

SECTION 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Trade Name	LINQALLOY™ CC-SAC305
Applications:	Solder for electrical and electronic packages. Industrial use only.
Advised Against	No further relevant information is available
Supplier Name	Caplinq Europe BV

CAPLINQ Europe BV
Industrieweg 15E
1566 JN Assendelft
The Netherlands
+31 20 893 2224

CAPLINQ Corporation
80 Sirocco Crescent
Ottawa, ON K2S 2C9
Canada
+1 (613) 416 8426

CAPLINQ Americas
36927 Schoolcraft Rd
Livonia, MI 48150
United States of America
+1 (618) 416 9739

CAPLINQ Malaysia
S-08-07 Setia Triangle
Penang, BL 11900
Malaysia
+60 (15) 460 00453

SECTION 2. HAZARDS IDENTIFICATION

CLASSIFICATION OF THE SUBSTANCE/MIXTURE

Classification according to Regulation (EC) No 1272/2008

Hazard Class

Skin sensitization
Carcinogenicity
Hazardous to the aquatic environment, acute hazard
Hazardous to the aquatic environment, long-term hazard

Hazard Category

Category 1
Category 2
Category 1
Category 1

LABEL ELEMENTS

Labeling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

Hazard Pictogram



Signal Word

Warning

Hazard Statements

H317	May cause an allergic skin reaction
H351	Suspected of causing cancer
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long-lasting effects

Prevention Precautionary Statements

P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response Precautionary Statements

P318	If exposed or concerned, get medical advice.
P302+P352	If on skin, wash with plenty of water.
P333+P317	If skin irritation or rash occurs: Get medical help.
P362+P364	Take off contaminated clothing and wash it before reuse.

Collect spillage

Storage Precautionary Statements

P405

Store locked up

Disposal Precautionary Statements

P501

Dispose of contents or container to an approved waste disposal.

OTHER HAZARDS

No available data to assess PBT and vPvB

SECTION 3. INGREDIENT COMPOSITION

Element	CAS Reg. No.	Proportion (%)
Copper	7440-50-8	45 – 70
Tin	7440-31-5	32 – 48
Silver	7440-22-4	0.8 – 1.5
Nickel	7440-02-0	3.7 – 6.8

SECTION 4. FIRST AID MEASURES

EYE CONTACT

- Immediately flush with plenty of water for at least 15 min.
- Inspect for and remove any contact lenses. Avoid using eye ointment.

SKIN CONTACT

- Immediately flush with plenty of water and soap for at least 15 min.
- Remove contaminated clothing, and launder it before reuse.

INHALATION

- Move the victim to fresh air.
- Administer oxygen if breathing is difficult.
- Get medical attention.

INGESTION

- Do not administer anything orally if the patient is on the verge of losing consciousness, already unconscious, or experiencing convulsions.
- Do not induce vomiting. Loosen tight clothing such as a collar, tie, belt, or waistband.
- If the victim is not breathing, administer mouth-to-mouth resuscitation.
- Get medical attention immediately.

INDICATION OF IMMEDIATE MEDICAL ATTENTION AND NOTES FOR PHYSICIAN

- Treatments depend on the condition of the patient.

SECTION 5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- Suitable : Dolomite, sand, black lead, soda ash, sodium chloride

HAZARD RELEASED FROM CHEMICAL

- Thermal Decomposition Products: Oxidized chemicals of tin.
- Fires and Explosive Risk: A fire and explosive risk is not considerable when it is bulk. However, the mixture with air and dust may pose an explosive hazard.

PROTECTIVE EQUIPMENT AND PRECAUTIONARY ACTIONS

- Move the container from the fire area if safe to do so.
- After extinguishing the fire, cool the container with water for a long time. If water is unavailable, prevent unauthorized access and isolate from hazardous areas.
- Use a fire extinguisher.
- Avoid inhaling the substance or the burning fumes. Position yourself against the wind.

SECTION 6. ACCIDENTAL RELEASE MEASURES

PRECAUTIONARY ACTIONS

- Avoid contact with products near heat, flames, sparks, or other ignition sources.
- Avoid inhalation of steam and contact with eyes or skin.

CONTAINMENT ACTIONS

- Small leak: Not available.
- Massive leak: Should not be allowed to spread over a wider area by using a vacuum fume or applying a water spray to contain it.

