



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

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99C 309 5C 0.5MM 0.25KG FN

sds no. : 208469  
V005.1

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

#### 1.1. Product identifier

99C 309 5C 0.5MM 0.25KG FN

#### 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 AG & Co. KGaA  
Henkelstr. 67  
40191 Düsseldorf

Germany

Phone: +49 (211) 797-0

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):

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

##### Classification (DPD):

The product is not subject to classification according to the calculation methods of the "General Classification Guideline for Preparations of the EC" as issued in the last version.

#### 2.2. Label elements

##### Label elements (CLP):

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

##### Supplemental information

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

**Label elements (DPD):**

The product is not subject to classification according to the calculation methods of the "General Classification Guideline for Preparations of the EC" as issued in the last version.

## Additional labeling:

Safety data sheet available for professional user on request.

Contains Rosin, 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.

Do not heat above 500 °C

**SECTION 3: Composition/information on ingredients****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	>= 80- < 100 %	
Rosin 8050-09-7	232-475-7 01-2119480418-32	>= 0,1- < 1 %	Skin sensitizer 1 H317
Rosin, reaction products with acrylic acid 83137-13-7	280-192-2	>= 0,1- < 1 %	Skin sensitizer 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.

**Declaration of ingredients according to DPD (EC) No 1999/45:**

Hazardous components CAS-No.	EC Number REACH-Reg No.	content	Classification
Tin 7440-31-5	231-141-8 01-2119486474-28	>= 80 - < 100 %	
Rosin 8050-09-7	232-475-7 01-2119480418-32	>= 0,1 - < 1 %	R43
Rosin, reaction products with acrylic acid 83137-13-7	280-192-2	>= 0,1 - < 1 %	Xi - Irritant; R43

For full text of the R-Phrases indicated by codes 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

**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**

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

## 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.

**6.4. Reference to other sections**

See advice in chapter 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.  
Do not heat above 500 °C  
See advice in chapter 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.

**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	ppm	mg/m <sup>3</sup>	Type	Category	Remarks
TIN (INORGANIC COMPOUNDS AS SN) 7440-31-5		2	Time Weighted Average (TWA):	Indicative	ECLTV
ROSIN-BASED SOLDER FLUX FUME 8050-09-7		0,05	Time Weighted Average (TWA):		EH40 WEL
ROSIN-BASED SOLDER FLUX FUME 8050-09-7		0,15	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	
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	STP					1000 mg/L	

**Derived No-Effect Level (DNEL):**

Name on list	Application Area	Route of Exposure	Health Effect	Exposure Time	Value	Remarks
Tin 7440-31-5	worker	Dermal	Acute/short term exposure - systemic effects		133,3 mg/kg	
Tin 7440-31-5	worker	inhalation	Acute/short term exposure - systemic effects		11,75 mg/m3	
Tin 7440-31-5	worker	Dermal	Long term exposure - systemic effects		133,3 mg/kg	
Tin 7440-31-5	worker	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	worker	inhalation	Long term exposure - systemic effects		176,32 mg/m3	
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 bw/day	
Rosin 8050-09-7	general population	oral	Long term exposure - systemic effects		15 mg/kg bw/day	

**Biological Exposure Indices:**

None

**8.2. Exposure controls:****Engineering controls:**

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.

Ensure good ventilation/extraction.

**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.

This recommendation should be matched to local conditions.

**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.

**Skin protection:**

Wear suitable protective clothing.

**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
Initial boiling point	No data available / Not applicable
Flash point	None
Decomposition temperature	No data available / Not applicable
Vapour pressure	not applicable
Density (25 °C (77 °F))	7,3 g/cm <sup>3</sup>
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	227 °C (440.6 °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 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**

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 1272/2008/EC. Relevant available health/ecological information for the substances listed under Section 3 is provided in the following.

**Oral toxicity:**

This material is considered to have low toxicity if swallowed.

**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:**

This product is considered to have low dermal toxicity.

**Skin irritation:**

Fumes emitted during soldering may irritate the skin.  
May produce an allergic reaction.

**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
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**Acute inhalative toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
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**Acute dermal toxicity:**

Hazardous components CAS-No.	Value type	Value	Route of application	Exposure time	Species	Method
Rosin 8050-09-7	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)

**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)

**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)

**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:**

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

Hazardous components CAS-No.	Value type	Value	Acute Toxicity Study	Exposure time	Species	Method
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)	

**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)

**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 applicable

**12.5. Results of PBT and vPvB assessment**



<b>Hazardous components CAS-No.</b>	<b>PBT/vPvB</b>
Rosin 8050-09-7	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 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

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

Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.

**14.2. UN proper shipping name**

Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.

**14.3. Transport hazard class(es)**

Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.

**14.4. Packaging group**

Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.

**14.5. Environmental hazards**

Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.

**14.6. Special precautions for user**

Not hazardous according to RID, ADR, ADNR, IMDG, IATA-DGR.

**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 < 5,0 %

**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.

### 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:

- R43 May cause sensitisation by skin contact.
- H317 May cause an allergic skin reaction.

**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.

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