**Aufhauser Corporation**

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# Safety Data Sheet

SCAN CODE FOR PDF
OF THIS DOCUMENT

## 1. Supplier and Manufacturer

Aufhauser Corporation
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Plainview NY 11803 USA
Telephone: 516-694-8696 www.brazing.com
Emergency Phone Number: 516-694-8696 or 212-246-0205
CHEMTREC 24-hour Emergency Response: 800-424-9300 or 703-527-3887
SDS Number: Groovie 201606
Product Codes: **Groovies cutting electrode**
Product Use(s): Metal gouging/ chamfering/ cutting

## 2. Hazards identification

**Classification(s)**
**GHS Classified**: Acute Tox 4 (oral): H302
**GHS Label Symbol(s)**: Exclamation

**GHS Label Signal Word(s)**: Warning
**GHS Label Hazard Statement**(s): Harmful if swallowed.
**GHS Precautionary statements**: In case of inadequate ventilation wear respiratory protection. Get medical advice/ attention if you feel unwell. Wear protective gloves/ protective clothing/ eye protection/ face protection. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment. IF SWALLOWED: call a poison center or doctor/physician if you feel unwell. If swallowed, rinse mouth. Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. Dispose of contents/ container to waste treatment facility in accordance with local and national regulations.

**Label Precautionary Statement(s):**
WARNING: PROTECT yourself and others. Read and understand this information.
FUMES AND GASES can be hazardous to your health.
ARC RAYS can injure your eyes and burn skin. ELECTRIC SHOCK can kill.

• Before Use, read and understand the manufacturer's instructions. Safety Data Sheets (SDSs), and your employer's safety policies. • Keep your head out of the fumes. • Use enough ventilation, exhaust at the arc, or both, to keep fumes and gases from your breathing zone and the general area. • Wear correct eye, ear, and body protection.

**Other Hazards**: These products consist of odorless wire/rod with a flux coating. There are no immediate health hazards associated with these products. These products are not reactive. If involved in a fire, these products may generate irritating fumes and a variety of metal oxides. Finely divided dusts of these products may result in explosive air/dust mixtures. Emergency responders must wear personal protective equipment suitable for the situation to which they are responding.

## 3. Composition/information on ingredients

Note: The percentage by weight values for the ingredients in this product represent approximate formulation values.

| Ingredient | CAS # | % wt | GHS note |
|---|---|---|---|
| Iron | 7439-89-6 | 30 - 60 | Acute Tox 4 (oral): H302 |
| Cellulose | 9004-34-6 | 7 - 13 | |
| Graphite | 7782-42-5 | 1 - 5 | |
| Magnesite | 546-93-0 | 5 - 10 | |

| | | | |
|---|---|---|---|
| Manganese | 7439-96-5 | 0.1 - 1 | |
| Potassium Silicate | 1312-76-1 | 1 - 5 | Acute Tox 4: H302 |
| Silicon Dioxide (Silica) | 14808-60-7 | 1 - 5 | Carc 1A: H350 |
| Sodium Silicate | 1344-09-8 | 1 - 5 | Acute Tox 4: H302; Skin Corr 1B: H314; STOT SE 3: H335 |

## 4. First aid measures

**Description of First Aid Measures**

**Inhalation**: Remove victim to fresh air. If necessary, use artificial respiration to support vital functions.
**Skin**: Immediately begin decontamination with cold, running water. Minimum flushing is for 15 minutes. Victim must seek medical attention if any adverse reaction occurs.
**Eye**: Open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have victim "roll" eyes. Minimum flushing is for 15 minutes. Victim must seek immediate medical attention.
**Ingestion**: If swallowed call physician immediately! Do not induce vomiting unless directed by medical personnel. Rinse mouth with water if person is conscious. Never give fluids or induce vomiting if person is unconscious, having convulsions, or not breathing.
**Note to Physician**: Treat symptoms and eliminate overexposure.

