

ROSIN (PINE RESIN / GUM ROSIN)

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SECTION 1: IDENTIFICATION

1.1 GHS Product identifier:

ROSIN (PINE RESIN / GUM ROSIN)
Colophony; Gum rosin; Abietic acid resin
CAS: 8050-09-7

Other means of identification:

Not relevant

1.2 Recommended use of the chemical and restrictions on use:

Relevant uses: Raw material for adhesives, printing inks, rubber compounding, soldering flux, paper sizing, soap manufacture and paint/varnish formulation. For industrial user only.
Uses advised against: All uses not specified in this section or in section 7.3.

1.3 Supplier's details:

SURAJ CHEMICALS
No 92, Govindappa Naicken Street, Shiva Complex, Chennai – 600001, Tamil Nadu, India
Tel: +91 - 7092722822, +91 - 9840284032 / +91 - 44 - 25393652, 42130281
Email: sales@surajchemicals.com | Website: www.surajchemicals.com
GST No: 33ACEPV8190L1ZZ

1.4 Emergency phone number:

Emergency Contact No: +91 - 7092722822, +91 - 9840284032

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture:

GHS:
Classification of this product has been carried out in accordance with the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Skin Sens. 1	Skin sensitisation, Category 1, H317
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Rosin (colophony) is well documented in commercial SDS and occupational dermatology literature as a common cause of allergic contact dermatitis, principally attributable to oxidation products (e.g. abietic acid derivatives) that form on ageing/air exposure.

2.2 GHS label elements, including precautionary statements:

GHS: Warning

Hazard statements:

Skin Sens. 1: H317 – May cause an allergic skin reaction.

Precautionary statements:

P261: Avoid breathing dust/fume generated during processing (e.g. soldering, heating).
P264: Wash hands thoroughly after handling.
P272: Contaminated work clothing should not be allowed out of the workplace.
P280: Wear protective gloves/protective clothing/eye protection.
P302+P352: IF ON SKIN: Wash with plenty of soap and water.
P333+P313: If skin irritation or rash occurs: Get medical advice/attention.
P363: Wash contaminated clothing before reuse.
P501: Dispose of contents/container in accordance with local regulations.

2.3 Other hazards which do not result in classification:

Fine rosin dust/powder may present a combustible dust explosion hazard if dispersed in air near an ignition source (well documented for powdered natural resins). Fume generated during soldering/hot processing (colophony fume) may cause respiratory irritation/occupational asthma-type sensitisation in susceptible individuals with repeated exposure.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances:

Chemical description: Natural resin – solid residue obtained after distillation of the volatile oil (turpentine) from pine oleoresin, consisting mainly of abietic-type and pimanic-type diterpene resin acids.
In accordance with Annex 4.3.3 of the GHS, the product contains:

Identification	Chemical Name / Classification	Concentration
CAS: 8050-09-7	Rosin (Gum Rosin) – Skin Sens. 1: H317 – Warning	≥ 99%

To obtain more information on the hazards of the substances, consult sections 11, 12 and 16.

3.2 Mixtures:

Non-applicable

SECTION 4: FIRST AID MEASURES

4.1 Description of necessary first-aid measures:

Request medical assistance if allergic skin reaction or respiratory symptoms occur, showing the SDS of this product.

By inhalation:

Remove the person affected from the area of exposure (e.g. soldering fume, dust), provide fresh air and keep at rest. Seek medical attention if respiratory irritation or breathing difficulty persists.

By skin contact:

Remove contaminated clothing. Wash skin thoroughly with soap and water (molten rosin may require cooling first – treat as a thermal burn if hot/molten). Seek medical advice/attention if a rash, redness or allergic reaction develops.

By eye contact:

Rinse eyes thoroughly with lukewarm water for at least 15 minutes. Remove contact lenses if present and easy to do. Seek medical advice if irritation persists.

By ingestion/aspiration:

Rinse mouth with water. Not expected to be acutely toxic in small amounts; seek medical advice if discomfort occurs or larger quantities are ingested.

4.2 Most important symptoms/effects, acute and delayed:

May cause an allergic skin reaction (sensitisation) on repeated or prolonged contact. Fume from hot processing (e.g. soldering) may cause respiratory irritation. See Sections 2 and 11.

4.3 Indication of immediate medical attention and special treatment needed, if necessary:

Treat allergic skin/respiratory reactions symptomatically; avoid further exposure once sensitised.

