



**Industrial
Oleochemical
Products**

SAFETY DATA SHEET

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OleoRez RP105 L

Pentaerythritol ester of tall oil rosin

OleoRez RP 105 L is a light-coloured pentaerythritol ester of tall oil rosin which exhibits a softening point of nominally 105°C. OleoRez RP 105 L tackifier is designed to contribute good colour stability at elevated temperatures, low odour and compatibility to EVA-based hot-melt adhesives.

1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER:

Product name:	OleoRez RP 105L	
Product identifier/synonyms:	Ester of stabilized tall oil rosin, modified	CAS # 161074-62-0 EC# 500-495-8
Product description:	Complex mixture of resin acids derived from pinewood. Composed primarily of resin acids and modified resin acids such as dehydroabietic acid, as their pentaerythritol esters	
Intended use:	Adhesives	
Application of the substance / the mixture	Tackifier resin for EVA hot melt adhesives. Tackifier resin for pressure sensitive adhesives formulated with polar polymers and elastomers Modifier for elastomers and waxes	
Manufacturer:	Industrial Oleochemical Products, (Pty) Ltd., Jacobs, 4052, KZN, Tel: +27-(0)31-4618680, Fax:: +27-(0)31-461-3743 info@oleo.co.za	
Emergency telephone number:	031-461-8721 (Monday-Friday 08.00 to 16.30hr) 031-461-8680 (after normal working hours) 071-483-7688 (medical emergencies)	



2. HAZARD IDENTIFICATION

This substance is not classified according to South African National Standard SANS 10234:2007, Globally Harmonized System of classification and labelling of chemicals (GHS). This substance is not classified in the Annex I of Directive 67/548/ (Index # 650-015-00-7) according to ESIS (European Chemical Substances Information System).

Flammability:

Hazard category	Criteria
0	Flash point (COC) 260°C

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HAZARD IDENTIFICATION: (continuation from page 1)

Classification of the substance or mixture	Combustible dust May form combustible dust concentration in air
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Classification according to Directive 67/548/EEC or Directive 1999/45/EC
Information concerning particular hazards for human and environment

DANGER!	HOT MOLTEN product. Burns may cause irreversible eye injury and blindness. Causes skin burns. Inhalation of smoke or fumes may cause throat discomfort, coughing, or breathing difficulty. Product may burn if ignited
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WARNING!	Solid product at ambient temperature. Static charges generated by emptying package in or near flammable vapours may cause a flash fire. May form flammable dust-air mixtures
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POTENTIAL HEALTH EFFECTS – (Solid product at ambient temperatures)	May cause eye irritation by mechanical abrasion. May cause skin irritation by mechanical abrasion. Inhalation may cause respiratory tract irritation. Prolonged or repeated contact may cause skin irritation and may cause skin sensitisation (allergic reaction) in susceptible individuals. Prolonged exposure to smoke or fumes generated by heating this product may cause respiratory irritation with throat discomfort, coughing, or breathing difficulty. Repeated exposure may lead to respiratory sensitisation (asthma) in susceptible individuals.
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GENERAL HYGIENIC PRACTICES

Avoid contact with eyes, skin, and clothing. Avoid breathing dust, vapours or mist. Handle in areas with adequate ventilation.
Refer to SDS Section 8, Exposure Controls / Personal Protection, for further information.
Refer to Section 5 for Hazardous Combustion Products, and Section 10 for Hazardous Decomposition / Hazardous Polymerization Products

Label elements (GHS label elements)

The substance is classified and labelled according to the Global Harmonized System (GHS)

Hazard pictograms	Void
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Signal word	Warning
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Hazard statements	May form combustible dust concentrations in air
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HAZARD IDENTIFICATION: (Continuation from page 2)

