LA-CO Industries, Inc.

Regular Soldering Flux Paste

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations, Canada Hazardous Products Regulations (HPR) / Règlement sur les produits dangereux (RPD)

Date of issue: 05/26/2011 Revision date: 02/18/2020 Supersedes: 03/09/2015 Version: 3.0

SECTION 1: Identification

1.1. Identification

Product form : Mixture

Trade name : Regular Soldering Flux Paste

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Soldering flux

Restrictions on use : No additional information available

1.3. Supplier

LA-CO Industries, Inc.
1201 Pratt Boulevard
Elk Grove Village, IL. 60007-5746
Phone: (847) 956-7600
Fax: (847) 956-9885
E-mail: customer_service@laco.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

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS classification

Hazardous to the aquatic environment — Chronic Hazard, Category 3 H412 Harmful to aquatic life with long lasting effects.

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-US labelling

Hazard statements (GHS) : H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (GHS) : P273 - Avoid release to the environment.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS_US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	% (w/w)	GHS classification
Ethanolamine hydrochloride	(CAS-No.) 2002-24-6	10 - 15	Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
Ammonium chloride	(CAS-No.) 12125-02-9	5 - 10	Acute Tox. 4 (Oral), H302 Eye Irrit. 2A, H319
2,6-Di-tert-butyl-4-methylphenol	(CAS-No.) 128-37-0	0.1 - 0.5	STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

***Chemical name, CAS number and/or exact concentration have been withheld as a trade secret**

Full text of hazard classes and H-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 (acute and delayed)

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

4.3. Immediate medical attention and special treatment, if necessary

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

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Carbon dioxide. Dry powder. Foam. Water spray.

Unsuitable extinguishing media : None known.

5.2. Specific hazards arising from the chemical

Fire hazard : No specific fire or explosion hazard.

Explosion hazard : Product is not explosive.

Reactivity : No dangerous reactions known.

5.3. Special protective equipment and precautions for fire-fighters

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.

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.

Prohibitions on mixed storage : Keep away from incompatible materials.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2,6-Di-tert-butyl-4-methylphenol (128-37-0)		
DNEL	DNEL	0.5 ppm Dermal
PNEC	PNEC	199 mg/l Freshwater
ACGIH	Local name	Butylated hydroxytoluene
ACGIH	ACGIH TWA (mg/m³)	2 mg/m³
ACGIH	Remark (ACGIH)	URT irr
NIOSH	NIOSH REL (TWA) (mg/m³)	10 mg/m³

Ammonium chloride (12125-02-9)		
ACGIH	Local name	Ammonium chloride, fume
ACGIH	ACGIH TWA (mg/m³)	10 mg/m³
ACGIH	ACGIH STEL (mg/m³)	20 mg/m³
ACGIH	Remark (ACGIH)	TLV® Basis: Eye & URT irr
ACGIH	Regulatory reference	ACGIH 2019
NIOSH	NIOSH REL (TWA) (mg/m³)	10 mg/m³
NIOSH	NIOSH REL (STEL) (mg/m³)	20 mg/m³

Ethanolamine hydrochloride (2002-24-6)
Not applicable

8.2. Appropriate engineering controls

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

Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

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

Respiratory protection:

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

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
Appearance	:	Paste.
Colour	:	yellowish to white
Odour	:	Faint
Odour threshold	:	No data available
pH	:	6.5 – 7
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	> 204 °C (TOC)
Relative evaporation rate (butylacetate=1)	:	No data available
Flammability (solid, gas)	:	No data available
Vapour pressure	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	1.1
Solubility	:	Soluble in water.
Log Pow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive limits	:	No data available
Explosive properties	:	Product is not explosive.
Oxidising properties	:	No oxidizing properties.

9.2. Other information

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 toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Regular Soldering Flux Paste	
LD50 oral rat	> 5000 mg/kg

Regular Soldering Flux Paste	
LC50 inhalation rat (mg/l)	> 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 rabbit	> 2000 mg/kg
ATE (oral)	6000 mg/kg bodyweight

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

Skin corrosion/irritation : Not classified. (Non-irritating to skin in rabbits.)

