

SAFETY DATA SHEET

ADIUM™

SDS DATE: 05/07/2020

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ADIUM™

DISTRIBUTOR: CHS Inc.

ADDRESS: 5500 Cenex Drive, Inver Grove Heights, MN 55077

PHONE: 651.355.6000

WEB ADDRESS: www.chsinc.com

EMERGENCY CHEMTREC PHONE: US & Canada: 1-800-424-9300

CHEMICAL NAME: Proprietary mixture

CHEMICAL FAMILY: Water Conditioning Agent/Surfactant/Polymer

CHEMICAL FORMULA: Mixture

PRODUCT USE: Adjuvant

SECTION 2: HAZARDS IDENTIFICATION

GHS Ratings:

Toxicity Categories

Eye irritation, Category 2A

H319: Causes serious eye irritation

Label Elements:



Signal Word: WARNING

GHS HAZARDS:

H319: Causes serious eye irritation

PRECAUTIONARY STATEMENTS:

P264 Wash skin thoroughly after handling

P280 Wear eye/face protection

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P337 + P313 if eye irritation persists: get medical advice/attention

HAZARDS NOT OTHERWISE CLASSIFIED (HNOC):

H401: Toxic to aquatic life

H412: Harmful to aquatic life with long lasting effects.

-Slightly irritating to the skin

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Substance: Not applicable, this product is a mixture

Mixture: Chemical nature, mixture of surfactants

Hazardous Ingredients and Impurities

Chemical name	Identification number CAS No.	Concentration (%)
Proprietary blend of ammonium salt, nonionic surfactants and polyacrylamide	Mixture	60-70%
Constituents Ineffective as Spray Adjuvants	Mixture	30-40%

The specific chemical identity and/or percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4: FIRST AID MEASURES

EYES: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes then continue rinsing eyes. Call a poison control center or doctor for treatment advice.

SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

INGESTION: Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person.

INHALATION: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

ADDITIONAL INFORMATION: Have the product container or label with you when calling a poison control center or doctor, or going in for treatment. For emergency medical assistance call **911**.

MOST IMPORTANT SYMPTOMS/EFFECTS, ACUTE & DELAYED: Skin contact may aggravate existing skin disease. Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis.

NOTES TO PHYSICIANS AND FIRST RESPONDERS:

-First responder needs to protect himself. Place affected apparel in a seal bag for decontamination. Show safety data sheet to doctor in attendance.

-All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred. Treat symptomatically. There is no specific antidote available.

SECTION 5: FIREFIGHTING MEASURES

FLASH POINT: > 200 °F (>93°C) closed cup. Flammability class: Will burn

AUTOIGNITION TEMPERATURE: No data available

FLAMMABILITY/EXPLOSIVE LIMIT: No data available

Suitable extinguishing media- The product is not flammable. Carbon dioxide (CO2). Dry Powder. Water Spray.

Unsuitable extinguishing media- High volume water jet (frothing possible)

Specific hazards during firefighting- Under fire conditions: will burn (following evaporation of water). Container may rupture on heating.

Hazardous combustion products- On combustion or on thermal decomposition (pyrolysis), releases: carbon dioxides, nitrogen oxides (NO_x)

Advice for fire fighters:

Special protective equipment for fire-fighters- Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing

Further information- Collect contaminated fire extinguishing water separately. This must NOT be discharged into drains.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: wear suitable protective equipment. For further information refer to section 8 “Exposure controls/personal protection.”

Environmental precautions: Do not flush into surface water or sanitary sewer system. Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems.

Methods and materials for containment and cleaning up:

Methods for containment- Stop the leak. Turn leaking containers leak-side up to prevent the escape of liquid. Dam up with sand or inert earth (do not use combustible materials).

Recovery- Soak up with inert absorbent material. Shovel or sweep up. Keep in suitable, closed containers for Dis

Decontamination/cleaning- Clean contaminated surface thoroughly. Flush with plenty of water. Recover the cleaning water for subsequent disposal. Decontaminate tools, equipment and personal protective equipment in a segregated area.

Disposal- Dispose of in accordance with local regulations.

Additional advice: Material can create slippery conditions

Reference to other sections:

7. Handling and storage

8. Exposure controls/personal protection

13. Disposal considerations

SECTION 7: HANDLING AND STORAGE

Precautions for safe handling: Handle in accordance with good industrial hygiene and safety practice. Do not breathe vapors of spray mist. Do not breathe vapors or spray mist. Avoid contact with skin and eyes. Do not freeze. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using. Avoid localized overheating. Vent drums while heating. Homogenize before using.

Hygiene measures- Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

1. Do not store, use and/or consume foods, beverages, tobacco products or cosmetics in areas where this material is stored
2. Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.
3. Wash exposed skin promptly to remove accidental splashes or contact with material.