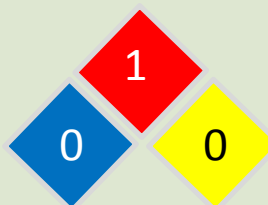
PRECAUTIONARY STATEMENTS

P202	Do not handle until all safety precautions have been read and understood
P210	Keep away from heat / sparks / open flames / hot surfaces – NO SMOKING
P234	Keep only in original packaging
P243	Take precautionary measures against static discharge
P261	Avoid breathing dust / fume/ gas/mist / vapours/ spray
P262	Do not get in eyes, on skin, or on clothing
P264	Wash thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P280	Wear protective gloves / eye protection
P284	In case of inadequate ventilation wear respiratory protection
P 301 + P312	If swallowed: call a doctor if you feel unwell
P301 + P330 + P331	If swallowed: Rinse mouth. DO NOT induce vomiting
P302 + P352	If on skin: Wash with plenty of soap and water
P304 + P312	IF INHALED: Call a doctor if you feel unwell
P304 + P341	If inhaled: if breathing is difficult, remove person to fresh air and keep comfortable for breathing
P305 + P351 + P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do, continue rinsing.

PRECAUTIONARY STATEMENTS

P314	Get medical advice / attention if you feel unwell
P333 + P313	If skin irritation or rash occurs: get medical advice / attention
P363	Wash contaminated clothing before reuse
P402 + P404	Store in a dry place. Store in a closed packaging
P403 + P233	Store in a well ventilated place. Keep packaging tightly closed
P501	Dispose of contents / packaging in accordance with local / regional / national/ international regulations

CLASSIFICATION SYSTEM : NFPA RATINGS (scale 0- 4)



HEALTH = 0

FIRE = 1

REACTIVITY = 0

HMIS RATINGS (scale 0 – 4)

HEALTH	0
FIRE	1
REACTIVITY	0

HEALTH = 0

FIRE = 1

REACTIVITY = 0

Other Hazards

Results of PBT and vPvB assessment

PBT

Not applicable

vPvB

Not applicable

(continues on page 4)

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3. COMPOSITION / INFORMATION ON INGREDIENTS

CHEMICAL CHARACTERISATION: SUBSTANCE

CAS number	8050-26-8
CAS number description	Resin acids and Rosin acids, esters with pentaerythritol
EC number	232-479-9
Additional information	<p>This product is shipped and delivered as an ambient temperature SOLID. See SDS section 2 for the HMIS health rating for the product at ambient temperature. THE HMIS HEALTH HAZARD RATING FOR THE HOT MOLTEN OR HOT LIQUID PRODUCT IS 3 SERIOUS.</p> <p>When shipped and delivered in SOLID form, this product is considered hazardous according to the OSHA Hazard Communication Standard 29CFR1010.1200 due to flammable dust potential.</p> <p>If this product is heated or used at temperatures sufficient to produce smoke or fumes, refer to SDS Section 8, Exposure controls / Personal Protection</p>

4. FIRST-AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

After inhalation	Remove to fresh air. Get medical attention if nasal, throat or lung irritation develops
After skin contact	HOT MOLTEN product: immediately cool skin burns with water and cold packs for at least 15 minutes.

DESCRIPTION OF FIRST AID MEASURES

After skin contact	<p>DO NOT put ice directly on the skin. DO NOT attempt to remove solidified resin from the skin as severe tissue damage may result. Get immediate medical attention. See Note to Medical Doctor below.</p> <p>SOLID product at ambient temperatures : Wash thoroughly with soap and water. Remove contaminated clothing. Get medical attention if irritation develops or persists. Thoroughly wash clothing before reuse. See Note to Medical Doctor below.</p>
After eye contact	<p>HOT MOLTEN product: Cool burns with plenty of low pressure water. Get immediate medical attention.</p> <p>SOLID product at ambient temperature: Remove contact lenses. Hold eyelids apart. Immediately flush eyes with plenty of low pressure water for at least 15 minutes. Get medical attention if irritation persists.</p>
After swallowing	<p>Not an ingestion hazard under anticipated conditions of use.</p> <p>For accidental ingestion: DO NOT induce vomiting. Get immediate medical attention.</p>
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4. FIRST-AID MEASURES (continues from page 4)

INFORMATION FOR MEDICAL DOCTOR

For MOLTEN or HOT LIQUID product	Material should not be forcibly removed from the skin. Mineral oil maybe used to loosen and soften the material This product contains rosin or a rosin derivative. Rosin and some of its derivatives have been reported to cause an allergic skin reaction (sensitisation) in susceptible individuals after repeated or prolonged skin contact. Smoke or fumes generated by heating product may lead to respiratory sensitisation (asthma) in susceptible individuals.
Most important symptoms and effects, both acute and delayed	No further relevant information available
Indication of any immediate medical attention and special treatment needed	No further relevant information available.

