PRODUCT

Product Name: LESTAC H5100 & LESTAC 9100
Chemical Family: Petroleum Resin / Hydrocarbon Resin (see Section 16 for applicable grades)
CAS NUMBER: 64742-16-1 & 68410-16-2
Product Description: pale yellow to amber solid, granularflake/powder
Intended Use: Tackifier resin, Adhesive, Tapes, labels, Coating, Sealant, Rubber Compound, Tire

COMPANY IDENTIFICATION

Manufacturer: LESCO CHEMICAL LIMITED
Address: Zhenxing North Road, Puyang, Henan, China
Telephone: 0086-393-8965619
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EMERGENCY TELEPHONE NUMBER: Working day (From Mon. to Fri.)
0086-393-8965619
0086-13603436766

This MSDS is a generic document with no country specific information included.

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

COMPOSITION

<table>
<thead>
<tr>
<th>COMPOSITION</th>
<th>WEIGHT % RANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petroleum Hydrocarbon Resin</td>
<td>≥99</td>
</tr>
<tr>
<td>Slip Agents/Anti-blocking agents/Antioxidants/Stabilizers</td>
<td>≤1</td>
</tr>
</tbody>
</table>

No Reportable Hazardous Substance(s) or Complex Substance(s).

Note: The product may contain varying levels of additives such as slip agents and anti-blocking agents, antioxidants and stabilizers.

The composition of this mixture may be proprietary information. In the event of a medical emergency, compositional information will be provided to a physician or nurse.
SECTION 3   HAZARDS IDENTIFICATION

HMIS Rating (scale 0-4)
   Health = 1 Fire = 0 Reactivity = 0 (0 = No Hazard 1 = Slight Hazard)

PHYSICAL/CHEMICAL HAZARDS
   ○ High dust levels may create potential for explosion. Spilled pellets present a slipping hazard on hard surfaces.
     Thermal burn hazard - contact with hot material may cause thermal burns. Material can accumulate static charges
     which may cause an incendiary electrical discharge.

HEALTH HAZARDS
   ○ No adverse effects due to inhalation are expected. When heated, the vapor/fumes given off may cause respiratory
     tract irritation.
   ○ Note: This material should not be used for any other purpose than the intended use in Section 1 without expert advice.
     Health studies have shown chemical exposure may cause potential human health risk which may vary from person to
     person.

SECTION 4   FIRST AID MEASURES

INHALATION
   ○ Immediately remove the affected victim out of contaminated area and into the fresh air. Administer artificial respiration
     if breathing is stopped and Keep at rest.

SKIN CONTACT
   ○ Wash contact areas with soap and water. For hot product: Immediately immerse in or flush affected area with large
     amounts of cold water to dissipate heat. Cover with clean cotton sheeting or gauze and get prompt medical attention.

EYE CONTACT
   ○ Flush thoroughly with water. If irritation occurs, get medical assistance.

INGESTION
   ○ Get medical attention immediately.
SECTION 5   FIRE- FIGHTING  MEASURES

**EXTINGUISHING MEDIA**
- Appropriate Extinguishing Media: Use water fog, foam, sand, dry chemical or carbon dioxide (CO2) to extinguish flames.

**FIRE FIGHTING**
- Fire Fighting Instructions: Assure an extended cooling down period to prevent re-ignition. Evacuate area. Prevent run-off from fire control or dilution from entering streams, sewers or drinking water supply. Fire-fighters should use standard protective equipment and in enclosed spaces, self-contained breathing apparatus (SCBA). Use water spray to cool fire exposed surfaces and to protect personnel.

