# Safety Data Sheet

Date Revised: 02/06/2019

Supersedes: 05/22/2018

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

| | |
|---|---|
| Product Name(s): | **Five Star® Fluid Grout 100**<br>**Five Star® High Strength Grout**<br>**Five Star® Fluid Grout UW**<br>**Five Star® Clarifier Grout**<br>**Five Star® Special Grout 110**<br>**Five Star® Special Grout 120**<br>**Five Star® Special Grout 150**<br>**Five Star® Special Grout 550**<br>**Five Star® Fluid 100 SP**<br>**Five Star® Fluid 100 SP AT**<br>**Five Star® Fluid Grout 100 N**<br>**Five Star® Fluid Grout 100 Red N**<br>**Five Star® Fluid Grout 100 SPR** |
| Synonyms: | FG100, Fluid 100, FG UW, HSG, Fluid Grout, Grout, 100 Grout |
| Product Use: | For use in supporting machinery and equipment requiring precision alignment. |
| Manufacturer/Supplier | Five Star Products, Inc.<br>60 Parrott Drive<br>Shelton, CT 06484 USA |
| Phone #: | 203-336-7900 |
| **Emergency Phone #:** | **CHEM-TEL 1-800-255-3924**<br>**(Outside the U.S. 1-813-248-0585)** |

## SECTION 2: HAZARD(S) IDENTIFICATION-GHS INFORMATION

**Classification:**

Acute Oral Toxicity – Category 4
Skin Corrosion/Irritation – Category 1
Acute Toxicity – Dermal, Category 5
Sensitization – Dermal, Category 1
Eye Damage/Irritation – Category 1
Sensitization – Respiratory, Category 1
Specific Target Organ Systemic Toxicity (Single Exposure) – Cat 3
Carcinogenicity – Category 1A
Specific Target Organ Toxicity (Repeated Exposure) – Cat 2

**Label Elements/Hazard Pictograms:**

| | |
|---|---|
| **Signal Word:** | Danger |
| **Hazard Statements:** | H302 Harmful if swallowed<br>H313 May be harmful in contact with skin<br>H314 Causes severe skin burns and eye damage<br>H317 May cause an allergic skin reaction<br>H318 Causes serious eye damage<br>H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled<br>H335 May cause respiratory irritation<br>H350 May cause cancer<br>H373 May cause damage to organs through prolonged or repeated exposure |
| **Precautionary Statements/Prevention:** | P260 Do not breathe dust, fume, gas, mist, vapors, or spray<br>P264 Wash thoroughly after handling<br>P270 Do not eat, drink or smoke when using this product<br>P272 Contaminated work clothing should not be allowed out of the workplace<br>P280 Wear protective gloves, protective clothing, eye protection and face protection<br>P284 Wear respiratory protection |
| **Response:** | P330, 331 If swallowed: Rinse mouth. Do NOT induce vomiting<br>P361, 353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower<br>P340 If inhaled: Remove person to fresh air and keep comfortable for breathing<br>P351, P338, P310 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.<br>P310 Immediately call a poison center or doctor<br>P333, P313 If skin irritation or rash occurs: Get medical advice/attention.<br>P342, P310, P363 If experiencing respiratory symptoms: Call a poison center or doctor. Wash contaminated clothing before reuse, P363. |
| **Storage:** | Store locked up. |
| **Disposal:** | Dispose of contents/container in accordance with applicable regional, national, and local laws and regulations. |
| **Hazards Not Otherwise Classified:** | Not applicable |

| SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS | | | |
|---|---|---|---|
| **Hazardous Ingredient(s)** | **Common Name/Synonyms** | **CAS No.** | **% wt/wt** |
| Portland Cement * | Hydraulic Cement | 65997-15-1 | 45-60 |
| Quartz | Silicon Dioxide, Silica Sand | 14808-60-7 | 40-55 |

* Portland cement typically contains about 0.5 ppm of Cr(VI) which may affect sensitized individuals to dermatitis.

