

0.5KG

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

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SDS No.: 208468

V005.0

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Replaces version from: 11.11.2013

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

1.1. Product identifier

LOCTITE 309 97SC 5C 1.2MM H known as 97SC 309 5C 1.2MM 0.5KG

LOCTITE 309 97SC 5C 1.2MM H known as 97SC 309 5C 1.2MM

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

Intended use: Solder Wire

1.3. Details of the supplier of the safety data sheet

Henkel Belgium N.V.

Esplanade 1

1020 Brussels

Belgium

Phone: +32 (2) 421 2711 Fax-no.: +32 (2) 420 7025

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):

The substance or mixture is not hazardous according to Regulation (EC) No 1272/2008 (CLP).

2.2. Label elements

Label elements (CLP):

The substance or mixture is not hazardous according to Regulation (EC) No 1272/2008 (CLP).

Supplemental information EUH210 Safety data sheet available on request.

Contains Colophony; Rosin, reaction products with acrylic acid. May produce an allergic

reaction.

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.

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 7440-22-4	231-131-3	1-< 3 %	
Rosin, hydrogenated 65997-06-0	266-041-3 01-2119487113-41	0,25-< 2,5 %	Aquatic Chronic 2 H411
Colophony 8050-09-7	232-475-7 01-2119480418-32	0,1-< 1 %	Skin Sens. 1 H317
Rosin, reaction products with acrylic acid 83137-13-7	280-192-2	0,1-< 1 %	Skin Sens. 1 H317

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:

Flush eyes with plenty of water for at least 5 minutes. If irritation persists seek medical attention.

Ingestion:

Do not induce vomiting.

Seek medical advice.

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

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

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

See section: Description of first aid measures

SECTION 5: Firefighting measures

Combustion behaviour:

The product itself does not burn. Any fire extinguishing action should be appropriate to the surroundings.

5.1. Extinguishing media

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.

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

Wear protective equipment.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

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

Dispose of contaminated material as waste according to Section 13.

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.

Avoid skin and eye contact.

See advice in section 8

Hygiene measures:

Good industrial hygiene practices should be observed.

Do not eat, drink or smoke while working.

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

7.2. Conditions for safe storage, including any incompatibilities

Ensure good ventilation/extraction.

Store in a cool, dry place.

