



Safety Data Sheet according to (EC) No 1907/2006

Page 1 of 11

LOCTITE TTC-LF 32 known as TTC-LF TIP TINNR 15gm/.5oz-REL

SDS No. : 181481
V007.1

Revision: 03.06.2015

printing date: 30.04.2018

Replaces version from: 08.04.2015

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

1.1. Product identifier

LOCTITE TTC-LF 32 known as TTC-LF TIP TINNR 15gm/.5oz-REL

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

Intended use:

Tip Tinner/Cleaner

1.3. Details of the supplier of the safety data sheet

Henkel Ltd

Wood Lane End

HP2 4RQ Hemel Hempstead

Great Britain

Phone: +44 1442 278000

Fax-no.: +44 1442 278071

ua-productsafety.uk@uk.henkel.com

1.4. Emergency telephone number

24 Hours Emergency Tel: +44 (0)1442 278497

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (CLP):

Acute hazards to the aquatic environment

Category 1

H400 Very toxic to aquatic life.

Chronic hazards to the aquatic environment

Category 1

H410 Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Signal word:

Warning

Hazard statement:

H410 Very toxic to aquatic life with long lasting effects.

Precautionary statement: P273 Avoid release to the environment.
Prevention

2.3. Other hazards

Avoid breathing fumes given out during soldering.

After handling solder wash hands with soap and water before eating, drinking or smoking.

Keep out of reach of children.

Flux fumes may irritate the nose, throat and lungs and may after prolonged/repeated exposure give an allergic reaction (asthma).

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Declaration of the ingredients according to CLP (EC) No 1272/2008:

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Tin 7440-31-5	231-141-8 01-2119486474-28	25- 50 %	
Citric acid 77-92-9	201-069-1 01-2119457026-42	5- < 10 %	Eye Irrit. 2 H319
Silver >= 99,9 % Ag in powder (< 1 mm) 7440-22-4	231-131-3	0,25- < 2,5 %	Aquatic Acute 1 H400 Aquatic Chronic 1 H410 M factor: 1.000 M factor (Chron Aquat Tox): 1.000
Copper 7440-50-8	231-159-6 01-2119480154-42	0,1- < 0,25 %	Acute Tox. 4; Oral H302 Skin Irrit. 2 H315 Eye Irrit. 2 H319 STOT SE 3; Inhalation H335 Aquatic Acute 1 H400 Aquatic Chronic 3 H412

For full text of the H - statements and other abbreviations see section 16 "Other information".
Substances without classification may have community workplace exposure limits available.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:

Move to fresh air. If symptoms persist, seek medical advice.

Skin contact:

Rinse with running water and soap.

Obtain medical attention if irritation persists.

Eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

Seek medical advice.

Ingestion:

Do not induce vomiting.

Seek medical advice.

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

Prolonged or repeated skin contact with silver and its salts may cause a blue-gray discoloration of the skin and mucous membranes that is irreversible (Argyria).

Prolonged or repeated contact may cause skin irritation.

Prolonged or repeated contact may cause eye irritation.

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

See section: Description of first aid measures

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

carbon dioxide, foam, powder, water spray jet, fine water spray

Extinguishing media which must not be used for safety reasons:

High pressure waterjet

5.2. Special hazards arising from the substance or mixture

High temperatures may produce heavy metal dust, fumes or vapours.

5.3. Advice for firefighters

Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective equipment.

6.2. Environmental precautions

Do not let product enter drains.

6.3. Methods and material for containment and cleaning up

Scrape up spilled material and place in a closed container for disposal.

6.4. Reference to other sections

See advice in section 8

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Use only in well-ventilated areas.

Avoid skin and eye contact.

Hygiene measures:

Good industrial hygiene practices should be observed.

Wash hands before work breaks and after finishing work.

Do not eat, drink or smoke while working.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool place in closed original container.

7.3. Specific end use(s)

Tip Tinner/Cleaner

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure Limits

Valid for
Great Britain

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Tin 7440-31-5 [TIN (INORGANIC COMPOUNDS AS SN)]		2	Time Weighted Average (TWA):	Indicative	ECLTV
Quartz (SiO ₂) 14808-60-7 [SILICA, RESPIRABLE CRYSTALLINE]		0,1	Time Weighted Average (TWA):		EH40 WEL
Silver 7440-22-4 [SILVER (METALLIC)]		0,1	Time Weighted Average (TWA):		EH40 WEL
Silver 7440-22-4 [SILVER, METALLIC]		0,1	Time Weighted Average (TWA):	Indicative	ECLTV
Copper 7440-50-8 [COPPER, FUME]		0,2	Time Weighted Average (TWA):		EH40 WEL
Copper 7440-50-8 [COPPER, INHALABLE DUSTS AND MISTS (AS CU)]		1	Time Weighted Average (TWA):		EH40 WEL
Copper 7440-50-8 [COPPER, INHALABLE DUSTS AND MISTS (AS CU)]		2	Short Term Exposure Limit (STEL):		EH40 WEL

Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Citric acid 77-92-9	aqua (freshwater)					0,44 mg/L	
Citric acid 77-92-9	aqua (marine water)					0,044 mg/L	
Citric acid 77-92-9	STP					1000 mg/L	
Citric acid 77-92-9	sediment (freshwater)					34,6 mg/kg	
Citric acid 77-92-9	sediment (marine water)					3,46 mg/kg	
Citric acid 77-92-9	soil					33,1 mg/kg	
Copper 7440-50-8	Soil					65 mg/kg	
Copper 7440-50-8	STP		230 µg/l				
Copper 7440-50-8	sediment (marine water)					676 mg/kg	
Copper 7440-50-8	aqua (freshwater)		7,8 µg/l				
Copper 7440-50-8	aqua (marine water)		5,2 µg/l				
Copper 7440-50-8	sediment (freshwater)					87 mg/kg	

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Tin 7440-31-5	Workers	Dermal	Acute/short term exposure - systemic effects		133,3 mg/kg	
Tin 7440-31-5	Workers	Inhalation	Acute/short term exposure - systemic effects		11,75 mg/m3	
Tin 7440-31-5	Workers	Dermal	Long term exposure - systemic effects		133,3 mg/kg	
Tin 7440-31-5	Workers	Inhalation	Long term exposure - systemic effects		11,75 mg/m3	
Tin 7440-31-5	general population	Dermal	Acute/short term exposure - systemic effects		80 mg/kg	
Tin 7440-31-5	general population	Inhalation	Acute/short term exposure - systemic effects		3,476 mg/m3	
Tin 7440-31-5	general population	oral	Acute/short term exposure - systemic effects		80 mg/kg	
Tin 7440-31-5	general population	Dermal	Long term exposure - systemic effects		80 mg/kg	
Tin 7440-31-5	general population	Inhalation	Long term exposure - systemic effects		3,476 mg/m3	
Tin 7440-31-5	general population	oral	Long term exposure - systemic effects		80 mg/kg	
Copper 7440-50-8	Workers	Dermal	Acute/short term exposure - systemic effects		273 mg/kg	
Copper 7440-50-8	general population	inhalation	Acute/short term exposure - systemic effects		20 mg/m3	
Copper 7440-50-8	general population	inhalation	Acute/short term exposure - local effects		1 mg/m3	
Copper 7440-50-8	general population	inhalation	Long term exposure - local effects		1 mg/m3	
Copper 7440-50-8	general population	Dermal	Acute/short term exposure - systemic effects		273 mg/kg	
Copper 7440-50-8	Workers	Dermal	Long term exposure - systemic effects		137 mg/kg	
Copper 7440-50-8	general population	Dermal	Long term exposure - systemic effects		137 mg/kg	
Copper 7440-50-8	Workers	inhalation	Acute/short term exposure - systemic effects		20 mg/m3	
Copper 7440-50-8	Workers	inhalation	Long term exposure - local effects		1 mg/m3	
Copper 7440-50-8	Workers	inhalation	Acute/short term exposure - local effects		1 mg/m3	

Biological Exposure Indices:
None**8.2. Exposure controls:**

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment.

An approved mask or respirator fitted with an organic vapour cartridge should be worn if the product is used in a poorly ventilated area

Filter type: A

Hand protection:

Chemical-resistant protective gloves (EN 374).

Suitable materials for short-term contact or splashes (recommended: at least protection index 2, corresponding to > 30 minutes permeation time as per EN 374):

nitrile rubber (NBR; ≥ 0.4 mm thickness)

Suitable materials for longer, direct contact (recommended: protection index 6, corresponding to > 480 minutes permeation time as per EN 374):

nitrile rubber (NBR; ≥ 0.4 mm thickness)

This information is based on literature references and on information provided by glove manufacturers, or is derived by analogy with similar substances. Please note that in practice the working life of chemical-resistant protective gloves may be considerably shorter than the permeation time determined in accordance with EN 374 as a result of the many influencing factors (e.g. temperature). If signs of wear and tear are noticed then the gloves should be replaced.

Eye protection:

Safety glasses with sideshields or chemical safety goggles should be worn if there is a risk of splashing.

Skin protection:

Wear suitable protective clothing.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance	paste grey
Odor	mild
Odour threshold	No data available / Not applicable
pH	Not applicable
Initial boiling point	Not determined
Flash point	None
Decomposition temperature	No data available / Not applicable
Vapour pressure	Not determined
Vapour pressure	Not determined
Density (ρ)	3,5 g/cm ³
Bulk density	No data available / Not applicable
Viscosity	No data available / Not applicable
Viscosity (kinematic)	No data available / Not applicable
Explosive properties	No data available / Not applicable
Solubility (qualitative) (Solvent: Water)	Insoluble
Solidification temperature	No data available / Not applicable
Melting point	217 °C (422.6 °F)
Flammability	No data available / Not applicable
Auto-ignition temperature	No data available / Not applicable
Explosive limits	No data available / Not applicable
Partition coefficient: n-octanol/water	No data available / Not applicable
Evaporation rate	No data available / Not applicable
Vapor density	No data available / Not applicable
Oxidising properties	No data available / Not applicable

9.2. Other information

No data available / Not applicable

SECTION 10: Stability and reactivity**10.1. Reactivity**

Solder alloy will react with concentrated nitric acid to produce toxic fumes of nitrogen oxides.

