Material Safety Data Sheet
Maleic Resin

SECTION 1.1 – PRODUCT IDENTIFICATION

Product Name	:	Maleic Resin
Molecular Formula	:	Not applicable
Molecular Weight	:	Not applicable
CAS No.	:	94581-16-5

SECTION: 1.2 COMPANY IDENTIFICATION

Company Name: Indenta Chemicals (India) Pvt. Ltd.
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SECTION 2: COMPOSITION / INFORMATION ON INGREDIENTS

Name	CAS #	% by Weight
Maleic Resin	94581-16-5	100

Toxicological Data on Ingredients: No Data Available

SECTION 3: HAZARD IDENTIFICATION

Potential Acute Health Effects:
Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion, of inhalation. Hazardous in case of skin contact (corrosive, permeator), of eye contact (corrosive). Liquid or spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Skin contact may produce burns. Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by coughing, choking, or shortness of breath. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:
Hazardous in case of skin contact (irritant), of ingestion, of inhalation. CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to kidneys, mucous membranes, skin, teeth. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated p. 2 or prolonged contact with spray mist may produce chronic eye irritation and severe skin irritation. Repeated or prolonged exposure to spray mist may produce respiratory tract irritation leading to frequent attacks of bronchial infection.

POTENTIAL HEALTH EFFECTS

Primary Routes of Entry: Inhalation, skin contact/absorption, eye contact, and ingestion.

General Acute Exposure: Liquid, mist, or vapours can cause eye, skin, and respiratory tract irritation and Central Nervous System (CNS) depression.

Inhalation:

Acute Exposure: Short-term exposure to high concentrations may cause CNS depression. Symptoms may include headache, weakness, drowsiness, light-headedness, nausea, difficult breathing, drunkenness, eye irritation, blurred vision, blindness, loss of consciousness, vertigo, fatigue, convulsions, and possibly death, depending on exposure. Victims may improve and then get worse again up to 30 hours later.

Skin:

Acute Contact: Upon prolonged or repeated contact, absorption through the skin may occur and produce toxic effects similar to those resulting from inhalation exposure. Repeated or prolonged skin contact may cause drying, cracking, and inflammation of the skin due to the defatting action of the product.

Eye:

Acute Contact: Eye irritation may occur upon short-term exposure, including a burning sensation, tearing, redness, or swelling. Upon direct contact with liquid, conjunctivitis and corneal burns may occur. The primary toxic effect is exerted upon the nervous system, particularly the optic nerves and possibly the retina. The condition can progress to permanent blindness.
Ingestion: Ingestion may cause serious poisoning with effects similar to those of inhalation and absorption through the skin. Toxic effects are more common after ingestion. Death from as little as one ounce has been reported.

Neurologic:

Acute Exposure: Central Nervous System (CNS) depression may occur upon exposure.

Summary of Chronic Exposure: It is slowly eliminated from the body; hence repeated exposures may result in toxic levels in the blood and tissues. Due to its slow elimination, it should be regarded as a cumulative poison. Though single exposures to fumes may cause no harmful effect, daily exposure may result in the accumulation of sufficient amount in the body to cause illness.

Note to the Physician: Coma resulting from massive exposures may last as long as 2-4 days. In the body, products formed by its oxidation are formaldehyde and formic acid.

Medical Conditions Aggravated by Exposure: Personnel with pre-existing CNS disease, skin disorders, impaired liver or kidney function, GI tract disorders or chronic respiratory diseases should avoid exposure.

SECTION 4: FIRST AID MEASURES

First Aid for Eyes: Immediately flush eyes with copious amounts of tepid water for at least 15 minutes. The patient should be seen in a health care facility and referral to an ophthalmologist considered.

First Aid for Skin: Immediately flush exposed area with copious amounts of tepid water for at least 15 minutes while removing contaminated clothing and shoes, followed by washing area thoroughly

with soap and water. The patient should be seen in a health care facility if irritation or pain persists or if symptoms of toxicity develop. Wash contaminated clothing and shoes before reuse.

First Aid for Inhalation: Move patient to fresh air and keep warm and at rest. Monitor for respiratory distress. If difficulty in breathing develops or if breathing has stopped, administer artificial respiration and seek medical attention. If trained to do so administer supplemental oxygen with assisted ventilation as required. Caution: Administration of mouth-to-mouth resuscitation may expose the first aid provider to chemical within the victim's lungs or vomit.

First Aid for Ingestion: If patient is conscious, immediately give two glasses of water and induce vomiting. Do not make an unconscious person vomit. Get medical attention immediately.