Refer to Technical Data Sheet

7.3. Specific end use(s)

Solder Wire

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

Occupational Exposure Limits

Valid 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):	15 minutes	IR_OEL

$\label{eq:predicted} \textbf{Predicted No-Effect Concentration (PNEC):}$

mg/l ppm mg/kg others	Name on list	Environmental Compartment	Exposure period	Value			Remarks	
Tim		P	F	mg/l	ppm	mg/kg	others	
Tin		aqua						
7440-31-5 water)								
Tin								
Treatment plant (STP) Sediment (freshwater) Times (freshwater) T								
STP Sediment Greshwater) Sediment Greshwater) Sediment Greshwater) Sediment Sedim								
Tin Sediment Circshwater) Sediment Sediment	/440-31-3							
7440-31-5 (freshwater)	Tin							
Tin 7440-31-5								
Tin 7440-31-5		sediment						
Table	7440-31-5	(marine water)						
Tin		Air						
Table								
Tin Predator 7440-31-5 aqua 0.0016 Rosin, hydrogenated aqua (marine 0.00016 65997-06-0 water) mg/l Rosin, hydrogenated aqua (marine 0.00016 80597-06-0 water) mg/l Rosin, hydrogenated aqua (intermittent releases) 0.016 mg/l Rosin, hydrogenated defsp97-06-0 sediment 0.0007 Rosin, hydrogenated sediment (s5997-06-0 mg/kg 0.0007 Rosin, hydrogenated sewage sewage mg/kg Rosin, hydrogenated sewage sewage mg/kg <		Soil						
7440-31-5		D. 1.			1			
Rosin, hydrogenated		Predator						
Creshwater mg/l m		agua		0.0016			+	
Rosin, hydrogenated				*				
September Sept	Rosin, hydrogenated							
Colophony Colophony Colophony Sediment Colophony Sosio Colophony Sediment Colophony Sosio Colophony Sediment Colophony Soil Colophony Sewage Colophony Soil Colophony	65997-06-0			mg/l				
Rosin, hydrogenated Sediment Cifeshwater) C	Rosin, hydrogenated			0,016 mg/l				
Rosin, hydrogenated Sediment (freshwater) mg/kg (freshwater) mg/l (freshwater) mg/l (freshwater) mg/l (freshwater) mg/l (freshwater) mg/l (freshwater) mg/l (freshwater) mg/kg (freshwater) mg/kg (freshwater) mg/l (freshwater) mg/l (freshwater) mg/kg (freshwater) mg/	65997-06-0							
Colophony Soil water) Colophony Sediment Colophony Soil water) Soil water Soi		,						
Rosin, hydrogenated								
Colophony Sediment Colophony Sewage Colophony Sewage	65997-06-0							
Rosin, hydrogenated Soil 0,00045 mg/kg	Kosin, nydrogenated							
Rosin, hydrogenated sewage 1000 mg/l								
Rosin, hydrogenated sewage treatment plant (STP) 1000 mg/l		Soli						
65997-06-0 treatment plant (STP) 0,002 mg/l Colophony 8050-09-7 aqua (freshwater) 0,0002 mg/l Colophony 8050-09-7 aqua (marine water) 0,0002 mg/l Colophony 8050-09-7 sediment (freshwater) 0,0007 mg/kg Colophony 8050-09-7 sediment (marine water) 0,001 mg/kg Colophony 8050-09-7 sediment (marine water) 0 mg/kg Colophony 8050-09-7 Soil 0 mg/kg Colophony 8050-09-7 sewage treatment plant (STP) 1000 mg/l	Rosin, hydrogenated	sewage		1000 mg/l		88		
Colophony 8050-09-7 aqua (freshwater) 0,002 mg/l <		treatment plant						
8050-09-7 (freshwater) 0,0002 mg/l 0,0002 mg/l 0,0007 mg/kg 0,0007 mg/kg 0,0007 mg/kg 0,0007 mg/kg 0,0007 mg/kg 0,0007 mg/kg 0,0001 mg/kg								
Colophony				0,002 mg/l				
8050-09-7 water) mg/l				0.0002				
Colophony sediment 0,007 8050-09-7 (freshwater) mg/kg Colophony sediment 0,001 8050-09-7 (marine water) mg/kg Colophony Soil 0 mg/kg 8050-09-7 sewage 1000 mg/l Colophony sewage 1000 mg/l 8050-09-7 treatment plant (STP)	Colophony							
8050-09-7 (freshwater) mg/kg		,		mg/1		0.007		
Colophony sediment 0,001 mg/kg 8050-09-7 (marine water) 0 mg/kg Colophony Soil 0 mg/kg 8050-09-7 sewage 1000 mg/l 8050-09-7 treatment plant (STP) 1000 mg/l	2010p11011y 8050-09-7							
8050-09-7 (marine water) mg/kg Colophony Soil 0 mg/kg 8050-09-7 colophony sewage 1000 mg/l 8050-09-7 treatment plant (STP) treatment plant (STP)					1		+	
Colophony 8050-09-7 Colophony 8050-09-7 treatment plant (STP) O mg/kg 1000 mg/l								
8050-09-7 Colophony sewage 1000 mg/l treatment plant (STP)	Colophony	. ,					1	
8050-09-7 treatment plant (STP)	8050-09-7							
(STP)				1000 mg/l				
	8050-09-7	treatment plant						
				0.04 - "	1		1	
	Colophony	aqua		0,016 mg/l				
8050-09-7 (intermittent releases)	8U3U-U9- /	`						

