

## SAFETY DATA SHEET

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### Maha™ MALEIC 237

1. Chemical Product and Company Identification	
Trade name	Maha™ MALEIC 237
Molecular Formula	Mixture
Molecular Weight	Not applicable
Company/Supplier information	Please contact the local distributor

2. Ingredients		
<u>Chemicals</u>	<u>CAS #</u>	<u>%</u>
Modified rosin ester resin	8051-10-7	> 99.5
<u>Composition</u>		
Rosin	-	76.4
Maleic Acid	-	9.6
Glycerol	-	13.9
Additive	-	0.1
Total:	-	100%

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3. Hazard Identification	
Emergency Overview: Color	Amber.
Appearance	Solid.
Odor	Slight Characteristic (rosin odor).
Potential Health Effect – Eye Contact	Dust/powder may irritate eye tissue. Rubbing may cause abrasion of the cornea. Symptoms may include irritation, redness, and cornea scratching and tearing. Vapors may also cause eye irritation. Thermal burn may result from eye contact with heated product.
Potential Health Effect – Skin Contact	Prolonged or repeated skin contact may cause irritation. Thermal burn may result from skin contact with heated product.
Potential Health Effect – Inhalation	Inhalation of dust may cause respiratory irritation. Inhalation of vapor/fume generated from product heating may cause respiratory irritation with throat discomfort, coughing and breathing difficulty.
Potential Health Effect – Ingestion	Ingestion of product may produce mild gastrointestinal disturbances.
Warning Statement	CAUTION THIS PRODUCT IS NON COMBUSTIBLE AND NON-REACTIVE SOLID MATERIAL. FLAKED MATERIAL MAY CAUSE DUSTING PROBLEM. PRODUCT MAY FORM EXPLOSIVE DUST/AIR MIXTURE IF HIGH CONCENTRATION OF PRODUCT DUST IS SUSPENDED IN AIR. STATIC ELECTRICAL CHARGES CREATED BY EMPTYING PRODUCT FROM UNGROUNDED CONTAINERS IN OR NEAR FLAMMABLE VAPOR MAY CAUSE FLASH FIRE. MAY CAUSE EYE IRRITATION. VAPOR MAY ALSO PRODUCE EYE IRRITATION. INHALATION OF VAPOR/FUME GENERATED BY HEATING THIS PRODUCT MAY CAUSE RESPIRATORY IRRITATION WITH THROAT DISCOMFORT, COUGHING, OR BREATHING DIFFICULTY.

4. First Aid Measures	
After Skin Contact	Rinse affected areas with soap and water. If irritation persists, get medical attention. In the case of hot/molten product skin contacts, cool the affected area with running water. Do not attempt to remove the hot, molten or cooled product from the skin. Seek medical attention.
After Eye Contact	Immediately rinse eyes with flooding cool low pressure water for at least 15 minutes. If irritation develops, get medical attention. In the case of hot/molten product eye contacts, flush affected area with water for at least 15 minutes and seek medical attention immediately.
After Ingestion	If swallowed, contact physician or poison control centre immediately. Do not induce vomiting unless directed by medical personnel.
After Inhalation	Move person to non contaminated air. Apply artificial respiration

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	in the absence of breathing. Seek medical attention.
Notes to physician	Provide general supportive measures and treat symptomatically. In case of ingestion, the decision to induce vomiting should be made by the physician. If burn is present, treat it as any thermal burn. Removal of adhered product from burned skin may compromise the skin integrity and result in more severe scarring.

5. Fire Fighting Measures	
Product Flammability	Non flammable.
Auto Ignition Temperature	N/A.
Flash Point (Closed Cup)	>125°C (Setaflash).
Flammable Limits	N/A.
General Fire Hazards	High concentration of airborne dust may form explosive mixture with air. Static electrical charges created by emptying product from ungrounded container in/near flammable vapor may cause flash fire. Product is not considered combustible. If heated above its flash point in the presence of air, product can support combustion.
Extinguishing Media	Use water, dry chemical and carbon dioxide.
Fire Fighting Equipment and Instructions for Fire Fighters	Wear full protective clothing, including self contained positive pressure/pressure demand breathing apparatus, helmet and protective clothing. Use water to cool fire exposed container and protect personnel.
Hazardous Decomposition Product	Smoke carbon monoxide, carbon dioxide and other combustion product.

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6. Accidental Release Measures	
Containment	Contain the discharged material. If airborne dust is generated, eliminate all sources of ignition that may come into contact with the dust.
Clean Up Procedure	Wear appropriate protective equipment and clothing during clean up. Avoid generation of dust during clean up. Wear an approved respirator if this is generated above exposure limits. If possible, try to reclaim free product. Shovel material into appropriate container for disposal. Follow all local, state and provincial regulation for disposal.
Evacuation Procedure	Person without appropriate protective equipment should be evacuated from area of spill until clean up has been completed.
Special Instruction	Avoid skin and eye contact. Avoid skin contact with molten product. Avoid inhalation of dust. Avoid inhalation of fumes from molten product.

