

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : HANDY FLUX Type A-1
 Product code : A00000775

1.2. Recommended use and restrictions on use

No additional information available

1.3. 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

Acute toxicity (oral), Category 4 H302 Harmful if swallowed.

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) :

Warning

Hazard statements (GHS US) :

H302 - Harmful if swallowed.

Precautionary statements (GHS US) :

P264 - Wash hands, forearms and face thoroughly after handling.
 P270 - Do not eat, drink or smoke when using this product.
 P301+P312 - If swallowed: Call a poison center/doctor if you feel unwell
 P330 - Rinse mouth.
 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

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%
Zinc chloride	(CAS-No.) 7646-85-7	4 - 8
Lithium chloride	(CAS-No.) 7447-41-8	3 - 6
Potassium fluoride (K(HF2))	(CAS-No.) 7789-29-9	1 - 5

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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.
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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.
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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".
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6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage.
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.

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.
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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Lithium chloride (7447-41-8)

Not applicable

Potassium fluoride (K(HF₂)) (7789-29-9)

Not applicable

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)

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
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	: Not applicable
Solubility	: No data available
Log Pow	: No data available
Auto-ignition temperature	: Not applicable

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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)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

ATE US (oral)	500 mg/kg bodyweight
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Lithium chloride (7447-41-8)	
LD50 oral rat	526 mg/kg
ATE US (oral)	526 mg/kg bodyweight

Potassium fluoride (K(HF2)) (7789-29-9)	
LD50 oral rat	160 mg/kg
ATE US (oral)	160 mg/kg bodyweight

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

Skin corrosion/irritation	: Not classified
Serious eye damage/irritation	: Not classified
Respiratory or skin sensitisation	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified

Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified

STOT-repeated exposure	: Not classified
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Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available

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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 : Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Lithium chloride (7447-41-8)

BCF fish 1 (no bioaccumulation)

Log Pow -2.66

Zinc chloride (7646-85-7)

BCF fish 1 16000

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

Not regulated

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

Lithium chloride (7447-41-8)

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

Potassium fluoride (K(HF2)) (7789-29-9)

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

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Zinc chloride (7646-85-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
CERCLA RQ	1000 lb

15.2. International regulations

Lithium chloride (7447-41-8)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Potassium fluoride (K(HF₂)) (7789-29-9)
Listed on the TCSI (Taiwan Chemical Substance Inventory)
Zinc chloride (7646-85-7)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

Component	State or local regulations
Potassium fluoride (K(HF ₂))(7789-29-9)	U.S. - New Jersey - Right to Know Hazardous Substance List
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

SECTION 16: Other information

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

Revision date : 08/11/2020

Full text of H-statements:

H302	Harmful if swallowed.
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SDS US (GHS HazCom 2012)

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