



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

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LOCTITE RA 10 96SAAS87V BK known as 96SRA10AAS87V

SDS No. : 181862
V003.4

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

1.1. Product identifier

LOCTITE RA 10 96SAAS87V BK known as 96SRA10AAS87V

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 Westerlo
AE Belgium
Nijverheidsstraat 7
2260 Westerlo

Belgium

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):

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

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

This product contains modified rosin.

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 | 80- 90 % | |
| Rosin 8050-09-7 | 232-475-7 01-2119480418-32 | 5- 10 % | Skin Sens. 1 H317 |
| Silver >= 99,9 % Ag in powder (< 1 mm) 7440-22-4 | 231-131-3 | 1- 5 % | Aquatic Acute 1 H400 Aquatic Chronic 1 H410 M factor: 1.000 M factor (Chron Aquat Tox): 1.000 |

**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:

water, carbon dioxide, foam, powder

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 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

Avoid skin and eye contact.

See advice in section 8

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.

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 original container at temperatures 5-10°C.

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 |
|--|-----|-------------------|-----------------------------------|--|-----------------|
| Tin 7440-31-5 [TIN (INORGANIC COMPOUNDS AS SN)] | | 2 | Time Weighted Average (TWA): | Indicative | ECLTV |
| 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 |
| 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 |
| Propane-1,2-diol 57-55-6 [PROPANE-1,2-DIOL, PARTICULATES] | | 10 | Time Weighted Average (TWA): | | EH40 WEL |
| Propane-1,2-diol 57-55-6 [PROPANE-1,2-DIOL, TOTAL VAPOUR AND PARTICULATES] | 150 | 474 | Time Weighted Average (TWA): | | EH40 WEL |

Colophony (Rosin) and derivatives: Rosin-based flux fume as total resin acids.

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 | 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 bw/day | |
| 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:

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

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 | 274 °C (525.2 °F) |
| Flash point | 124 °C (255.2 °F) |
| Decomposition temperature | No data available / Not applicable |
| Vapour pressure | No data available / Not applicable |
| Density | 3,93 g/cm ³ |
| (25 °C (77 °F)) | |
| 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) | Partially miscible |
| (Solvent: Water) | |
| Solidification temperature | No data available / Not applicable |
| Melting point | Solder alloy |
| Melting point | 221 - 240 °C (429.8 - 464 °F) |
| Flammability | No data available / Not applicable |
| Auto-ignition temperature | 186 °C (366.8 °F) |
| Explosive limits | No data available / Not applicable |
| Partition coefficient: n-octanol/water | Not determined |
| Evaporation rate | No data available / Not applicable |
| Vapor density | Heavier than air |
| 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

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:

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 |
|--|---------------|---------------|-------------------------|------------------|---------|---|
| Rosin 8050-09-7 | LD50 | 2.800 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 | |

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 |
|---------------------------------|---------------|---------------|-------------------------|------------------|---------|---|
| 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:**

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

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) | DIN 38412-09 |

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:

Octanol/Water distribution coefficient: Not determined

| Hazardous components CAS-No. | LogKow | 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) |

12.5. Results of PBT and vPvB assessment

| Hazardous components CAS-No. | PBT/vPvB |
|---|---|
| Rosin 8050-09-7 | 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 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. Packaging 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 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 | <p>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.</p> |
|---------|---|

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.

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.

Label elements (DPD):

Xi - Irritant



Risk phrases:

R43 May cause sensitisation by skin contact.

Safety phrases:

S24 Avoid contact with skin.
S37 Wear suitable gloves.

Contains:

Rosin

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.