

"M-A" Stainless Steel Soldering Flux Liquid**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)

Issue date: 05/14/2012

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Supersedes: 12/15/2014

Version: 3.0

SECTION 1: Identification**1.1. Identification**

Product form : Mixture
Trade name : "M-A" Stainless Steel Soldering Flux Liquid

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Soldering flux
Restrictions on use : No data 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**

Skin corrosion/irritation, Category 1B H314 Causes severe skin burns and eye damage.

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements**GHS labelling**

Hazard pictograms (GHS) :



Signal word (GHS) :

Danger

Hazard statements (GHS) :

H314 - Causes severe skin burns and eye damage.

Precautionary statements (GHS) :

P260 - Do not breathe mist, spray, vapours.
P264 - Wash hands thoroughly after handling.
P280 - Wear eye protection, protective clothing, protective gloves.
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting.
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
P310 - Immediately call a doctor.
P321 - Specific treatment (see First aid measures on this label).
P363 - Wash contaminated clothing before reuse.
P405 - Store locked up.
P501 - Dispose of contents/container to an approved waste disposal plant.

2.3. Other hazards which do not result in classification

No data available

2.4. Unknown acute toxicity (GHS)

Not applicable

SECTION 3: Composition/information on ingredients**3.1. Substances**

Not applicable

"M-A" Stainless Steel Soldering Flux Liquid

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)

3.2. Mixtures

Name	Product identifier	% (w/w)	GHS classification
Phosphoric acid	(CAS-No.) 7664-38-2	3 - 65	Skin Corr. 1B, H314

*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 : Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor. If not breathing, give artificial respiration.
- First-aid measures after skin contact : Take off immediately all contaminated clothing and wash it before reuse. Wash skin thoroughly with mild soap and water. Drench affected area with water for at least 15 minutes. Get medical advice/attention.
- First-aid measures after eye contact : Immediately rinse with plenty of water (for at least 15 minutes). Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
- First-aid measures after ingestion : Do NOT induce vomiting unless directed to do so by medical personnel. Rinse mouth. Drink plenty of water. Get medical advice/attention.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects : Effects of contact or inhalation might be delayed.
- Symptoms/effects after inhalation : Inhalation of vapours may cause respiratory irritation. Corrosive to the respiratory tract.
- Symptoms/effects after skin contact : Causes severe skin burns and eye damage. Redness. Blisters. Swelling. Pain.
- Symptoms/effects after eye contact : Causes serious eye damage. Blurred vision. Can cause blindness. May cause destruction of eye tissue.
- Symptoms/effects after ingestion : May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

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 : Use extinguishing media appropriate for surrounding fire.
- Unsuitable extinguishing media : None known.

5.2. Specific hazards arising from the chemical

- Fire hazard : Not flammable. Burning produces irritating, toxic and noxious fumes. ammonia. Nitrogen oxides.
- Explosion hazard : Product is not explosive.
- Reactivity : Thermal decomposition generates : Corrosive vapours.

5.3. Special protective equipment and precautions for fire-fighters

- Firefighting instructions : Exercise caution when fighting any chemical fire. 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. Use self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Avoid all unnecessary exposure. Do not breathe aerosol. Do not breathe vapour. Do not get in eyes, on skin, or on clothing. Do not handle until all safety precautions have been read and understood. Do NOT taste or swallow. Do not touch spilled material. Ensure adequate ventilation. Evacuate area. Wear personal protective equipment.

6.1.1. For non-emergency personnel

- Protective equipment : Refer to section 8.2.
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Refer to section 8.2.

"M-A" Stainless Steel Soldering Flux Liquid

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)

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 any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

Methods for cleaning up : Take up in non-combustible absorbent material and shove into container for disposal.

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 breathe aerosol. Do not breathe vapours. Do not get in eyes, on skin, or on clothing. Do not handle until all safety precautions have been read and understood. Do NOT taste or swallow. Handle in accordance with good industrial hygiene and safety procedures. Keep only in original container. Provide good ventilation in process area to prevent formation of vapour. Wear personal protective equipment.

