Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 05/05/2015

Reviewed on 08/17/2018

1 Identification

· Product identifier
  · Trade name: Structure®
  · Relevant identified uses of the substance or mixture and uses advised against
    For agricultural use only. Not for human or animal consumption.
  · Product description
    A commercial agricultural product used to improve soil and/or plant health and for improved growth.
    NPK Values: 7 - 21 - 0; 0.20% Zn

· Details of the supplier of the safety data sheet
  · Manufacturer/Supplier:
    Actagro, LLC
    677 W. Palmdon Dr. #108
    Fresno, CA 93704
    Phone: (559) 369-2222
    Fax: (559) 843-2845
  · Emergency telephone number: INFOTRAC: (800) 535-5053

2 Hazard(s) identification

· Classification of the substance or mixture
  
  !

  GHS07

  Skin Irrit. 2 H315 Causes skin irritation.

  Eye Irrit. 2B H320 Causes eye irritation.

· Label elements
  · GHS label elements
    The product is classified and labeled according to the Globally Harmonized System (GHS).

· Hazard pictograms
  
  !

  GHS07

· Signal word Warning

· Hazard statements
  Causes skin and eye irritation.

· Precautionary statements
  Wear protective gloves.
  Wash thoroughly after handling.
  If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
  Continue rinsing.
  Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
  If skin irritation occurs: Get medical advice/attention.
  If eye irritation persists: Get medical advice/attention.
  If on skin: Wash with plenty of water.
  Take off contaminated clothing and wash it before reuse.

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Trade name: Structure®

- **Unknown acute toxicity:**
  - 47.1 percent of the mixture consists of ingredient(s) of unknown toxicity.
- **Classification system:**
  - **NFPA ratings (scale 0 - 4)**
    - Health = 1
    - Fire = 0
    - Reactivity = 0
  - **HMIS-ratings (scale 0 - 4)**
    - Health = 1
    - Fire = 0
    - Reactivity = 0
- **Hazard(s) not otherwise classified (HNOC):** None known

**3 Composition/information on ingredients**

<table>
<thead>
<tr>
<th>CAS: 7732-18-5</th>
<th>water, distilled, conductivity or of similar purity</th>
<th>45-65%</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTECS: ZC 0110000</td>
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- **Chemical characterization:** Mixtures
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous Components:**
  - **CAS: 7722-76-1** Ammonium phosphate monobasic
    - **Skin Irrit. 2, H315; STOT SE 3, H335; Eye Irrit. 2B, H320**
    - 25-50%

**4 First-aid measures**

- **Description of first aid measures**
  - **After inhalation:**
    - Supply fresh air. If required, provide artificial respiration. Consult doctor if symptoms persist.
    - In case of unconsciousness, place patient securely on side position for transportation.
  - **After skin contact:**
    - Immediately wash with water and soap and rinse thoroughly.
    - If skin irritation occurs, consult a doctor.
  - **After eye contact:**
    - Rinse opened eye for at least 15 minutes under running water. If symptoms persist, consult a doctor.
  - **After swallowing:** Consume large amounts of water. If symptoms persist, consult a physician.
- **Information for doctor:**
  - **Most important symptoms and effects, both acute and delayed:** No further relevant information available.
  - **Indication of any immediate medical attention and special treatment needed**
    - No further relevant information available.

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5 Fire-fighting measures

- **Extinguishing media**
  - **Suitable extinguishing agents**: CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
  - **Special hazards arising from the substance or mixture**
    If incinerated, product will release the following toxic fumes: Oxides of Carbon, Nitrogen (NOx), Potassium, Silicon, Sodium and Zinc, and Ammonia.

- **Advice for firefighters**
  - **Protective equipment**: As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
  Wear protective equipment. Keep unprotected persons away.
  Ensure adequate ventilation
  Material can create slippery conditions.

- **Environmental precautions**: Do not allow to enter sewers/surface or ground water.

- **Methods and material for containment and cleaning up**
  Absorb with liquid-binding material (ie. sand, diatomite, acid binders, universal binders, sawdust).
  Ensure adequate ventilation.
  Dispose contaminated material as waste according to section 13.
  Dispose of the collected material according to regulations.

- **Reference to other sections**
  See Section 7 for information on safe handling.
  See Section 8 for information on personal protection equipment.
  See Section 13 for disposal information.

7 Handling and storage

7.1 PRECAUTIONS FOR SAFE HANDLING:

- **Advice on Safe Handling**: Avoid inhalation of dusts, vapors / spray and contact with eyes, skin and clothing. Do not breathe dusts, mist or vapor. Wear personal protective equipment. Do not use in areas without adequate ventilation. Avoid prolonged exposure. Wash thoroughly after handling. Do not empty into drains. Handle and open container with care. Use care in handling/storage. Wash before eating, drinking and/or smoking.