SECTION 5: FIRE AND EXPLOSION DATA

Suitable extinguishing media	Combustible if heated. Water spray, carbon dioxide and polyvalent foam.
Unsuitable extinguishing media	Dry powder cannot be used, because it contains sodium.
Special hazard arising from the chemical	May produce irritating and toxic gases if burning.
Special protective equipment for fire-fighters	Use self-contained breathing apparatus (SCBA) operated in positive pressure mode and complete protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spill or Leak Measures: Stop leak if you can do it without risk. Keep unnecessary people away and deny entry. Isolate spill or leak area immediately for at least 330 to 660 feet in all directions. Stay upwind, out of low areas, and ventilate closed spaces before entering. Eliminate all ignition sources. Do not touch or walk through spilled material. Prevent entry of product into waterways, sewers, basements, or confined spaces. A vapour suppressing foam may be used to reduce vapours. All equipment used when handling the product must be grounded and/or spark resistant. Water spray may reduce vapours but may not prevent ignition in closed spaces. Fully encapsulating, vapour protective clothing should be worn for spills and leaks with no fire.

Determining Spill Size: Generally, a small spill is one that involves a single, small package (i.e. up to a 55 gallon drum), small cylinder, or a small (non-continuing) leak from a large container.

Large Spill:

a. Dike far ahead of liquid spill for later disposal.
b. Follow local emergency protocol for handling.
c. Water spray may reduce vapor; but may not prevent ignition in closed spaces.

Small Spill:

a. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
b. Use clean non-sparking tools to collect absorbed material.

SECTION 7: HANDLING AND STORAGE

Precautions: In case of the product inhalation, handle with general/local ventilation system. Avoid inhalation, contact with skin and eyes. Do not handle near incompatible materials.

Storage: Keep only in original container, in a cool, dry, well ventilated place. Keep away from food. Store locked up. Keep out of reach of children. Avoid static electricity by grounding.

SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION

Skin Protection Requirements: Equipment should prevent repeated or prolonged skin contact with the product. This may include rubber boots, resistant gloves, and other impervious and resistant clothing. Compatible materials may include butyl rubber, natural rubber, neoprene, nitrile rubber, viton and others. Review the equipment manufacture's compatibility data.

Eye Protection Requirements: Use chemical (indirectly vented) goggles when there is a potential for contact with product, including vapour. A full-face shield may be worn over goggles for additional protection, but not as a substitute for goggles.

Other Protective Equipment: Safety shower and eyewash fountain should be provided. Proper fire extinguishment equipment must be kept in the handling area.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance	Yellowish transparent granular or piece
Softening point	130 +/- 5 degree C
Acid value	30 mgKOH/g max
Solubility in benzol	clear
Solubility in water	negligible
Vapor pressure	negligible
Percent volatiles by volume	negligible

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable under normal conditions of storage and handling. Polymerization will not occur.

Incompatible materials: Strong oxidants, alkaline metals, piridine, amines, alkalis, quinoline.

Hazardous decomposition products: May produce acrid smoke and fumes if burning. Carbon monoxide and dioxide and various hydrocarbons.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity: LD50 (oral, rats): 400 mg/Kg. LD50 (dermal, rats): 610 mg/kg Harmful if swallowed with abdominal pain, burning sensation, headache, nausea, vomiting and dizziness. May cause kidney damage and lung edema. Harmful in contact with skin. May cause irritation or burns to upper respiratory tract with sore throat, cough and shortness of breath, nosebleeding, redness of the throat and nose.

Skin corrosion/irritation: Causes skin irritation with redness, burns and pain.

Serious eye damage/irritation: Causes severe damage to the eyes with redness, pain, photophobia, conjunctivitis and blurred vision.

Respiratory or skin sensitization: May cause bronchitis, asthma and pulmonary edema. May cause dermatitis.

Carcinogenicity: Not listed as carcinogenic to humans (IARC).

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: The product may cause environmental damage because of its corrosivity.

Mobility in soil: Moderate mobility.

Persistence/degradability: It is expected that this product present rapid degradability and low persistence.

Bioaccumulative potential: It presents low potential of bioaccumulation in aquatic organisms.

SECTION 13: DISPOSAL CONSIDERATION

Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations

SECTION 14: TRANSPORT INFORMATION

Not classified as dangerous in the meaning of transport regulation

SECTION 15: OTHER REGULATORY INFORMATION

Regulatory: REGULATION (EC) No 1907/2006 of the European Parliament and of the Council, of 18 December 2006.

SECTION 16: ADDITIONAL INFORMATION

This information is provided for documentation purposes only.
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