SECTION 7. HANDLING AND STORAGE

HANDLING

- This product is for industrial use only. Wash your hands after use.
- Do not take it internally. Avoid contact with eyes, skin, and clothing.
- Avoid inhalation of soldering fumes during the process.
- Keep out of reach of children. Observe good industrial practices.
- Ensure the availability of suitable protective and ventilation equipment.
- Minimize dust generation and accumulation.

STORAGE

- Store in a tightly sealed container. Avoid direct exposure to sunlight and store substances in a cool, dry place. Keep them away from acids, strong oxidizing agents, and other hazardous materials.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

EXPOSURE LIMITS

Chemical Name	CAS Reg. No.	Long-term exposure limit (TWA)	Short-term exposure limit (STEL)	Maximum exposure limit (Ceiling)
		mg/m ³		
Tin	7440-31-5	2.0	NA	NA
Silver	7440-22-4	0.1	NA	NA
Copper	7440-50-8	0.2	NA	NA
Nickel	7440-02-0	1.0	NA	NA

¹Occupational Safety and Health Administration (OSHA) 8-hour total weight average (TWA) permissible exposure limit (PEL)

²American Conference of Governmental Industrial Hygienists (ACGIH) 8-hour total weight average (TWA) threshold limit value (TLV)

EXPOSURE CONTROLS

Eye and face protection	Standard safety glasses
Hand protection	Protective gloves resistant to organic solvents or chemicals.
Body protection	Anti-static work clothes and safety shoes.
Respiratory protection	Wear a gas mask for organic gas. Wear an air-supplied mask in a closed area.
Control of environmental exposure	Do not release the product to the environment.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Solid alloy sphere
Color	Gray Solid
pH	Not Available
Odor	Odorless
Resolve temperature	Not Available
Auto ignition temperature	Not Available
Vapor pressure	Not Available
Melting Point	217 °C – 227 °C (Solid Layer) & 1083 °C (Cu Cored)
Flash Point	Not Available
Explosion limit	Not applicable
Vapor density	Not applicable
Density g/cm ³	1) solder layer 7.4, 2) Cu core 8.9
Solubility in Water (wt%)	Negligible (0–1%)

SECTION 10. STABILITY & REACTIVITY

Chemical stability

Stable in room temperature and atmospheric pressure.

Possibility of hazardous reactions

These products are not reactive. Metal fumes and certain noxious gases, such as carbon monoxide, may be produced at temperature above and the melting point or during welding or burning operations. Carbon monoxide, carbon dioxide, and other toxic fumes may be produced during welding or burning operations.

Conditions to avoid (e.g. static discharge, shock or vibration, etc.)

Avoid heat, sparks, open flame or oxidizing materials.

Incompatible materials

Avoid strong acid, strong oxidizing agent, halogen, metal or flammable materials.

Hazardous decomposition products

Oxidized tin materials

SECTION 11. TOXICOLOGICAL INFORMATION

INFORMATION ON HAZARD CLASSES AS DEFINED (EC) No 1272/2008

Acute Toxicity (Oral)	Not classified, based on available data
Acute Toxicity (Dermal)	Not classified, based on available data
Acute Toxicity (Inhalation)	Not classified, based on available data
Skin corrosion/irritation	Not classified, based on available data
Serious eye damage/irritation	Not classified, based on available data
Respiratory or skin sensitisation	Nickel has a harmonised classification as H317, although limited toxicological data is available specific to this mixture. No effects were observed in standard testing, but classification is applied in accordance with Regulation (EC) No 1272/2008, Annex VI.
Germ cell mutagenicity	Not classified, based on available data
Carcinogenicity	Nickel has a harmonised classification as H351, although limited

Reproductive Toxicity	toxicological data is available specific to this mixture. No effects were observed in standard testing, but classification is applied in accordance with Regulation (EC) No 1272/2008, Annex VI.
Specific Target Organ Toxicity (Single Exposure)	Not classified, based on available data
Specific Target Organ Toxicity (Repeated Exposure)	Not classified, based on available data
Aspiration hazard	Not classified, based on available data

INFORMATION ON OTHER HAZARDS

Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties

The product is not included in the list established in accordance with Article 57(f) 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 at levels of 0.1% or higher. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Potential adverse human health effects and symptoms

No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecological Toxicity

Prevent from spreading or entering into drains, surface water, groundwater and rivers. The product is considered toxic to aquatic organisms and may cause long-term adverse effects in the aquatic environment.

