



SAFETY DATA SHEET

Revision date 2015-04-25

Revision number 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product name WS-147

Other means of identification

Product code 3225N

Synonyms Inorganic metal salt coagulant/flocculant in aqueous solution

Recommended use of the chemical and restrictions on use

Recommended use [RU] No information available

Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Anderson Chemical Company
325 South Davis Ave.
Litchfield, MN 55355
+1-320-693-2477
Hours: Monday-Friday 8:00-5:00 CST (Central Standard Time)

Emergency telephone number

24 Hour Emergency Phone Number CHEMTREC: (800) 424-9300

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Corrosive to metals	Category 1

GHS Label elements, including precautionary statements

EMERGENCY OVERVIEW

Physical state liquid	Color reddish brown	Appearance opaque	Odor slight amine
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**WARNING****Hazard statements**

Causes skin irritation
Causes serious eye irritation
May be corrosive to metals

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Keep only in original container

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
Absorb spillage to prevent material damage

Precautionary Statements - Storage

Store in corrosive resistant container with a resistant inner liner

Other information

- May be harmful if swallowed

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	weight-%	TRADE SECRET
Trade Secret Ingredient	PROPRIETARY	40 - 50%	*
Trade Secret Ingredient	PROPRIETARY	<10%	*

*The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First Aid Measures**Eye contact**

Remove contact lenses, if worn. Immediately flush with plenty of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve maximum effectiveness. Get medical attention if irritation develops and persists.

Skin contact

Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

Ingestion

Seek medical attention immediately. Give large amounts of water to drink. If vomiting should occur spontaneously, keep airway clear. Never give anything by mouth to an unconscious person.

Inhalation

Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Most important symptoms and effects, both acute and delayed**Acute effects**

Possible eye, skin and respiratory tract irritation.

Chronic effects

May aggravate existing skin, eye, and lung conditions. Persons with kidney disorders have an increased risk from exposure based on general information found on aluminum salts.

Aggravated Medical Conditions

Existing skin, eye and lung conditions.

Indication of any immediate medical attention and special treatment needed**Note to physicians**

Aluminum soluble salts may cause gastroenteritis if ingested. Treatment includes the use of demulcents. Note: Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

5. FIRE-FIGHTING MEASURES

Extinguishing media**Suitable extinguishing media**

Water Spray, Carbon Dioxide, Foam, Dry Chemical.

Extinguishing media which must not be used for safety reasons

No information available

Special hazards arising from the substance or mixture**Special Hazard**

May produce hazardous fumes or hazardous decomposition products.

Advice for firefighters**Firefighting measures**

Product is a water solution and nonflammable. In a fire, this product may build up pressure and rupture a sealed container; cool exposed containers with water spray. Use self-contained breathing apparatus in confined areas; avoid breathing mist or spray.

Special protective equipment for firefighters

Full protective clothing and approved self-contained breathing apparatus required for firefighting personnel.

Explosion data**Sensitivity to Mechanical Impact**

None.

Sensitivity to Static Discharge

None.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

Wear adequate personal protective clothing and equipment. Approved breathing apparatus may be necessary.

Environmental precautions

Environmental precautions

Do not allow liquid to enter streams or waterways.

Methods and material for containment and cleaning up

Methods for containment

Prevent further leakage or spillage if safe to do so. Build dikes as necessary to contain flow of large spills.

Methods for cleaning up

Clear spills immediately. For small spills, use soda ash to neutralize, an inert material to absorb, or wash product to a chemical sewer. Place contaminated materials into containers and store in a safe place to await proper disposal. Caution: Use of soda ash may generate carbon dioxide gas. Provide adequate ventilation to spill area.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

Keep away from heat and open flame.

Keep container closed when not in use

Avoid contact with eyes, skin and clothing

Wear chemical splash goggles, gloves, and protective clothing when handling.

Wash thoroughly after handling

Avoid breathing vapor or mist

Use with adequate ventilation and employ respiratory protection where mist or spray may be generated.

FOR INDUSTRIAL USE ONLY.

Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Store in a cool, dry place away from direct heat.

Keep container tightly closed when not in use.

Do not store in unlined metal containers.

Product may slowly corrode iron, brass, copper, aluminum, mild steel, and stainless steel.

Incompatible products

Alkalis.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering controls

Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details. If there are no applicable or established exposure limit requirements or guidelines, general ventilation should be sufficient.