Serious eye damage/irritation : Not classified. (Slightly irritant but not relevant for classification)

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

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

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

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

STOT-repeated exposure : Not classified

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 through prolonged or repeated exposure.

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

Aspiration hazard : Not classified

Viscosity, kinematic : No data available

Likely routes of exposure : Skin and eye contact.

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

SECTION 12: Ecological information

12.1. Toxicity

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

2,6-Di-tert-butyl-4-methylphenol (128-37-0)	
LC50 fish 1	0.199
EC50 crustacea	0.48 mg/l
EC50 other aquatic organisms 1	0.758 mg/l
NOEC (acute)	0.15 mg/l

Ammonium chloride (12125-02-9)	
LC50 fish 1	209 mg/l 96 h
EC50 crustacea	101 mg/l 48 h

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.

12.3. Bioaccumulative potential

Regular Soldering Flux Paste	
Bioaccumulative potential	Not established.

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

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. Other adverse effects

Other information : No additional information available.

SECTION 13: Disposal considerations

13.1. Disposal methods

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

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

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated.

Transportation of Dangerous Goods

Not regulated.

Transport by sea

Not regulated.

Air transport

Not regulated.

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Ammonium chloride (12125-02-9)	
Not subject to reporting requirements of the United States SARA Section 313	
CERCLA RQ	5000 lb

15.2. International regulations

CANADA

2,6-Di-tert-butyl-4-methylphenol (128-37-0)
Listed on the Canadian DSL (Domestic Substances List) inventory.

Ammonium chloride (12125-02-9)
Listed on the Canadian DSL (Domestic Substances List) inventory.

Ethanolamine hydrochloride (2002-24-6)
Listed on the Canadian DSL (Domestic Substances List) inventory.

EU-Regulations

2,6-Di-tert-butyl-4-methylphenol (128-37-0)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Ammonium chloride (12125-02-9)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

Ethanolamine hydrochloride (2002-24-6)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Regular Soldering Flux Paste
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).

2,6-Di-tert-butyl-4-methylphenol (128-37-0)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on Taiwan National Chemical Inventory Listed on the AICS (Australian Inventory of Chemical Substances)

Ammonium chloride (12125-02-9)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on the AICS (Australian Inventory of Chemical Substances) Listed on Taiwan National Chemical Inventory Listed on the Korean ECL (Existing Chemicals List) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory Listed on the Inventory of Existing Chemical Substances Produced or Imported in China (IECSC).

Ethanolamine hydrochloride (2002-24-6)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances) Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on Taiwan National Chemical Inventory Listed on the AICS (Australian Inventory of Chemical Substances) Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory

15.3. US State regulations

⚠ **WARNING:** This product can expose you to Ethylene oxide, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

Component	Carcinogenicity	Developmental toxicity	Reproductive toxicity male	Reproductive toxicity female	No significant risk level (NSRL)	Maximum allowable dose level (MADL)
1,4-dioxane(123-91-1)	X				30 µg/day	
Ethylene oxide(75-21-8)	X	X	X	X	2 µg/day	20 µg/day
1,2 - Propylene oxide(75-56-9)	X					

Component	State or local regulations
2,6-Di-tert-butyl-4-methylphenol(128-37-0)	U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List
Ammonium chloride(12125-02-9)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Revision date : 02/18/2020

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.

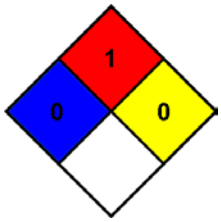
Full text of H-statements:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
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.

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

NFPA health hazard	:	0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	:	1 - Materials that must be preheated before ignition can occur.
NFPA reactivity	:	0 - Normally stable, even under fire exposure conditions, and not reactive with water.



Indication of changes:
General information.

SDS Prepared by: The Redstone Group
110 Polaris Pkwy
Suite 200
Westerville, OH USA 43082
P: +1 (614) 923-7472
www.redstonegrp.com