

MATERIAL SAFETY DATA SHEET

Prepared in accordance with ISO 11014-1/ANSI standard Z400.1-1998

Revision Date: 03/03/2005

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Flattening Agent
Product Code : FA
Use of the Substance/Preparation: Material, Industrial Products, Various

Manufactured for: Alsa Corporation
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Vernon, CA 90058
USA
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Emergency Telephone Number: (800)535-5053

2. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS Number | EINECS Number | Weight % | EU Classification |
|--------------------------------|-------------|---------------|----------|-------------------|
| Silica gel, trimethylsilylated | 126877-03-0 | Not assigned | >97 | None |

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW - CAUTION:

Fine white powder with no distinct odor. **CAUTION:** Dust may be harmful if inhaled. Do not breathe dust. May cause mechanical irritation. Avoid temperatures above ~ 250°C (482°F). Dust irritating to respiratory tract. Irritating, but will not permanently injure eye tissue. Repeated exposure may cause skin dryness or cracking. Take precautionary measures against static discharges. All metal parts of the mixing and processing equipment must be earthed/grounded. Ensure all equipment is electrically earthed/grounded before beginning transfer operations.

Principle Routes of Exposure: Inhalation, Eyes, Skin contact

POTENTIAL HEALTH EFFECTS

Eye Contact: May cause mechanical irritation. Irritating, but will not permanently injure eye tissue.

Skin Contact: May cause skin irritation and/or dermatitis. Repeated exposure may cause skin dryness or cracking.

Inhalation: Dust may be harmful if inhaled. Dust may be irritating to respiratory tract. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. See also Section 8.

Ingestion: Health injuries are not known or expected under normal use. Low hazard for usual industrial or commercial handling.

Carcinogenic Effects: Does not contain any substances listed by IARC (International Agency for Research on Cancer), NTP (National Toxicology Program), OSHA (Occupational Safety and Health Administration), ACGIH (American Conference for Governmental Industrial Hygienists) or EU (European Union). See also Section 11.

Target Organ Effects: Lungs, Skin

Medical Conditions Aggravated by Exposure: Asthma, Respiratory disorder, Dermatitis

Potential Environmental Effects: Unknown. Avoid release into the environment. See also Section 12.

4. FIRST AID MEASURES

Skin Contact: Wash thoroughly with soap and water. Remove contaminated clothing and shoes. Seek medical attention if redness, swelling, itching, or burning occurs.

Eye Contact: Flush eyes immediately with large amounts of water for 15 minutes. Seek medical attention if redness, swelling, itching, burning or visual disturbances occur.

Inhalation: If cough, shortness of breath or other breathing problems occur, move to fresh air. Seek medical attention if symptoms persist. If necessary, restore normal breathing through standard first aid measures.

Ingestion: Do not induce vomiting. If conscious, give several glasses of water. Never give anything by mouth to an unconscious person.

Notes to Physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point: Not determined

Flammable Limits in Air - Upper: Not determined

Flammable Limits in Air - Lower (%): Not determined

OSHA Flammability Classification: Not determined

Autoignition Temperature: 400°C

Burn Velocity: Method: Does not ignite

Extinguishing Media: Standard method for solid particles

Special Protective Equipment for Firefighters:

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. DO NOT USE a solid water stream as it may scatter and spread fire. The product is insoluble and floats on water.

Specific Hazards:

Wear suitable protective equipment. In the event of fire, wear self-contained breathing apparatus.

Hazardous Combustion Products:

Heating can release vapors which can be ignited. Avoid temperatures above 250°C. The product is insoluble and floats on water. If possible, try to contain floating material.

Carbon monoxide, Carbon dioxide, Organic products of decomposition.

Risk of Dust Explosion:

Dust may form explosive mixture in air. Take precautionary measures against static discharges.

6. ACCIDENTAL RELEASE MEASURES

| | |
|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Personal Precautions: | Avoid dust formation. Ensure adequate ventilation. Remove all sources of ignition. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapors). Use personal protective equipment. See also Section 8. |
| Methods for Cleaning Up: | Clean up promptly by vacuum. Use a suitable vacuum cleaner. Pick up and transfer to properly labeled containers. Avoid dust formation. See Section 13. |
| Environmental Precautions: | The product is insoluble and floats on water. If possible, try to contain floating material. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained. |

7. HANDLING AND STORAGE

| | |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Handling: | Dust may be harmful if inhaled. Avoid dust formation. Do not breathe dust. Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Avoid contact with skin and eyes. Keep away from heat and sources of ignition. Take precautionary measures against static discharge. All metal parts of the mixing and processing equipment must be earthed/grounded. Ensure all equipment is electrically earthed/grounded before beginning transfer operations. |
| Storage: | Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in properly labeled containers. Do not store together with volatile chemicals as they may be adsorbed onto product. |

