



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

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LOCTITE HF 212 97SCDAP88.5 DK known as
97SCHF212DAP88.5 AF5 500G JAR

SDS No. : 470540
V004.0

Revision: 17.03.2017

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Replaces version from: 20.10.2014

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

1.1. Product identifier

LOCTITE HF 212 97SCDAP88.5 DK known as 97SCHF212DAP88.5 AF5 500G JAR

Contains:

Rosin

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

Intended use:
Solder Paste

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@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):

Skin sensitizer
H317 May cause an allergic skin reaction.

Category 1

2.2. Label elements

Label elements (CLP):

Hazard pictogram:



Signal word:

Warning

Hazard statement:

H317 May cause an allergic skin reaction.

Precautionary statement: P261 Avoid breathing fume.
Prevention P280 Wear protective gloves.

Precautionary statement: P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
Response

2.3. Other hazards

Avoid breathing fumes given out during soldering.

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

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

Keep out of reach of children.

Self classification: product testing according to Classification, Labelling and Packaging Regulation EC/1272/2008, Annex 1, Part 4.

This product contains modified rosin.

Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

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	50- 100 %	
Silver >= 99,9 % Ag in powder (< 1 mm) 7440-22-4	231-131-3 01-2119555669-21	1- < 5 %	Aquatic Acute 1 H400 Aquatic Chronic 1 H410 M factor (Acute Aquat Tox): 1.000 M factor (Chron Aquat Tox): 100
Rosin 8050-09-7	232-475-7 01-2119480418-32	1- < 5 %	Skin Sens. 1 H317
Modified rosin 144413-22-9	434-230-1, 434- 230-1 01-2120117087-62	1- < 5 %	Aquatic Chronic 4 H413
Copper 7440-50-8	231-159-6 01-2119480154-42	0,1- < 1 %	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 running water (for 10 minutes), seek medical attention from a specialist.

Ingestion:

Rinse mouth, drink 1-2 glasses of water, do not induce vomiting, consult a doctor.

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

SKIN: Rash, Urticaria.

Prolonged or repeated contact may cause eye irritation.

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).

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

Fine water spray

Extinguishing media which must not be used for safety reasons:

Do not use water on fires where molten metal is present.

5.2. Special hazards arising from the substance or mixture

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

The flux medium will give rise to irritating fumes.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and full protective clothing, such as turn-out gear.

Additional information:

In case of fire, keep containers cool with water spray.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes.

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

Extraction is necessary to remove fumes evolved during reflow.

When using do not eat, drink or smoke.

Wash hands before breaks and immediately after handling the product.

Avoid breathing fumes given out during soldering.

See advice in section 8

Hygiene measures:

Good industrial hygiene practices should be observed.

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

Do not eat, drink or smoke while working.

7.2. Conditions for safe storage, including any incompatibilities
Refer to Technical Data Sheet

7.3. Specific end use(s)
Solder Paste

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
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	ECTLV
Rosin 8050-09-7 [ROSIN-BASED SOLDER FLUX FUME]		0,05	Time Weighted Average (TWA):		EH40 WEL
Rosin 8050-09-7 [ROSIN-BASED SOLDER FLUX FUME]		0,15	Short Term Exposure Limit (STEL):		EH40 WEL
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

Occupational Exposure LimitsValid for
Ireland

Ingredient [Regulated substance]	ppm	mg/m ³	Value type	Short term exposure limit category / Remarks	Regulatory list
Tin 7440-31-5 [TIN, METAL (AS SN)]		2	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
Tin 7440-31-5 [TIN (INORGANIC COMPOUNDS AS SN)]		2	Time Weighted Average (TWA):	Indicative	ECTLV
Silver 7440-22-4 [SILVER (METALLIC)]		0,1	Time Weighted Average (TWA):	Indicative OELV	IR_OEL
Silver 7440-22-4 [SILVER, METALLIC]		0,1	Time Weighted Average (TWA):	Indicative	ECTLV
Rosin 8050-09-7 [ROSIN CORE SOLDER PYROLYSIS PRODUCTS (AS AIRBORNE TOTAL RESIN ACID)]		0,05	Time Weighted Average (TWA):		IR_OEL
Rosin 8050-09-7 [ROSIN CORE SOLDER PYROLYSIS PRODUCTS (AS AIRBORNE TOTAL RESIN ACID)]		0,15	Short Term Exposure Limit (STEL):		IR_OEL
Copper 7440-50-8 [COPPER (AS CU), DUSTS AND MISTS]		1	Time Weighted Average (TWA):		IR_OEL
Copper 7440-50-8 [COPPER (AS CU), FUME]		0,2	Time Weighted Average (TWA):		IR_OEL