Derived No-Effect Level (DNEL):

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Tin 7440-31-5	General population	dermal	Long term exposure - systemic effects		80 mg/kg	
Tin 7440-31-5	Workers	inhalation	Long term exposure - systemic effects		71 mg/m3	
Tin 7440-31-5	Workers	dermal	Long term exposure - systemic effects		10 mg/kg	
Tin 7440-31-5	General population	inhalation	Long term exposure - systemic effects		17 mg/m3	
Tin 7440-31-5	General population	oral	Long term exposure - systemic effects		5 mg/kg	
Rosin, hydrogenated 65997-06-0	Workers	Inhalation	Long term exposure - systemic effects		117 mg/m3	
Rosin, hydrogenated 65997-06-0	Workers	dermal	Long term exposure - systemic effects		17 mg/kg	
Rosin, hydrogenated 65997-06-0	General population	Inhalation	Long term exposure - systemic effects		35 mg/m3	
Rosin, hydrogenated 65997-06-0	General population	dermal	Long term exposure - systemic effects		10 mg/kg	
Rosin, hydrogenated 65997-06-0	General population	oral	Long term exposure - systemic effects		10 mg/kg	
Colophony 8050-09-7	Workers	inhalation	Long term exposure - systemic effects		117 mg/m3	
Colophony 8050-09-7	Workers	dermal	Long term exposure - systemic effects		17 mg/kg	
Colophony 8050-09-7	General population	inhalation	Long term exposure - systemic effects		35 mg/m3	
Colophony 8050-09-7	General population	dermal	Long term exposure - systemic effects		10 mg/kg	
Colophony 8050-09-7	General population	oral	Long term exposure - systemic effects		10 mg/kg	

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.

Respiratory protection:

Ensure adequate ventilation.

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

In case of aerosol formation, we recommend wearing of appropriate respiratory protection equipment with ABEK P2 filter (EN 14387).

This recommendation should be matched to local conditions.

Hand protection:

Please note that in practice the working life of chemical resistant gloves may be considerably reduced as a result of many influencing factors (e.g. temperature). Suitable risk assessment should be carried out by the end user. If signs of wear and tear are noticed then the gloves should be replaced.

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. 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 solid

grey

Odor None

Odour threshold No data available / Not applicable

pH Not applicable Melting point $217 \,^{\circ}\text{C} (422.6 \,^{\circ}\text{F})$

Solidification temperature No data available / Not applicable

Initial boiling point Not determined Flash point Not applicable

Evaporation rate No data available / Not applicable Flammability No data available / Not applicable Explosive limits No data available / Not applicable

Vapour pressure Not applicable Relative vapour density: Heavier than air Density 7,5 g/cm3 $(25 \, ^{\circ}\text{C} \, (77 \, ^{\circ}\text{F}))$

Bulk density No data available / Not applicable Solubility No data available / Not applicable

Solubility (qualitative)

Partition coefficient: n-octanol/water

Insoluble

Not applicable

Auto-ignition temperature

Decomposition temperature

No data available / Not applicable

No data available / Not applicable

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

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

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

General toxicological information:

Fumes emitted during soldering may irritate the skin.

Prolonged or repeated contact may cause skin irritation.

Prolonged or repeated contact may cause eye irritation.

11.1. Information on toxicological effects

Acute oral toxicity:

This material is considered to have low toxicity if swallowed.

Hazardous substances CAS-No.	Value type	Value	Species	Method
Tin 7440-31-5	LD50	> 2.000 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)
Silver 7440-22-4	LD50	> 2.000 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)
Rosin, hydrogenated 65997-06-0	LD50	> 2.000 mg/kg	rat	OECD Guideline 423 (Acute Oral toxicity)
Colophony 8050-09-7	LD50	2.800 mg/kg	rat	not specified

Acute dermal toxicity:

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances	Value	Value	Species	Method
CAS-No.	type			
Tin	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
7440-31-5				
Rosin, hydrogenated	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
65997-06-0				
Colophony	LD50	> 2.000 mg/kg	rat	OECD Guideline 402 (Acute Dermal Toxicity)
8050-09-7				

Acute 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.