5. FIRE FIGHTING MEASURES

Extinguishing media

Suitable extinguishing agents	Water spray, dry chemical, foam, carbon dioxide or clean extinguishing agents may be used on fires involving this product
Special hazards arising from the substance or mixture	If heated to combustion, the following substances may be formed: Carbon monoxide (CO); Carbon Dioxide (CO ₂); Aldehydes, Carboxylic acids; Smoke

Advise for fire-fighters

Protective equipment	Wear self-contained breathing apparatus pressure-demand. MSHA/NIOSH approved (or equivalent) and full protective gear when fighting fires involving this product. Apply water to HOT MOLTEN or HOT LIQUID resin fires from a safe, protected location to avoid body contact with hot rosin. Cool packaging with water to prevent rupture.
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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	For HOT MOLTEN or HOT LIQUID product: Wear protective equipment as required (see SDS Section 8). Contain spilled material and allow it to cool and solidify. DO NOT apply water. After solidification, clean up and place in suitable containers for use or disposal. For SOLID product: Ventilate area. Avoid dust formation. If product is not contaminated, scopp into clean containers for use. If product is contaminated scoop into containers, and dispose appropriately. In case of accidental spills or release, refer to Section 8, Personal Protective Equipment and General Hygiene Practices. (continues on page 6)
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6. ACCIDENTAL RELEASE MEASURES (cont...from page 5)

Environmental precautions	No special measured required
Methods and material for containment and cleaning up	Pick up mechanically
Reference to other sections	No dangerous substances are released

7. HANDLING AND STORAGE

Precautions for safe handling	<p>For HOT MOLTEN or HOT LIQUID product: Use personal protective equipment as indicated in Section 8: Exposure Controls / Personal Protection</p> <p>For SOLID product: Earth all equipment. Blanket vessel with inert gas when emptying bags where flammable vapours may be present. Earth operator and pour material slowly into conductive, earth chute.</p>
Information about protection against explosions and fires	<p>Water contact with HOT MOLTEN or HOT LIQUID resin may result in foaming or spattering, which can cause eye or skin burns.</p> <p>Avoid conditions that generate dust; product may form flammable dust-air mixtures.</p> <p>Avoid emptying package in or near flammable vapours; charges may cause flash fire.</p> <p>Keep away from heat, flame, sparks and other ignition sources.</p>

Conditions for safe storage, including any incompatibilities

Requirements to be met by storerooms and receptacles	Store at ambient temperature
Information about storage in one common storage facility	Keep bags closed when not in use
Further information about storage conditions	Not required
Specific end use(s)	Dry well ventilated
	No further information available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Additional information about design of technical systems	<p>Eyewash fountains and safety showers should be easily accessible.</p> <p>If user operations generate dust or fumes: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Discharge from the ventilation system should comply with applicable air pollution control regulations.</p> <p>Eliminate ignition sources and prevent build up of static electrical charges.</p> <p>Completely isolate and thoroughly clean all equipment, piping, or vessels before beginning maintenance or repairs.</p> <p>Keep area clean. Product will burn</p>
Control parameters	
Components with limit values that require monitoring at the workplace	Not required

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION

(continues from page 6)

Control parameters

Additional Occupational Exposure Limit Values for possible hazard during processing

This product may present an inhalation health hazard if used under conditions that could generate dust or fumes.

PARTICULATES (INSOLUBLE) NOT OTHERWISE SPECIFIED (PNOS): If used under conditions that generate particulates, the ACGIH TLV-TWA of 3 mg/m³ respirable fraction (10 mg/m³ total) should be observed.

ROSIN PYROLYSIS FUMES: If the product is heated to temperatures sufficient to produce smoke or fumes, maintain exposure to resin acids to be lowest achievable concentration using recommended engineering controls and personal protective equipment.

Exposure controls – Personal Protective equipment

General protective and hygiene measures

Avoid contact with eyes, skin and clothing
 Avoid breathing dust or fumes
 Handle in areas with adequate ventilation.
 Avoid contamination of food, beverages, or smoking materials.
 Wash thoroughly after handling and before eating, drinking or smoking.
 Remove contaminated clothing promptly and clean thoroughly before reuse.

