

# SAFETY DATA SHEET

## 1. Identification

**Product identifier** Sulfur Coated Urea Fe Mn 29-0-0

**Other means of identification**

**Product code** KAS\_SCUFEMN\_2900\_US\_EN

**Recommended use** Fertilizer.

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**

**Manufacturer/Supplier** Koch Agronomic Services, LLC  
 4111 E 37th St N  
 Wichita, KS 67220 US  
 kochmsds@kochind.com  
 1.866.863.5550

**Emergency** For Chemical Emergency  
 Call CHEMTREC day or night  
 USA/Canada - 1.800.424.9300  
 Mexico - 1.800.681.9531  
 Outside USA/Canada - 1.703.527.3887  
 (collect calls accepted)

## 2. Hazard(s) identification

**Physical hazards** Not classified.

**Health hazards** Skin corrosion/irritation Category 2

**OSHA defined hazards** Not classified.

### Label elements



**Signal word** Warning

**Hazard statement** Causes skin irritation.

**Precautionary statement**

**Prevention** Wear protective gloves/protective clothing/eye protection/face protection. Wash thoroughly after handling.

**Response** If on skin: Wash with plenty of water. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

**Storage** Store away from incompatible materials.

**Disposal** Dispose of waste and residues in accordance with local authority requirements.

**Hazard(s) not otherwise classified (HNOC)** None known.

## 3. Composition/information on ingredients

### Mixtures

| Chemical name | CAS number | %       |
|---------------|------------|---------|
| Urea          | 57-13-6    | 60 - 70 |
| Sulfur        | 7704-34-9  | 20 - 30 |
| Iron oxide    | 1309-37-1  | < 3     |

|                           |             |     |
|---------------------------|-------------|-----|
| Non-hazardous ingredients | Proprietary | < 3 |
| Manganese oxide           | 1344-43-0   | < 2 |

**Composition comments** All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

This Safety Data Sheet is not a guarantee of product specification or NPK value(s). NPK content is on specified sales orders, customer invoices, or product specification sheets obtained from supplier.

#### 4. First-aid measures

**Inhalation** Move to fresh air. Get medical attention if any discomfort continues.

**Skin contact** Wash contact areas with soap and water. Get medical attention if irritation develops and persists.

**Eye contact** Dust in the eyes: Do not rub eyes. Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if irritation persists after washing.

**Ingestion** Rinse mouth thoroughly. Get medical attention if any discomfort continues.

**Most important symptoms/effects, acute and delayed** Symptoms can include irritation, redness, scratching of the cornea, and tearing. Eye contact: Skin contact: Causes skin irritation. Dust may irritate throat and respiratory system and cause coughing.

**Indication of immediate medical attention and special treatment needed** Treat symptomatically.

**General information** Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire-fighting measures

**Suitable extinguishing media** Use fire-extinguishing media appropriate for surrounding materials.

**Unsuitable extinguishing media** None known.

**Specific hazards arising from the chemical** Urea is non-combustible under most conditions. However, during a fire, irritating/toxic gases may be generated. The dust can be ignited at very high temperatures, but not expected to explode (minimum ignition temperature (cloud) = 900 deg C.

**Special protective equipment and precautions for firefighters** Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.

**Fire fighting equipment/instructions** Move containers from fire area if you can do it without risk. Use water spray to prevent dust formation, absorb heat, keep containers cool and protect fire-exposed material.

#### 6. Accidental release measures

**Personal precautions, protective equipment and emergency procedures** Avoid inhalation of dust and contact with skin and eyes. Ensure adequate ventilation. Wear suitable protective clothing. For personal protection, see section 8 of the SDS.

**Methods and materials for containment and cleaning up** Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements or confined areas. Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. After removal flush contaminated area thoroughly with water.

**Environmental precautions** Never return spills to original containers for re-use. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Do not allow to enter drains, sewers or watercourses.

#### 7. Handling and storage

**Precautions for safe handling** Avoid generation and spreading of dust. Avoid inhalation of dust and contact with skin and eyes. Use only with adequate ventilation. Observe good industrial hygiene practices.