10.2. Chemical stability

Stable under recommended storage conditions.

10.3. Possibility of hazardous reactions

See section reactivity

10.4. Conditions to avoid

None if used for intended purpose.

10.5. Incompatible materials

None if used properly.

10.6. Hazardous decomposition products

Thermal decomposition can lead to release of irritating gases and vapors.

SECTION 11: Toxicological information**11.1. Information on toxicological effects****General toxicological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Oral toxicity:

May cause irritation to the digestive tract.

Inhalative toxicity:

Fumes evolved at soldering temperatures will irritate the nose, throat and lungs.

Skin irritation:

Prolonged or repeated contact may cause skin irritation.

Eye irritation:

Prolonged or repeated contact may cause eye irritation.

Fumes emitted during soldering may irritate the eyes.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Citric acid 77-92-9	LD50	11.700 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
Silver >= 99,9 % Ag in powder (< 1 mm) 7440-22-4	LD50	> 2.000 mg/kg	oral		rat	OECD Guideline 401 (Acute Oral Toxicity)
Copper 7440-50-8	LD50	584 mg/kg	oral		rat	

Acute inhalative toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
---------------------------------	---------------	-------	-------------------------	------------------	---------	--------

Acute dermal toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Citric acid 77-92-9	LD50	> 2.000 mg/kg	dermal		rat	

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Citric acid 77-92-9	slightly irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Citric acid 77-92-9	highly irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Citric acid 77-92-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		Ames Test

SECTION 12: Ecological information**General ecological information:**

The mixture is classified based on the available hazard information for the ingredients as defined in the classification criteria for mixtures for each hazard class or differentiation in Annex I to Regulation 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

12.1. Toxicity**Ecotoxicity:**

Very toxic to aquatic life with long lasting effects.
Do not empty into drains / surface water / ground water.

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Citric acid 77-92-9	LC50	> 250 mg/l	Fish	48 h	Leuciscus idus	DIN 38412-15
Citric acid 77-92-9	EC50	275 mg/l	Daphnia	24 h	Daphnia magna	
Citric acid 77-92-9	EC50	> 640 mg/l	Algae	7 d	Scenedesmus quadricauda	

12.2. Persistence and degradability**Persistence and Biodegradability:**

The product is not biodegradable.

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Citric acid 77-92-9	readily biodegradable	aerobic	79 %	OECD Guideline 301 D (Ready Biodegradability: Closed Bottle Test)

12.3. Bioaccumulative potential / 12.4. Mobility in soil**Mobility:**

The product is insoluble and sinks in water.

Bioaccumulative potential:

No data available.

Hazardous components CAS-No.	LogKow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
---------------------------------	--------	----------------------------------	------------------	---------	-------------	--------

Citric acid 77-92-9	-1,72			20 °C	EU Method A.8 (Partition Coefficient)
------------------------	-------	--	--	-------	--

12.5. Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB
Citric acid 77-92-9	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Silver >= 99,9 % Ag in powder (< 1 mm) 7440-22-4	Not fulfilling PBT (persistent/bioaccumulative/toxic) criteria

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Wherever possible unwanted solder alloy should be recycled for recovery of metal.

Disposal of uncleaned packages:

Dispose of as unused product.

Waste code

06 04 05 - wastes containing other heavy metals

SECTION 14: Transport information**14.1. UN number**

ADR	3077
RID	3077
ADN	3077
IMDG	3077
IATA	3077

14.2. UN proper shipping name

ADR	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Silver)
RID	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Silver)
ADN	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Silver)
IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Silver)
IATA	Environmentally hazardous substance, solid, n.o.s. (Silver)

14.3. Transport hazard class(es)

ADR	9
RID	9
ADN	9
IMDG	9
IATA	9

14.4. Packaging group

ADR	III
RID	III
ADN	III
IMDG	III
IATA	III

14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	Marine pollutant
IATA	not applicable

14.6. Special precautions for user

ADR	not applicable Tunnelcode: (E)
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**VOC content < 3,00 %
(1999/13/EC)**15.2. Chemical safety assessment**

A chemical safety assessment has not been carried out.

National regulations/information (Great Britain):

Remarks

The Health & Safety at Work Act 1974.
The Control of Substances Hazardous to Health Regulations. L5:General
Approved Code of Practice to the COSHH Regulations. HS(G)97:A Step by Step
Guide to the COSHH Regulations. HS(G)193: COSHH essentials: Easy steps to
control chemicals.

SECTION 16: Other information

The labelling of the product is indicated in Section 2. The full text
of all abbreviations indicated by codes in this safety data sheet are as follows:

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

Further information:

This information is based on our current level of knowledge and relates to the product in the state in which it is delivered. It is intended to describe our products from the point of view of safety requirements and is not intended to guarantee any particular properties.

Relevant changes in this safety data sheet are indicated by vertical lines at the left margin in the body of this document. Corresponding text is displayed in a different color on shadowed fields.