Copper 7440-50-8 [COPPER (AS CU), DUSTS AND MISTS]		2	Short Term Exposure Limit (STEL):		IR_OEL
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Predicted No-Effect Concentration (PNEC):

Name on list	Environmental Compartment	Exposure period	Value				Remarks
			mg/l	ppm	mg/kg	others	
Tin 7440-31-5	aqua (freshwater)						
Tin 7440-31-5	aqua (marine water)						
Tin 7440-31-5	sewage treatment plant (STP)						
Tin 7440-31-5	sediment (freshwater)						
Tin 7440-31-5	sediment (marine water)						
Tin 7440-31-5	Air						
Tin 7440-31-5	soil						
Tin 7440-31-5	Predator						
Rosin 8050-09-7	aqua (freshwater)		0,005 mg/l				
Rosin 8050-09-7	aqua (marine water)		0,0005 mg/l				
Rosin 8050-09-7	sediment (freshwater)				108 mg/kg		
Rosin 8050-09-7	sediment (marine water)				10,8 mg/kg		
Rosin 8050-09-7	soil				21,4 mg/kg		
Rosin 8050-09-7	sewage treatment plant (STP)		1000 mg/l				
Copper 7440-50-8	soil				65 mg/kg		
Copper 7440-50-8	sewage treatment plant (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	
Rosin 8050-09-7	Workers	Inhalation	Long term exposure - systemic effects		176,32 mg/m3	
Rosin 8050-09-7	Workers	dermal	Long term exposure - systemic effects		25 mg/kg	
Rosin 8050-09-7	General population	Inhalation	Long term exposure - systemic effects		52,174 mg/m3	
Rosin 8050-09-7	General population	dermal	Long term exposure - systemic effects		15 mg/kg	
Rosin 8050-09-7	General population	oral	Long term exposure - systemic effects		15 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:

Engineering controls:

Ensure adequate ventilation, especially in confined areas.

Extraction is necessary to remove fumes evolved during reflow.

Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Respiratory protection:

Use only in well-ventilated areas.

In case of insufficient ventilation, wear suitable respiratory equipment.

Suitable respiratory protection:

Filter type: A (EN 14387)

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; \geq 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; \geq 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.

Protective eye equipment should conform to EN166.

Skin protection:

Wear suitable protective clothing.

Protective clothing should conform to EN 14605 for liquid splashes or to EN 13982 for dusts.

Advices to personal protection equipment:

The information provided on personal protective equipment is for guidance purposes only. A full risk assessment should be conducted prior to using this product to determine the appropriate personal protective equipment to suit local conditions.

Personal protective equipment should conform to the relevant EN standard.

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

Appearance

paste

liquid

Gray

Odor

mild

Odour threshold

No data available / Not applicable

pH

No data available / Not applicable

Initial boiling point

No data available / Not applicable

Flash point	> 120 °C (> 248 °F); Estimated
Decomposition temperature	No data available / Not applicable
Vapour pressure	No data available / Not applicable
Density	No data available / Not applicable
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	Not determined
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

Ignition temperature > 500 °C (> 932 °F)

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

No decomposition if stored and applied as directed.

10.5. Incompatible materials

See section reactivity.

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 (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

Oral toxicity:

Swallowing may cause irritation of mouth, throat and digestive tract, diarrhea and vomiting

Inhalative toxicity:

Fumes evolved at soldering temperatures will irritate the nose, throat and lungs. Prolonged or repeated exposure to flux fumes may result in sensitisation in sensitive workers.

Dermal toxicity:

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).

Skin irritation:

Prolonged or repeated contact may cause skin irritation.

Eye irritation:

Solder pastes may be abrasive to the eyes and the fumes are irritating.

