LA-CO Industries, Inc.

Regular Soldering Flux Paste

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Reference number: LC_1407002
Issue date: 26/05/2011 Revision date: 14/02/2023 Supersedes version of: 26/02/2021 Version: 5.1

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

1.1. Product identifier

Product form : Mixture
Trade name : Regular Soldering Flux Paste

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Industrial use,Professional use
Use of the substance/mixture : Soldering flux

1.2.2. Uses advised against

Restrictions on use : Any use not specified

1.3. Details of the supplier of the safety data sheet

LA-CO Industries Europe
Parc Industriel de la Plaine de l'Ain - Allée des Combes
01150 Blyes
France
T +33 474462323 - F +33 (0)4 74 46 23 29
info-europe@laco.com - www.markal-city.com

1.4. Emergency telephone number

Emergency number : 24-hour emergency: CHEMTREC- U.S. : 1-800-424-9300 International: +1-703-527-3887;
全国应急中心 0532 8388 9090

Country	Organisation/Company	Address	Emergency number	Comment
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Cardiff Centre) University Hospital Llandough	Penlan Road CF64 2XX	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Edinburgh Centre) Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre	16/17 Framlington Place Newcastle-upon-Tyne NE2 4AB	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA	0344 892 0111	Only for healthcare professionals
United Kingdom	NHS 111/NHS 24/NHS Direct		111 0845 4647	or call a doctor

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazardous to the aquatic environment – Chronic Hazard, Category 3 H412

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No data available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Signal word (CLP)	:	-
Hazard statements (CLP)	:	H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP)	:	P273 - Avoid release to the environment. P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
Unknown acute toxicity (CLP: Classification, Labelling, Packaging.) - SDS	:	53.3% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 76.9% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 76.9% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))
Unknown hazards to the aquatic environment (CLP)	:	Contains 0.18 % of components with unknown hazards to the aquatic environment

2.3. Other hazards

PBT: not yet assessed
vPvB: not yet assessed
Contains no PBT and/or vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
1,4-dioxane (123-91-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
1,2-Propylene oxide (75-56-9)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

Component	
1,4-dioxane(123-91-1)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605
1,2-Propylene oxide(75-56-9)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Ethanolamine hydrochloride	CAS-No.: 2002-24-6 EC-No.: 217-900-6	10 - 20	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Polyethylene Glycol substance with national workplace exposure limit(s) (AT, DE, DK, SK)	CAS-No.: 25322-68-3 EC-No.: 500-038-2	10 - 20	Not classified
Poloxamer substance with national workplace exposure limit(s) (DE)	CAS-No.: 9003-11-6 EC-No.: N/A	10 - 20	Not classified
Ammonium chloride	CAS-No.: 12125-02-9 EC-No.: 235-186-4 EC Index-No.: 017-014-00-8	5 - 10	Acute Tox. 4 (Oral), H302 Eye Irrit. 2, H319
2,6-Di-tert-butyl-4-methylphenol	CAS-No.: 128-37-0 EC-No.: 204-881-4	0.1 - 0.5	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
1,4-dioxane substance listed as REACH Candidate	CAS-No.: 123-91-1 EC-No.: 204-661-8 EC Index-No.: 603-024-00-5	<0.01	Flam. Liq. 2, H225 Eye Irrit. 2, H319 Carc. 1B, H350 STOT SE 3, H335
Ethylene oxide	CAS-No.: 75-21-8 EC-No.: 200-849-9 EC Index-No.: 603-023-00-X	<0.01	Press. Gas Flam. Gas 1, H220 Carc. 1B, H350 Muta. 1B, H340 Repr. 1B, H360Fd Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Oral), H301 STOT SE 3, H335 STOT SE 3, H336 STOT RE 1, H372 Skin Corr. 1, H314 Eye Dam. 1, H318
1,2-Propylene oxide substance listed as REACH Candidate (Methyloxirane (Propylene oxide))	CAS-No.: 75-56-9 EC-No.: 200-879-2 EC Index-No.: 603-055-00-4	<0.01	Flam. Liq. 1, H224 Acute Tox. 4 (Oral), H302 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Inhalation), H331 Eye Irrit. 2, H319 Muta. 1B, H340 Carc. 1B, H350 STOT SE 3, H335

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

First-aid measures after skin contact : Take off immediately all contaminated clothing. Rinse skin with water/shower.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects : No significant signs or symptoms indicative of any health hazard are expected to occur.

