

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Product name : Handy Flo 822
Product code : A00001132

1.2. Recommended use and restrictions on use

No additional information available

1.3. Supplier

Supplier

Lucas-Milhaupt, Inc.
5656 South Pennsylvania Ave.
Cudahy, WI 53110 - USA
T (414)-769-6000
Contact:SDS Contact

1.4. Emergency telephone number

Emergency number : CHEMTREC within the USA and Canada: 1-800-424-9300
CHEMTREC outside the USA and Canada +1 701-741-5970

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Skin corrosion/irritation, Category 1A H314 Causes severe skin burns and eye damage.

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labelling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) : H314 - Causes severe skin burns and eye damage.

Precautionary statements (GHS US) : P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P264 - Wash hands, forearms and face thoroughly after handling.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a poison center/doctor
P321 - Specific treatment (see supplemental first aid instruction on this label)
P363 - Wash contaminated clothing before reuse.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

Handy Flo 822

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Zinc chloride	(CAS-No.) 7646-85-7	14.25 - 25
Ammonium chloride	(CAS-No.) 12125-02-9	7 - 10

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : Call a physician immediately.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
- First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
- First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after skin contact : Burns.
- Symptoms/effects after eye contact : Serious damage to eyes.
- Symptoms/effects after ingestion : Burns.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Water spray. Dry powder. Foam.
- Unsuitable extinguishing media : Water.

5.2. Specific hazards arising from the chemical

No additional information available

5.3. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Mechanically recover the product.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

Handy Flo 822

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Zinc chloride (7646-85-7)		
ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³ (fume)
ACGIH	ACGIH STEL (mg/m ³)	2 mg/m ³ (fume)
OSHA	OSHA PEL (TWA) (mg/m ³)	1 mg/m ³ (fume)
IDLH	US IDLH (mg/m ³)	50 mg/m ³ (fume)
NIOSH	NIOSH REL (TWA) (mg/m ³)	1 mg/m ³ (fume)
NIOSH	NIOSH REL (STEL) (mg/m ³)	2 mg/m ³ (fume)
Ammonium chloride (12125-02-9)		
ACGIH	ACGIH TWA (mg/m ³)	10 mg/m ³ (fume)
ACGIH	ACGIH STEL (mg/m ³)	20 mg/m ³ (fume)
NIOSH	NIOSH REL (TWA) (mg/m ³)	10 mg/m ³ (fume)
NIOSH	NIOSH REL (STEL) (mg/m ³)	20 mg/m ³ (fume)

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Colour : No data available
- Odour : No data available
- Odour threshold : No data available
- pH : No data available
- Melting point : No data available
- Freezing point : Not applicable
- Boiling point : No data available

Handy Flo 822

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Flash point	: Not applicable
Relative evaporation rate (butylacetate=1)	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: Not applicable
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: Not applicable
Explosive properties	: No data available
Oxidising properties	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Zinc chloride (7646-85-7)	
LD50 oral rat	1100 mg/kg
LC50 inhalation rat (mg/l)	<= 1975 mg/m ³ (Exposure time: 10 min)
ATE US (oral)	1100 mg/kg bodyweight

Ammonium chloride (12125-02-9)	
LD50 oral rat	1650 mg/kg
ATE US (oral)	1650 mg/kg bodyweight

Skin corrosion/irritation	: Causes severe skin burns and eye damage.
Serious eye damage/irritation	: Serious eye damage, category 1, implicit
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified

Handy Flo 822

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Symptoms/effects after skin contact	: Burns.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

Ammonium chloride (12125-02-9)

LC50 fish 1	209 mg/l (Exposure time: 96 h - Species: Cyprinus carpio [static])
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12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Zinc chloride (7646-85-7)

BCF fish 1	16000
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12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description	: UN1840 Zinc chloride, solution, 8, III
UN-No.(DOT)	: UN1840
Proper Shipping Name (DOT)	: Zinc chloride, solution
Class (DOT)	: 8 - Class 8 - Corrosive material 49 CFR 173.136
Packing group (DOT)	: III - Minor Danger
Hazard labels (DOT)	: 8 - Corrosive



Marine pollutant : Yes (IMDG only)



DOT Packaging Non Bulk (49 CFR 173.xxx)	: 203
DOT Packaging Bulk (49 CFR 173.xxx)	: 241

Handy Flo 822

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

- DOT Special Provisions (49 CFR 172.102) : IB3 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 2 for UN2672).
T4 - 2.65 178.274(d)(2) Normal..... 178.275(d)(3)
TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / (1 + a (tr - tf))$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling.
- DOT Packaging Exceptions (49 CFR 173.xxx) : 154
- DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) : 5 L
- DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) : 60 L
- DOT Vessel Stowage Location : A - The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel.
- Emergency Response Guide (ERG) Number : 154
- Other information : No supplementary information available.

Transportation of Dangerous Goods

Not applicable

Transport by sea

- Transport document description (IMDG) : UN 1840 ZINC CHLORIDE SOLUTION, 8, III, MARINE POLLUTANT
- UN-No. (IMDG) : 1840
- Proper Shipping Name (IMDG) : ZINC CHLORIDE SOLUTION
- Class (IMDG) : 8 - Corrosive substances
- Packing group (IMDG) : III - substances presenting low danger
- Marine pollutant : Yes (IMDG only)



Air transport

- Transport document description (IATA) : UN 1840 Zinc chloride solution, 8, III
- UN-No. (IATA) : 1840
- Proper Shipping Name (IATA) : Zinc chloride solution
- Class (IATA) : 8 - Corrosives
- Packing group (IATA) : III - Minor Danger

SECTION 15: Regulatory information

15.1. US Federal regulations

Zinc chloride (7646-85-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

CERCLA RQ : 1000 lb

Ammonium chloride (12125-02-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

CERCLA RQ : 5000 lb

15.2. International regulations

Zinc chloride (7646-85-7)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

Handy Flo 822

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Ammonium chloride (12125-02-9)

Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

Component	State or local regulations
Zinc chloride(7646-85-7)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List; U.S. - Pennsylvania - RTK (Right to Know) List
Ammonium chloride(12125-02-9)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Full text of H-statements:

H314

Causes severe skin burns and eye damage.

SDS US (GHS HazCom 2012)

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