**Conditions for safe storage, including any incompatibilities** Keep container tightly closed. Store in a cool, dry, well-ventilated place. Store away from incompatible materials.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Components | Type | Value                                       | Form                                |
|------------|------|---|-------------------------------------|
| Dust       | PEL  | 5 mg/m <sup>3</sup><br>15 mg/m <sup>3</sup> | Respirable fraction.<br>Total dust. |

#### US. OSHA Table Z-3 (29 CFR 1910.1000)

| Components | Type | Value   | Form   |
|------------|------|---|--|
| Dust       | TWA  | 5 mg/m <sup>3</sup><br>15 mg/m <sup>3</sup><br>50 mppcf<br>15 mppcf | Respirable fraction.<br>Total dust.<br>Total dust.<br>Respirable fraction. |

#### US. ACGIH Threshold Limit Values

| Components | Type | Value                                       | Form  |
|------------|------|---|---|
| Dust       | TWA  | 3 mg/m <sup>3</sup><br>10 mg/m <sup>3</sup> | Respirable particles.<br>Inhalable particles. |

#### US. Workplace Environmental Exposure Level (WEEL) Guides

| Components         | Type | Value                | Form               |
|--------------------|------|----------------------|--------------------|
| Urea (CAS 57-13-6) | TWA  | 10 mg/m <sup>3</sup> | Total particulate. |

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Appropriate engineering controls** Provide adequate ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of dust.

#### Individual protection measures, such as personal protective equipment

**Eye/face protection** Use tight fitting goggles if dust is generated.

#### Skin protection

**Hand protection** Risk of contact: Wear protective gloves. Suitable gloves can be recommended by the glove supplier.

**Other** Normal work clothing (long sleeved shirts and long pants) is recommended.

**Respiratory protection** If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Wear air supplied respiratory protection if exposure concentrations are unknown. In case of inadequate ventilation or risk of inhalation of dust, use suitable respiratory equipment with particle filter. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA 29 CFR 1910.134 and ANSI Z88.2.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**General hygiene considerations** Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

### Appearance

**Physical state** Solid.  
**Form** Granular solid.  
**Color** Yellow.

**Odor** Odourless.

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** Not available.

**Evaporation rate** Not applicable.

**Flammability (solid, gas)** Not available.

**Upper/lower flammability or explosive limits**

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.

**Vapor pressure** Not available.

**Vapor density** Not applicable.

**Relative density** Not available.

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity** Not applicable.

**Other information**

**Explosive properties** Not explosive.

**Oxidizing properties** Not oxidizing.

**10. Stability and reactivity**

**Reactivity** Reacts violently with strong oxidants, nitrites, inorganic chlorides, chlorites and perchlorates causing fire and explosion hazard.

**Chemical stability** Normally stable. May gradually give off ammonia. The product is hygroscopic and will absorb water by contact with the moisture in the air.

**Possibility of hazardous reactions** Hazardous polymerization does not occur.

**Conditions to avoid** Moisture. High temperatures. Contact with incompatible materials.

**Incompatible materials** Strong oxidizing agents. Nitric acid. Nitrites.

**Hazardous decomposition products** Carbon oxides. Nitrogen oxides (NOx). Ammonia. Biuret.

**11. Toxicological information****Information on likely routes of exposure**

**Inhalation** High concentrations of dust may irritate throat and respiratory system and cause coughing.

**Skin contact** Causes skin irritation.

**Eye contact** Dust may irritate the eyes.

**Ingestion** May cause discomfort if swallowed.

**Symptoms related to the physical, chemical and toxicological characteristics** Symptoms can include irritation, redness, scratching of the cornea, and tearing.

**Information on toxicological effects**

**Acute toxicity** May cause discomfort if swallowed.

| Components                               | Species   | Test Results           |
|--|---|------------------------|
| Sulfur (CAS 7704-34-9)                   |   |                        |
| <b>Acute</b>                             |   |                        |
| <i>Dermal</i>                            |   |                        |
| LD50                                     | Rat   | > 2000 mg/kg, 24 hours |
| Urea (CAS 57-13-6)                       |   |                        |
| <b>Acute</b>                             |   |                        |
| <i>Oral</i>                              |   |                        |
| LD50                                     | Rat   | 14300 mg/kg            |
| <b>Skin corrosion/irritation</b>         | Causes skin irritation.                           |                        |
| <b>Serious eye damage/eye irritation</b> | May cause irritation through mechanical abrasion. |                        |
| <b>Respiratory or skin sensitization</b> |   |                        |
| <b>Respiratory sensitization</b>         | Not classified.                                   |                        |
| <b>Skin sensitization</b>                | Not a skin sensitizer.                            |                        |

|   |   |
|---|---|
| <b>Germ cell mutagenicity</b>   | Not classified.   |
| <b>Carcinogenicity</b>  | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. Not classifiable as to carcinogenicity to humans. |
| <b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b> |   |
|   | Not listed.   |
| <b>Reproductive toxicity</b>  | Not classified.   |
| <b>Specific target organ toxicity - single exposure</b>               | Inhalation of dusts may cause respiratory irritation.   |
| <b>Specific target organ toxicity - repeated exposure</b>             | Not classified.   |
| <b>Aspiration hazard</b>  | Not an aspiration hazard.   |
| <b>Chronic effects</b>  | Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.                            |
| <b>Further information</b>  | No other specific acute or chronic health impact noted.   |

