

1 PRODUCT AND COMPANY IDENTIFICATION

Trade name: 817 Inorganic Acid Water Soluble Flux

Relevant identified uses of the substance or mixture and uses advised against Professional use of solder

Details of the supplier of the safety data sheet

This Safety Data Sheet has been updated in accordance with the Globally Harmonized System (GHS).

Manufacturer/Supplier:

Kester

800 West Throntdale Ave.

Itasca, IL 60143

Tel (630) 616-4000

Fax (630) 616-4044

Kester Components Pte Ltd

500 Chai Chee Lane

Singapore 469024

Tel: 65-64491133

Information department: SDS Coordinator (630) 616-6844

Emergency telephone number:

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

CHEMTREC 24-Hour Emergency Response (Outside US & Canada) Telephone Number : (703) 527-3887

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.



GHS07

Acute Tox. 4 H302

Harmful if swallowed.

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

H402

Harmful to aquatic life.

Label elements

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS05 GHS07

Signal word Danger

Hazard-determining components of labelling:

zinc chloride

Hydrochloric Acid

ammonium chloride

Hazard statements

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

UNITED STATES DEPARTMENT OF JUSTICE
FEDERAL BUREAU OF INVESTIGATION

MEMORANDUM FOR THE DIRECTOR, FBI (100-374301) FROM SAC, NEW YORK (100-100000) (P)

Re New York airtel to Bureau dated 1/11/61, captioned as above.

On 1/11/61, the New York Office received information from the New York City Police Department (NYPD) that a person known to the NYPD as "John Doe" had been seen in the vicinity of the New York City Police Department (NYPD) on 1/11/61.

The New York Office is currently conducting an investigation into the activities of "John Doe" and is requesting that the Bureau be kept advised of any developments.

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SAFETY DATA SHEET (SDS)

According to 1907/2006/EC, Article 31

Printing Date 11/11/2012

Version number 9

Reviewed on 11/11/2012

Trade name: 817 Inorganic Acid Water Soluble Flux

(Contd. of page 1)

H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

H402 Harmful to aquatic life.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Hazard description:

WHMIS Hazard Symbols



D2B - Toxic material causing other toxic effects

E - Corrosive material



Classification system:

NFPA ratings (scale 0 - 4)



Health = 3

Fire = 1

Reactivity = 1

HMIS-ratings (scale 0 - 4)

HEALTH	3
FIRE	1
REACTIVITY	1

Health = 3

Fire = 1

Reactivity = 1

Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3 COMPOSITION OF MIXTURE

Chemical characterization: Mixtures

Description: Mixture of the substances listed below with nonhazardous additions.

CAS No.	Description		% Range
CAS: 7646-85-7 EINECS: 231-592-0	zinc chloride	⚠ Skin Corr. 1B, H314; Eye Dam. 1 ⚠ Acute Tox. 4, H302 H402	50-65%
CAS: 7647-01-0 EINECS: 231-595-7	Hydrochloric Acid	⚠ Skin Corr. 1B, H314; Eye Dam. 1 ⚠ Acute Tox. 4, H302; STOT SE 3, H335	15-20%
CAS: 12125-02-9 EINECS: 235-186-4	ammonium chloride	⚠ Acute Tox. 4, H302; Eye Irrit. 2A, H319	2.5-5.0%
CAS: 7732-18-5 EINECS: 231-791-2	Water		25-35%

(Contd. on page 3)

SAFETY DATA SHEET (SDS)

According to 1907/2006/EC, Article 31

Printing Date 11/11/2012

Version number 9

Reviewed on 11/11/2012

Trade name: 817 Inorganic Acid Water Soluble Flux

(Contd. of page 2)

Additional information:

This solder product does not contain any Substance of Very High Concern (SVHC) on the European Chemicals Agency (ECHA) candidate list.

4 FIRST AID MEASURES

Description of first aid measures

General information: Immediately remove any clothing soiled by the product.

After inhalation:

In case of unconsciousness place patient stably in side position for transportation.

Supply fresh air; consult doctor in case of complaints.

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: Seek immediate medical advice.

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

Extinguishing media

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

In case of fire, the following can be released:

Nitrogen oxides (NO_x)

Carbon monoxide (CO)

Aliphatic aldehydes

Advice for firefighters

Protective equipment:

Fire fighters should be fully trained and wear full protective clothing including an approved, self-contained breathing apparatus which supplies a positive air pressure within a full face-piece mask.