No substance data available.

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.

No substance data available.

Skin corrosion/irritation:

Fumes emitted during soldering may irritate the skin.

Hazardous substances CAS-No.	Result	Exposure time	Species	Method
Tin 7440-31-5	not irritating	tinic	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Silver 7440-22-4	slightly irritating		rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)
Colophony 8050-09-7	not irritating	4 h	rabbit	OECD Guideline 404 (Acute Dermal Irritation / Corrosion)

Serious eye damage/irritation:

Fumes emitted during soldering may irritate the eyes.

Hazardous substances	Result	Exposure	Species	Method
CAS-No.		time		
Tin	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
7440-31-5				
Silver	slightly		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
7440-22-4	irritating			
Colophony	not irritating		rabbit	OECD Guideline 405 (Acute Eye Irritation / Corrosion)
8050-09-7				

Respiratory or skin sensitization:

No data available.

Germ cell mutagenicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances	Result	Type of study /	Metabolic	Species	Method
CAS-No.		Route of	activation /		
		administration	Exposure time		
Tin	negative	bacterial reverse	with and without		OECD Guideline 471
7440-31-5		mutation assay (e.g			(Bacterial Reverse Mutation
		Ames test)			Assay)
Tin	negative	in vitro mammalian	with and without		OECD Guideline 473 (In vitro
7440-31-5		chromosome			Mammalian Chromosome
		aberration test			Aberration Test)
Tin	negative	mammalian cell	with and without		OECD Guideline 476 (In vitro
7440-31-5		gene mutation assay			Mammalian Cell Gene
					Mutation Test)
Colophony	negative	bacterial reverse	with and without		OECD Guideline 471
8050-09-7		mutation assay (e.g			(Bacterial Reverse Mutation
		Ames test)			Assay)

Carcinogenicity

No data available.

Reproductive toxicity:

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Test type	Route of application	Species	Method
Tin	NOAEL P > 1.000 mg/kg		oral: gavage	rat	OECD Guideline 421
7440-31-5					(Reproduction /
					Developmental Toxicity
					Screening Test)

STOT-single exposure:

No data available.

STOT-repeated exposure::

The mixture is classified based on threshold limits referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Result / Value	Route of application	Exposure time / Frequency of treatment	Species	Method
Tin	NOAEL > 1.000 mg/kg	oral: gavage	28 days	rat	OECD Guideline 407
7440-31-5			daily		(Repeated Dose 28-Day
			_		Oral Toxicity in Rodents)

Aspiration hazard:

No data available.

SECTION 12: Ecological information

General ecological information:

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

12.1. Toxicity

Toxicity (Fish):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
Tin	LC50		96 h	Pimephales promelas	OECD Guideline 203 (Fish,
7440-31-5					Acute Toxicity Test)
Rosin, hydrogenated	LC50	1,7 mg/l	96 h	Pimephales promelas	OECD Guideline 203 (Fish,
65997-06-0					Acute Toxicity Test)
Colophony	LC50		96 h	Pimephales promelas	OECD Guideline 203 (Fish,
8050-09-7					Acute Toxicity Test)

Toxicity (Daphnia):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
Rosin, hydrogenated	EL50		48 h	Daphnia magna	OECD Guideline 202
65997-06-0					(Daphnia sp. Acute
					Immobilisation Test)
Colophony	EL50		48 h	Daphnia magna	OECD Guideline 202
8050-09-7					(Daphnia sp. Acute
					Immobilisation Test)