SECTION 5: FIRE-FIGHTING MEASURES

5.1 Suitable extinguishing media:

Suitable: Water fog/spray, foam (AFFF), dry chemical powder (ABC), carbon dioxide (BC)
Unsuitable: High-pressure water jet on molten material; avoid actions that disperse rosin dust into a cloud near ignition sources

5.2 Specific hazards arising from the chemical:

Combustible solid resin. Fine rosin dust/powder dispersed in air can form an explosible dust cloud if an ignition source is present – a recognised combustible-dust hazard for powdered natural resins. Molten material can cause splash burns.

5.3 Special protective actions for fire-fighters:

Evacuate non-essential personnel. Use self-contained breathing apparatus (SCBA) in enclosed fires. Cool exposed containers with water spray. Avoid actions that raise dust.

Additional provisions:

Contain fire-fighting water run-off to prevent environmental contamination.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures:

For non-emergency personnel:

Avoid skin contact and avoid generating dust. Use appropriate PPE (Section 8). Eliminate ignition sources if handling powdered material.

For emergency responders:

Wear suitable protective equipment, including heat-resistant gloves for molten material spills.

6.2 Environmental precautions:

Prevent entry into drains, sewers and watercourses. Not expected to be significantly environmentally hazardous in small quantities.

6.3 Methods and materials for containment and cleaning up:

Allow molten material to solidify, then sweep/shovel solid lumps/powder into suitable containers. Use wet methods or vacuum with appropriate filtration to minimise dust generation; avoid dry sweeping of fine powder near ignition sources.

6.4 Reference to other sections:

See sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling:

A. General precautions for safe use:

Avoid repeated/prolonged skin contact given sensitisation potential. Minimise dust generation during grinding/handling of powdered rosin; use local exhaust ventilation.

B. Technical recommendations for the prevention of fires and explosions:

Keep away from open flame/ignition sources, particularly where fine rosin dust may accumulate or become airborne. Bond/ground equipment during bulk powder transfer to control static discharge; use dust-explosion-rated equipment where applicable.

C. Technical recommendations on general occupational hygiene:

Wash hands after handling. Avoid inhalation of dust/fume. Launder contaminated clothing before reuse.

D. Technical recommendations to prevent environmental risks:

Prevent spillage from entering drains or watercourses.

7.2 Conditions for safe storage, including any incompatibilities:

A. Specific storage requirements:

Minimum Temp.	5°C
Maximum Temp.	35°C
Maximum time	24 Months (in original sealed packaging, cool/dry place)

B. General conditions for storage:

Store in a cool, dry, well-ventilated place away from direct sunlight and ignition sources. Control dust accumulation where powdered material is stored/handled. Keep containers/bags properly closed and labelled.

7.3 Specific end use(s):

Industrial raw material as described in Section 1.2. Except for the instructions already specified, no special recommendations are required.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters:

Occupational exposure limits applicable to colophony (rosin core solder flux decomposition products), as published in widely referenced international OEL lists, used here as reference guidance for hot-processing (e.g. soldering) operations:

Identification	Occupational Exposure Limit Type	Value
Rosin (colophony) fume, as generated during soldering CAS: 8050-09-7	Time Weighted average concentration (8 hrs)	0.05 mg/m³ (as total rosin core solder flux decomposition products)

8.2 Appropriate engineering controls:

General ventilation is normally adequate for solid/lump material handling. Use local exhaust ventilation/fume extraction for hot processing operations (soldering, melting) and dust extraction for grinding/milling.

B. Respiratory protection:

Not normally required for solid/lump handling. Use a particulate (dust) respirator (FFP2/P2) for dusty operations, and fume extraction/appropriate respiratory protection for soldering-type hot processing.

C. Specific protection for the hands:

Chemical-resistant/heat-resistant gloves recommended to minimise repeated skin contact given sensitisation potential.

D. Eye and face protection:

Safety glasses/goggles recommended, particularly for molten material or dusty/fume-generating operations.

E. Bodily protection:

Heat-resistant apron for molten handling; general work clothing otherwise. Launder contaminated clothing before reuse.

F. Additional emergency measures:

Eyewash station and washing facilities should be available in the work area.