Breathing equipment

Appropriate respiratory protection is required when exposure to airborne contaminants may exceed acceptable limits. Respirators should be selected and used in accordance with OSHA, subpart 1 (29 CFR 1910.134) and manufacturer's recommendations

Protection of hands

Impervious gloves
 The glove material has to be impermeable and resistant to the product / the substance / the preparation.
 Selection of the glove material should be based on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection

Safety glasses

Body protection

Appropriate protective clothing
 Personnel exposed to HOT MOLTEN or HOT LIQUID material should wear protective clothing that provides protection against thermal burns.

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Body protection (continuation from page 7)	Required Protective Equipment: 1, Long-sleeved protective shirt, long pants and work shoes; 2, Hard hat and face shield; 3, Long-cuff gloves extending beyond wrist; 4, Lined rain suit with protective hood or shoulder shroud or 5, Full aluminized or thermal suit with hood.
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9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties :

General information

Appearance Form	solid at ambient temperatures
Appearance colour	Pale yellow
Odour	Faint typical rosin
Specific gravity	1.06 g/ml
Vapour density	Heavier than air
Change in condition	104 - 106 (°C) (Ring & Ball)
Softening point	
Flash Point	> 200 (°C) (Closed cup)
Danger of explosion	Product is not explosive, However, formation of explosive air/dust mixtures are possible
Vapour pressure at 20 (°C)	Negligible hPa
Density	1.06 kg/m ³
Bulk density	Not determined
Solubility in / Miscibility with water	Negligible
Partition coefficient (n-octanol/water)	>4
Other information	No further relevant information available

10. STABILITY AND REACTIVITY

Reactivity and Chemical Stability

Thermal decomposition / conditions to be avoided	Stable under recommended handling and storage conditions
Possibility of hazardous reactions	Not anticipated under normal or recommended handling and storage
Conditions to avoid	No further information available
Incompatible materials	None known
Hazardous decomposition products	No dangerous decomposition products known

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity

LD/LC50 values that are relevant for classification

Oral LD50 (rat)	>2000 mg/kg. Not toxic by OSHA/ANSI criteria based on acute animal per oral testing on similar product (LD>500 mh/kg). Feeding studies of similar products indicate no evidence of risk at anticipated workplace exposure levels. Mild reversible respiratory irritation from single and repeated inhalation exposure to heated vapours of similar material.
Primary irritant effect on the skin	No irritant effect
Primary irritant effect on the eye	The fine particles and powder should be regarded as an inert, nuisance dust
Sensitisation	Due to the physical nature of this material, may cause eye, skin and respiratory irritation by mechanical abrasion. (continues on page 9)

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11. TOXICOLOGICAL INFORMATION

(continuation from page 8)

Sensitisation	<p>This product contains rosin or a rosin derivative. Rosin and some rosin derivatives have been reported to cause allergic skin reaction (sensitisation) in susceptible individuals after repeated or prolonged contact.</p> <p>Smoke or fumes generated by heating may lead to respiratory sensitisation (asthma) in susceptible individuals</p>
Additional toxicological information IARC (International Agency for Research on Cancer: Substance is not listed	<p>Carcinogenic categories</p> <p>Substance is not listed</p>
NTP (National Toxicology Program)	Substance is not listed
OSHA-Ca (Occupational Safety & Health Administration)	Substance is not listed

12. ECOLOGICAL INFORMATION

Toxicity	
Aquatic toxicity	<p>Acute 96-hour LL50 (Fathead minnow): > 1000 mg/L</p> <p>Acute 48-hour EL50 (Daphnia magna): >1000 mg/L</p> <p>Algae growth inhabitation test (72-hour EL50):>1000 mg/L</p>
Persistence and degradability	Based upon data from similar materials, this product cannot be regarded as readily biodegradable; however, it may be slowly biodegradable