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS

There are no exposure limits identified for this specific product. Exposure limits for silica are stated below. **Silica 7631-86-9**

| | |
|-------------------------|-----------------------------------------------------|
| Austria MAK: | 4 mg/m ³ , TWA, Inhalable fraction |
| Belgium OEL: | 10 mg/m ³ , TWA, Inhalable fraction |
| | 3 mg/m ³ , TWA, Respirable fraction |
| Germany TRGS 900: Italy | 4 mg/m ³ , TWA, Inhalable fraction |
| OEL: | 10 mg/m ³ , TWA, Inhalable fraction |
| | 3 mg/m ³ , TWA, Respirable fraction |
| Netherlands MAC: | 10 mg/m ³ , TWA, Inhalable fraction |
| | 5 mg/m ³ , TWA, Respirable fraction |
| Norway: | 1.5 mg/m ³ , TWA, Respirable fraction |
| Spain: | 10 mg/m ³ , TWA, Inhalable fraction |
| | 3 mg/m ³ , TWA, Respirable fraction |
| Sweden: | 10 mg/m ³ , TWA, Inhalable fraction |
| | 5 mg/m ³ , TWA, Respirable fraction |
| UK EH40 OES (Table 2): | 6 mg/m ³ , TWA, Total inhalable fraction |
| | 2.4 mg/m ³ , TWA, Respirable fraction |
| ACGIH TLV: | 10 mg/m ³ , TWA, Inhalable fraction. |

ACGIH: American Conference of Governmental Industrial Hygienists
 NIOSH: National Institute for Occupational Safety and Health
 OSHA: Occupational Health and Safety Administration
 PEL: Permissible Exposure Limit
 REL: Recommended Exposure Limit
 TLV: Threshold Limit Value
 TWA: Time Weighted Average
 MAK: Maximale Arbeitsplatzkonzentration
 OES: Occupational Exposure Standard
 TRGS: Technische Regeln für Gefahrstoffe
 (Technical Rule for Hazardous Materials)

ENGINEERING CONTROLS

Provide appropriate exhaust ventilation at machinery and at places where dust can be generated. Ensure adequate ventilation to maintain exposures below occupational limits.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Approved respirator may be necessary if local exhaust ventilation is not adequate.

Hand Protection: Repeated exposure may cause skin dryness or cracking. Use protective skin cream before handling the product. Wear suitable gloves.

Eye Protection: Wear eye/face protection. Safety glasses with side-shields. Goggles.

Skin and Body Protection: Wear suitable protective clothing. Remove and wash contaminated clothing before re-use. No special protective equipment required.

Other: Handle in accordance with good industrial hygiene and safety practice. Emergency eyewash and safety shower should be located nearby.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|-------------------------------------------------|-------------------------------------|
| Appearance: | Fine Powder |
| Odor: | None |
| pH: | Not applicable |
| Vapor Pressure: | Not determined |
| Boiling Point/Range: | 2230 °C after partial decomposition |
| Melting Point/Range: | 1700 °C after partial decomposition |
| Water Solubility: | Insoluble |
| Density: | 1900-2200 kg/m ³ @ 20 °C |
| Bulk Density: | 20-100 kg/m ³ @20°C |
| Specific Gravity: | Not determined |
| % Volatile (by Volume): | Negligible |
| Evaporation Rate: | Not determined |
| Viscosity: | Not determined |
| Partition Coefficient (n-octanol/water): | Floats on water; disperses in oil |

10. STABILITY AND REACTIVITY

| | |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Stability: | Stable |
| Hazardous Polymerization: | Hazardous polymerization does not occur. |
| Mechanical Sensitivity (shock): | Not sensitive to mechanical impact. |
| Conditions to Avoid: | Do not expose to temperatures above 250°C. Avoid conditions where oxygen may condense in or around this product, as this will increase the flammability. |
| Hazardous Decomposition Products: | Carbon monoxide, Carbon dioxide, Organic products of decomposition. |
| Static Discharge Effects: | Dust may form explosive mixture in air. Avoid dust formation. Take precautionary measures against static discharges. All metal parts of the mixing and processing equipment must be earthed/grounded. Ensure all equipment is electrically earthed/grounded before beginning transfer operations. |

11. TOXICOLOGICAL INFORMATION

Information given is based on data obtained from this substance or from similar substances.

ACUTE TOXICITY

Oral LD50: LD50/oral/rat = > 5000 mg/kg.

Inhalation LC50: Due to the product's physical characteristics, no suitable testing procedure is available.

Dermal LD50: Not determined.

Eye Irritation: Draize score 0.7/110 @ 24 hr. Non-irritating.

Skin Irritation: Non-irritating.

SUBCHRONIC TOXICITY

Not determined.

CHRONIC TOXICITY

Due to the product's physical characteristics, no suitable testing procedure is available.