4.3. Indication of any immediate medical attention and special treatment needed

All treatments should be based on observed signs and symptoms of distress in the patient.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Carbon dioxide. Dry powder. Foam. Water spray.
Unsuitable extinguishing media	:	None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	No specific fire or explosion hazard.
Explosion hazard	:	Product is not explosive.
Hazardous decomposition products in case of fire	:	Carbon monoxide. Carbon dioxide. ammonium oxides. hydrogen chloride.

5.3. Advice for firefighters

Firefighting instructions	:	Exercise caution when fighting any chemical fire. Use water spray or fog for cooling exposed containers. Do not allow run-off from fire fighting to enter drains or water courses.
Protection during firefighting	:	Do not enter fire area without proper protective equipment, including respiratory protection. Wear fire/flame resistant/retardant clothing. Wear a self contained breathing apparatus. EN469.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	:	Wear suitable protective clothing and gloves. Nitrile gloves. Chemical goggles or safety glasses. In case of inadequate ventilation wear respiratory protection.
Emergency procedures	:	Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	:	Wear suitable protective clothing and gloves. Neoprene or nitrile rubber gloves. Chemical goggles or safety glasses. Where excessive vapour, mist, or dust may result, use approved respiratory protection equipment.
Emergency procedures	:	Ventilate area.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	:	Stop the flow of material, if this is without risk. Contain and/or absorb spill with inert material, then place in suitable container.
Methods for cleaning up	:	Take up in non-combustible absorbent material and shove into container for disposal. On land, sweep or shovel into suitable containers.

6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Do not eat, drink or smoke when using this product. Provide good ventilation in process area to prevent formation of vapour. Remove all sources of ignition.
Hygiene measures	:	Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Keep only in the original container in a cool well ventilated place. Keep container closed when not in use.
Incompatible products	:	Strong oxidizing agents. Strong acids. Strong bases. amines. Acid chlorides. Metals. Cyanides and sulfide salts.
Information on mixed storage	:	Keep away from incompatible materials.

7.3. Specific end use(s)

Flux.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

2,6-Di-tert-butyl-4-methylphenol (128-37-0)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	10 mg/m³

Ammonium chloride (12125-02-9)	
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	10 mg/m³
WEL STEL (OEL STEL)	20 mg/m³
Remark	(fume)

1,4-dioxane (123-91-1)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	1,4 Dioxane
IOEL TWA	73 mg/m³
IOEL TWA [ppm]	20 ppm
Regulatory reference	COMMISSION DIRECTIVE 2009/161/EU COMMISSION DIRECTIVE 2009/161/EU
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	73 mg/m³
WEL TWA (OEL TWA) [2]	20 ppm
Remark	(Sk)

Ethylene oxide (75-21-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Ethylene oxide
IOEL TWA	1.8 mg/m³ (BOEL)
Remark	Skin (Substantial contribution to the total body burden via dermal exposure possible)
Regulatory reference	DIRECTIVE (EU) 2019/130 (amending Directive 2004/37/EC)
EU - Binding Occupational Exposure Limit (BOEL)	
Local name	Ethylene oxide
BOEL TWA	1.8 mg/m³

Ethylene oxide (75-21-8)	
BOEL TWA [ppm]	1 ppm
Notes	Skin (Substantial contribution to the total body burden via dermal exposure possible)
Regulatory reference	DIRECTIVE (EU) 2019/130 (amending Directive 2004/37/EC)
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	9.2 mg/m³
WEL TWA (OEL TWA) [2]	5 ppm
Remark	(Carc)

