

MATERIAL SAFETY DATA SHEET

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Royal Adhesives & Sealants[®], PO Box 127, Simpsonville, SC 29681
24-Hour Emergency Telephone: (864) 967-7691

SECTION 1. PRODUCT IDENTIFICATION

PRODUCT NAME: PARABOND[®] M-250

CHEMICAL FAMILY: Contact Adhesive, solvent based, flammable

SECTION 2. HAZARDOUS INGREDIENTS AND EXPOSURE LIMITS

<u>Chemical Name</u>	<u>CAS Number</u>	<u>% by Weight</u>	<u>ACGIH TLV</u>	<u>OSHA PEL</u>
Toluene	108-88-3	11-15	50 ppm	200 ppm
Acetone	67-64-1	27-33	750 ppm	1000 ppm
Hexane	110-54-3	34-38	500 ppm	500 ppm

SECTION 3. HAZARDS IDENTIFICATION

PRIMARY ROUTES OF ENTRY: Eyes, skin, and respiratory system.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Respiratory problems, skin disorders.

POTENTIAL HEALTH EFFECTS:

EYE CONTACT: Can cause moderate to severe irritation, including discomfort, swelling, corneal damage, and blindness. Vapors can cause slight to moderate irritation.

SKIN CONTACT: Can cause moderate irritation, swelling, de-fatting, and dermatitis. Ingredients in Section 2 are absorbed through the skin into the blood upon contact.

INGESTION: Can cause gastrointestinal irritation, nausea, vomiting, and diarrhea. The possibility of aspiration of vapors into the lungs can lead to serious damage and chemical pneumonia.

INHALATION: Can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea, headache, possible unconsciousness, and asphyxiation.

CHRONIC: Chronic exposure by inhalation and skin absorption can cause damage to lungs, kidneys, liver, heart, and central nervous system, increase in birth defects, and lower fertility in males (based on animal tests).

CARCINOGENICITY: This product contains no ingredient above the OSHA minimum reporting threshold listed as a carcinogen by IARC, NTP, or OSHA.

SECTION 4. FIRST AID MEASURES

EYE CONTACT: Flush with water for 15 minutes. Get immediate medical attention.

SKIN CONTACT: Wash with soap and water. Call physician if irritation occurs.

INGESTION: To conscious person, give two glasses of water. Do not induce vomiting and call physician immediately.

INHALATION: Move person to fresh air. If breathing stops, administer artificial respiration and call physician immediately.

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SECTION 5. FIRE-FIGHTING MEASURES

FLASH POINT (°)F: - 10 [SCC]

*** FLAMMABLE LIQUID ***

LOWER FLAMMABLE LIMIT: 1.0

UPPER FLAMMABLE LIMIT: 7.5

AUTOIGNITION TEMPERATURE: 437° F.

FIRE-FIGHTING INSTRUCTIONS: Alcohol foam, CO₂, and dry chemical. Use protective clothing and self-contained breathing apparatus. Eliminate sources of ignition because vapors may travel along the ground or be moved by ventilation.

DECOMPOSITION PRODUCTS: Material may produce CO, CO₂, H₂O, hydrocarbons, and materials listed in SECTION 2.

SECTION 6. ACCIDENTAL RELEASE MEASURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED: Eliminate all ignition sources. Wear protective clothing including appropriate respiratory gear. Dike and pump liquid to waste containers. Dispense sand, sawdust, or vermiculite and absorb spill residue. Shovel into secure waste containers of solvent proof construction. Do not allow into waterways, sewers, or storm drains.

SECTION 7. HANDLING AND STORAGE

HANDLING: Store in well ventilated area. Use good hygienic practices. (Wash hands before eating, using washroom, or smoking.) Keep closure tight and container upright to prevent leakage. Drums of this material should be grounded and bonded when pouring. Do not puncture, drag, or slide container. Prevent prolonged or repeated breathing of vapor or mist. Do not weld or flame cut an empty drum. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal. This product as supplied is a liquid, and there are no dust hazards from the powders in it. When the product is processed, the powders should be encapsulated. The user must determine if there is a dust hazard because of the process used or the end use of the dried material.

*** Keep out of the reach of children ***

STORAGE: Store between 40° F and 100° F. DO NOT store or use near heat, sparks, or flame.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT:

EYE/FACE PROTECTION: Wear splash goggles, face shield, and/or full face respirator if contact with liquid is likely.

