

Safety Data Sheet

acc. to OSHA HCS 29CFR1910.1200

Printing Date 08/30/2017

Version number 7

Reviewed on 08/30/2017

1 Identification

Trade name: 1429 Soldering Flux

Article number: C4-00-1429

Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.

Application of the substance / the preparation: Soldering flux

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Kester Inc.
800 West Thorndale Avenue
Itasca, IL 60143 USA
Tel (630) 616-4000
Tel International 00 1 630 616-4000

ITW Specialty Materials (Suzhou) Co., Ltd.
Heng Qiao Road
Wujiang Economic Development Zone
Suzhou, Jiangsu 215200 China
Tel +86 512 82060808

Kester GmbH
Ganghofer Strasse 45
D-82216 Gernlinden Germany
Tel +49 (0) 8142 4785 0

Information department: Product Compliance: EHS_Kester@kester.com

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 Hazard(s) identification

Classification of the substance or mixture



Corrosion

Eye Dam. 1 H318 Causes serious eye damage.



Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

Label elements

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS05



GHS07

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS 29CFR1910.1200

Printing Date 08/30/2017

Version number 7

Reviewed on 08/30/2017

Trade name: 1429 Soldering Flux

(Contd. of page 1)

Signal word Danger

Hazard statements

- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.

Precautionary statements

- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves.
- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- 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.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)



HMIS-ratings (scale 0 - 4)



Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

3 Composition/information on ingredients

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

CAS No.	Description	% Range
CAS: 57-13-6	urea	⚠ Skin Irrit. 2, H315; Eye Irrit. 2A, H319 5-10%

4 First-aid measures

Description of first aid measures

General information:

Immediately remove any clothing soiled by the product.
Follow general first aid procedures.

After inhalation: 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.

Safety Data Sheet
acc. to OSHA HCS 29CFR1910.1200

Printing Date 08/30/2017

Version number 7

Reviewed on 08/30/2017

Trade name: 1429 Soldering Flux

(Contd. of page 2)

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents: CO2, extinguishing powder or water spray. Fight larger fires with water spray.

Special hazards arising from the substance or mixture

Nitrogen oxides (NOx)

In case of fire, the following can be released:

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.

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.

Protective Action Criteria for Chemicals

PAC-1:

CAS: 57-13-6	urea	30 mg/m3
CAS: 7647-01-0	Hydrochloric Acid	1.8 ppm

PAC-2:

CAS: 57-13-6	urea	280 mg/m3
CAS: 7647-01-0	Hydrochloric Acid	22 ppm

PAC-3:

CAS: 57-13-6	urea	1,700 mg/m3
CAS: 7647-01-0	Hydrochloric Acid	100 ppm

7 Handling and storage

Handling:

Precautions for safe handling

Store in cool, dry place in tightly closed receptacles.

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.

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

Further information about storage conditions:

Protect from frost.

Keep receptacle tightly sealed.

(Contd. on page 4)

Safety Data Sheet
acc. to OSHA HCS 29CFR1910.1200

Printing Date 08/30/2017

Version number 7

Reviewed on 08/30/2017

Trade name: 1429 Soldering Flux

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

(Contd. of page 3)

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:

CAS: 57-13-6 urea

WEEL | Long-term value: 10 mg/m³

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:

When ventilation is not sufficient to remove fumes from the breathing zone, a safety approved respirator or self-contained breathing apparatus should be worn.

Not necessary if room is well-ventilated.

Use suitable respiratory protective device in case of insufficient ventilation.

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.

Eye protection:



Safety glasses

9 Physical and chemical properties

Information on basic physical and chemical properties

General Information

Appearance:

Form: Liquid
Color: Colorless

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS 29CFR1910.1200

Printing Date 08/30/2017

Version number 7

Reviewed on 08/30/2017

Trade name: 1429 Soldering Flux

(Contd. of page 4)

Odor:	Mild
pH-value at 20°C (68 °F):	1.3
Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	100°C (212 °F)
Flash point:	Not applicable.
Auto igniting:	Product is not selfigniting.
Danger of explosion:	Product does not present an explosion hazard.
Vapor pressure at 20°C (68 °F):	23hPa (17.3 mm Hg)
Density at 20°C (68 °F):	1.06g/cm ³ (8.85 lbs/gal)
Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
Solvent content:	
Water:	81.9%
Solids content:	18.0%

10 Stability and reactivity

Reactivity No further relevant information available.