Hazardous to the aquatic environment, short term (acute)

Copper Category 1 (fish :96h-LC50 0.028 mg/L Pimephales promelas)
Fish: 96h-LC50 0.028 mg/L (Pimephales promelas)
Invertebrate: 48h-EC50 0.03 mg/L (Daphnia magna)
Algae : 72h-EC50 0.038 mg/L (Selenastrum capricornutum)

Hazardous to the aquatic environment, long-term (chronic)

Copper Category 1 (fish :96h-LC50 0.028 mg/L Pimephales promelas)
Fish: 96h-LC50 0.028 mg/L (Pimephales promelas)
Invertebrate: 48h-EC50 0.03 mg/L (Daphnia magna)
Algae : 72h-EC50 0.038 mg/L (Selenastrum capricornutum)

Mobility in soil

No available data

Bioaccumulation

No available data

Persistence and biodegradability

No available data

PBT and vPvB assessment

No available data

SECTION 13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD

Consider categories of waste treatment management regulation. Disposal of waste needs to be carried out at the city, state, or federally permitted disposal facility. Handle in accordance with applicable regulations and/or local authorities.

WASTE DISPOSAL PRECAUTION

Obey the waste treatment management regulation.

SECTION 14. TRANSPORT INFORMATION

UN NUMBER OR ID NUMBER

ADR/RID/ADN, IMDG, IATA

Not classified as dangerous goods

PROPER SHIPPING NAME

ADR/RID/ADN

Not applicable

IMDG

Not applicable

IATA

Not applicable

TRANSPORT HAZARD CLASS

Hazard Class

Not applicable

Label

Not applicable

PACKING GROUP

ADR/RID/ADN, IMDG, IATA

ENVIRONMENTAL HAZARDS

Marine pollutant

Not applicable

Special marking (ADR/RID/ADN)

Not applicable

Special marking (IATA)

Not applicable

SPECIAL PRECAUTIONS FOR USER

Hazard identification number (Kemler code)

Not applicable

EMS Number

Not applicable

Stowage Category

Not applicable

MARITIME TRANSPORT IN BULK ACCORDING TO IMO INSTRUMENTS Not applicable

Transport/Additional information

ADR/RID/ADN

Limited quantities (LQ)

Not applicable

Excepted quantities (EQ)

Not applicable

Transport category

Not applicable

Tunnel restriction code

Not applicable

UN "Model Regulation"

Not applicable

TRANSPORTATION PRECAUTIONS

- Ensure the container is leak-proof.
- During transport, prevent falling, tipping, collisions, and exposure to direct sunlight.
- Pack and transport in a sealed container.
- Transportation must adhere to applicable national and international regulations.

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized safety officer. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

SECTION 15. REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

Directive 2012/18/EU (Seveso III Directive) – Annex I: Named Dangerous Substances

None of the ingredients is listed.

REGULATION (EC) No. 1907/2006 – Annex XVII: Restricted Substances

No restrictions

Directive 2011/65/EU (RoHS Directive) – Annex II: Restricted Substances in Electrical and Electronic Equipment

Substance is not listed.

SECTION 16. OTHER INFORMATION

The information in this safety data sheet was obtained from reputable sources and to the best of our knowledge is accurate and current at the mentioned date. Neither CAPLINQ Corporation nor CAPLINQ Europe BV accepts any liability arising out of the use of the information provided here or the use, application, or processing of the product described herein.

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ABBREVIATIONS AND ACRONYMS

ADR	Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
STOT	Specific Target Organ Toxicity
RE	Repeated Exposure
PBT	Persistent, Bioaccumulative, and Toxic
vPvB	Very Persistent and very Bioaccumulative
CAS	Chemical Abstracts Service
IMDG	International Maritime Code for Dangerous Goods
IATA	International Air Transport Association
CAS	Chemical Abstracts Service (A division of the American Chemical Society)
PEL	Permissible Exposure Limit
TLV	Threshold Limit Value
REL	Recommended Exposure Limit
TWA	Time Weighted Average
STEL	Short-Term Exposure Limit
NIOSH	National Institute for Occupational Safety and Health
ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	Occupational Safety and Health Administration
IMDG	International Maritime Dangerous Goods Code
IATA DGR	International Air Transport Association Dangerous Goods Regulations