

Safety Data Sheet

acc. to OSHA HCS 29CFR1910.1200

Printing Date 11/02/2017

Version number 4

Reviewed on 11/02/2017

1 Identification

Trade name: 7210 Defoamer**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

Defoamers, Anti-foaming agent

Details of the supplier of the safety data sheet**Manufacturer/Supplier:**

Kester Inc.

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Itasca, IL 60143 USA

Tel (630) 616-4000

Tel International 00 1 630 616-4000

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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

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Flam. Liq. 4 H227 Combustible liquid.

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

GHS07

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

Printing Date 11/02/2017

Version number 4

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Trade name: 7210 Defoamer

(Contd. of page 1)

Signal word Warning

Hazard-determining components of labeling:

2-butoxyethanol

Hazard statements

- H227 Combustible liquid.
- H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.

Precautionary statements

- P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- P261 Avoid breathing dust/fume/gas/mist/vapors/spray
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P302+P352 If on skin: Wash with plenty of water.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- 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.
- P403+P235 Store in a well-ventilated place. Keep cool.
- 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: 111-76-2	2-butoxyethanol ⚠ Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319 Flam. Liq. 4, H227	85-100%
Trade Secret	Aliphatic hydroxyl diol ⚠ Eye Irrit. 2A, H319 Flam. Liq. 4, H227	10-25%

(Contd. on page 3)

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

Printing Date 11/02/2017

Version number 4

Reviewed on 11/02/2017

Trade name: 7210 Defoamer

(Contd. of page 2)

4 First-aid measures

Description of first aid measures

General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Follow general first aid procedures.

After inhalation:

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

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

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. If symptoms persist, 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 Fire-fighting 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

Nitrogen oxides (NO_x)

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 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: 111-76-2	2-butoxyethanol	60 ppm
	Aliphatic hydroxyl diol	30 mg/m ³

PAC-2:

CAS: 111-76-2	2-butoxyethanol	120 ppm
	Aliphatic hydroxyl diol	330 mg/m ³

PAC-3:

CAS: 111-76-2	2-butoxyethanol	700 ppm
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(Contd. on page 4)

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

Printing Date 11/02/2017

Version number 4

Reviewed on 11/02/2017

Trade name: 7210 Defoamer

Aliphatic hydroxyl diol

(Contd. of page 3)

2,000 mg/m³

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: 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:

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

CAS: 111-76-2 2-butoxyethanol

PEL	Long-term value: 240 mg/m ³ , 50 ppm Skin
REL	Long-term value: 24 mg/m ³ , 5 ppm Skin
TLV	Long-term value: 97 mg/m ³ , 20 ppm BEI

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.

(Contd. on page 5)

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

Printing Date 11/02/2017

Version number 4

Reviewed on 11/02/2017

Trade name: 7210 Defoamer

(Contd. of page 4)

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: Light yellow
Odor: Mild

pH-value: Not determined.

Change in condition

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 171 °C (339.8 °F)

Flash point: 74 °C (165.2 °F)

Ignition temperature: 240 °C (464 °F)

Auto igniting: Product is not selfigniting.

Danger of explosion: Not determined.

Explosion limits:

Lower: 1.1 Vol %
Upper: 10.6 Vol %

Vapor pressure at 20 °C (68 °F): 1.2 hPa (0.9 mm Hg)

Density at 20 °C (68 °F): 0.9 g/cm³ (7.51 lbs/gal)

Solubility in / Miscibility with

Water: Fully miscible.

Solvent content:

Organic solvents: 85.0 %

Solids content: 15.0 %

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

Printing Date 11/02/2017

Version number 4

Reviewed on 11/02/2017

Trade name: 7210 Defoamer

(Contd. of page 5)

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:

LD/LC50 values that are relevant for classification:

CAS: 111-76-2 2-butoxyethanol

Oral	LD50	1,480 mg/kg (rat)
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Dermal	LD50	400 mg/kg (rab)
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Inhalative	LC50/4 h	11 mg/l (ATE)
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Aliphatic hydroxyl diol

Oral	LD50	4,600 mg/kg (rat)
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Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

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:

Harmful

Irritant

Carcinogenic categories

IARC (International Agency for Research on Cancer)

CAS: 111-76-2	2-butoxyethanol	3
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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.

Results of PBT and vPvB assessment

PBT: Not applicable.

(Contd. on page 7)

Safety Data Sheet
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Printing Date 11/02/2017

Version number 4

Reviewed on 11/02/2017

Trade name: 7210 Defoamer

vPvB: Not applicable.

(Contd. of page 6)

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

UN-Number

DOT

NA1993

ADR, ADN, IMDG, IATA

Not applicable

UN proper shipping name

DOT

COMBUSTIBLE LIQUID, N.O.S (2-butoxyethanol)

ADR, ADN, IMDG, IATA

Not applicable

Transport hazard class(es)

DOT



Class

3 Combustible liquids

Label

3

ADR, ADN

Class

Not applicable

IMDG, IATA

Class

Not applicable

Not regulated.

Packing group

DOT

III

IMDG, IATA

Not applicable

Marine pollutant:

No

Special precautions for user

Not applicable.

Stowage Category

B

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

Not applicable.

Transport/Additional information:

DOT

Quantity limitations

On passenger aircraft/rail: 60 L

On cargo aircraft only: 220 L

IMDG

Limited quantities (LQ)

1L

Excepted quantities (EQ)

Maximum net quantity per outer packaging: 1000 ml

(Contd. on page 8)

Safety Data Sheet
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Version number 4

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Trade name: 7210 Defoamer

UN "Model Regulation":

Not applicable

(Contd. of page 7)

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):

None of the ingredient is listed.

Section 313 (Specific toxic chemical listings):

CAS: 111-76-2 | 2-butoxyethanol

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: 111-76-2 | 2-butoxyethanol

NL

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



GHS07

Signal word Warning

Hazard-determining components of labeling:

2-butoxyethanol

Hazard statements

H227 Combustible liquid.

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

(Contd. on page 9)

Safety Data Sheet

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Trade name: 7210 Defoamer

(Contd. of page 8)

H315 Causes skin irritation.

H319 Causes serious eye irritation.

Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapors/spray

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

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

P302+P352 If on skin: Wash with plenty of water.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

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.

P403+P235 Store in a well-ventilated place. Keep cool.

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:**

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)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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

Flam. Liq. 4: Flammable liquids – Category 4

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

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