7.2 CONDITIONS FOR SAFE STORAGE:

- **Requirements for Storage Areas and Containers**: Store above 40°F (4.4°C). Store in original containers only. Keep containers tightly closed when not in use. Store in a cool, dry well-ventilated area, preferably in a locked storage area away from children, feed and food products and seed. Do not contaminate water, food or feed by storage or disposal.

8 Exposure controls/personal protection

- **Additional information about design of technical systems**: No further data; see section 7.
Control parameters
All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use local exhaust at filling zones and where leakage and dust formation is probable. Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.

Components with occupational exposure limits:
Not determined

8.2 EXPOSURE CONTROLS:
Engineering Measures
Provide adequate general and local exhaust ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors and spray mists. Provide eyewash station and safety shower.

Individual Protection Measures:
Eye / Face Protection: Goggles or shielded safety glasses are recommended.
Skin Protection: Chemical resistant clothing is recommended. Routinely wash work clothing and protective equipment to remove contaminants. The use of chemical-resistant gloves is recommended when handling undiluted product. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.
Respiratory Protection: In case of inadequate ventilation or risk of inhalation of dusts or vapors, use suitable respiratory equipment such as MSHA/NIOSH TC-21C or NIOSH approved respirator with N, R, P or HE filter. Wear respiratory protection during operations where spraying or misting occurs. If respirators are used, a program should be in place to assure compliance with 29 CFR 1910.134, the OSHA Respiratory Protection standard. Wear air supplied respiratory protection if exposure concentrations are unknown.

* 9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:
Form: Liquid
Color: Black
Odor: Odorless
Odor threshold: Not determined.
10 Stability and reactivity

10.1 REACTIVITY
Stable

10.2 CHEMICAL STABILITY
Stable under normal temperature conditions

10.3 POSSIBILITY OF HAZARDOUS REACTIONS
No reactions known under normal use conditions. Will not polymerize.

10.4 CONDITIONS TO AVOID
None known.

10.5 INCOMPATIBLE MATERIALS
None known.

10.6 HAZARDOUS DECOMPOSITION PRODUCTS
May include but are not limited to oxides of carbon and oxides of sulfur, ammonia, and oxides of nitrogen.

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**11 Toxicological information**

11.1 LIKELY ROUTES OF EXPOSURE

- **Eye contact, skin contact.**
  - **LC₅₀ (rat):** No data available
  - **LD₅₀ Oral (rat):** 35 mg/m² (Ammonia); 1,710 mg/kg (Zinc Sulfate)
  - **LD₅₀ Dermal (rat):** No data available

- **Acute Toxicity Estimates:** No data available
- **Skin Irritation (rabbit):** No data available
- **Eye Irritation (rabbit):** No data available
- **Specific Target Organ Toxicity:** Single exposure: No data available.
- **Aspiration:** No data available
- **Skin Sensitization (guinea pig):** Not a sensitizer
- **Carcinogenicity:** No data available
- **Germ Cell Mutagenicity:** No data available
- **Interactive Effects:** None known

**12 Ecological information**

- **Toxicity** The hazards for the aquatic environment are unknown.
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
  - **Bioaccumulative potential** No further relevant information available.
  - **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
  - **Results of PBT and vPvB assessment**
    - **PBT:** Not applicable.
    - **vPvB:** Not applicable.
  - **Other adverse effects** No further relevant information available.

**13 Disposal considerations**

- **Waste treatment methods**
  - **Recommendation:**
    Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.

- **Uncleaned packagings:**
  - **Recommendation:**
    Dispose of as unused product.
    Disposal must be made according to official regulations.
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Trade name: Structure®

**14 Transport information**

- **UN-Number**
  - DOT, ADR, ADN, IMDG, IATA
  - Non-Regulated Material

- **DOT, ADR, ADN, IMDG, IATA**
  - Non-Regulated Material

- **Transport hazard class(es)**
  - DOT, ADR, ADN, IMDG, IATA
  - Non-Regulated Material

- **Class**
  - DOT, ADR, ADN, IMDG, IATA
  - Non-Regulated Material

- **Packing group**
  - DOT, ADR, IMDG, IATA
  - Non-Regulated Material

- **Environmental hazards:**
  - Not applicable.

- **Special precautions for user**
  - Not applicable.

- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**
  - Not applicable.

- **UN "Model Regulation":**
  - -

**15 Regulatory information**

**16 Other information**

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

**Date of preparation - last revision** 05/05/2015 - 08/17/2018

**Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Ox. Sol. 3: Oxidising Solids, Hazard Category 3

Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Eye Irrit. 2B: Serious eye damage/eye irritation, Hazard Category 2B

STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3