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. Do not eat, drink or smoke when using this product. Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Comply with applicable regulations.

Storage conditions : Keep only in original container. Keep container tightly closed and in a well-ventilated place.

Incompatible products : Strong oxidizing agents. Reducing agents. Peroxides. metals.

Incompatible materials : Caustic products. Aldehydes. Stow "away from" fluorides. Halogenated compounds. Nitromethane. Sodium borohydride.

Prohibitions on mixed storage : Keep away from incompatible materials.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Phosphoric acid (7664-38-2)		
ACGIH	Local name	Phosphoric acid
ACGIH	ACGIH TWA (mg/m ³)	1 mg/m ³
ACGIH	ACGIH STEL (mg/m ³)	3 mg/m ³
ACGIH	Remark (ACGIH)	TLV® Basis: URT, eye, & skin irr
ACGIH	Regulatory reference	ACGIH 2020
OSHA	OSHA PEL TWA [1]	1 mg/m ³
OSHA	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
IDLH	IDLH	1000 mg/m ³
NIOSH	NIOSH REL TWA	1 mg/m ³
NIOSH	NIOSH REL STEL	3 mg/m ³

8.2. Appropriate engineering controls

Appropriate engineering controls : Avoid creating mist or spray. Avoid splashing. Either local exhaust or general room ventilation is usually required. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

"M-A" Stainless Steel Soldering Flux Liquid

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)

Wear suitable gloves resistant to chemical penetration. nitrile rubber gloves. Natural rubber. neoprene/butyl rubber. PVC. Viton. Breakthrough time: > 8 h

Eye protection:

Chemical goggles or safety glasses. face shield

Skin and body protection:

Wear suitable protective clothing. Impervious clothing. Wear impervious rubber safety shoes. Rubber Apron

Respiratory protection:

In case of inadequate ventilation wear respiratory protection.;Appropriate dust or mist respirator should be used if airborne particles are generated when handling this material

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	: Clear liquid.
Colour	: Colourless
Odour	: odourless
Odour threshold	: No data available
pH	: < 1.5
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
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	: No data available
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	: No data available
Oxidising properties	: No data available

9.2. Other information

VOC content : 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions

Hazardous Polymerization may occur.

"M-A" Stainless Steel Soldering Flux Liquid

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)

10.4. Conditions to avoid

Extremely high or low temperatures.

10.5. Incompatible materials

Strong caustics. Strong oxidizing agents. Strong reducing agents. Peroxides. Cyanides and sulfide salts. reactive metals. Aldehydes. ferrous metal. Halogenated compounds. The product may generate flammable gases by contact with nitrides. Phosphorus and metal phosphides. Nitromethane. Sodium borohydride. Azo compounds, epoxides. Fluorides. Mercaptans. Acetylides, Silicides, Carbides. Acid anhydrides.

10.6. Hazardous decomposition products

Thermal decomposition generates : Phosphorus oxides. Nitrogen oxides. ammonia. 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

Phosphoric acid (7664-38-2)	
LD50 oral rat	3500 mg/kg
LD50 dermal rat	> 1260 mg/kg
ATE (oral)	3500 mg/kg bodyweight

Skin corrosion/irritation : Causes severe skin burns.
Serious eye damage/irritation : Assumed to cause serious eye damage
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
Viscosity, kinematic : No data available
Likely routes of exposure : Skin and eye contact. Inhalation.
Symptoms/effects : Effects of contact or inhalation might be delayed.
Symptoms/effects after inhalation : Inhalation of vapours may cause respiratory irritation. Corrosive to the respiratory tract.
Symptoms/effects after skin contact : Causes severe skin burns and eye damage. Redness. Blisters. Swelling. Pain.
Symptoms/effects after eye contact : Causes serious eye damage. Blurred vision. Can cause blindness. May cause destruction of eye tissue.
Symptoms/effects after ingestion : May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.
Other information : No data available.