Sensitizing:

May cause an allergic skin reaction.

Acute oral toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Tin 7440-31-5	LD50	> 2.000 mg/kg	oral		rat	OECD Guideline 423 (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)
Rosin 8050-09-7	LD50	2.800 mg/kg	oral		rat	not specified
Modified rosin 144413-22-9	LD50	> 2.000 mg/kg	oral		rat	OECD Guideline 423 (Acute Oral toxicity)

Acute inhalative toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Copper 7440-50-8	LC50	> 5,11 mg/l		4 h	rat	OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class (ATC) Method)

Acute dermal toxicity:

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Tin 7440-31-5	LD50	> 2.000 mg/kg	dermal		rat	OECD Guideline 402 (Acute Dermal Toxicity)
Silver >= 99,9 % Ag in powder (< 1 mm) 7440-22-4	LD50	> 2.000 mg/kg	dermal		rat	OECD Guideline 402 (Acute Dermal Toxicity)
Rosin 8050-09-7	LD50	> 2.000 mg/kg	dermal		rat	OECD Guideline 402 (Acute Dermal Toxicity)
Modified rosin 144413-22-9	LD50	> 2.000 mg/kg	dermal		rat	OECD Guideline 402 (Acute Dermal Toxicity)

Skin corrosion/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Rosin 8050-09-7	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Modified rosin 144413-22-9	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Hazardous components CAS-No.	Result	Exposure time	Species	Method
Rosin 8050-09-7	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
Modified rosin 144413-22-9	moderately irritating	24 h	rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)

Respiratory or skin sensitization:

Hazardous components CAS-No.	Result	Test type	Species	Method
Modified rosin 144413-22-9	not sensitising	Guinea pig maximisation test	guinea pig	OECD Guideline 406 (Skin Sensitisation)

Germ cell mutagenicity:

Hazardous components CAS-No.	Result	Type of study / Route of administration	Metabolic activation / Exposure time	Species	Method
Rosin 8050-09-7	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Modified rosin 144413-22-9	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
	negative	in vitro mammalian chromosome aberration test	with and without		OECD Guideline 473 (In vitro Mammalian Chromosome Aberration Test)
Copper 7440-50-8	negative	bacterial reverse mutation assay (e.g Ames test)	with and without		OECD Guideline 471 (Bacterial Reverse Mutation Assay)
Copper 7440-50-8	negative	oral: gavage		mouse	EU Method B.12 (Mutagenicity)
	negative			rat	OECD Guideline 486 (Unscheduled DNA Synthesis (UDS) Test with Mammalian Liver Cells in vivo)

Repeated dose toxicity

Hazardous components CAS-No.	Result	Route of application	Exposure time / Frequency of treatment	Species	Method
Modified rosin 144413-22-9	NOAEL=150 mg/kg	oral: gavage	28 ddaily	rat	OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity in Rodents)

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 (EC) No 1272/2008. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

12.1. Toxicity**Ecotoxicity:**

Do not empty into drains / surface water / ground water.

Self classification: product testing according to Classification, Labelling and Packaging Regulation EC/1272/2008, Annex 1, Part 4.

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
Silver >= 99,9 % Ag in powder (< 1 mm) 7440-22-4	EC50	0,00022 mg/l	Daphnia	48 h	Daphnia magna	other guideline:
Silver >= 99,9 % Ag in powder (< 1 mm) 7440-22-4	NOEC	0.32 µg/l	chronic Daphnia	21 d	Daphnia magna	EPA OPPTS 850.1300 (Daphnid Chronic Toxicity Test)
Rosin 8050-09-7	LC50	> 1.000 mg/l	Fish	96 h	Pimephales promelas	OECD Guideline 203 (Fish, Acute Toxicity Test)
Rosin 8050-09-7	EC50	911 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Rosin 8050-09-7	EC50	> 100 mg/l	Algae	72 h	Scenedesmus subspicatus (new name: Desmodesmus subspicatus) not specified	DIN 38412-09
Copper 7440-50-8	LC 50	> 0,1 - 1 mg/l	Fish	96 h	not specified	OECD Guideline 203 (Fish, Acute Toxicity Test)
	NOEC	> 0,1 - 1 mg/l	Fish	28 d	not specified	OECD Guideline 210 (fish early lite stage toxicity test)
Copper 7440-50-8	EC50	> 0,1 - 1 mg/l	Daphnia	48 h	Daphnia magna	OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
Copper 7440-50-8	EC50	> 0,1 - 1 mg/l	Algae	72 h	not specified	OECD Guideline 201 (Alga. Growth Inhibition Test)
	NOEC	> 0,1 - 1 mg/l	Algae	72 h	not specified	OECD Guideline 201 (Alga. Growth Inhibition Test)
Copper 7440-50-8	EC50	> 0,1 - 1 mg/l	Bacteria	3 h	activated sludge	OECD Guideline 209 (Activated Sludge, Respiration Inhibition Test)
Copper 7440-50-8	NOEC	> 0,1 - 1 mg/l	chronic Daphnia	21 d	Daphnia magna	OECD 211 (Daphnia magna, Reproduction Test)