Conditions for safe storage, including any incompatibilities:

Technical measures/Storage conditions- Take all necessary measures to avoid accidental discharge of products into drains and waterways due to the rupture of containers or transfer systems. Keep container tightly closed. Keep in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep away from incompatible materials to be indicated by the manufacturer. Keep away from: Do not mix with incompatible materials (see list, section 10).

Packaging material- Store in original container. Store in Intermediate Bulk Container (IBC) or plastic materials (polyethylene). Do not store in stainless steel or ordinary steel containers. For optimal storage, store between 40°F and 120°F.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

CONTROL MEASURES:

Engineering measures- where engineering controls are indicated by use conditions for a potential excessive exposure exists, the following traditional exposure control techniques may be used to effectively minimize employee exposures. Effective exhaust ventilation system.

INDIVIDUAL PROTECTION MEASURES:

Respiratory protection- When respirators are required, select NIOSH/MSHA approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industrial recommendations.

Hand protection- Recommended preventive skin protection: gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Eye protection- Eye and face protection requirements will vary dependent upon work environment conditions and material handling practices. Appropriate ANSI Z87 approved equipment should be selected for the use intended for this material. Eye contact should be prevented through the use of; safety glasses with side-shields.

Skin and body protection- Recommended preventative skin protection: footwear protecting against chemicals, impervious clothing. Choose body protection according to the amount and concentration of the dangerous substance at the work place. Remove and wash contaminated apparel.

Hygiene measures- Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material:

- 1) Do not store, use and/or consume foods, beverages, tobacco products or cosmetics in areas where this material is stored.
- 2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.
- 3) Wash exposed skin promptly to remove accidental splashes or contact with material.

Protective measures- Ensure that eyewash stations and safety showers are close to the workstation location. Emergency equipment immediately accessible, with instructions for use. Selections of appropriate personal protective equipment should be based on and evaluation of the performance characteristics of the protective equipment relative to the task(s) to be performed, conditions present, duration of use, and the potential hazards, and/or risks that may occur during use. The protective equipment must be selected in accordance with the current local standards in cooperation with the supplier of the protective equipment.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical and chemical properties here represent typical properties of this product. Contact the business area using the Product Information phone number in Section 1 for its exact specifications.

APPEARANCE: PHYSICAL STATE:	Clear to light yellow Liquid	VAPOR PRESSURE (mmHg):	No Data Available F: No Data Available C: No Data Available
ODOR: ODOR THRESHOLD;	Slight Ammonia No Data Available	VAPOR DENSITY (AIR = 1):	No Data Available F: No Data Available C: No Data Available

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ADIUM™

pH:	6.0 – 8.0 (1% (m/v))	RELATIVE DENSITY:	1.14-1.20 g/cm ³
INITIAL BOILING POINT:	F: No Data Available C: No Data Available	EVAPORATION RATE:	No Data Available
BOILING POINT RANGE:	F: No Data Available C: No Data Available	BASIS (butyl acetate=1):	
MELTING POINT:	F: No Data Available C: No Data Available	SOLUBILITY IN WATER:	Miscible with water
FREEZING POINT:	F: No Data Available C: No Data Available	PARTITION COEFFICIENT: (n-octanol/water)	No Data Available
FLASH POINT:	F: >200 C: >93	AUTO IGNITION TEMPERATURE:	No Data Available
METHOD USED:	No Data Available	DECOMPOSITION TEMPERATURE:	No Data Available
FLAMMABILITY CLASS:	No Data Available	VISCOSITY: @Not Determined	F: No Data Available C: No Data Available
FLAMMABLE LIMITS IN AIR (% BY VOLUME)	UPPER: No Data Available LOWER: No Data Available		

Other Information:**NON VOLATILES BY WEIGHT-** ca. 70%**SECTION 9 NOTES: Values are not product specifications.**

Note: These physical data are typical values based on material tested but may vary from sample to sample. Typical values should not be construed as a guaranteed analysis of any specific lot or as specification item

SECTION 10: STABILITY AND REACTIVITY**Reactivity:** No Data Available**Stability:** Stable under normal conditions**Possibility of hazardous reactions:** Hazardous polymerization does not occur**Conditions to avoid:** Heat, flames and sparks.**Incompatible materials:** Strong oxidizing agents, strong reducing agents, strong acids and strong bases.**Hazardous decomposition products:** On combustion or on thermal decomposition (following the evaporation of water) releases: Nitrogen oxides (NO_x) and Carbon dioxides.**SECTION 11: TOXICOLOGY INFORMATION****INFORMATION ON TOXICOLOGICAL EFFECTS****Acute toxicity:****Acute oral toxicity-** Not classified as hazardous for acute oral toxicity according to GHS. According to the data on the components. According to the classification criteria for mixtures.**Acute inhalation toxicity-** Not classified as hazardous for acute inhalation toxicity according to GHS. According to the data on the components. According to the classification criteria for mixtures.**Acute dermal toxicity-** Not classified as hazardous for acute dermal toxicity according to GHS. According to the data on the components. According to the classification criteria for mixtures.**Acute toxicity (other routes of administration)-** Not applicable.**Skin corrosion/irritation:**

Not classified as irritating to skin. According to the data on the components. According to the classification criteria for mixtures.