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:

When heated to soldering temperatures, solvents will be evaporated and organic material may release aliphatic aldehydes and acids.

11 Toxicological information

Information on toxicological effects

Acute toxicity:

Primary irritant effect:

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

on the eye: Irritating effect.

through inhalation: May cause respiratory irritation.

through ingestion: May cause gastrointestinal irritation.

Sensitization: Sensitization possible through inhalation.

Additional toxicological information:

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

Corrosive

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

(Contd. on page 6)

US

Safety Data Sheet
acc. to OSHA HCS 29CFR1910.1200

Printing Date 08/30/2017

Version number 7

Reviewed on 08/30/2017

Trade name: 1429 Soldering Flux

(Contd. of page 5)

Carcinogenic categories

IARC (International Agency for Research on Cancer)

CAS: 7647-01-0 Hydrochloric Acid	3
------------------------------------	---

NTP (National Toxicology Program)

None of the ingredients is listed.

OSHA-Ca (Occupational Safety & Health Administration)

None of the ingredients is listed.

12 Ecological information

Toxicity

Aquatic toxicity: No further relevant information available.

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.

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.

13 Disposal considerations

Waste treatment methods

Recommendation:

Disposal must be made according to official regulations.

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.

14 Transport information

UN-Number

DOT, ADR, ADN, IMDG, IATA Not applicable

UN proper shipping name

DOT, ADR, ADN Not applicable

IMDG, IATA Not applicable

Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA Class Not applicable

Packing group

DOT, IMDG, IATA Not applicable

Marine pollutant: No

Special precautions for user Not applicable.

Transport in bulk according to Annex II of MARPOL73/78

and the IBC Code Not applicable.

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS 29CFR1910.1200

Printing Date 08/30/2017

Version number 7

Reviewed on 08/30/2017

Trade name: 1429 Soldering Flux

UN "Model Regulation":

Not applicable

(Contd. of page 6)

15 Regulatory information

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

All ingredients are listed on the following Government Inventories:

- China: Inventory of Existing Chemical Substances in China (IECSC)
- Korea: Korea Existing Chemicals List (ECL)
- Europe: European Inventory of Existing Commercial Chemical Substances (EINECS)
- Japan: Inventory of Existing and New Chemical Substances (ENCS)
- Philippines: Philippine Inventory of Chemicals and Chemical Substances (PICCS)
- USA: TSCA (Toxic Substances Control Act) TSCA Inventory of Chemical Substances

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

SARA (Superfund Amendments and Reauthorization Act)

Section 355 (extremely hazardous substances):

CAS: 7647-01-0 | Hydrochloric Acid

Section 313 (Specific toxic chemical listings):

CAS: 7647-01-0 | Hydrochloric Acid

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.

Carcinogenic categories

EPA (Environmental Protection Agency)

CAS: 57-13-6 | urea

II

NIOSH-Ca (National Institute for Occupational Safety and Health)

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.

GHS label elements The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS05 GHS07

Signal word Danger

Hazard statements

- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.

Precautionary statements

P270 Do not eat, drink or smoke when using this product.

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS 29CFR1910.1200

Printing Date 08/30/2017

Version number 7

Reviewed on 08/30/2017

Trade name: 1429 Soldering Flux

(Contd. of page 7)

P280 Wear protective gloves.
P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
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.
P332+P313 If skin irritation occurs: Get medical advice/attention.
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.

Department issuing Safety Data Sheet (SDS): Product Compliance / EHS Department

Contact: EHS_Kester@kester.com

Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
ICAO: International Civil Aviation Organisation
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
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

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