Environmental exposure controls:

Avoid release to the environment. See subsection 7.1.D.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties:

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Appearance	
Physical state at 20°C	Solid (lumps, flakes or powder)
Appearance	Brittle, glassy solid
Color	Pale yellow to amber/dark brown
Odor	Mild, characteristic resinous/pine odour
Odour threshold	Not established
Volatility	
Boiling point at atmospheric pressure	Not applicable (decomposes before boiling)
Vapour pressure at 20°C	Negligible
Evaporation rate at 20°C	Negligible
Product Description	
Density / Relative density at 20°C	1.07 – 1.09 g/cm³
Dynamic / Kinematic viscosity	Not applicable (solid at 20°C)
Concentration	Non-applicable (natural resin, variable composition)
pH	Not relevant (water-insoluble resin)
Vapour density at 20°C	Not relevant
Partition coefficient n-octanol/water	Typical value – refer to current specification sheet
Solubility in water at 20°C	Insoluble; soluble in alcohol, ether, turpentine, most organic solvents
Decomposition temperature	> 300°C (typical)
Melting/softening point	70 – 80°C (typical, ring and ball softening point)
Flammability	
Flash Point	> 200°C (molten state, typical)
Flammability (solid, gas)	Combustible solid; dust explosible when finely divided and airborne
Autoignition temperature	Typical value – refer to current specification sheet
Lower / Upper flammability limit	Not established (liquid-phase limits non-applicable; see dust hazard above)
Particle Characteristics	
Median equivalent diameter	Lump/flake form, or powder (variable mesh size) – refer to current specification sheet

Values are typical for commercial-grade Gum Rosin – refer to current specification sheet for batch-specific figures.

9.2 Other information:

Explosive properties	Dust cloud of finely divided material may be explosible in presence of an ignition source
Oxidising properties	Not an oxidiser; readily oxidises on prolonged air exposure, forming sensitising degradation products
Corrosive to metals	Not corrosive
Heat of combustion	Typical value – refer to current specification sheet
Acid value	150 – 175 mg KOH/g (typical)
Softening point (ring and ball)	70 – 80°C (typical)

SECTION 10: STABILITY AND REACTIVITY

- 10.1 Reactivity:**
Stable under normal conditions of use. Readily oxidises on prolonged exposure to air/light, forming degradation products associated with increased skin-sensitising potential. May react with strong oxidising agents.
- 10.2 Chemical stability:**
Chemically stable under the indicated conditions of storage, handling and use when protected from prolonged air/heat exposure.
- 10.3 Possibility of hazardous reactions:**
Under specified conditions, hazardous reactions are not expected other than the combustible-dust hazard noted in Sections 5 and 9.
- 10.4 Conditions to avoid:**

Shock/Friction	Contact with Air	Increase in Temperature	Sunlight	Humidity
Avoid dust generation near ignition sources	Avoid prolonged exposure (oxidation)	Avoid unnecessary heating above softening point	Avoid prolonged direct exposure	Not applicable

10.5 Incompatible materials:

Strong Oxidisers	Strong Acids/Alkalis	Ignition Sources
Avoid contact	Avoid contact	Avoid contact with dust/powder

- 10.6 Hazardous decomposition products:**
Thermal decomposition/combustion (including soldering-type hot processing) may generate carbon monoxide, carbon dioxide and irritating/sensitising aldehyde and resin-acid decomposition fumes.

SECTION 11: TOXICOLOGICAL INFORMATION

- 11.1 Information on toxicological effects:**
Rosin (colophony) is of low acute toxicity. Its principal recognised and well-documented hazard is skin sensitisation (allergic contact dermatitis), and, with repeated fume exposure during hot processing, potential respiratory sensitisation/irritation.
- A. Ingestion (acute effect):**
Low acute oral toxicity expected.
- B. Inhalation (acute effect):**
Dust may cause mild mechanical irritation of airways; fume from hot processing (e.g. soldering) is a recognised cause of occupational respiratory irritation and, in sensitised individuals, asthma-type reactions.
- C. Contact with skin and eyes (acute effect):**
May cause mild irritation. Repeated/prolonged contact, especially with aged/oxidised material, is a well-documented cause of allergic contact dermatitis (sensitisation).
- D. CMR effects (carcinogenicity, mutagenicity, reproductive toxicity):**
Classification criteria for carcinogenicity, mutagenicity and reproductive toxicity are not met based on available data. IARC: Not listed.
- E. Sensitizing effects:**
Skin Sens. 1 (H317) – may cause an allergic skin reaction; one of the most frequently cited botanical/resin contact allergens in occupational dermatology references. Respiratory sensitisation may occur with repeated fume

exposure during hot processing (e.g. rosin-flux soldering).