## SECTION 4: FIRST AID MEASURES

**Inhalation:** If inhaled: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms call poison center or doctor.

**Eye Contact:** If in eyes: Rinse cautiously with water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor.

**Skin Contact:** If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower for at least 15 minutes. Immediately call a poison center or doctor if irritation develops. Wash contaminated clothing before reuse.

**Ingestion:** If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately call a poison center or doctor. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Never give anything by mouth to an unconscious person.

**General Advice:** In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

**Note to Physicians:** Symptoms may not appear immediately. Treat symptomatically.

## SECTION 5: FIRE-FIGHTING MEASURES

**Flammability and Explosion Information:** Not flammable or combustible by OSHA/WHMIS criteria.

**Sensitivity to Mechanical Impact:** This material is not sensitive to mechanical impact.

**Sensitivity to Static Discharge:** This material is sensitive to static discharge at temperatures at or above the flash point.

**MEANS OF EXTINCTION**

**Suitable Extinguishing Media:** Small Fire: Dry chemical, CO2, or water spray.

Large Fire: Dry chemical, CO2, alcohol-resistant foam or water spray. Move containers from fire area if you can do it without risk. Dike fire-control water for later disposal; do not scatter the material.

**Unsuitable Extinguishing Media:** Not available

**Product of Combustion:** Non-combustible

**Protection of Firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**Emergency Procedures:** Use personal protective equipment. Ensure adequate ventilation. Keep people from spill. Avoid dust formation.

**Personal Precautions:** Avoid inhalation of dust. Do not get into eyes, on skin, or clothing.

**Environmental Precautions:** The environmental impact of this product has not been fully investigated.

**Methods for Containment:** Cover powder spill with plastic sheet or tarp to minimize spreading. Collect this material into a disposal container by sucking or sweeping up.

**Methods for Cleanup:** Pick up and transfer to properly labeled containers.

**Other Information:** See Section 13 for disposal considerations.

## SECTION 7: HANDLING AND STORAGE

**Handling:** Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not breathe dust. Prevent contact with skin, eyes, and clothing. Wash thoroughly after handling.

**Storage:** Keep containers tightly closed in a cool, dry, and well-ventilated place. Store locked up.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Exposure Guidelines**

| Component | CAS No. | ACGIH TLV | OSHA PEL |
|---|---|---|---|
| Portland Cement | 65997-15-1 | TWA: 1mg/m$^3$ particulate matter containing no asbestos and <1% crystalline silica, respirable fraction | TWA: 15 mg/m$^3$ total dust TWA: 5 mg/m$^3$ respirable fraction (vacated) TWA: 10 mg/m$^3$ total dust (vacated) TWA: 5 mg/m$^3$ respirable fraction TWA: 50 mppcf, <1% Crystalline silica |
| Quartz* | 14808-60-7 | TWA: 0.025mg/m$^3$ respirable fraction | TWA: 0.050 mg/m$^3$ AL: 0.025 mg/m$^3$ |

PEL: Permissible Exposure Limit TLV: Threshold Limit Value AL: Actionable Level

*Respirable (< 6 micron) fraction for product is <0.1%

**Engineering Controls** Not normally required.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**Eye/Face Protection:** Tightly fitting safety goggles

**Hand Protection:** Impervious gloves. Impervious clothing.

**Skin and Body Protection:** Impervious gloves. Impervious clothing.

**Respiratory Protection:** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations:** Handle according to established industrial hygiene and safety practices.

| **SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES** | |
|---|---|
| **Appearance:** | Gray, finely ground solid powder |
| **Color:** | Gray |
| **Odor:** | Mild |
| **Odor Threshold:** | None |
| **Physical State:** | Solid, powder |
| **pH:** | 12 when mixed with water |
| **Melting Point / Freezing Point:** | > 1,832°F (1,000°C) |
| **Initial Boiling Point:** | Not Available |
| **Boiling Point:** | > 3,632°F (2,000°C) |
| **Flash Point:** | Not Applicable |
| **Evaporation Rate:** | Not Applicable |
| **Flammability (solid, gas):** | Not Applicable |
| **Lower Flammability Limit:** | Not Applicable |
| **Upper Flammability Limit:** | Not Applicable |
| **Vapor Pressure:** | Not Applicable |
| **Vapor Density:** | Not Applicable |
| **Relative Density:** | 2.7 – 3.1 |
| **Solubility:** | Slight 0.2-0.5% |
| **Partition Coefficient: n-Octanol/Water:** | Not Applicable |
| **Auto-ignition Temperature:** | Not Applicable |

| | |
|---|---|
| **Decomposition Temperature:** | Not Available |
| **Viscosity:** | Not Applicable |
| **Percent Volatile, wt.%:** | 0 |
| **VOC Content, wt.%:** | 0 |
| **Density:** | 2.7 – 3.1 g/cc |
| **Coefficient of Water/Oil Distribution:** | Not Applicable |

## SECTION 10: STABILITY AND REACTIVITY

**Chemical Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** None under normal processing.

**Conditions to Avoid:** Exposure to water – product may harden on contact with water. Manage dust formation during usage.

**Incompatible Materials:** Strong acids

## SECTION 11: TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

**Product information**

**Inhalation:** Irritating to respiratory system. Irritating to mucous membranes.

**Eye contact:** Risk of serious damage to eyes.

**Skin contact**: Irritating to skin. May cause allergic skin reaction. May cause alkali burns.

**Ingestion:** Harmful if swallowed.

| Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| Portland Cement | Not Available | Not Available | Not Available |

| Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|---|---|---|---|
| Quartz | 500 – 22,500 mg/kg (Rat) | Not Established | Not Established* |

*LCL50: 0.3 mg/m3 / 10Y (Human)

**Symptoms related to the physical, chemical and toxicological characteristics:** No information available.

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Sensitization:** May cause sensitization by skin contact.

**Mutagenic Effects:** No information available.

**Carcinogenicity:** The table below indicates whether each agency has listed any ingredient as a carcinogen. Crystalline silica (quartz) has been classified by the International Agency for Research on Cancer (IARC) as a known human carcinogen (Group 1). May cause cancer by inhalation.

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|---|---|---|---|---|
| Quartz | A2* | Group 1 | Known | X |

*The respirable fraction as a whole is less than 0.1% and anticipated usage would generate far less than 0.1% as a respirable quantity above exposure guidelines as noted in Section 8.

**ACGIH: (American Conference of Governmental Industrial Hygienists):** A2 - Suspected Human Carcinogen

**IARC: (International Agency for Research on Cancer):** Group 1 - Carcinogenic to Humans

**NTP: (National Toxicity Program):** Known Carcinogen

**OSHA: (Occupational Safety & Health Administration):** X - Present

**Reproductive Toxicity:** No information available.

**STOT - single exposure:** May cause respiratory irritation.

**STOT - repeated exposure:** Causes damage to organs through prolonged or repeated exposure if inhaled. Lungs.

**Chronic Toxicity:** Inhalation overexposure to free crystalline silica may cause delayed lung injury including silicosis, a disabling and potentially fatal lung disease.

**Aspiration Hazard:** No information available.

**Numerical measures of toxicity - Product**

**The following values are calculated based on chapter 3.1 of the GHS document:** LD 50 Oral: 500 mg/kg; Acute toxicity estimate

## SECTION 12: ECOLOGICAL INFORMATION

**Toxicity:** The environmental impact of this product has not been fully investigated.

**Aquatic Toxicity:** The environmental impact of this product has not been fully investigated. Portland cement contains up to about 3-5% calcium oxide.