6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Environmental precautions: *Do not allow to enter sewers/ surface or ground water.*

Methods and material for containment and cleaning up:

Dispose contaminated material as waste according to item 13.

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 *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: Store in a cool location.

(Contd. on page 4)

— USA —

SAFETY DATA SHEET (SDS)

According to 1907/2006/EC, Article 31

Printing Date 11/11/2012

Version number 9

Reviewed on 11/11/2012

Trade name: 817 Inorganic Acid Water Soluble Flux

(Contd. of page 3)

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

PEL	1 mg/m ³ Fume
REL	Short-term value: 2 mg/m ³ Long-term value: 1 mg/m ³
TLV	Short-term value: 2 mg/m ³ Long-term value: 1 mg/m ³ fume

7647-01-0 Hydrochloric Acid

PEL	Short-term value: C 7 mg/m ³ , C 5 ppm
REL	Short-term value: C 7 mg/m ³ , C 5 ppm
TLV	Short-term value: C 2.98 mg/m ³ , C 2 ppm

12125-02-9 ammonium chloride

REL	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³
TLV	Short-term value: 20 mg/m ³ Long-term value: 10 mg/m ³

Additional information:

PEL = Permissible Exposure Limit (OSHA)

TLV= Threshold Limit Value (ACGIH)

OSHA= Occupational Safety and Health Administration

ACGIH= American Conference of Governmental Industrial Hygienists

Exposure controls

Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

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:

Exposure Controls: Use appropriate engineering control such as process enclosures, local exhaust ventilation to control airborne levels below recommended exposure limits.

When ventilation is not sufficient to remove airborne levels from the breathing zone, a NIOSH safety approved respirator or self-contained breathing apparatus should be worn. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.

Protection of hands:



Protective gloves

Material of gloves:

Nitrile rubber, NBR

Natural rubber, NR

Penetration time of glove material:

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

(Contd. on page 5)

SAFETY DATA SHEET (SDS)

According to 1907/2006/EC, Article 31

Printing Date 11/11/2012

Version number 9

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Trade name: 817 Inorganic Acid Water Soluble Flux

(Contd. of page 4)

Eye protection:
Safety Glasses with Sideshields at all times.



Face Shield with Safety Glasses when refilling.

9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

General Information

Appearance:

Form:	Liquid
Color:	Colorless to light yellow
Odor:	Mild

pH-value at 20 °C (68 °F): < 1

Change in condition

Melting point/Melting range: Undetermined.

Boiling point/Boiling range: 113 °C (235 °F)

Flash point: Undetermined.

Auto igniting: Product is not selfigniting.

Danger of explosion: Product does not present an explosion hazard.

Vapor pressure at 20 °C (68 °F): 23 hPa (17 mm Hg)

Density at 20 °C (68 °F): 1.92 g/cm³ (16.022 lbs/gal)

Solubility in / Miscibility with

Water: Not miscible or difficult to mix.

Solvent content:

Organic solvents: 0.0 %

Water: 35 %

Solids content: 65 %

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: Strong acids, strong oxidizers.

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)

(Contd. on page 6)

Report of the

Commissioners of the

Department of Education

for the year ending June 30, 1902

Albany:

W. H. Rouse, Printer

1903

REPORT OF THE COMMISSIONERS OF THE DEPARTMENT OF EDUCATION

FOR THE YEAR ENDING JUNE 30, 1902

ALBANY: W. H. ROUSE, PRINTER

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SAFETY DATA SHEET (SDS)

According to 1907/2006/EC, Article 31

Printing Date 11/11/2012

Version number 9

Reviewed on 11/11/2012

Trade name: 817 Inorganic Acid Water Soluble Flux

(Contd. of page 5)

7647-01-0 Hydrochloric Acid

Oral LD50 900 mg/kg (rabbit)

12125-02-9 ammonium chloride

Oral LD50 1650 mg/kg (rat)

Primary irritant effect:

on the skin:

Caustic effect on skin and mucous membranes.

Irritant to skin and mucous membranes.

on the eye: Irritating effect.

Sensitization: Sensitization possible through skin contact.

Additional toxicological information:

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

Harmful

Corrosive

Irritant

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

Carcinogenic categories

IARC (International Agency for Research on Cancer)

7647-01-0 Hydrochloric Acid

3

NTP (National Toxicology Program)

None of the ingredients is listed.