7. Handling and Storage	
Handling	Avoid eye and skin contact. Avoid breathing dusts from this material. Avoid breathing of fumes if product is used at higher temperature. Maintain good housekeeping to prevent dust accumulation. Flaked or crushed material may cause dusting problem. If the product is in dust form, it is classified as dust explosion hazard class 11. If handling with flammable or combustible material, the explosion hazard may increase. Avoid ignition sources such as sparks and flames. In addition, when emptying bags where flammable vapor may be present, blanket vessel with inert gas; assure proper grounding and pour material slowly into conductive grounded chutes. Do not reheat product packaged in light metal container. The light metal container will not safely support the movement or transfer of the product in a hot, molten form. Do not chisel drum in area where flammable liquid is stored or used. Wash thoroughly after handling. Never eat, drink or smoke in work area. Practice good personal hygiene after using this material, especially before eating, drinking, smoking or applying cosmetic.
Storage	Store at ambient temperature and atmospheric pressure. Keep away from product dust accumulation. Flaked or crushed product may be prone to oxidation, therefore control inventory by applying FIFO. Suggest stainless steel construction for bulk storage.

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8. Exposure Controls & Personal Protection	
General	Use good industrial hygiene practices in handling this material. Eye wash fountain and emergency shower are recommended. Wash contaminated clothing before reuse.
Engineering Control	Provide local exhaust and good general ventilation systems to maintain airborne concentration below 10 mg/m <sup>2</sup> and manufacturer recommended exposure limits. Local exhaust ventilation is preferred because it prevents contaminant dispersion into work areas by controlling it at its source. Local exhaust ventilation is recommended when generating excessive levels of airborne dust or vapor from handling or thermal processing. Use electrically grounded explosion proof equipment for ventilation or any handling of this product.
Personal Protection – Eye	Wear chemical goggles and face shield when handling molten material.
Personal Protection – Skin	Use impervious gloves. Work clothing should be sufficient to prevent all skin contact. Use any type of thermal insulating gloves and other clothing as necessary for self protection from thermal burns.
Personal Protection – Inhalation	Respirator should be selected by and used under the direction of a trained health and safety professional following requirements. A written respiratory protection program, including provisions for medical certification, training, fit testing, exposure assessment, maintenance, inspection, cleaning and convenient sanitary storage must be implemented.

9. Physical & Chemical Properties	
Physical state	Solid.
Color (Gardner, 50% toluene)	<7
Acid Value, mg KOH/g resin	<30
Vapor Density	N/A
Flash Point (Close Cup), °C	>125 (Setaflash)
R/B Softening Point, °C	130±5
Specific Gravity	1.09

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Solubility in water	N/A
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10. Stability & Reactivity	
Chemical Stability	Product is stable.
Conditions to Avoid	Avoid strong oxidizing agent. Avoid dust dispersion in the air. Avoid sources of ignition where dust is produced.
Incompatibility	May react with strong oxidizing agents.
Hazardous Decomposition Products	Smoke, carbon monoxide, carbon dioxide and other products of combustion.
Hazardous Decomposition	Hazardous polymerization will not occur.

11. Toxicological Information	
Toxicity to Animal	No information is available for this product, however, information on similar product is as follows: Oral, rat, LD <sub>50</sub> ≥ 5000 mg/kg body weight when administered as 75% w/w solution in corn oil Dermal, rat, LD <sub>50</sub> ≥ 5000 mg/kg A similar product was found to produce mild eye and skin irritation in rabbits. A similar product was non mutagenic in the Ames Salmonella Assay.
Toxicity to Human	Direct contact may cause skin or eye irritation. Ingestion may cause nausea, vomiting and diarrhea. Inhalation of dust may cause respiratory irritation. Prolonged or repeated exposure to smoke/fume generated by heating this product may cause respiratory irritation with throat discomfort, coughing or breathing difficulty.

12. Ecological Information	
Ecotoxicity	This product does not exhibit immediate danger to the aquatic environment.
Environmental Fate	No information is available.

13. Disposal Considerations	

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**General**

Waste must be tested to determine if it meets applicable definition of hazardous waste. Disposal of waste material according to local, state and provincial environmental regulations.

**14. Transport Information**

## DOT Classification

Not a DOT controlled material

## DOT Identification Number

None

## Proper Shipping Name

None

## Packing Group

None

## Hazardous Substances

N/A

## Special Provision for Transport

If shipped over 100°C (but still below the flash point). DOT shipping name: Elevated Temperature Liquid, n.o.s; Hazard Class: 9; UN/UA Number: UN3257; Packing Group III (bulk shipping requires "HOT" placard)

## Additional Shipping Information

Not determined

## International Transport Regulation

Not determined

**15. Regulatory Information**

This product contains heat stability agent and light stability agent.

**16. Other Information**

No other information.

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