Behaviour in environmental systems

Bioaccumulative potential	No further relevant information available
Mobility in soil	No further relevant information available
Results of PBT and vPvB assessment	
PBT	Not applicable
vPvB	Not applicable
Other adverse effects	No further relevant information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Recommendation	<p>For SOLID and HOT MOLTEN product that has been cooled and solidified: Land filling in a permitted solid or hazardous waste facility is recommended.</p> <p>Handling, transportation, and disposal of material should be conducted in a manner to prevent a nuisance dust hazard.</p> <p>Fully containerise the material before handling, and protect from exposure to the outdoors. Ensure there is no restrictions on disposing of bulk or semi-bulk quantities of waste material.</p> <p>Disposal should be in accordance with all local and national regulations.</p>
Un-cleaned packaging recommendation	<p>Disposal must be made according to official regulations</p> <p>(continued on page 10)</p>

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14. TRANSPORTATION INFORMATION

UN-Number DOT, ADR, DAN, IMDG, IATA	Void
UN proper shipping name DOT, ADR, ADN, IMDG, IATA	Void
Transport hazard class(es) DOT, ADR, ADN, IMDG, IATA	Void
Packaging group DOT, ADR, IMDG, IATA	Void
Environmental hazards: Marine pollutant	No
Special precautions for user	Not applicable
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable
UN "Model Regulation":	-

15. REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture	
SARA Section 355 (extremely hazardous substances)	Substance is not listed
Section 313 (Specific toxic chemical listings)	This product does not contain any chemicals subjected to reporting under Section 313 of Title III of the Superfund Amendments and Reauthorization Act and 40CFR372
TSCA (Toxic Substances Control Act)	Substance is listed
Proposition 65 Chemicals known to cause cancer	Substance not listed
Chemicals known to cause reproductive toxicity for females	Substance is not listed
Chemicals known to cause reproductive toxicity for males	Substance is not listed
Chemicals known to cause developmental toxicity	Substance is not listed

Carcinogenic categories EPA (Environmental Protection Agency)	Substance is not listed
TLV (Threshold Limit Value established by ACGIH)	Substance is not listed
NIOSH-Ca (National Institute for Occupational Safety and Health)	Substance is not listed
Canadian Domestic Substances List (DSL)	Substance is not listed
GHS label elements	This substance is classified and labelled according to the Global Harmonized System (GHS)
Hazard pictogram	Void
Signal word	Warning
Hazard statements	May form combustible dust concentration in air

PRECAUTIONARY STATEMENTS

P202	Do not handle until all safety precautions have been read and understood
P210	Keep away from heat / sparks / open flames / hot surfaces – NO SMOKING
P234	Keep only in original packaging
P243	Take precautionary measures against static discharge
P261	Avoid breathing dust / fume/ gas/mist / vapours/ spray
P262	Do not get in eyes, on skin, or on clothing (continues on page 11)

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15. REGULATORY INFORMATION

(Continuation from page 10)

PRECAUTIONARY STATEMENTS

P264	Wash thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P280	Wear protective gloves / eye protection
P284	In case of inadequate ventilation wear respiratory protection
P 301 + P312	If swallowed: call a doctor if you feel unwell
P301 + P330 + P331	If swallowed: Rinse mouth. DO NOT induce vomiting
P302 + P352	If on skin: Wash with plenty of soap and water
P304 + P312	IF INHALED: Call a doctor if you feel unwell
P304 + P341	If inhaled: if breathing is difficult, remove person to fresh air and keep comfortable for breathing
P305 + P351 + P338	If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do, continue rinsing.
P314	Get medical advice / attention if you feel unwell
P333 + P313	If skin irritation or rash occurs: get medical advice / attention

PRECAUTIONARY STATEMENTS

P363	Wash contaminated clothing before reuse
P402 + P404	Store in a dry place. Store in a closed packaging
P403 + P233	Store in a well ventilated place. Keep packaging tightly closed
P501	Dispose of contents / packaging in accordance with local / regional / national/ international regulations
Chemical safety assessment	A chemical safety assessment has not been carried out

16. OTHER INFORMATION

DISCLAIMER:

To the best of our knowledge of this substance and on current EC and international regulations, the information contained herein is accurate. However, neither the above-named supplier nor any of its subsidiaries or agents assumes liability whatsoever for the accuracy or completeness of the information contained herein.

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Version:	01
Contact	info@oleo.co.za
Department issuing SDS	Technical Department (Industrial Oleochemical Products (IOP))