12 ECOLOGICAL INFORMATION

Toxicity

Aquatic toxicity: No further relevant information available.

Ecotoxicological effects:

Remark: Harmful to fish

Additional ecological information:

General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Recommendation:

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Disposal must be made according to official regulations.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

14 TRANSPORT INFORMATION

UN-Number

DOT, ADR, IMDG, IATA

UN3264

(Contd. on page 7)

USA

Page 1 of 1

100-100000-100000

100-100000-100000

100-100000-100000

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SAFETY DATA SHEET (SDS)

According to 1907/2006/EC, Article 31

Printing Date 11/11/2012

Version number 9

Reviewed on 11/11/2012

Trade name: 817 Inorganic Acid Water Soluble Flux

(Contd. of page 6)

UN proper shipping name
DOT, IMDG, IATA

ADR

Transport hazard class(es)

DOT



Class
Label

UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC,
N.O.S. (HYDROCHLORIC ACID, ZINC CHLORIDE)
3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(HYDROCHLORIC ACID, ZINC CHLORIDE)

8 Corrosive substances.
8

ADR, IMDG, IATA



Class
Label

8 Corrosive substances
8

Packing group

DOT, ADR, IMDG, IATA

III

Environmental hazards:

Marine pollutant:

Yes

Special precautions for user

Not applicable.

Transport in bulk according to Annex II of MARPOL73/78
and the IBC Code

Not applicable.

UN "Model Regulation":

UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC,
N.O.S. (HYDROCHLORIC ACID, ZINC CHLORIDE), 8, III

15 REGULATORY INFORMATION

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

USA The following information relates to product regulation specific to the USA.

SARA (Superfund Amendments and Reauthorization Act)

Section 355 (extremely hazardous substances):

7647-01-0 Hydrochloric Acid

Section 313 (Specific toxic chemical listings):

7646-85-7 zinc chloride

7647-01-0 Hydrochloric Acid

TSCA (Toxic Substances Control Act): Kester certifies that all components listed below for the subject finished product are on the TSCA Inventory of Chemical Substances and are not subject to any chemical specific regulation under TSCA Section 12(b) export notification requirements delineated at 40 CFR part 707, subpart D.

All ingredients are listed or exempt from listing.

California Proposition 65

Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity:

None of the ingredients is listed.

(Contd. on page 8)

USA

SAFETY DATA SHEET (SDS)

According to 1907/2006/EC, Article 31

Printing Date 11/11/2012

Version number 9

Reviewed on 11/11/2012

Trade name: 817 Inorganic Acid Water Soluble Flux

(Contd. of page 7)

Carcinogenic categories

EPA (Environmental Protection Agency)	
7646-85-7 zinc chloride	//
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.	

CANADA:

Workplace Hazardous Materials Identification (WHMIS):

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulation (CPR) and the Safety Data Sheet (SDS) contains all of the information required by the CPR.

See classification in Section 2 Hazard Identification

Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard pictograms



GHS05 GHS07

Signal word Danger

Hazard-determining components of labelling:

zinc chloride

Hydrochloric Acid

ammonium chloride

Hazard statements

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H335-H336 May cause respiratory irritation. May cause drowsiness or dizziness.

H402 Harmful to aquatic life.

Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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

16 OTHER INFORMATION

The information contained herein is based on data considered accurate and is offered solely for information, consideration and investigation. Kester extends no warranties, makes no representations and assumes no responsibility as to the accuracy, completeness or suitability of this data for any purchaser's use. The data on this Material Safety Data Sheet relates only to this product and does not relate to use with any other material or in any process. All chemical products should be used only by, or under the direction of, technically qualified personnel who are aware of the hazards involved and the necessity for reasonable care in handling. Hazard communication regulations require that employees must be trained on how to use a Material Safety Data Sheet as a source for hazard information.

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)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

(Contd. on page 9)

USA

SAFETY DATA SHEET (SDS)

According to 1907/2006/EC, Article 31

Printing Date 11/11/2012

Version number 9

Reviewed on 11/11/2012

Trade name: 817 Inorganic Acid Water Soluble Flux

(Contd. of page 8)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

WHMIS: Workplace Hazardous Materials Information System (Canada)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

*** Data compared to the previous version altered.**

— USA —

10-15-1944

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