

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Trade name : HANDY FLO 712
 Product code : A00000918

1.2. Recommended use and restrictions on use

Recommended use : Binders for metal brazing

1.3. Supplier

Lucas-Milhaupt, Inc.
 5656 South Pennsylvania Ave.
 Cudahy, WI 53110 - USA
 T (414)-769-6000
LM_SDSinfo@lucasmilhaupt.com - www.Lucasmilhaupt.com

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

Flammable liquids, Category 4	H227	Combustible liquid
Skin corrosion/irritation, Category 2	H315	Causes skin irritation.
Serious eye damage/eye irritation, Category 2A	H319	Causes serious eye irritation.

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) :

H227 - Combustible liquid
 H315 - Causes skin irritation.
 H319 - Causes serious eye irritation.

Precautionary statements (GHS US) :

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P264 - Wash hands, forearms and face thoroughly after handling.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P302+P352 - If on skin: Wash with plenty of water
 P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P321 - Specific treatment (see supplemental first aid instruction on this label)
 P332+P313 - If skin irritation occurs: Get medical advice/attention.
 P337+P313 - If eye irritation persists: Get medical advice/attention.
 P362+P364 - Take off contaminated clothing and wash it before reuse.
 P370+P378 - In case of fire: Use media other than water to extinguish.
 P403+P235 - Store in a well-ventilated place. Keep cool.
 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

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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	%
Petroleum distillates, hydrotreated light	(CAS-No.) 64742-47-8	25 - 30
Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)-	(CAS-No.) 13775-53-6	15 - 20
Lithium chloride	(CAS-No.) 7447-41-8	10 - 13
Naphtha, petroleum, hydrotreated heavy	(CAS-No.) 64742-48-9	8.88 - 11.84
Zinc chloride	(CAS-No.) 7646-85-7	0.95 - 2

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	: IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: If skin irritation occurs: Get medical advice/attention. Rinse skin with water/shower. Take off immediately all contaminated clothing.
First-aid measures after eye contact	: 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.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell. Rinse mouth.

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

Symptoms/effects after skin contact	: Irritation.
Symptoms/effects after eye contact	: Eye irritation.

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	: Dry powder. Water spray. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Water.

5.2. Specific hazards arising from the chemical

Fire hazard	: Flammable liquid and vapour.
Reactivity	: The product is non-reactive under normal conditions of use, storage and transport. Flammable liquid and vapour.

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. Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapours/spray. No open flames, no sparks, and no smoking.
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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. Notify authorities if product enters sewers or public waters.

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6.3. Methods and material for containment and cleaning up

- For containment : Collect spillage.
Methods for cleaning up : Mechanically recover the product. Notify authorities if product enters sewers or public waters.
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. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Floors, walls and other surfaces in the hazard area must be cleaned regularly. Do not breathe dust/fume/gas/mist/vapours/spray. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof 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. Separate working clothes from town clothes. Launder separately.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Ground/bond container and receiving equipment.
Storage conditions : Store in a well-ventilated place. Keep cool. Store locked up. Keep container tightly closed.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- (13775-53-6)

Not applicable

Petroleum distillates, hydrotreated light (64742-47-8)

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)

Lithium chloride (7447-41-8)

Not applicable

Naphtha, petroleum, hydrotreated heavy (64742-48-9)

Not applicable

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:

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Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment. [In case of inadequate ventilation] wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: No data available
Odour	: No data available
Odour threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
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	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive limits	: No data available
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. Flammable liquid and vapour.

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). Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

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

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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

Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- (13775-53-6)	
LD50 oral rat	> 5 g/kg
LD50 dermal rabbit	> 2100 mg/kg
LC50 inhalation rat (mg/l)	4470 µg/l (Exposure time: 4 h)
ATE US (gases)	4500 ppmv/4h
ATE US (vapours)	4.47 mg/l/4h
ATE US (dust,mist)	4.47 mg/l/4h

Petroleum distillates, hydrotreated light (64742-47-8)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 inhalation rat (mg/l)	> 5.2 mg/l/4h
ATE US (vapours)	3 mg/l/4h

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

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

Naphtha, petroleum, hydrotreated heavy (64742-48-9)	
LD50 oral rat	> 6000 mg/kg
LD50 dermal rabbit	> 3160 mg/kg
LC50 inhalation rat (mg/l)	> 8500 mg/m ³ (Exposure time: 4 h)

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
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

Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- (13775-53-6)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified
Viscosity, kinematic : No data available
Symptoms/effects after skin contact : Irritation.
Symptoms/effects after eye contact : Eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. Toxic to aquatic life. Toxic to aquatic life with long lasting effects. Harmful to aquatic life.

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Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- (13775-53-6)	
EC50 Daphnia 1	5 mg/l (Exposure time: 48 h - Species: Daphnia pulex)
Petroleum distillates, hydrotreated light (64742-47-8)	
LC50 fish 1	45 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
LC50 fish 2	2.2 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus [static])
Naphtha, petroleum, hydrotreated heavy (64742-48-9)	
LC50 fish 1	2200 mg/l (Exposure time: 96 h - Species: Pimephales promelas)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- (13775-53-6)	
BCF fish 1	(no bioaccumulation)
Petroleum distillates, hydrotreated light (64742-47-8)	
BCF fish 1	61 - 159
Zinc chloride (7646-85-7)	
BCF fish 1	16000
Lithium chloride (7447-41-8)	
BCF fish 1	(no bioaccumulation)
Log Pow	-2.66

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.
Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not applicable

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

SECTION 15: Regulatory information

15.1. US Federal regulations

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Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- (13775-53-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Petroleum distillates, hydrotreated light (64742-47-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Zinc chloride (7646-85-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
CERCLA RQ	1000 lb
Lithium chloride (7447-41-8)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
Naphtha, petroleum, hydrotreated heavy (64742-48-9)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

15.2. International regulations

Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)- (13775-53-6)	
Listed on the TCSI (Taiwan Chemical Substance Inventory)	
Petroleum distillates, hydrotreated light (64742-47-8)	
Listed on the TCSI (Taiwan Chemical Substance Inventory)	
Zinc chloride (7646-85-7)	
Listed on the TCSI (Taiwan Chemical Substance Inventory)	
Lithium chloride (7447-41-8)	
Listed on the TCSI (Taiwan Chemical Substance Inventory)	
Naphtha, petroleum, hydrotreated heavy (64742-48-9)	
Listed on the TCSI (Taiwan Chemical Substance Inventory)	

15.3. US State regulations

Component	State or local regulations
Aluminate(3-), hexafluoro-, trisodium, (OC-6-11)-(13775-53-6)	
Naphtha, petroleum, hydrotreated heavy(64742-48-9)	
Petroleum distillates, hydrotreated light(64742-47-8)	
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
Lithium chloride(7447-41-8)	

SECTION 16: Other information

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

Full text of H-statements:

H227	Combustible liquid
H315	Causes skin irritation.
H319	Causes serious eye irritation.

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