## 12. Ecological information

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

| Components             | Species | Test Results  |
|------------------------|---------|---|
| Sulfur (CAS 7704-34-9) |         |   |
| <b>Aquatic</b>         |         |   |
| Fish                   | LC50    | Western mosquitofish ( <i>Gambusia affinis</i> ) > 10000 mg/l, 96 Hours |
| Urea (CAS 57-13-6)     |         |   |
| <b>Aquatic</b>         |         |   |
| Fish                   | LC50    | Leuciscus idus > 6810 mg/l, 96 hours                                    |

|  |   |
|--|---|
| <b>Persistence and degradability</b>                     | No data available.                                      |
| <b>Bioaccumulative potential</b>                         | No data available.                                      |
| <b>Partition coefficient n-octanol / water (log Kow)</b> |   |
| Urea (CAS 57-13-6)                                       | -2.11   |
| <b>Mobility in soil</b>                                  | This product is water soluble and may disperse in soil. |
| <b>Other adverse effects</b>                             | No data available.                                      |

## 13. Disposal considerations

|  |  |
|--|--|
| <b>Disposal instructions</b>                 | Do not allow this material to drain into sewers/water supplies. Dispose in accordance with all applicable regulations.   |
| <b>Hazardous waste code</b>                  | Not regulated.   |
| <b>Waste from residues / unused products</b> | Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal. |
| <b>Contaminated packaging</b>                | Since emptied containers may retain product residue, follow label warnings even after container is emptied.  |

## 14. Transport information

|   |                                   |
|---|-----------------------------------|
| <b>DOT</b>  | Not regulated as dangerous goods. |
| <b>IATA</b>   | Not regulated as dangerous goods. |
| <b>IMDG</b>   | Not regulated as dangerous goods. |
| <b>Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code</b> | Not applicable.                   |

## 15. Regulatory information

|                               |   |
|-------------------------------|---|
| <b>US federal regulations</b> | This product is hazardous according to OSHA 29 CFR 1910.1200. All components are listed on or exempt from the U.S. EPA TSCA Inventory List. |
|-------------------------------|---|

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** Yes

**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations** This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

**US. Massachusetts RTK - Substance List**

Sulfur (CAS 7704-34-9)

**US. New Jersey Worker and Community Right-to-Know Act**

Sulfur (CAS 7704-34-9)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Sulfur (CAS 7704-34-9)

**US. Rhode Island RTK**

Not regulated.

**US. California Proposition 65**

Not Listed.

**International Inventories**

| Country(s) or region        | Inventory name                                | On inventory (yes/no)* |
|-----------------------------|---|------------------------|
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory | Yes                    |

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**16. Other information, including date of preparation or last revision**

**Issue date** 27-May-2015  
**Revision date** -  
**Version #** 01  
**Further information** HMIS® is a registered trade and service mark of the NPCA.  
**HMIS® ratings** Health: 2  
Flammability: 1  
Physical hazard: 0

**NFPA ratings**



## List of abbreviations

LC50: Lethal Concentration, 50%.  
LD50: Lethal Dose, 50%.

## References

ECHA CHEM  
EPA: Acquire database  
HSDB® - Hazardous Substances Data Bank  
RTECS

## Disclaimer

NOTICE: The information presented herein is based on data considered to be accurate as of the date of preparation of this Safety Data Sheet (SDS) and was prepared pursuant to Government regulation(s) that identify specific types of information to be provided. This SDS may not be used as a commercial specification sheet of manufacturer or seller, and no warranty or representation, expressed or implied, is made as to the accuracy or comprehensiveness of the foregoing data and safety information, nor is any authorization given or implied to practice any patented invention without a license. Additional information may be needed to evaluate other uses of the product, including use of the product in combination with any materials or in any processes other than those specifically referenced. Information provided herein with respect to any hazards that may be associated with the product is not meant to suggest that use of the product in a given application will necessarily result in any exposure or risk to workers or the general public. No responsibility can be assumed by vendor for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices, or from any hazards inherent in the nature of the product. Purchasers and users assume all risk of use, storage and handling of the product in compliance with applicable federal, state and local laws and regulations. Purchasers and users of the product specifically should advise all of their employees, agents, contractors and customers who will use the product of this (M)SDS.