**FLAMMABILITY PROPERTIES**
- Flash Point [Method]: N/A
- Flammable Limits (Approximate volume % in air): LEL: N/D   UEL: N/D
- Auto ignition Temperature: N/D

SECTION 6   ACCIDENTAL  RELEASE  MEASURES

**NOTIFICATION PROCEDURES**
- Notify relevant authorities in accordance with all applicable regulations.

**PERSONAL PRECAUTIONS**
- Wear protective equipment listed at Section 8.

**ENVIRONMENTAL PRECAUTIONS**
- Prevent entry into waterways, sewers, basements or confined areas.

**SPILL MANAGEMENT**
- Land Spill: Spilled pellets present a slipping hazard on hard surfaces.
- Water Spill: Stop leak if you can do so without risk. Confine the spill immediately with booms. Skim from surface
SECTION 7  HANDLING AND STORAGE

HANDLING

- Avoid elevated temperatures for prolonged periods of time. Prevent small spills and leakage to avoid slip hazard.
  
  DO NOT handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Material can accumulate static charges which may cause an electrical spark (ignition source). Apart from the specific nature of the polymer product, conditions such as humidity, sunlight and temperature have an influence on the way the product behaves during storage and handling. Special attention should be paid to avoid inappropriate stacking of palletized bags or other package units. Indeed, polymer products may be dimensionally unstable under certain conditions. Avoid conditions generating heat during transfer operations.

- Loading/Unloading Temperature: [Ambient]
- Transport Temperature: [Ambient]
- Static Accumulator: This material is a static accumulator.

STORAGE

- Store in a cool, dry place. For resins having a softening point below 80°C, prolonged storage above 25°C will cause blocking. For resins having a softening point between 80 and 95°C, prolonged storage above 30°C will cause blocking.

- Storage Temperature: [Ambient]
- Storage Pressure: [Ambient]
- Suitable Containers/Packing: Super sacks, Bags (20/25kgs)
- Suitable Materials and Coatings: Paper, Steel, Polyethylene, Polypropylene

SECTION 8  EXPOSURE CONTROLS /PERSONAL PROTECTION

- Note: Limits/standards shown for guidance only and please follow applicable regulations.

EXPOSURE LIMITED

- 5mg/m³ OSHA (respirable dust)

ENGINEERING CONTROLS

- Control measures to consider: Adequate ventilation should be provided so that exposure limits are not exceeded.
- Special Precautions: Should significant vapors/fumes be generated during thermal processing of this product, it is recommended that work stations be monitored for the presence of thermal degradation by-products which may evolve at elevated temperatures (for example, oxygenated components).
PERSONAL PROTECTION

- Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material as below.

Respiratory Protection:
- No special requirements under ordinary conditions of use and with adequate ventilation.
- If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, usage, and maintenance must be in accordance with regulatory requirements, if applicable.
- For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filters capacity/rating may be exceeded.

Hand Protection:
- Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves.
- If product is hot, thermally protective gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves.

Eye Protection:
- Safety glasses with side shields are recommended.

Skin and Body Protection:
- Any specific clothing information provided is based on published literature or manufacturer data.
- If product is hot, thermally protective, chemical resistant apron and long sleeves are recommended.

Specific Hygiene Measures:
- Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping.
SECTION 9   PHYSICAL AND CHEMICAL PROPERTIES

Typical physical and chemical properties are given below. Consult the manufacturer in Section 1 for additional data.

GENERAL INFORMATION

- Physical State: Solid
- Form: flake, granular, powder
- Color: Pale yellow to amber
- Odor: None to Mild petrochemical
- Odor Threshold: N/D

IMPORTANT HEALTH, SAFETY, AND ENVIRONMENTAL INFORMATION

- Relative Gravity: 0.97-1.00
- Density (at 18 °C): 970 kg/m³ (8.09 lbs/gal, 0.97 kg/dm³)
- Flash Point [Method]: N/A
- Flammable Limits (Approximate volume % in air): LEL: N/D   UEL: N/D
- Auto ignition Temperature: N/D
- Minimum Ignition Energy of Dust: 3mJ
- Boiling Point / Range: N/A
- Vapor Density (Air = 1): N/A
- Vapor Pressure: N/A
- Evaporation Rate (N-Butyl Acetate = 1): N/A
- pH: N/A
- Log Pow (n-Octanol/Water Partition Coefficient): N/A
- Solubility in Water: Insoluble
- Solubility in Organic solvent: Soluble
- Viscosity: N/A
- Oxidizing properties: See Sections 3, 15, 16.