**Most Important Symptoms and Effects Both Acute and Delayed**

**General**: Welding, cutting, or processing this material may release dust or fumes that are hazardous. During processing, inhalation of fumes may cause dizziness and/or irritation to the eyes, nose, and throat. Hot molten product will cause thermal burns to the skin.
**Inhalation**: Short-term (acute) overexposure to gases, fumes, and dusts may include irritation of the eyes, lungs, nose, and throat. Some toxic gases may cause pulmonary edema, asphyxiation, and death. Acute overexposure may include signs and symptoms such as water eyes, nose and throat irritation, headache, dizziness, difficulty in breath, frequent coughing, or chest pain. Excessive inhalation or ingestion of manganese can produce manganese poisoning. Overexposure to manganese compounds may affect the central nervous system, symptoms of which are languor, sleepiness, muscular weakness, emotional disturbances, and spastic gait resembling Parkinsonism. These symptoms can become progressive and permanent if not treated. Excessive inhalation of fumes may cause "Metal Fume Fever" with flu-like symptoms such as chills, fever, body aches, vomiting, sweating.
**Skin Contact**: May cause irritation. Contact with hot, molten metal will cause thermal burns.
**Eye Contact**: Fumes from thermal decomposition may cause eye irritation. Risk of thermal burns on contact with molten product. Arc rays and sparks can burn eyes.
**Ingestion**: Ingestion is likely to be harmful or have adverse effects.

**Indication of Any Immediate Medical Attention and Special Treatment Needed**

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label/SDS at hand.

## 5. Firefighting measures

**Extinguishing Media**

**Suitable Extinguishing Media**: Use extinguishing agents appropriate for surrounding materials.
**Unsuitable Extinguishing Media**: Do not use water on molten metal.

**Special Hazards Arising From the Substance or Mixture**

**Fire Hazard**: Not considered flammable.
**Explosion Hazard**: Product is not explosive. Ensure proper welding procedures to avoid welding explosions.
**Reactivity**: None under normal conditions. Metallic dusts may ignite or explode.

**Advice for Firefighters**

**Precautionary Measures Fire**: Exercise caution when fighting any chemical fire.
**Firefighting Instructions**: Do not breathe fumes from fires or vapors from decomposition.
**Protection During Firefighting**: Use proper protective equipment, including respiratory protection.
**Hazardous Combustion Products**: This product may decompose and produce iron fumes, iron and a variety of metal compounds and metal oxides. The hot material can present a significant thermal hazard to firefighters.

## 6. Accidental release measures

**Personal Precautions, Protective Equipment and Emergency Procedures**

**General Measures**: No additional information available.

**For Non-Emergency Personnel**

**Protective Equipment**: No additional information available.
**Emergency Procedures**: No additional information available.

**For Emergency Personnel**
**Protective Equipment**: No additional information available.
**Emergency Procedures**: No additional information available.

**Environmental Precautions**
Prevent entry to sewers and public waters.

**Methods and Material for Containment and Cleaning Up**
**For Containment**: No special requirements.
**Methods for Cleaning Up**: Clean up spills immediately and dispose of waste safely. Avoid generation of dust during clean-up of spills. Ventilate area. Do not mix with other materials. Transfer spilled material to a suitable container for recycling or appropriate disposal. Use gloves to prevent cuts and personal protective equipment to prevent other injuries as necessary while handling.

## 7. Handling and storage

**Precautions for Safe Handling**
Use proper ventilation and respiration apparatus; eye, hand, and body protection as necessary.
**Additional Hazards When Processed**: Risk of electric shock when welding. Arc rays and sparks can burn skin. See ANSI Z49.1-1967 Safety in Welding and Cutting published by the American Welding Society and OSHA Hazard Communication Standard 1910.1200 for additional details regarding the handling and storage of this material.
**Precautions for Safe Handling**: Use appropriate personal protective equipment when handling and observe good personal hygiene measures after handling.
**Hygiene Measures**: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking, or smoking and again when leaving work.

**Conditions for Safe Storage, Including Any Incompatibilities**
**Storage Conditions**: Store in a dry, cool place. Keep container closed when not in use. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.
**Incompatible Materials**: See section 10.

