

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** FLUX 845
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Product category** PC38 Welding and soldering products (with flux coatings or flux cores.), flux products
- **Application of the substance / the preparation** Preparation
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
GUILBERT EXPRESS INC
60 BROAD STREET, SUITE 3502
NEW YORK - NY 10004
Phone : 888-628-6343
Fax : 920-997-5701
www.guilbert-express.com
- **Information department:**
contact@guilbert-express.com
- **Emergency telephone number:**
CHEMTREC: 800-424 3900

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS05 Corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.



GHS09 Environment

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

STOT SE 3 H335+H336 May cause respiratory irritation. May cause drowsiness or dizziness.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



C; Corrosive

R34: Causes burns.



Xn; Harmful

R22: Harmful if swallowed.



N; Dangerous for the environment

R50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- **Information concerning particular hazards for human and environment:**
The product has to be labelled due to the calculation procedure of international guidelines.
- **Classification system:**
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

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- **Label elements**

- **Labelling according to EU guidelines:**

The product has been marked in accordance with national laws.
2008/58/CE (30eme ATP) ; 2009/2/CE (31eme ATP) ; 2006/8/CE

- **Code letter and hazard designation of product:**



C Corrosive
N Dangerous for the environment

- **Hazard-determining components of labelling:**

zinc chloride

- **Risk phrases:**

22 Harmful if swallowed.
34 Causes burns.
50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- **Safety phrases:**

20 When using do not eat or drink.
23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
57 Use appropriate container to avoid environmental contamination.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 3
Fire = 0
Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = 3
Fire = 0
Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

- **Description:** Mixture: consisting of the following components.

- **Dangerous components:**

CAS: 7646-85-7 EINECS: 231-592-0 Index number: 030-003-00-2 RTECS: ZH 1400000	zinc chloride 	25-50%
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CAS: 12125-02-9 EINECS: 235-186-4 Index number: 017-014-00-8 RTECS: BP 4550000	ammonium chloride ☒ Xn R22; ☒ Xi R36 ⚠ Acute Tox. 4, H302; Eye Irrit. 2, H319	2.5-25%
CAS: 107-21-1 EINECS: 203-473-3 Index number: 603-027-00-1 RTECS: KW 2975000	ethanediol ☒ Xn R22 ⚠ Acute Tox. 4, H302	2.5-25%
CAS: 67-63-0 EINECS: 200-661-7 Index number: 603-117-00-0 RTECS: NT 8050000	propan-2-ol ☒ Xi R36; ☒ F R11 R67 ⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2, H319; STOT SE 3, H336	2.5-25%
CAS: 7647-01-0 EINECS: 231-595-7 Index number: 017-002-00-2 RTECS: MW 9620000	hydrogen chloride ☒ C R34; ☒ Xi R37 ⚠ Skin Corr. 1B, H314; ⚠ STOT SE 3, H335	<10%

4 First aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Immediately call a doctor.
Drink copious amounts of water and provide fresh air. Immediately call a doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.

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Ensure adequate ventilation.

· **Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

· **Handling:**

· **Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Prevent formation of aerosols.

· **Information about protection against explosions and fires:** No special measures required.

· **Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:** No special requirements.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:** Keep receptacle tightly sealed.

· **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

7646-85-7 zinc chloride (25-50%)

PEL 1 mg/m³

Fume

REL Short-term value: 2 mg/m³

Long-term value: 1 mg/m³

TLV Short-term value: 2 mg/m³

Long-term value: 1 mg/m³

fume

12125-02-9 ammonium chloride (10-25%)

REL Short-term value: 20 mg/m³

Long-term value: 10 mg/m³

TLV Short-term value: 20 mg/m³

Long-term value: 10 mg/m³

107-21-1 ethanediol (2.5-10%)

TLV Short-term value: C 100 mg/m³

H

67-63-0 propan-2-ol (2.5-10%)

PEL 980 mg/m³, 400 ppm

REL Short-term value: 1225 mg/m³, 500 ppm

Long-term value: 980 mg/m³, 400 ppm

TLV Short-term value: 984 mg/m³, 400 ppm

Long-term value: 492 mg/m³, 200 ppm

BEI

7647-01-0 hydrogen chloride (≤2.5%)

PEL Short-term value: C 7 mg/m³, C 5 ppm

REL Short-term value: C 7 mg/m³, C 5 ppm

TLV Short-term value: C 2.98 mg/m³, C 2 ppm

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· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Breathing equipment:**



Suitable respiratory protective device recommended.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Eye protection:**



Tightly sealed goggles

· **Body protection:**



Protective work clothing

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Liquid

Color: Violet

· **Odor:** Odorless

· **Odour threshold:** Not determined.

· **pH-value at 20°C (68 °F):** <1.5

· **Change in condition**

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 100°C (212 °F)

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** Not applicable.