F. Specific target organ toxicity (STOT) – single exposure:

May cause respiratory irritation from fume generated during hot processing.

G. Specific target organ toxicity (STOT) – repeated exposure:

Classification criteria are not met based on available data, beyond the sensitisation effects noted above.

H. Aspiration hazard:

Classification criteria are not met based on available data (solid at room temperature).

Product-specific toxicological information:

Identification	Acute Toxicity	Genus
Rosin (Gum Rosin) CAS: 8050-09-7	LD50 oral: > 5000 mg/kg	Rat
	LD50 dermal: > 2000 mg/kg	Rabbit

SECTION 12: ECOLOGICAL INFORMATION

Not expected to be significantly hazardous to the aquatic environment under GHS criteria based on available data.

12.1 Toxicity:

Acute Toxicity	Species	Genus
LC50: Typical value – refer to current specification sheet	Non-applicable	Fish

12.2 Persistence and degradability:

Expected to be inherently biodegradable (natural resin acid mixture).

12.3 Bioaccumulative potential:

Not established.

12.4 Mobility in soil:

Koc	Henry	Dry Soil	Moist Soil
Not established	Not relevant	Low mobility (solid resin)	Low mobility

12.5 Results of PBT and vPvB assessment:

Does not meet PBT/vPvB criteria.

12.6 Other adverse effects:

None known beyond those described above.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Disposal methods:

Dispose of via a licensed waste disposal contractor in accordance with national and local regulations, or recycle/reprocess where possible. Do not discharge to drains. Empty containers/bags may retain residue; dispose of as per label instructions.

SECTION 14: TRANSPORT INFORMATION

Transport of dangerous goods by land (ADR 2023 / RID 2023):

14.1 UN number	Non-applicable – not classified as dangerous goods
14.2 UN proper shipping name	Not applicable
14.3 Transport hazard class(es)	Not applicable
14.4 Packing group	N/A
14.5 Environmental hazard	No
14.6 Special precautions for user	Physico-chemical properties: see section 9; combustible solid/dust – see sections 5 and 10
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by sea (IMDG 41-22):

14.1 UN number	Non-applicable – not classified as dangerous goods
14.2 UN proper shipping name	Not applicable
14.3 Transport hazard class(es)	Not applicable
14.4 Packing group	N/A
14.5 Marine pollutant	No
14.6 Special precautions for user	Non-applicable
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

Transport of dangerous goods by air (IATA/ICAO 2024):

14.1 UN number	Non-applicable
14.2 UN proper shipping name	Not applicable
14.3 Transport hazard class(es)	Not applicable
14.4 Packing group	N/A
14.5 Environmental hazard	No
14.6 Special precautions for user	Non-applicable
14.7 Transport in bulk (Annex II MARPOL 73/78, IBC Code)	Not relevant

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations specific for the product in question:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of local circumstances, in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

Other legislation:

Manufacture, Storage and Import of Hazardous Chemicals Rules 1989
The Factories Act, 1948 (Act No. 63 of 1948), as amended by the Factories (Amendment) Act, 1987 (Act 20 of 1987)

Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with Annex 4 – Guidance on the preparation of Safety Data Sheets of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS).

Texts of the legislative phrases mentioned in sections 2 and 3:

H317: May cause an allergic skin reaction.

The phrases indicated do not refer to the product itself; they are present merely for informative purposes and refer to the individual components which appear in section 3.

Advice related to training:

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product – in particular on skin sensitisation precautions and the combustible-dust hazard of powdered material.

Principal bibliographical sources:

The United Nations Economic Commission for Europe (UNECE); publicly available GHS classification references for natural pine resins (colophony).

Abbreviations and acronyms:

ADR: European agreement concerning the international carriage of dangerous goods by road | IMDG: International maritime dangerous goods code | IATA: International Air Transport Association | ICAO: International Civil Aviation Organisation | LD50: Lethal Dose 50 | LC50: Lethal Concentration 50 | Koc: Partition coefficient of organic carbon | IARC: International Agency for Research on Cancer

The information contained in this safety data sheet is based on sources, technical knowledge and current legislation, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product; it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within Suraj Chemicals' awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this safety data sheet only refers to this product, which should not be used for needs other than those specified.

END OF SAFETY DATA SHEET