12.2. Persistence and degradability

Persistence and Biodegradability:

The product is not biodegradable.

Hazardous components CAS-No.	Result	Route of application	Degradability	Method
Rosin 8050-09-7		aerobic	36 - 46 %	OECD Guideline 301 F (Ready Biodegradability: Manometric Respirometry Test)
Modified rosin 144413-22-9	Not readily biodegradable.	aerobic	25 %	OECD Guideline 301 B (Ready Biodegradability: CO2 Evolution Test)
Copper 7440-50-8	Rapidly degradable	not specified	> 60 %	OECD 301 A - F

12.3. Bioaccumulative potential / 12.4. Mobility in soil

Mobility:

The product is insoluble and sinks in water.

Bioaccumulative potential:

No data available.

Bioaccumulative potential:

Octanol/Water distribution coefficient: Not determined

Hazardous components CAS-No.	LogPow	Bioconcentration factor (BCF)	Exposure time	Species	Temperature	Method
Rosin 8050-09-7	3 - 6,2					OECD Guideline 117 (Partition Coefficient (n- octanol / water), HPLC Method)
Modified rosin 144413-22-9	> 6					EU Method A.8 (Partition Coefficient)

12.5. Results of PBT and vPvB assessment

Hazardous components CAS-No.	PBT/vPvB
Tin 7440-31-5	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 Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Rosin 8050-09-7	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.
Copper 7440-50-8	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very Bioaccumulative (vPvB) criteria.

12.6. Other adverse effects

No data available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product disposal:

Wherever possible unwanted solder pastes should be recycled for recovery of metal.
Otherwise dispose of in accordance with local and national regulations.

Disposal of uncleaned packages:

Dispose of as unused product.

Waste code

06 04 05 - wastes containing other heavy metals

The valid EWC waste code numbers are source-related. The manufacturer is therefore unable to specify EWC waste codes for the articles or products used in the various sectors. The EWC codes listed are intended as a recommendation for users. We will be happy to advise you.

SECTION 14: Transport information

- 14.1. UN number**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.2. UN proper shipping name**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.3. Transport hazard class(es)**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.4. Packing group**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.5. Environmental hazards**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.6. Special precautions for user**
Not hazardous according to RID, ADR, ADN, IMDG, IATA-DGR.
- 14.7. Transport in bulk according to Annex II of Marpol 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 < 5 %
(2010/75/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.
IND (G)248L:Solder fume and you. IND(G)249L:Controlling health risks from rosin (colophony) based solder fluxes.
The Control of Lead at Work Regulations. L132:Control of Lead at Work: Approved Code of Practice and Guidance.
Employees should be under medical surveillance if the risk assessment made under the Control of Lead at Work Regulations indicates they are likely to be exposed to significant concentrations of lead, or if an Employment Medical Advisor or appointed doctor so certifies.
A woman employed on work which exposes her to lead should notify her employer as soon as possible if she becomes pregnant. The Employment Medical Advisor / Appointed Doctor should be informed of the pregnancy.
Under the Management of Health and Safety at Work Regulations, employers are required to assess the particular risks to health at work of pregnant workers and workers who have recently given birth or who are breast feeding.

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:

- H317 May cause an allergic skin reaction.
- 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.
- H413 May cause long lasting harmful effects to aquatic life.

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.