1,2-Propylene oxide (75-56-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	1,2-Epoxypropane
IOEL TWA	2.4 mg/m³ (BOEL)
Remark	SCOEL Recommendations (2010)
Regulatory reference	DIRECTIVE (EU) 2019/130 (amending Directive 2004/37/EC)
EU - Binding Occupational Exposure Limit (BOEL)	
Local name	1,2-Epoxypropane
BOEL TWA	2.4 mg/m³
BOEL TWA [ppm]	1 ppm
Regulatory reference	DIRECTIVE (EU) 2019/130 (amending Directive 2004/37/EC)
EU - Biological Limit Value (BLV)	
Local name	Propylene oxide
BLV	1.3 Parameter: N-(3-hydroxypropyl) valine - Medium: blood
Regulatory reference	SCOEL List of recommended health-based BLVs and BGVs
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	12 mg/m³
WEL TWA (OEL TWA) [2]	5 ppm
Remark	(Carc)

8.1.2. Recommended monitoring procedures

No data available

8.1.3. Air contaminants formed

No data available

8.1.4. DNEL and PNEC

No data available

8.1.5. Control banding

No data available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Provide local exhaust ventilation of closed transfer systems to minimize exposures.

8.2.2. Personal protection equipment

Personal protective equipment:
Avoid all unnecessary exposure.

8.2.2.1. Eye and face protection

No data available

8.2.2.2. Skin protection

Hand protection:
It is a good industrial hygiene practice to minimize skin contact. Wear suitable gloves. Impermeable protective nitrile gloves

8.2.2.3. Respiratory protection

Respiratory protection:
In case of inadequate ventilation wear respiratory protection. Use an approved respirator equipped with oil/mist cartridges.

8.2.2.4. Thermal hazards

No data available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

Other information:
Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	yellowish to white.
Appearance	:	Paste.
Odour	:	Faint.
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Not available
Explosive properties	:	Product is not explosive.
Oxidising properties	:	No oxidizing properties.
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	> 204 °C (TOC)
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	6.5 – 7
Viscosity, kinematic	:	Not available
Solubility	:	Soluble in water.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	Not available
Relative density	:	1.1
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No data available

9.2.2. Other safety characteristics

VOC content	:	0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Contact with incompatible materials. Avoid excessive heat or cold.

10.5. Incompatible materials

Strong oxidizing agents. Strong bases. Strong acids. amines. aluminum and other metals. Cyanides and sulfide salts.

10.6. Hazardous decomposition products

Carbon dioxide. Carbon monoxide. ammonia. hydrogen chloride. Burning produces irritating, toxic and noxious fumes.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

Regular Soldering Flux Paste	
LD50 oral rat	> 5000 mg/kg
LC50 Inhalation - Rat	> 20 mg/l vapours, 1 hour exposure

2,6-Di-tert-butyl-4-methylphenol (128-37-0)	
LD50 oral rat	6000 mg/kg
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	> 2 mg/l Source: OSHRI GLP toxicity test

Polyethylene Glycol (25322-68-3)	
LD50 oral rat	47000 mg/kg
LD50 dermal rat	> 20000 mg/kg

Ammonium chloride (12125-02-9)	
LD50 oral rat	1410 mg/kg
LD50 dermal rat	> 2000 mg/kg

Poloxamer (9003-11-6)	
LD50 oral rat	5000 mg/kg

1,4-dioxane (123-91-1)	
LD50 oral rat	5150 mg/kg

1,4-dioxane (123-91-1)	
LC50 Inhalation - Rat	> 155 mg/l 1 h

Ethylene oxide (75-21-8)	
LD50 oral rat	330 mg/kg bodyweight
LC50 Inhalation - Rat [ppm]	1741 ppm/4h

Unknown acute toxicity (CLP: Classification, Labelling, Packaging.) - SDS : 53.3% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral)
76.9% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal)
76.9% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

Skin corrosion/irritation : Not classified. (Based on available data, the classification criteria are not met. Not irritating to skin)
pH: 6.5 – 7

Additional information : Edema score: 0

Poloxamer (9003-11-6)	
pH	3.5 – 6.5

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met. Slightly irritant but not relevant for classification)
pH: 6.5 – 7