## 8. Exposure controls/personal protection.

**Ingredients – Exposure Limits**

| Ingredient | CAS # | ACGIH TLV (mg/m3) | OSHA PEL (mg/m3) | Carc. |
|---|---|---|---|---|
| Iron | 7439-89-6 | 5 (fume) | 10 (fume) | |
| Cellulose | 9004-34-6 | 10 | 5 | |
| Graphite | 7782-42-5 | 2 | 15 mppcf | |
| Magnesite | 546-93-0 | 10 | 5 | |
| Manganese | 7439-96-5 | 0.02 (resp) | 5 (ceiling) | |
| Potassium Silicate | 1312-76-1 | not established (ne) | ne | |
| Silicon Dioxide (Silica) | 14808-60-7 | 0.025 (resp) | 0.3 (total dust), 0.1 (resp) | IARC 1, A2 |
| Sodium Silicate | 1344-09-8 | ne | ne | |

**Exposure Controls**
**Appropriate Engineering Controls**: Emergency eye wash fountains and safety showers should be available in the immediate vicinity. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. All equipment should comply with the National Electric Code. When cutting, grinding, crushing, or drilling, provide general or local ventilation systems, as needed, to maintain airborne dust concentrations below the regulatory limits. Local vacuum collection is preferred since it prevents release of contaminants into the work area by controlling it at the source. Other technologies that may aid in controlling airborne respirable dust include wet suppression, ventilation, process enclosure, and enclosed employee work stations. Prevent dust accumulation.
**Personal Protective Equipment**: Gloves. Protective clothing. Face shield. Insufficient ventilation: wear respiratory protection.
**Materials for Protective Clothing**: With molten material wear thermally protective clothing.
**Hand Protection**: Appropriate welding or heat resistant gloves.
**Eye Protection**: Welders should wear goggles or safety glasses with side shields that comply with ANSI Z87.1 under welding helmets. Always wear goggles or other suitable eye protection when gas welding or oxygen cutting.
**Skin and Body Protection**: Wear fire/flame resistant/retardant clothing appropriate for task.
**Respiratory Protection**: Wear approved respiratory apparatus appropriate for task.
**Consumer Exposure Controls**: Do not eat, drink or smoke during use.

## 9. Physical and chemical properties

| | |
|---|---|
| Physical state: Solid | Appearance: wire/rod with a flux coating |
| Odor: none | Odor threshold: n/a |
| pH: n/a | Evaporation rate: n/a |
| Melting point: > 1000 C (> 1800 F) | Freezing point: n/a |
| Boiling point (@ 24 mm Hg): n/a | Flash point: n/a |

| | |
|---|---|
| Auto-ignition temperature: n/a | Decomposition temperature: n/a |
| Flammability (solid, gas): n/a | Lower flammable limit: n/a |
| Upper flammable limit: n/a | Vapor pressure: n/a |
| Relative vapor density at 20C: n/a | Relative density: n/a |
| Specific gravity @ 20C (water = 1): n/a | Solubility in water: Insoluble |
| Partition coefficient (N-octanol/water): n/a | Viscosity: n/a |
| Explosion - sensitivity to mechanical impact: not expected to present an explosion hazard due to mechanical impact | Explosion - sensitivity to static discharge: not expected to present an explosion hazard due to static discharge |