Individual protection measures, such as personal protective equipment**Eye/face Protection**

Wear chemical splash goggles and face shield (when eye and face contact is possible due to splashing or spraying of material).

Hand Protection

Appropriate chemical resistant gloves should be worn.

Skin and body protection

Standard work clothing and work shoes.

Respiratory protection

If exposures exceed the PEL or TLV, use NIOSH/MSHA approved respirator in accordance with OSHA Respiratory Protection Requirements under 29 CFR 1910.134. If there are no applicable or established exposure limit requirements or guidelines, general ventilation should be sufficient.

Other personal protection data

Eyewash fountains and safety showers must be easily accessible.

Hygiene measures

Take off contaminated clothing and wash before reuse.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical state	liquid
Color	reddish brown
Appearance	opaque
Odor	slight amine
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks / Method</u>
pH	2.0 - 3.0	as is
Melting / freezing point	No information available	No information available
Boiling point / boiling range	No information available	No information available
Flash point	Not applicable	No information available
Evaporation rate	No information available	No information available
Flammability (solid, gas)	Not applicable	No information available
Flammability Limit in Air		
Upper flammability limit	Not applicable	No information available
Lower flammability limit	Not applicable	No information available
Vapor pressure	No information available	No information available

Vapor density	No information available	No information available
Specific gravity	1.346 - 1.366	No information available
Solubility (water)	Soluble below pH 4	No information available
Solubility in other solvents	No information available	No information available
Partition coefficient: n-octanol/water	No information available	No information available
Autoignition temperature	Not applicable	No information available
Decomposition temperature	No information available	No information available
Kinematic viscosity	No information available	No information available
Dynamic viscosity	20 - 35 cps	No information available

Other information

Density	11.23 - 11.39 lb/gal
Bulk Density	No information available
Explosive properties	No information available.
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	No information available
Volatile organic compounds (VOCs) content	No information available
Percent Volatile, wt. %	45 - 65 % (Water)

10. STABILITY AND REACTIVITY

Reactivity**Reactivity**

No data available.

Chemical stability**Chemical stability**

Stable under normal conditions of handling, use and transportation.

Possibility of hazardous reactions**Possibility of hazardous reactions**

None under normal processing.

Hazardous polymerization

Not anticipated under normal or recommended handling and storage conditions.

Conditions to avoid**Conditions to avoid**

None known

Incompatible materials

Materials to avoid

Alkalis.

Hazardous decomposition products**Hazardous decomposition products**Thermal decomposition may release toxic and/or hazardous gases such as aluminum, Cl₂, and HCl.**11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure****Eye contact**

May cause moderate eye irritation that can become severe with prolonged contact. Prolonged exposure to Aluminum salts may cause conjunctivitis.

Skin contact

Prolonged and/or repeated contact may cause skin irritation.

Ingestion

May be harmful if swallowed. May cause irritation of the mouth, throat and stomach. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Inhalation

Inhalation of mist or vapor may cause respiratory tract irritation.

Acute toxicity - Product Information**Oral LD50** No information available**Dermal LD50** No information available**Inhalation LC50** No information available**Acute toxicity - Component Information**

Component	weight-%	Oral LD50	Dermal LD50	Inhalation LC50
Trade Secret Ingredient	40 - 50%	> 2000 mg/kg (Rat)	--	--
Trade Secret Ingredient	<10%	= 500 mg/kg (Rat)	--	--

Information on toxicological effects**Symptoms**

No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure**Skin corrosion/irritation**

Irritating to skin

Serious eye damage/eye irritation

Causes serious eye irritation

Sensitization

No information available

Germ cell mutagenicity

No information available

Carcinogenicity

This product does not contain any components in concentrations greater than or equal to 0.1% that are listed as known or suspected carcinogens by NTP, IARC, ACGIH, or OSHA.

Reproductive toxicity

No information available

Specific target organ toxicity - Single exposure

No information available.

Specific target organ toxicity - Repeated exposure

No information available

Aspiration hazard

No information available.

Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document

ATEmix (oral) 3276 mg/kg

Other information

Data is based on a product of similar composition and conclusions are drawn from sources other than direct testing.