Poloxamer (9003-11-6)	
pH	3.5 – 6.5

Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

2,6-Di-tert-butyl-4-methylphenol (128-37-0)	
IARC group	3 - Not classifiable

1,4-dioxane (123-91-1)	
IARC group	2B - Possibly carcinogenic to humans

Ethylene oxide (75-21-8)	
IARC group	1 - Carcinogenic to humans

1,2-Propylene oxide (75-56-9)	
IARC group	2B - Possibly carcinogenic to humans

2,6-Di-tert-butyl-4-methylphenol (128-37-0)	
NOAEL (chronic, oral, animal/male, 2 years)	25 mg/kg bodyweight Animal: rat, Animal sex: male, Remarks on results: other:

Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

Ethanolamine hydrochloride (2002-24-6)	
STOT-single exposure	May cause respiratory irritation.

1,4-dioxane (123-91-1)	
STOT-single exposure	May cause respiratory irritation.

Ethylene oxide (75-21-8)	
STOT-single exposure	May cause respiratory irritation. May cause drowsiness or dizziness.

1,2-Propylene oxide (75-56-9)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

2,6-Di-tert-butyl-4-methylphenol (128-37-0)	
NOAEL (oral, rat, 90 days)	25 mg/kg bodyweight/day Digestive, liver, urogenital, kidneys, glandular, thyroids, adrenal gland.
STOT-repeated exposure	May cause damage to organs (liver) through prolonged or repeated exposure.

Polyethylene Glycol (25322-68-3)	
LOAEL (oral, rat, 90 days)	16000 mg/kg bodyweight Animal: rat, Guideline: other:
NOAEL (oral, rat, 90 days)	8000 mg/kg bodyweight Animal: rat, Guideline: other:
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	1 mg/l air Animal: rat, Guideline: other:

Ammonium chloride (12125-02-9)	
NOAEL (subchronic, oral, animal/male, 90 days)	≥ 580 mg/kg bodyweight 56 days

Ethylene oxide (75-21-8)	
Affected organs	nervous system

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

2,6-Di-tert-butyl-4-methylphenol (128-37-0)	
Viscosity, kinematic	0.92 – 3.47 mm²/s 160°C to 80°C

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : None known

11.2.2. Other information

Other information : No data available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Avoid undiluted product to come into sewer or superficial water.

Unknown hazards to the aquatic environment (CLP) : Contains 0.18 % of components with unknown hazards to the aquatic environment

Hazardous to the aquatic environment, short–term (acute) : Not classified

Hazardous to the aquatic environment, long–term (chronic) : Harmful to aquatic life with long lasting effects.

2,6-Di-tert-butyl-4-methylphenol (128-37-0)	
LC50 - Fish [1]	0.199 mg/l
EC50 - Crustacea [1]	0.48 mg/l
EC50 - Other aquatic organisms [1]	0.758 mg/l
EC50 72h - Algae [1]	> 0.4 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
LOEC (chronic)	1 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (acute)	0.15 mg/l
NOEC (chronic)	0.023 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Polyethylene Glycol (25322-68-3)	
LC50 - Fish [1]	> 100 mg/l

Polyethylene Glycol (25322-68-3)	
LC50 - Other aquatic organisms [1]	1000 mg/l
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 96h - Algae [1]	> 100 mg/l Test organisms (species): other:
NOEC (chronic)	17475.27 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	13671.59 mg/l Test organisms (species): other: Duration: '28 d'

Ammonium chloride (12125-02-9)	
LC50 - Fish [1]	209 mg/l 96 h
EC50 - Crustacea [1]	101 mg/l 48 h

1,4-dioxane (123-91-1)	
EC50 - Crustacea [1]	> 1000 mg/l 48 h
NOEC chronic fish	> 103 mg/l 32 d
NOEC chronic crustacea	1000 mg/l 21 d

Ethylene oxide (75-21-8)	
LC50 - Fish [1]	84 mg/l Test organisms (species): Pimephales promelas

12.2. Persistence and degradability

Regular Soldering Flux Paste	
Persistence and degradability	Not readily biodegradable. May cause long-term adverse effects in the environment.