**10. Stability and reactivity**

Products as shipped are non-hazardous, nonflammable, non-explosive, and nonreactive.
**Reactivity**: None under normal conditions.
**Chemical Stability**: Stable under normal conditions.
**Possibility of Hazardous Reactions**: Contact with chemical substances like acids or strong bases could cause generation of gas.
**Conditions to Avoid**: Incompatible materials. Uncontrolled exposure to extreme temperatures.
**Incompatible Materials**: Strong acids, strong bases, hydrogen peroxide (52% or greater- in presence of manganese dioxide). Hot iron wire burns in chlorine gas. Dusts of these products would be incompatible with strong oxidizers, acetaldehyde, ammonium peroxodisulfate, chloroformamidinium, chloric acid, ammonium nitrate, halogens, dinitrogen tetroxide, nitryl fluoride, polystyrene, sodium acetylide, potassium dichromate, peroxyformic acid, and sodium carbide.
**Hazardous Decomposition Products**: Metal oxides. Iron compounds. Fluoride and calcium compounds. Fume constituents may include: complex oxides of iron, manganese, silicon, copper, carbon dioxide, carbon monoxide, ozone and nitrogen oxides. Certain products may also include: molybdenum, aluminum, magnesium titanium, and zirconium. Fume limits for individual components may be reached before limit of 5 mg/m3 of general welding fumes is reached. Gaseous reaction products may include carbon monoxide and carbon dioxide. Ozone and nitrogen oxides may be formed by the radiation from the arc.
NOTE: The composition and quality of welding fumes and gases are dependent upon the metal being welded, the process, the procedure, and the electrodes used. Other conditions that could also influence the composition and quantity of fumes and gases to which workers may be exposed include the following: any coatings on metal being welded (e.g., paint, plating, or galvanizing), the number of welders and the volume of the work area, the quality of ventilation, the position of the welder's head with respect to the fume plume, and the presence of other contaminates in the atmosphere. When the electrode is consumed, the fume and gas decomposition products generated are different in percent and form from the ingredients listed in Section 2 (Composition and Information on Ingredients). Fume and gas decomposition products, and not the ingredients in the electrode, are important. Concentration of the given fume or gas component may decrease or increase by many times the original concentration. New compounds in the electrode may form. Decomposition products of normal operations include not only those originating from volatilization, reaction, or oxidation of the product's components but also those from base metals and any coating (as noted previously). The best method to determine the actual composition of generated fumes and gases is to take an air sample from inside the welder's helmet if worn or in breathing zone. For additional information, refer to the American Welding Society Publication, "Fumes and Gases in the Welding Environment".

**11. Toxicological information**

**Information on Toxicological Effects - Product**

| | |
|---|---|
| Acute Toxicity: Harmful if swallowed | LD50 and LC50 Data: Not available |
| Skin Corrosion/Irritation: Not classified | Serious Eye Damage/Irritation: Not classified |
| Respiratory or Skin Sensitization: Not classified | Germ Cell Mutagenicity: Not classified |
| Teratogenicity: Not available | Carcinogenicity: Not classified. |
| Specific Target Organ Toxicity (Repeated Exposure): Not classified | Reproductive Toxicity: Not classified |
| Specific Target Organ Toxicity (Single Exposure): Not classified. | Aspiration Hazard: Not classified |

**Irritancy of product**: Dusts or fumes of these products may be irritating to contaminated skin and eyes. Fumes may be irritating to the respiratory system.
**Sensitization to the product**: These products are not known to be skin or respiratory sensitizers.
**Reproductive toxicity information**: Listed below is information concerning the effects of this product and its components on the human reproductive system.
Mutagenicity: These components are not reported to produce mutagenic effects in humans.
Embryotoxicity: These products are not reported to produce embryotoxic effects in humans.
Teratogenicity: These components are not reported to cause teratogenic effects in humans.
Reproductive Toxicity: These components are not reported to cause reproductive effects in humans.
**Biological exposure indices**: No other information available.

**Information on Toxicological Effects - Ingredient(s)**

| | |
|---|---|
| Iron | TDLo (oral, child) = 77 mg/kg; BAH, gastrointestinal tract, blood effects |
| Manganese | TCLo (inhalation, human) 2.3 mg/m3: Brain and Central Nervous System effects |
| Sodium Silicate | Skin Irritancy (human) = 250 mg/ 24 hours; severe<br>LD50 (oral rat) 1153 mg/kg<br>ATE (oral) 1153 mg/kg |
| Potassium Silicate | LD50 (oral rat) 1300 mg/kg<br>ATE (oral) 1300 mg/kg |

**Suspected Cancer Agents**: The components of this product are listed as follow:

| | |
|---|---|
| Silicon Dioxide (Silica) | IARC 1 (Carcinogenic to humans), ACGIH A2 (Suspected human carcinogen). NIOSH-Ca (Potential Occupational Carcinogen with no Further Categorization); NTP-R (Reasonably Anticipated to be a Human Carcinogen (limited evidence of carcinogenicity from studies in humans, which indicates that causal relationship is credible); MAK-1 (Substances that Cause Cancer in Man and Which Can Be Assumed to Make a Significant Contribution to Cancer Risk).<br>The information on quartz is pertinent to inhalation of quartz particulates, which is not a likely route of exposure for this component as it exists in this product. |

Other components of these products that are not found on the following lists: FEDERAL OSHA Z LIST, NTP, IARC, and CAL/OSHA therefore are not considered to be, nor suspected to be, cancer-causing agents by these agencies.