12. ECOLOGICAL INFORMATION

Ecotoxicity**Acute aquatic toxicity - Product Information**

Fish No information available

Crustacea No information available

Algae/aquatic plants No information available

Acute aquatic toxicity - Component Information

Component	weight-%	Algae/aquatic plants	Fish	Toxicity to daphnia and other aquatic invertebrates
Trade Secret Ingredient	<10%	--	LC50 (96 h static) = 37.2 mg/L (Gambusia affinis)	--

Persistence and degradability**Persistence and degradability**

No information available

Bioaccumulative potential**Bioaccumulative potential**

No information available.

Mobility**Mobility**

No information available

Results of PBT and vPvB assessment**PBT and vPvB assessment**

No information available

Other adverse effects**Other information**

No other ecological studies have been carried out on this product.

13. DISPOSAL CONSIDERATIONS**Waste treatment methods****Disposal of wastes**

Dispose of product in an approved chemical waste landfill or incinerate in accordance with applicable Federal, state and local regulations.

Contaminated packaging

Since empty containers retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION**DOT**

Regulated

DOT UN/NA Number

UN3264

Proper shipping name

Corrosive liquid, acidic, inorganic, N.O.S. (Polyaluminum ferric chlorosulfate solution)

Hazard class

8

Packing group

III

ERG Number

154

Reportable Quantity (RQ)

24,000 lbs

DOT Shipping Name > RQ

UN3264, Corrosive liquid, acidic, inorganic, N.O.S. (Polyaluminum ferric chlorosulfate solution), 8, PG III, RQ, ERG# 154

ICAO/IATA

Regulated

UN number

UN3264

Proper shipping name

Corrosive liquid, acidic, inorganic, N.O.S. (Polyaluminum ferric chlorosulfate solution)

Hazard class

8

Packing group

III

ERG Code

8L

IMDG

Regulated

UN number

UN3264

Proper shipping name

Corrosive liquid, acidic, inorganic, N.O.S. (Polyaluminum ferric chlorosulfate solution)

Hazard class

8

Packing group

III

EmS

F-A; S-B

Harmonized Tariff Number

3824.90

15. REGULATORY INFORMATION

International Inventories

TSCA (United States)

All ingredients are on the inventory or exempt from listing

Australia (AICS)

All ingredients are on the inventory or exempt from listing

Canada (DSL)

All ingredients are on the inventory or exempt from listing

Canada (NDSL)

None of the ingredients are on the inventory.

China (IECSC)

All ingredients are on the inventory or exempt from listing

EINECS (European Inventory of Existing Chemical Substances)

All ingredients are on the inventory or exempt from listing

ELINCS (European List of Notified Chemical Substances)

None of the ingredients are on the inventory.

ENCS (Japan)

All ingredients are on the inventory or exempt from listing

South Korea (KECL)

All ingredients are on the inventory or exempt from listing

Philippines (PICCS)

All ingredients are on the inventory or exempt from listing

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

AICS - Australian Inventory of Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

IECSC - China Inventory of Existing Chemical Substances

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

U.S. Federal Regulations

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302).

Component	CERCLA/SARA Hazardous Substance RQ	CERCLA/SARA - Section 302 Extremely Hazardous Substances TPQs	Calculated Product RQ
Ferric Sulfate 10028-22-5	1000 lb final RQ; 454 kg final RQ	--	24,000 lbs in solution

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Priority Pollutants	CWA - Toxic Pollutants
Ferric Sulfate 10028-22-5	Present	1000 lb RQ	--	--

SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic health hazard	No
Fire hazard	No
Sudden release of pressure hazard	No
Reactive hazard	No

SARA 313

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 Code of Federal Regulations, Part 372.

U.S. State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Polyaluminum Chloride 1327-41-9	
Minnesota Hazardous Substance List	Present
Pennsylvania Right to Know List	Present
Ferric Sulfate 10028-22-5	
Massachusetts Right to Know Law	Present
Minnesota Hazardous Substance List	Present (as Fe)
New Jersey Right to Know List	sn 0925
Pennsylvania Right to Know List	Environmental hazard

16. OTHER INFORMATION

NFPA Rating	Health - 2	Flammability - 0	Instability - 0	Special Hazard -
HMIS Rating	Health - 2	Flammability - 0	Physical hazard - 0	Personal protection - B

Product code	3225N
Revision date	2015-04-25
Revision number	1

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet