PINE ROSIN FLAKES

SAFETY DATA SHEET

This Safety Data Sheet contains information concerning the potential risks to those involved in handling, transporting and working with the material, as well as describing potential risks to the consumer and the environment. This information must be made available to those who may come into contact with the material or are responsible for the use of the material.

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

1.1 Product identifier

Product name: ROSIN
Other names: Colophony, Kolophonium, Pine Resin, Gum Rosin, Wood Rosin
EC number: 232-475-7
CAS number (EC inventory): 8050-09-7
REACH Registration Number: 01-2119480418-32-xxxx

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

Friction Aid, Grip Aid, Solder Flux, Electrical Insulation, Non-Draining Compound, Coating, Emulsion, Adhesives, Depilatory Wax, Clay Pigeon, Polish, Sealants, Dental Cement, Pigment Manufacture

1.3 Details of the supplier of the safety data sheet

LiveMoor
Unit 9A Forresters Business Park
Estover Close
Plymouth
Devon
PL6 7PL

SECTION 2: Hazards identification

2.1 Classification of the substance

According to 1272/2008/EC Regulation

Skin sensitiser Category 1

2.2 Label elements

Pictogram

Signal word: Warning

Hazard Statement/Precautionary Statements

H317 – May cause an allergic skin reaction
P210 – Keep away from heat/sparks/open flames/hot surfaces. No smoking
P261 – Avoid breathing dust/fumes
P280 – Wear protective gloves/protective clothing
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 contents/container according to the end user disposal procedure

According to 67/548/EC Regulation

Xi – Irritant Risk Phrase

Safety Phrases

S 24 – Avoid contact with skin
S 37 – Wear suitable gloves

SECTION 3: Composition/information on ingredients

In accordance with Annex II of Regulation (EC) No. 1907/2006 (point3), the product contains:

Identification	Chemical name/classification		Concentration
CAS: 8050-09-7	Rosin	ATP CLP00	100%
EC: 232-475-7	Directive 67/548/EC	Xi: R43	
Index: 650-015-7	Regulation 1272/2008	Skin sens1: H317-Warning	

SECTION 4: First aid measures

4.1 Description of first aid measures

EYE CONTACT: Immediately flood eyes with plenty of low-pressure water for at least 10 minutes, holding eye open. Remove contact lenses. Obtain medical assistance if redness develops or persists.

SKIN CONTACT: Wash skin thoroughly with soap and water. Obtain medical help if redness develops.

INGESTION: Wash mouth out with water. Do not induce vomiting. Obtain Medical attention if a large amount has been swallowed.

INHALATION: Remove from exposure, keep warm and at rest. Obtain medical attention if breathing difficulty occurs.

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

Acute and delayed effects are indicated in section 2 and 11.

SECTION 5: Firefighting Measures

5.1 Extinguishing media: Carbon dioxide, dry chemical or water fog
Unsuitable extinguishing media: Water

5.2 Special hazards arising from the substance or mixture:
Protective equipment: Self contained breathing apparatus needed for fires in enclosed areas.

Other information: Rosin dust is a severe explosion hazard in air, avoid dispersing dust in air
Minimum exposable concentration: 15g/m^3. Risk of spark ignition prevented by reducing oxygen concentration below 17% by dilution with carbon dioxide.

5.3 Advice for fire fighters - Do Not Use Water as extinguishing media.
No special firefighting equipment required.

SECTION 6: Accidental Release Measures

6.1 Personal precautions: Avoid breathing dust. Wear dust respirator, gloves, chemical goggles and overalls.

6.2 Environmental precautions: Avoid dispersion of the product

6.3 Methods and materials for containment and clearing up: Sweep up or otherwise recover the product and remove to a safe environment

Additional Advice: Avoid propagating more dust than is absolutely unavoidable.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Person Protection: Wear protective clothing and dust mask
Dust: Avoid processes that generate excessive dust

7.2 Conditions for safe storage

Suitable Storage Container: Galvanised iron drums or paper sacks internally coated with silicone or with a polypropylene liner.

Handling/Storage Precautions: Explosion proof ventilation adequate to meet any dust conditions at room temperature. Store in cool, well ventilated conditions.
Explosion proof electrical services should be used where dusty conditions prevail.
Prevent static sparks. Product can spontaneously heat during storage.
Exercise care: Avoid placing the material next to, or inContact with, oxidising agents.

7.3 Specific end use(s)

Except for the instructions alre4ady specified it is not necessary to provide special recommendation regarding the uses of this product.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters - No data available

Substances whose occupational exposure limits have been monitored in the work environment
Nuisance dust: Inhalable dust 10mg/m³ Respirable dust: 4mg/m³
DNEL workers
Acute/short-term exposure – systemic effects
Dermal DN(M)EL: No-threshold effect and/or no dose-response information available
Inhalation DN(M)EL: No-threshold effect and/or no dose-response information available
Acute/short-term exposure – local effect
Dermal DN(M)EL: No-threshold effect and/or no dose-response information available
Long-term exposure – systemic effects
Dermal DN(M)EL: No-threshold effect and/or no dose-response information available
Inhalation DN(M)EL: No-threshold effect and/or no dose-response information available

Long-term exposure – local effects
Dermal DN(M)EL: No-threshold effect and/or no dose-response information available
Inhalation DN(M)EL: No-threshold effect and/or no dose-response information available
General population
Acute/short-term exposure – systemic effects
Dermal DN(M)EL: No-threshold effect and/or no dose-response information available
Inhalation DN(M)EL: No-threshold effect and/or no dose-response information available
Oral DN(M)EL: No-threshold effect and/or no dose-response information available
Acute/short-term exposure – local effect
Dermal DN(M)EL: No-threshold effect and/or no dose-response information available
Inhalation DN(M)EL: No-threshold effect and/or no dose-response information available

Long-term exposure – systemic effects
Dermal DN(M)EL: No-threshold effect and/or no dose-response information available
Inhalation DN(M)EL: No-threshold effect and/or no dose-response information available
Oral DN(M)EL: No-threshold effect and/or no dose-response information available
Long-term exposure – local effects
Dermal DN(M)EL: No-threshold effect and/or no dose-response information available
Inhalation DN(M)EL: No-threshold effect and/or no dose-response information available
Components to control with biological restricted values:
PNEC
Freshwater: 0,0016mg/L
Freshwater sediments: 0,007mg/kg sediment dw
Marine water: 0,00016 mg/L
Marine sediments: 0,0007mg/kg sediment dw
Oral: No bioaccumulation potential
STP: 1000 mg/L
Soil: 0,0045 mg/kg soil dw

8.2 Exposure controls

Appropriated technical control measures: Dust extraction pointed to local of formation

Personal protective equipment
Respiratory protection: Wear respiratory protection against organic vapours
Hand protection: Wear appropriate gloves to prevent skin exposure
Eye/face protection: Wear chemical splash goggles conforming to EN 166
Skin protection: Wear appropriate clothing to prevent skin exposure

Environmental exposure control
Organisational measure: Apply general preventative measures in chemical safe handling

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance: Water-white to dark brown vitreous solid
Odour: Characteristic (slight turpentine odour
Odour threshold: No data available
pH: Not applicable
Melting point: 65-90°C
Flashpoint: >205°C
Auto ignition temperature: >390°C
Explosive Properties: Severe dust explosion hazard in air
Oxidising Properties: None
Vapour Pressure: < 0.1 hPA
Relative Density at 15°C: -1.08
Solubility – Water: Insoluble
Solubility – Solvent: Aromatic hydrocarbons, chlorinated hydrocarbons, alcohols, ketones
Other properties: Unsaponifiable matter 8% max

SECTION 10: Stability and Reactivity

10.1 Reactivity: No hazardous reactions are expected

10.2 Chemical stability
Stability: Substance is stable at normal temperature and pressure.
Oxidation: Substance is oxidised by atmospheric oxygen

10.3 Possibility of hazardous reactions: Not if stored correctly

10.4 Conditions to avoid: Generation of dust in air

10.5 Incompatible materials: Oxidising agents

10.6 Hazardous decomposition products: Thermal oxidation may result in formation of formaldehyde and carbon monoxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Oral Acute toxicity
Method: OECD Guideline 420 (Acute Oral Toxicity)
Species: rat (male and female)
Route of administration: oral, gavage
Dose: Single dose
Conclusion: LD50> 2000mg/kg similar substance
The classification criteria for oral acute toxicity or specific target organ toxicity by acute exposure were not met, according to GHS, CLP and 67/548/EC. Analysis based on acquired data.
Inhalation: Based on available data, the classification was not met.

Dermal acute toxicity
Method: OECD Guideline 402 (Acute Dermal Toxicity)/EU Method B.3 (Acute Dermal Toxicity)
Species: rabbit (male and female)
Route of administration: dermal, topic
Doses: 2000mg/kg bw
Period of exposure: 24 hours
Conclusion: LD50>2000mg/kg (rabbit, male/female), similar substance. Classification criteria for dermal acute toxicity, irritation or skin corrosion of for single target organ toxicity by acute exposure, based on GHS, CLP and 67/548/EC, were met. Analysis based on acquired data for similar substance.

Irritation and skin corrosion: Classification not, determined due to lack of data
Method: OECD Guideline 404 (acute Dermal Irritation/Corrosion)/Eu Method B.4
Species: rabbit
Route of administration: dermal, semi occlusive
Doses: 0.5g
Period of exposure: 4hrs
Conclusion: during tests no edema was observed. Classification criteria for dermal acute toxicity, irritation or skin corrosion or for single target organ toxicity by acute exposure, based on GHS, CLP and 67/548/EC, were not met. Analysis based on acquired data.

Eye irritation and damage
Method: OECD Guideline 405 (Acute Eye Irritation/Corrosion), equivalent method to
Species: rabbit
Route of administration cornea, topic
Doses: 100mg/eye/specimen
Period of exposure: single dose
Conclusion: slight reversable redness of the conjunctivae was observed on some animals. Classification criteria for eye irritation, based on GHS, CLP and 67/548/EC, were not met. Analysis based on acquired data.