Carcinogenic Effects: Does not contain any substances listed by IARC (International Agency for Research on Cancer), NTP (National Toxicology Program), OSHA (Occupational Safety and Health Administration), ACGIH (American Conference for Governmental Industrial Hygienists) or EU (European Union).

Mutagenic Effects: Not mutagenic in AMES Test, chromosomal aberration in Chinese hamster ovary (CHO) cells.

Reproductive Toxicity: Not determined.

Sensitizing Effects: A delayed contact hypersensitivity study in guinea pigs utilizing the Buehler technique was performed. Non-sensitizing.

Synergistic Materials: None reasonably foreseeable.

12. ECOLOGICAL INFORMATION

Information given is based on data obtained from this substance or from similar substances.

- Aquatic Toxicity:** Fish (Brachydanio rerio) LC50(96 hour) > 10,000 mg/l (Method: OECD 203)
Daphnia magna EC50 (24 hours) > 10,000 mg/l (Method: OECD 202)
- Other Information:** Aquatic toxicity is unlikely due to low solubility.

ENVIRONMENTAL FATE

- Mobility:** Insoluble. Not expected to migrate.
- Bioaccumulation:** According to experience not expected.
- Persistence / Degradability:** The methods for determining biodegradability are not applicable to inorganic substances.

13. DISPOSAL CONSIDERATIONS

Disclaimer: Information in this section pertains to the product as shipped in its intended condition as described in Section 2 of this MSDS. Contamination or processing may change waste characteristics and requirements. Regulations may also apply to empty containers, liners or rinsate. State/provincial and local regulations may be different from federal regulations.

Unused and Uncontaminated Product: Can be burned in suitable incineration plants or disposed of in a suitable landfill in accordance with the regulations issued by the appropriate federal, provincial, state and local authorities.

14. TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulations.

15. REGULATORY INFORMATION

Hazard Classification

United States - OSHA (29 CFR 1910.1200): Not hazardous.

Mexico - NOM-018-STPS-2000: Refer to HMIS Rating in Section 16.

Canada - WHMIS Classification (CPR, SOR/88-66): Not controlled.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International Inventories

All components of this product are listed on or exempt from the following inventories:

- YES - Australian Inventory of Chemical Substances (AICS)
- YES - Canadian Domestic Substances List (DSL)
- NO - Chinese Inventory
- YES - European Inventory of Existing Commercial Chemical Substances (EINECS)
- NO - Japanese Inventory of Existing and New Chemical Substances (ENCS)
- NO - Korean Existing Chemicals List (KECL)
- YES - New Zealand Hazardous Substances and New Organisms Act (HSNO)
- NO - Philippines Inventory of Chemicals and Chemical Substances (PICCS)
- YES - United States Toxic Substances Control Act (TSCA) Inventory

NOTE: The chemicals in this product may not be subject to notification in the following countries under an "article" exemption: Canada, Japan, Korea, New Zealand and Switzerland. Please contact your Alsa sales representative for more information.

U.S. Federal Regulations

TSCA 12(b) Export Notification: This product does not contain any components that are subject to TSCA 12(b) Export Notification.

Clean Air Act Amendments of 1990 (CAA, Section 112, 40 CFR 82): This product does not contain any components listed as a Hazardous Air Pollutant, Flammable Substance, Toxic Substance, or Class 1 or 2 Ozone Depletor.

Clean Water Act (CWA, 40 CFR 116) Priority Pollutants: This product does not contain any listed Priority Pollutants.

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, 40 CFR 302): This product does not contain any listed Hazardous Substances.

Superfund Amendments and Reauthorization Act, Title III (SARA):

SARA Section 302 (40 CFR 355) Extremely Hazardous Substances: No components are listed as extremely hazardous chemicals under SARA Section 302.

SARA Sections 311/312 (40 CFR 370) Hazard Category: This product does not meet any of the MSDS Requirement definitions for a hazardous material under SARA Sections 311/312.

SARA Section 313 (40 CFR 372) Toxics Release Inventory: Does not contain any of the substances identified under Section 313 as toxic chemicals in excess of the de minimis concentrations necessary to be subject to this rule.

Pharmaceutical Information: Not permitted

U.S. State Regulations

California Proposition 65: This product does not contain any components listed on California Proposition 65.

US Coalition of NorthEastern Governors (CONEG) Metals List: This product meets the CONEG Source Reduction Council limits for the sum of the levels of lead, cadmium, mercury and hexavalent chromium of less than 100 parts per million by weight.

16. OTHER INFORMATION

HMIS Rating

HMIS Index: 0-minimal, 1-slight, 2 - moderate, 3-serious, 4 - severe, *-chronic

Health: 1

Flammability: 1

Physical Hazard: 0

Revision Date: 03/03/2005

Previous Revision Date: -

Reason for Revision: -

Disclaimer:

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