61--May cause harm to the unborn child
S-Phrases:
S16 – Keep away from source of ignition – No smoking.
S26--In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection.
S45 – In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S53 – Avoid exposure – obtain special instructions before use.
S61 – Avoid release to the environment.

Flux:

HAZARD IDENTIFICATION:

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Classification of the Substance/Mixture

CLP/GHS Classification (1272/2008):

Serious Eye Damage/Skin Irritation, Category 1

Corrosion/Irritation, Category 1B

Acute Toxicity, Category 3

Specific Target Organ Toxicity, Category 2

EU Classification (67/548/EEC):

Toxic (T), Corrosive (C), Harmful (Xn), Irritant (Xi), Dangerous for the Environment (N), R61, R34, R62, R37, R43, R51/53

Signal Word: Danger

Hazard Statements:

H301--Toxic if swallowed

H311--Toxic in contact with skin

H320--Causes eye irritation and may cause burns

H335--May cause respiratory irritation

H373--May cause damage to organs through prolonged or repeated exposures

Precautionary Statements:

P201--Obtain special instructions before use

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

P261--Avoid breathing dust/fume/gas/mist/vapors/spray

P264--Wash skin thoroughly after handling

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

P281--Use personal protective equipment as required

P301+P330+P312--IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Contact a physician if you feel unwell

P361+P353+P363--IF ON SKIN: Remove/Take off immediately all contaminated clothing. Rinse skin with water and wash contaminated clothes before reuse

P305+P311--IF IN EYES: Rinse cautiously with water for 15 minutes. Contact physician or Poison Control Center

FIRST AID MEASURES:

Inhalation: Remove to fresh air immediately or administer oxygen. Get medical attention immediately.

Skin: Flush skin with large amounts of water and soap. If irritation develops and persists, get medical attention.

Eye: Flush eyes with water for at least 15 minutes. Get medical attention.

Ingestion: Obtain medical attention immediately if ingested. Rinse mouth.

FIRE-FIGHTING MEASURES:

Suitable Extinguishing Media: Use extinguishing measures that are appropriate to local circumstances and the surrounding environment..

Unsuitable Extinguishing Media: Not applicable

Specific Hazards Arising From Chemical: May emit metallic fumes of byproducts or oxides when exposed to open flame. Cool containers/tanks with water spray.

Protective Equipment: Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

ACCIDENTAL RELEASE MEASURES:

Cleaning Measures: Solid objects may be picked up and placed into a container. Liquids or pastes should be scooped up and placed into a container. Wear proper protective equipment while handling these materials. Do not discard as refuse.

HANDLING AND STORAGE:

Precautions for Safe Handling: Handle with care to avoid stings or cuts. Wear gloves when handling welding consumables. Avoid exposure to dust. Do not ingest. Some individuals can develop an allergic reaction to certain materials. Retain all warning and identity labels.

Conditions for Safe Storage: Store in a cool, dry place in closed packages. Keep separate from chemical substances like acids and strong bases, which could cause chemical reactions.

EXPOSURE CONTROLS/PERSONAL PROTECTION:

Engineering Controls: Avoid exposure to welding fumes, spatter, heated materials and dust. Ensure sufficient ventilation, local exhaust, or both, to keep welding fumes and gases from breathing zone and general area. Keep work place and protecting clothing clean and dry. Train welders to avoid contact with live electrical parts and insulate conductive parts. Check condition of protective clothing and equipment on a regular basis.

Exposure Limits: Use industrial hygiene equipment to ensure that exposure does not exceed applicable national exposure limits. Unless noted, all values are for 8 hour time weighted average.

Biological limits: No available data

Personal protection: Use an air purifying dust respirator when welding or brazing in a confined space, or when local exhaust or ventilation is not sufficient to keep exposure values within safe limits.

Hands protection: Wear appropriate gloves to prevent skin contact

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Type B gloves are recommended when high dexterity is required as for TIG welding, while type A gloves are recommended for other welding processes. The contact temp (°C) is 100 and the threshold time (seconds) >15.

Eyes protection: Welder's helmet or face shield with color absorbing lenses. Shield and filter to provide protection

from harmful UV radiation, infra red and molten metal approved to standard EN379. Filter shade to be a minimum of shade 9.

Skin protection: Heat-resistant protective clothing. Wear safety boots, apron, arm and shoulder protection. Keep protective clothing clean and dry. Clothing should be selected to suit the level, duration and purpose of the welding activity.

STABILITY AND REACTIVITY:

Chemical Stability: This product is stable under normal conditions.

Hazardous Reactions: Contact with chemical substances like acids or strong bases cause generation of gas.

Conditions to Avoid: Excess heat

Incompatible Materials: Strong acids or alkalis

Hazardous Decomposition Products: Emits toxic and corrosive fluoride compounds. May also emit oxides of boron and potassium when heated to decomposition.

TOXICOLOGICAL INFORMATION:

Signs and Symptoms of Overexposure: Very hazardous in case of skin contact (sensitizer), of ingestion. Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. May cause fluoride burns that may not be immediately painful or evident, especially on prolonged contact. This material may be absorbed through the skin resulting in systematic poisoning. Symptoms of poisoning are similar to those that occur with ingestion.

Acute Effects: Overexposure to welding fumes may result in symptoms such as eye and skin burns, damage to digestive and respiratory system, abdominal pain, vomiting and effect on the central nervous system. Ingesting large amounts may be fatal.

Chronic Effects: Severe exposure may cause bronchospasms and pulmonary edema. Absorption may cause systematic poisoning similar to that which occurs with ingestion.

DISPOSAL CONSIDERATIONS:

Product: For product elimination, consult recycling companies or appropriate local authority

Package: May be disposed in approved landfills provided local regulations are observed

REGULATORY INFORMATION:

Safety, health and environment regulations/legislation specific for the substance or mixture: Read and understand the manufacturer's instructions, your employer's safety practices and the health and safety instructions on the label. Observe any federal and local regulations. Take precautions when welding and protect yourself and others.

Warning: Welding fumes and gases are hazardous to your health and may damage lungs and other organs. Use adequate ventilation. Electric shock can kill. Arc rays and sparks can injure eyes and burn skin. Wear correct hand, head, eye and body protection.

Chemical safety assessment: No

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H301--Toxic if swallowed

H311--Toxic in contact with skin

H314--Causes severe skin burns and eye damage

H315--Causes skin irritaotn

H320--Causes eye irritation and may cause burns

H335--May cause respiratory irritation

H373--May cause damage to organs (kidneys, liver, lungs, nervous system, mucous membranes) through prolonged or repeated exposures

R-Phrases:

R11--Very flammable

R23/25--Toxic by inhalation and if swallowed

R34--Causes burns

R36/38--Irritating to eyes and skin

R36/37/28--Irritating to eyes, respiratory system and skin

R43--May cause sensitization by skin contact

S-Phrases:

S26--In case of contact with eyes, rinse immediately with plenty of water and seek medical advice

S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection.

S45 – In case of accident or if you feel unwell, seek medical advice immediately

S53 – Avoid exposure – obtain special instructions before use.

S61 – Avoid release to the environment.