## 12. Ecological information

**Toxicity**: Very toxic to aquatic life.

| | |
|---|---|
| Manganese | NOEC chronic fish: 3.6 mg/L (Exposure time: 96h - Species: Oncorhynchus mykiss) |
| Iron | LC50 Fish: 0.56 mg/L (96h - Cyprinus carpio) |
| Potassium Silicate | LC50 Fish 1: 301 - 478 mg/L (96h - Lepomis macrochirus)<br>LC50 Fish 2: 3185 mg/L (96h - Brachydanio rerio) |

**Persistence and Degradability**: The components of these products are expected to persist in the environment for an extended period of time.
**Environmental Stability:** Iron, the main component of these products will react with water and air to form a variety of stable iron oxides.
**Bioaccumulative**: No additional information available.
**Mobility in Soil**: No additional information available.
**Other Adverse Effects**: Copper may concentrate to toxic level in the food chain.

## 13. Disposal considerations

**Sewage Disposal Recommendations**: Do not empty into drains; dispose of this material and its container in a safe way.
**Waste Disposal Recommendations**: Dispose of waste material in accordance with all local, regional, national, and international regulations.
**Additional Information**: Recycle where possible and/or dispose of spent material such as metals & metal-bearing waste and submerged arc welding (SAW) flux/slag appropriately.
**EPA Waste Number**: D005 (Barium) 100 mg/L (Regulated Level).

## 14. Transport information

THIS MATERIAL IS NOT HAZARDOUS (Per 49 CFR 172.101) BY THE U.S. DEPARTMENT OF TRANSPORTATION.
Transport is not regulated in accordance with: USDOT, TDG (Canada), IATA, or IMDG.
**UN Identification Number**: Not Applicable

## 15. Regulatory information

| | **US Federal Regulations** | **Canadian** |
|---|---|---|
| **Manganese** | Listed on the United States TSCA (Toxic Substances Control Act) inventory; Listed on United States SARA Section 313<br><br>SARA Section 313 - Emission Reporting: 1.0% | Listed on the Canadian DSL (Domestic Substances List); Listed on the Canadian IDL (Ingredient Disclosure List)<br><br>IDL Concentration 1 %<br><br>WHMIS Classification: Uncontrolled product according to WHMIS classification criteria |
| **Iron** | Listed on United States TSCA (Toxic Substances Control Act) inventory | WHMIS Class B-4 |
| **Sodium Silicate, Potassium Silicate, Graphite, Cellulose, Magnesite** | Listed on United States TSCA (Toxic Substances Control Act) inventory | |

**State Regulatory Information**:
Some components are listed.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains information required by CPR.

WARNING: This product may contain chemicals, and when used for welding or brazing may produce fumes or gases containing chemicals known to the state of California to cause cancer, and/or birth defects (or other reproductive harm).

**Proposition 65** (California):
· Chemicals known to cause cancers: silicon dioxide (silica, crystalline airborne particles of respirable size)
· Chemicals known to cause reproductive toxicity for females none
· Chemicals known to cause reproductive toxicity for males: none
· Chemicals known to cause developmental toxicity: none

## 16. Other information including information on preparation and revision of the SDS

| | |
|---|---|
| NFPA Health Hazard: 2 - May be harmful if inhaled or absorbed<br>NFPA Fire Hazard: 0 - Materials that will not burn<br>NFPA Reactivity: 0 - Normally stable, even under fire exposure conditions, and are not reactive with water | HMIS III Rating<br>Health: 2 Moderate Hazard - Temporary or minor injury may occur<br>Flammability: 0 Minimal Hazard<br>Physical: 0 Minimal Hazard |

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