2,6-Di-tert-butyl-4-methylphenol (128-37-0)	
Persistence and degradability	Not readily biodegradable. May cause long-term adverse effects in the environment.

Ethylene oxide (75-21-8)	
Persistence and degradability	Readily biodegradable.

12.3. Bioaccumulative potential

Regular Soldering Flux Paste	
Bioaccumulative potential	Not established.

2,6-Di-tert-butyl-4-methylphenol (128-37-0)	
Partition coefficient n-octanol/water (Log Pow)	5.2
Bioaccumulative potential	This product is not bioaccumulating.

Ethylene oxide (75-21-8)	
Partition coefficient n-octanol/water (Log Pow)	-0.3

12.4. Mobility in soil

Regular Soldering Flux Paste	
Ecology - soil	Not established.

2,6-Di-tert-butyl-4-methylphenol (128-37-0)	
Ecology - soil	Absorbs to soil particles and will not be mobile.

12.5. Results of PBT and vPvB assessment

Regular Soldering Flux Paste
PBT: not yet assessed
vPvB: not yet assessed

Component	
1,4-dioxane (123-91-1)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
1,2-Propylene oxide (75-56-9)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : None known.

12.7. Other adverse effects

Additional information : No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Sewage disposal recommendations : Do not dispose of waste into sewer.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

European List of Waste (LoW, EC 2000/532) : For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

HP Code : HP14 - “Ecotoxic:” waste which presents or may present immediate or delayed risks for one or more sectors of the environment

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated for transport				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport
Not regulated

Transport by sea
Not regulated

Air transport
Not regulated

Inland waterway transport
Not regulated

Rail transport
Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains substance(s) listed on the REACH Candidate List in concentrations ≥ 0.1 % or SCL: 1,4-dioxane (EC 204-661-8, CAS 123-91-1), Methyloxirane (Propylene oxide) (EC 200-879-2, CAS 75-56-9)

PIC Regulation (Prior Informed Consent)

Contains substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals): Ethylene oxide (75-21-8)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

VOC Directive (2004/42)

VOC content : 0 %

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

All components are listed on the EEC inventory European Inventory of Existing Commercial Chemical Substances (EINECS).
All ingredients are listed on the Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:
Composition/information on ingredients. Revised format.

Abbreviations and acronyms:	
	ACGIH (American Conference of Government Industrial Hygienists)
	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	GHS: Globally Harmonized System (of Classification and Labeling of Chemicals).
	LD50: Lethal Dose for 50% of the test population
	OSHA: Occupational Safety & Health Administration
	PBT: Persistent, Bioaccumulative, Toxic
	PNEC: Predicted No Effect Level
	STEL: Short Term Exposure Limits
	TSCA: Toxic Substances Control Act
	TWA: Time Weighted Average

Data sources : ACGIH 2000. Canadian Centre for Occupational Health and Safety. Accessed at: http://www.ccohs.ca/oshanswers/legisl/whmis_classifi.html. ESIS (European chemincal Substances Information System; accessed at: http://esis.jrc.ec.europa.eu/index.php?PGM=cla. European Chemicals Agency (ECHA) Registered Substances list. Accessed at http://echa.europa.eu/. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. National Fire Protection Association; Fire Protection Guide to Hazardous Materials; 10th edition. OSHA 29CFR 1910.1200 Hazard Communication Standard. REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006. TSCA Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html.

Other information : None.

Full text of H- and EUH-statements:	
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Carc. 1B	Carcinogenicity, Category 1B
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Gas 1	Flammable gases, Category 1
Flam. Liq. 1	Flammable liquids, Category 1

Full text of H- and EUH-statements:	
Flam. Liq. 2	Flammable liquids, Category 2
H220	Extremely flammable gas.
H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H350	May cause cancer.
H360Fd	May damage fertility. Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Muta. 1B	Germ cell mutagenicity, Category 1B
Press. Gas	Gases under pressure
Repr. 1B	Reproductive toxicity, Category 1B
Skin Corr. 1	Skin corrosion/irritation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

The classification complies with : ATP 12

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.