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· Decomposition temperature:	Not determined.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapor pressure at 20°C (68 °F):	23 hPa (17 mm Hg)
· Density at 20°C (68 °F):	1.28-1.131 g/cm ³ (10.682-9.438 lbs/gal)
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Fully miscible.
· Segregation coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	<10 %
Water:	>50 %
VOC content:	9.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values that are relevant for classification:		
7646-85-7 zinc chloride		
Oral	LD50	350 mg/kg (rat)
12125-02-9 ammonium chloride		
Oral	LD50	1650 mg/kg (rat)

- **Primary irritant effect:**

- **on the skin:** Caustic effect on skin and mucous membranes.

- **on the eye:** Strong caustic effect.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

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Harmful


Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12 Ecological information

- **Toxicity**
- **Acquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Ecotoxicological effects:**
- **Remark:** Very toxic for fish
- **Additional ecological information:**
- **General notes:**
 - Water hazard class 3 (Self-assessment): extremely hazardous for water
 - Do not allow product to reach ground water, water course or sewage system, even in small quantities.
 - Must not reach bodies of water or drainage ditch undiluted or unneutralized.
 - Danger to drinking water if even extremely small quantities leak into the ground.
 - Also poisonous for fish and plankton in water bodies.
 - Very toxic for aquatic organisms
 - Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
 - **Recommendation:**
- 

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
 - **Recommendation:** Disposal must be made according to official regulations.
 - **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **DOT regulations:**



- **Hazard class:** 8
- **Identification number:** UN3264

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- **Packing group:** III
- **Proper shipping name (technical name):** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, ZINC CHLORIDE)
- **Label** 8

- **Land transport ADR/RID (cross-border):**



- **ADR/RID class:** 8 (C1) Corrosive substances
- **Danger code (Kemler):** 80
- **UN-Number:** 3264
- **Packaging group:** III
- **Label:** 8
- **Special marking:** Symbol (fish and tree)
- **UN proper shipping name:** 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, ZINC CHLORIDE), ENVIRONMENTALLY HAZARDOUS

- **Maritime transport IMDG:**



- **IMDG Class:** 8
- **UN Number:** 3264
- **Label** 8
- **Packaging group:** III
- **EMS Number:** F-A,S-B
- **Marine pollutant:** Yes
Symbol (fish and tree)
- **Segregation groups** Acids
- **Propper shipping name:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, ZINC CHLORIDE)

- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 8
- **UN/ID Number:** 3264
- **Label** 8
- **Packaging group:** III
- **Propper shipping name:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (HYDROCHLORIC ACID, ZINC CHLORIDE)

- **UN "Model Regulation":** UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S., ENVIRONMENTALLY HAZARDOUS, 8, III

- **Environmental hazards:** Product contains environmentally hazardous substances: zinc chloride
- **Special precautions for user** Warning: Corrosive substances
- **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not applicable.

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15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (extremely hazardous substances):	
7647-01-0	hydrogen chloride

· Section 313 (Specific toxic chemical listings):	
7646-85-7	zinc chloride
107-21-1	ethanediol
67-63-0	propan-2-ol
7647-01-0	hydrogen chloride

· TSCA (Toxic Substances Control Act):	
All ingredients are listed.	

· Proposition 65	
· Chemicals known to cause cancer:	
None of the ingredients is listed.	

· Chemicals known to cause reproductive toxicity for females:	
None of the ingredients is listed.	

· Chemicals known to cause reproductive toxicity for males:	
None of the ingredients is listed.	

· Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	

· Carcinogenicity categories		
· EPA (Environmental Protection Agency)		
7646-85-7	zinc chloride	II

· IARC (International Agency for Research on Cancer)		
67-63-0	propan-2-ol	3
7647-01-0	hydrogen chloride	3

· NTP (National Toxicology Program)	
None of the ingredients is listed.	

· TLV (Threshold Limit Value established by ACGIH)		
107-21-1	ethanediol	A4
67-63-0	propan-2-ol	A4
7647-01-0	hydrogen chloride	A4

· NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	

· OSHA-Ca (Occupational Safety & Health Administration)	
None of the ingredients is listed.	

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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*IMDG: International Maritime Code for Dangerous Goods**DOT: US Department of Transportation**IATA: International Air Transport Association**IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)**ICAO: International Civil Aviation Organization**ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)**GHS: Globally Harmonized System of Classification and Labelling of Chemicals**ACGIH: American Conference of Governmental Industrial Hygienists**NFPA: National Fire Protection Association (USA)**HMIS: Hazardous Materials Identification System (USA)**VOC: Volatile Organic Compounds (USA, EU)**LC50: Lethal concentration, 50 percent**LD50: Lethal dose, 50 percent*

USA