SECTION 12: Ecological information

12.1. Toxicity

Phosphoric acid (7664-38-2)	
LC50 fish 1	138 mg/kg 96 h Gambusia affinis
EC50 crustacea	> 100 mg/l

12.2. Persistence and degradability

"M-A" Stainless Steel Soldering Flux Liquid	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

"M-A" Stainless Steel Soldering Flux Liquid	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

"M-A" Stainless Steel Soldering Flux Liquid	
Ecology - soil	Not established.

"M-A" Stainless Steel Soldering Flux Liquid

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)

12.5. Other adverse effects

Other information : No data 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

Transport document description : UN1805 Phosphoric acid solution, 8, III
UN-No.(DOT) : UN1805
Proper Shipping Name (DOT) : Phosphoric acid solution
Transport hazard class(es) (DOT) : 8 - Class 8 - Corrosive material 49 CFR 173.136
Packing group (DOT) : III - Minor Danger
Hazard labels (DOT) : 8 - Corrosive



Other information : No supplementary information available

Transportation of Dangerous Goods

Transport document description (TDG) : UN 1805 PHOSPHORIC ACID, SOLUTION, 8, III
UN-No. (TDG) : UN 1805
Proper Shipping Name (TDG) : PHOSPHORIC ACID, SOLUTION
Primary Hazard Classes : 8 - Class 8 - Corrosives
Packing group (TDG) : III - Minor Danger

Transport by sea

Transport document description (IMDG) : UN 1805 PHOSPHORIC ACID, SOLUTION, 8, III
UN-No. (IMDG) : 1805
Proper Shipping Name (IMDG) : PHOSPHORIC ACID, SOLUTION
Class (IMDG) : 8 - Corrosive substances
Packing group (IMDG) : III - substances presenting low danger
Limited quantities (IMDG) : 5 L

Air transport

Transport document description (IATA) : UN 1805 PHOSPHORIC ACID, SOLUTION, 8, III
UN-No. (IATA) : 1805
Proper Shipping Name (IATA) : PHOSPHORIC ACID, SOLUTION
Class (IATA) : 8 - Corrosives
Packing group (IATA) : III - Minor Danger

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

Phosphoric acid (7664-38-2)

CERCLA RQ	5000 lb
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"M-A" Stainless Steel Soldering Flux Liquid

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)

15.2. International regulations

CANADA

Phosphoric acid (7664-38-2)

Listed on the Canadian DSL (Domestic Substances List) inventory.

EU-Regulations

Phosphoric acid (7664-38-2)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

"M-A" Stainless Steel Soldering Flux Liquid

All ingredients are listed on the Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL).

Phosphoric acid (7664-38-2)

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 NZIoC (New Zealand Inventory of Chemicals)
Listed on Taiwan National Chemical Inventory
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on the Chinese Catalog of Hazardous Chemicals.
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on KECL/KECI (Korean Existing Chemicals Inventory)

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm.

Component	State or local regulations
Phosphoric acid(7664-38-2)	U.S. - Delaware - Pollutant Discharge Requirements - Reportable Quantities; U.S. - Idaho - Non-Carcinogenic Toxic Air Pollutants - Acceptable Ambient Concentrations; U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

Revision date	: 12/29/2020
Data sources	: ACGIH (American Conference of Government Industrial Hygienists). European Chemicals Agency (ECHA) C&L Inventory database. Accessed at http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database . 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. TSCA Chemical Substance Inventory. Accessed at http://www.epa.gov/oppt/existingchemicals/pubs/tscainventory/howto.html .
Other information	: None.

Full text of H-statements:

H314	Causes severe skin burns and eye damage.
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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

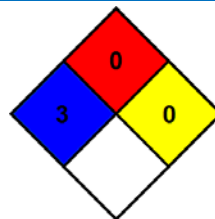
"M-A" Stainless Steel Soldering Flux Liquid

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)

	TSCA: Toxic Substances Control Act
	TWA: Time Weighted Average

- NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.
- NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.
- NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and not reactive with water.



Indication of changes:

Composition/information on ingredients. General information.

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.