Skin sensitisation
Method: OECD Guideline 428 (LLNA), method equivalent to
Species: rat (female)
Conclusion: Based on study results, rosin is not a moderate or strong skin sensitiser to rats. Rosin did not show any potential to acts as skin sensitiser. The classification criteria for skin sensitising, based on GHS, CLP ans 67/548/EC, were not met. Analysis based on acquired data. However, Annex I in

Direction 67/548/EEC and table 3,1 in CLP Regulation present rosin in R43 – May cause sensitisation in contact with skin and H317: May cause skin allergic response, respectively.
Sensitising effects by inhalation: Based on data available, the classification requirement was not met.

Mutagenicity
Method: OECD Guideline 471 (Bacterial Reverse Mutation Assay); EU Method B.13/14(Mutagenicity – Reverse Mutation Test Using Bacteria)
Conclusion: Absence of genotoxic and mutagenic effects. Classification criteria were not met.
Analysis based on acquired data.

Carcinogenicity – Based on the data available, the classification was not met

Toxicity for reproduction
Method: OECD Guideline 421 (Reproduction/Development Toxicity Screening Test)
Conclusion: NOAEL reproductive – 3000ppm (nominal) (male and female) Not determined on FI generation. Criteria were not met and the product is not classified for the Development or Reproductive Toxicity according to GHS, CLP and 67/548/EC. Analysis based on acquired data.

Long exposure effects: No reliable data available
STOT – single exposure: Based on available data, the classification was not met.
STOT – repeated exposure: Based on available data, the classification was not met.
Respiratory risks: Based on available data, the classification was not met.

SECTION 12: Ecological information

12.1 Toxicity

Short term toxicity	
Fish:	96h,LL50 < 10mg/L (nominal, based on mortality) Brachydanio rerio, OECD 203 48, NOELr = 750mg/L (nominal, based on mortality)
Aquatic invertebrates:	48h, EL50 – 911mg/L (nominal, based on mortality) Daphnia magna, OECD 202 72h, NOELr ≥ 1000mg/L (nominal, similar substance, based on growth rate and biomass)
Algae and aquatic plants:	72h, LL50 = 1000mg/L (nominal, similar substance, based on growth rate and biomass) Selenastrum capriconutum, OECD 201
Other organisms:	Not determined
Long-term toxicity	
Fish:	Not determined
Aquatic invertebrates:	Not determined
Algae and aquatic plants:	Not determined
Other organisms:	Not determined

12.2 Persistence and degradability

Abiotic degradability:	Not determined
Photochemical and physico-Chemical elimination:	Not determined
Biodegradation:	Substance is readily biodegradable 70% degradation after 28 days

12.3 Bioaccumulative potential

Partition coefficient n-octanol/water

Log (Kow):	refer to section 9
Bioconcentration factor (BCF):	56,23 L/kg wet/wt (QSAR, regression-based m.)
Bioaccumulation factor (BAF):	694 000 (Arnot-Gobas upper trophic m.)

12.4 Soil Mobility

Partition coefficient soil/water (Koc) log Koc = 3,7289 (QSAR, estimated from log Kow)

12.5 PBT evaluation results: Product does not fulfil PBT or vPvB criteria

12.6 Other adverse effects/additional information: N/A

SECTION 13: Disposal Considerations

13.1 Waste treatment methods

Recommendation: Dispose of waste to a licensed disposal site in accordance with the requirements of the local Waste Disposal Authority. Do not allow into drains, sewers and water courses.

Contaminated packaging: Used containers should be recycled after dust removal.

SECTION 14: Transport Information

Not classified in accordance with ADR/RID, IMDG and IATA

SECTION 15: Regulatory Information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Classification acc. to:

Regulation (CE) n. 1005/2009:	Not applicable
Regulation (CE) n. 1907/2006	
- Annex XVII	Not restricted substance:
Directive n. 2003/53/EC:	Not applicable
Directive n. 2003/105/CE:	Substance not classified in the scope in the directive
Regulation (CE) n. 850/2004:	Not applicable
The German Federal Water Management Act:	Classe WGK 1

SECTION 16: Other Information

Abbreviations and acronyms:
ADR: International Carriage of Goods by Road
IMDG: International Maritime Dangerous Goods
IATA: International Air Transport Association
ICAO: International Civil Aviation Organisation
BCF: Bioconcentration Factor
LD50: Lethal Dose 50
LC50: Lethal Concentration 50
KOC: Partition Coefficient of Organic Carbon
OECD: Organisation for Economic Cooperation Development
NOEL: No Observed effect level
STOT: Specific Target Organ Toxicity
QSR: Quantitive Structure Activity Relationship
LLNA: Local Lymph Node Assay

The information in this safety data sheet is based on the properties of the material known to LiveMoor at the time the data sheet was issued. The safety data sheet is intended to provide information for a health and safety assessment of the material and the circumstances under which it is packaged, stored or applied in the workplace. This document is not intended for quality assurance purposes.