OTHER INFORMATION

- Freezing Point: N/D
- Melting Point: 90°C (194°F) - 140°C (270°F)
- Molecular Weight: 800 - 2000
- Hygroscopic: No
SECTION 10   STABILITY AND REACTIVITY

STABILITY:
○ Stable under normal conditions.

CONDITIONS TO AVOID:
○ Open flames, high temperatures.

MATERIALS TO AVOID:
○ Strong oxidizers

HAZARDOUS DECOMPOSITION PRODUCTS:
○ Carbon Monoxide, Carbon Dioxide

HAZARDOUS POLYMERIZATION:
○ Will not occur.

SECTION 11   TOXICOLOGICAL INFORMATION

Acute Toxicity:

Route of Exposure   Conclusion (Based on test data for structurally similar materials)

INHALATION
Toxicity: Minimally Toxic.
Irritation: Negligible hazard at ambient/normal handling temperatures.

INGESTION
Toxicity: Minimally Toxic.

Skin/ Eye
Toxicity: Minimally Toxic.
Irritation: Negligible irritation to skin/eyes at ambient temperatures.

IARC Classification:
The Following Ingredients are cited on the Lists Below: None.

--REGULATORY LISTS SEARCHED--

1 = IARC 1
2 = IARC 2A
3 = IARC 2B
SECTION 12  ECOLOGICAL INFORMATION

The information given is based on data available for the material, the components of the material, and similar materials.

ECOTOXICITY
○ Not expected to be harmful/chronic toxicity to aquatic organisms.

MOBILITY
○ Low solubility and floats and is expected to migrate from water to the land.
○ Expected to partition to sediment and wastewater solids.

PERSISTENCE AND DEGRADABILITY
○ Expected to be persistent.
○ Bioaccumulation Potential: low.

SECTION 13  DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS
○ Suitable routes of disposal are supervised incineration, preferentially with energy recovery, or appropriate recycling methods in accordance with applicable regulations and material characteristics at the time of disposal.

SECTION 14  TRANSPORT INFORMATION

LAND: Not Regulated for Land Transport

SEA (IMDG): Not Regulated for Sea Transport according to IMDG-Code

AIR (IATA): Not Regulated for Air Transport.
SECTION 15  REGULATORY INFORMATION

Material is not hazardous as defined by the EU Dangerous Substances/Preparations Directives.


ROHS: LESTAC RESIN complies with directive 2002/96/EC relating to ROHS (Directive on the restriction of the use of hazardous substances in electrical and electronic equipment)

SARA CLASSIFICATION: SARA hazard categories, SARA section 311/312 (40CFR370.21): NONE
SARA section 313(40CFR 372.65): NONE

Complies with the following national/regional chemical inventory requirements: TSCA, EINECS

SECTION 16  OTHER INFORMATION

N/D = Not Determined, N/A = Not Applicable

THIS MSDS IS APPLICABLE THE FOLLOWING PRODUCTS:

| LESTAC-H5100 | LESTAC-H9100 |

The information and recommendations contained herein are, to the best of Lesco's knowledge and belief, accurate and reliable as of the date issued. The information and recommendations are offered for the user's consideration and examination. It is the user's responsibility to satisfy itself that the product is suitable for the intended use. If buyer repackages this product, it is the user's responsibility to insure proper health, safety and other necessary information is included with and/or on the container. Appropriate warnings and safe-handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Except to the extent required by law, re-publication or retransmission of this document, in whole or in part, is not permitted.

Note: Original data refer to Lesco Chemical Limited