Calcium Oxide (1305-78-8):

• 96 hour LC50 freshwater fish – Species: Cyprinus carpio =1070 mg/l (static)

• Chronic 46 day NOEC freshwater fish – Species: Oreochromis niloticus juvenile (fledgling, hatchling, weanling) = 100 mg/l

**Persistence and Degradability:** No information available.

**Bio-accumulative Potential:** Does not accumulate in organisms

**Mobility in Soil:** No further relevant information available

**Ecotoxical Effects Remark:** No information available.

**Additional Ecological Information** No information available.

**General Notes:** This statement was deduced from products with a similar structure or composition. Due to available data on eliminability/decomposition and bio-accumulation potential prolonged term damage of the environment cannot be excluded. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Addition of water to cement creates an alkaline pH of between 12-13. Cured product is inert. Common to concrete construction around waterways, particular concern should be given to best practices to avoid/minimize spillage/discharge to the nearby environment as best as possible. In the case of significant spillage in confined or restricted areas, pH may increase to a level toxic to fish and aquatic organisms.

**PBT Assessment:** Not Available

**vPvB Assessment:** Not Available

**Other Adverse Effects:** No further relevant information available

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Treatment Methods**

**Recommendation:** This material as supplied is not a hazardous waste according to Federal regulations (40CFR261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered.

**Uncleaned Packaging Recommendation:** Disposal must be made according to official regulations. Do not re-use empty containers.

## SECTION 14: TRANSPORT INFORMATION

**US DEPARTMENT of TRANSPORTATION (DOT) Proper Shipping Name:** Not Regulated

**Class:** Not Applicable

| | |
|---|---|
| **UN #:** | Not Applicable |
| **Packing Group:** | Not Applicable |
| **CANADA Transportation of Dangerous Goods (TDG) Proper Shipping Name:** | Not Regulated |
| **Class:** | Not Applicable |
| **UN #:** | Not Applicable |
| **Packing Group:** | Not Applicable |
| **INTERNATIONAL AIR TRANSPORTATION Proper Shipping Name (ICAO/IATA):** | Not Regulated |
| **Class:** | Not Applicable |
| **UN#:** | Not Applicable |
| **Packing Group:** | Not Applicable |
| **WATER TRANSPORTATION Proper Shipping Name (IMO/IMDG):** | Not Regulated |
| **Class:** | Not Applicable |
| **UN #:** | Not Applicable |
| **Packing Group:** | Not Applicable |
| **Marine Pollutant:** | Not Applicable |

## SECTION 15: REGULATORY INFORMATION

**CHEMICAL INVENTORIES**

| | |
|---|---|
| **US (TSCA):** | The components of this product are in compliance with the chemical notification requirements of TSCA. |
| **CANADA (DSL):** | The components of this product are in compliance with the chemical notification requirements of NSN Regulations under CEPA, 1999. |
| **U.S. FEDERAL REGULATIONS** | Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the CFR, Part 372. |
| **UNITED STATES:** | This SDS has been prepared to meet the US OSHA Hazard Communication Standard, 29 CFR 1910.1200 |
| **SARA 311/312 Hazard Categories** | Acute health hazard – Yes<br>Chronic Health hazard – Yes<br>Fire Hazard – No<br>Sudden Release of Pressure – No |

Reactive Hazard – No

**US STATE Right to Know Regulations**

| Chemical Name | NJ | MA | PA | IL | RI |
|---|---|---|---|---|---|
| Portland Cement | X | X | X | | X |
| Quartz | X | X | X | | X |

**California**

This product contains the following Proposition 65 chemicals:

**California Prop 65:**

Chemical Name: Quartz, CAS No 14808-60-7, CA Prop. 65: Carcinogen

Chemical Name: Chromium, CAS No 18450-29-9, CA Prop 65: Birth defects or other reproductive harm

## SECTION 16: OTHER INFORMATION

**HMIS Rating:**

| Health | Flammability | Physical Hazard | Personal Protection |
|---|---|---|---|
| 1 | 0 | 1 | E, X |

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