Serious eye damage/eye irritation:

Irritating to the eyes. According to the data on the components. According to the classification criteria for mixtures.

Respiratory or skin sensitization:

Does not cause skin sensitization. According to the data on the components. According to the classification criteria for mixtures. Does not cause respiratory sensitization. According to the data on the components. According to the classification criteria for mixtures.

Mutagenicity:

Genotoxicity in vitro- According to the data on the components, product is not considered to be genotoxic according to the classification criteria for mixtures.

Genotoxicity in vivo- According to the data on the components, product is not considered to be genotoxic according to the classification criteria for mixtures.

Carcinogenicity: No Data Available

This product does not contain any ingredient designated as probably or suspected human carcinogens by: NTP, IARC, OSHA, ACGIH

Toxicity for reproduction and development:

Toxicity to reproduction/fertility- This product is not considered to affect fertility

Developmental Toxicity/Teratogenicity- This product is not considered to be toxic for development. This product is not considered to be teratogenic.

STOT:

STOT-single exposure- The substance or mixture is not classified as a specific target organ toxicant, single exposure according to GHS criteria

STOT-repeated exposure- The substance or mixture is not classified as a specific target organ toxicant, repeated exposure according to GHS criteria

Aspiration Toxicity: No Data Available

Component Toxicity: Ammonium Sulfate

Oral Toxicity: 2,000.00 mg/kg (Rat)

SECTION 12: ECOLOGICAL INFORMATION**Ecotoxicity Assessment:**

Acute aquatic toxicity- According to the data on the components, this product is toxic to aquatic life.

Chronic aquatic toxicity- According to the data on the components, this product is harmful to aquatic life with long lasting effects.

SECTION 13: DISPOSAL CONSIDERATIONS**Waste Treatment Methods:**

Product Disposal- Chemical additions, processing or otherwise altering this material may make the waste management information presented in this SDS incomplete, inaccurate or otherwise inappropriate. Please be advised that state and local requirements for waste disposal may be more restrictive or otherwise different from federal laws and regulations. Consult state and local regulations regarding the proper disposal of this material.

Waste Code- Environmental Protection Agency. Hazardous Waste – NO

Advice on cleaning and disposal of packing- Rinse with appropriate solvent. Dispose of contents/container in accordance with local regulation.

SECTION 14: TRANSPORTATION INFORMATION

DOT- Not regulated
TGD- Not regulated
NOM- Not regulated
IMDG- Not regulated
IATA- Not regulated

Note: The above regulatory prescriptions are those valid on the date of the publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

SECTION 15: REGULATORY INFORMATION

U.S. Federal Regulations-

United States TSCA Inventory- Listed on inventory

SARA HAZARD DESIGNATION SECTIONS 311/312 (40 CFR 370)

Fire Hazard	No
Reactivity Hazard	No
Sudden Release of Pressure Hazard	No
Acute Health Hazard	Yes
Chronic Health Hazard	No

Section 313 Toxic Chemicals (40 CFR 372.65)

This chemical does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Section 302 Emergency Planning Extremely Hazardous Substance Threshold Planning Quantity (40 CFR 355)

No chemicals in this material are subject to the reporting requirements.

Section 302 Emergency Planning Extremely Hazardous Substance Reportable Quantity (40 CFR 355)

This material does not contain any of the reportable components.

Section 304 Emergency Release Notification Reportable Quantity (40 CFR 355)

This material does not contain any of the reportable components.

SECTION 16: OTHER INFORMATION

Revision Date: 05/07/2020

Prepared By: CHS Inc.

Disclaimer: The recommendation for safe handling and protection procedures is believed to be generally suitable for the standard uses of this compound. However, each user should identify his intended uses of this material and determine whether they are appropriate. All data included in this document is released as typical values and should not be utilized to determine the suitability of this material for a particular use or purpose. No warranty, either expressed or implied, is hereby made, nor do we give permission, inducement, or recommendations to practice any patented invention without a license. All data is offered for consideration, investigation and verification purposes only.