Chronic toxicity to aquatic invertebrates

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances CAS-No.	Value	Value	Exposure time	Species	Method
Tin	type NOEC		7 d	Ceriodaphnia dubia	other guideline:
7440-31-5				r	

Toxicity (Algae):

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
Tin 7440-31-5	EC50		72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Tin 7440-31-5	NOEC		72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Rosin, hydrogenated 65997-06-0	EC50	39,6 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Rosin, hydrogenated 65997-06-0	NOEC	6,25 mg/l	72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Colophony 8050-09-7	EL50		72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)
Colophony 8050-09-7	NOELR		72 h	Pseudokirchneriella subcapitata	OECD Guideline 201 (Alga, Growth Inhibition Test)

Toxicity to microorganisms

The mixture is classified based on calculation method referring to the classified substances present in the mixture.

Hazardous substances	Value	Value	Exposure time	Species	Method
CAS-No.	type				
Tin	EC50		3 h	activated sludge of a	OECD Guideline 209
7440-31-5				predominantly domestic sewage	(Activated Sludge,
					Respiration Inhibition Test)
Rosin, hydrogenated	EC0	> 10.000 mg/l	18 h		not specified
65997-06-0					
Colophony	EC20		3 h	activated sludge of a	OECD Guideline 209
8050-09-7				predominantly domestic sewage	(Activated Sludge,
					Respiration Inhibition Test)

12.2. Persistence and degradability

The product is not biodegradable.

Hazardous substances	Result	Test type	Degradability	Exposure	Method
CAS-No.				time	
Rosin, hydrogenated	readily biodegradable	aerobic	80 %	28 d	OECD Guideline 301 B (Ready
65997-06-0					Biodegradability: CO2 Evolution
					Test)
Colophony	readily biodegradable	aerobic	71 %	28 d	OECD Guideline 301 D (Ready
8050-09-7					Biodegradability: Closed Bottle
					Test)

12.3. Bioaccumulative potential

No data available.

No substance data available.

12.4. Mobility in soil

The product is insoluble and sinks in water.

Hazardous substances CAS-No.	LogPow	Temperature	Method
Rosin, hydrogenated 65997-06-0	> 4		not specified
Colophony 8050-09-7	> 3 - 6,2		OECD Guideline 117 (Partition Coefficient (n-octanol / water), HPLC Method)

12.5. Results of PBT and vPvB assessment

Hazardous substances	PBT / vPvB
CAS-No.	
Tin	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
7440-31-5	Bioaccumulative (vPvB) criteria.
Silver	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
7440-22-4	Bioaccumulative (vPvB) criteria.
Rosin, hydrogenated	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
65997-06-0	Bioaccumulative (vPvB) criteria.
Colophony	Not fulfilling Persistent, Bioaccumulative and Toxic (PBT), very Persistent and very
8050-09-7	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 alloy 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

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

14.2. UN proper shipping name

Not dangerous goods
Not dangerous goods

14.3. Transport hazard class(es)

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

14.4. Packing group

ADR	Not dangerous goods
RID	Not dangerous goods
ADN	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

14.5. Environmental hazards

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

14.6. Special precautions for user

ADR	not applicable
RID	not applicable
ADN	not applicable
IMDG	not applicable
IATA	not applicable

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 $$<5.0\ \%$

VOC content (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.

H411 Toxic to aquatic life with long lasting effects.

Further information:

This Safety Data Sheet has been produced for sales from Henkel to parties purchasing from Henkel, is based on Regulation (EC) No 1907/2006 and provides information in accordance with applicable regulations of the European Union only. In that respect, no statement, warranty or representation of any kind is given as to compliance with any statutory laws or regulations of any other jurisdiction or territory other than the European Union. When exporting to territories other than the European Union, please consult with the respective Safety Data Sheet of the concerned territory to ensure compliance or liaise with Henkel's Product Safety and Regulatory Affairs Department (ua-productsafety.de@henkel.com) prior to export to other territories than the European Union.

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.