SKIN PROTECTION: Wear solvent impermeable gloves where contact with liquid is likely. Wear solvent resistant clothing where splash potential exists.

RESPIRATORY PROTECTION: If PEL or TLV is exceeded, use a NIOSH/MSHA approved respirator, or a positive pressure supplied air respirator. Dust masks are not acceptable to prevent inhalation hazards.

ENGINEERING CONTROLS: Use sufficient ventilation, in volume and pattern, to keep air contaminant concentration below PEL or TLV. Work areas must be free of all flame/ignition sources. Do not use in confined spaces without proper ventilation.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (°F): 149
VAPOR DENSITY (air=1): 3
% VOLATILE BY WEIGHT: 82
APPEARANCE AND ODOR: Hazy tan liquid with sweet-ketone odor.

VAPOR PRESSURE (mm Hg): 125 @ 68° F.
SPECIFIC GRAVITY (water= 1): 0.675

SECTION 10. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.
POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: Contact with hot surfaces, flame, sparks.
HAZARDOUS DECOMPOSITION PRODUCTS: None.

SECTION 11. TOXICOLOGICAL INFORMATION

Toluene: Acute Oral LD₅₀ (Rat) – 636 mg/kg. Toluene is classified as a Teratogen in animals.
Hexane: Acute Oral LD₅₀ (Rat) – 28,710 mg/kg Irritation: Eye (Rabbit) 10 mg – Mild.
Acetone: Acute Oral - LD₅₀ (Rat) – 5800 mg/kg LD_{Lo} (Man) – 2857 mg/kg
Acute Inhalation - TC₅₀ (Rat) – 44 mg/m³/4 hr TC_{Lo} (Man) – 500 ppm
Irritation: Eye (Rabbit) 20 mg – Severe Skin (Rabbit) 500 mg/24 hr and open irritation test – Mild.

SECTION 12. ECOLOGICAL INFORMATION

Toluene, Acetone, Hexane: Readily volatilize when released to air, ground, or water. Biodegradation in soil is gradual dependant on soil conditions. Degradation in air is via photochemical reaction (hydroxy radicals) with expected half lives of 3 hrs to 1 days for toluene, 1 to 10 days for hexane, and 22 days for acetone. Little to no bioaccumulation is expected.
Ecotoxicity: Toluene: LC₅₀ (Bluegill) – 17 mg/L/24 hr. 13 mg/L/96 hr.
Acetone: LC₅₀ (Rainbow Trout) – 5540 mg/L/96 hr. Sunfish, death – 14,250 ppm/24 hr.

SECTION 13. DISPOSAL CONSIDERATIONS

Dispose of in accordance with federal, state and local regulations. This product as received is a hazardous waste classified as ignitable/flammable (D001 – Ignitable) for disposal purposes.

SECTION 14. TRANSPORT INFORMATION

For domestic transportation purposes, this product is designated as a hazardous material by the U.S. Department Of Transportation.

DOT CLASSIFICATION: Proper Shipping Name: Adhesive Hazard Class: 3
ID Number: UN 1133, PG II Label: Extremely Flammable

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SECTION 15. REGULATORY INFORMATION

TSCA: All ingredients are listed on the TSCA inventory.

RCRA: This product meets the category definition of a hazardous waste. Hazardous waste number – U002; hazardous waste classification – Ignitable waste.

CERCLA:	<u>Chemical Name</u>	<u>RQ</u>
	Toluene	1,000 lbs.
	Acetone	5,000 lbs.
	Hexane	5,000 lbs.

SARA TITLE III:

Section 311 and 312 Health and Physical Hazards:

Immediate	Delayed	Fire	Pressure	Reactivity
[X]	[X]	[X]	[]	[]
Section 313 Chemicals:	<u>Chemical Name</u>	<u>CAS#</u>	<u>% by Weight</u>	
	Toluene	108-88-3	11 - 15 %	
	Hexane	110-54-3	34 - 38 %	

CALIFORNIA PROPOSITION 65: This product contains toluene, known to the State of California to cause developmental toxicity.

VOLATILE ORGANIC COMPOUNDS (VOC): Acetone: 27-33 %, Toluene: 11-15 %, Hexane: 34-38 %

HAZARDOUS AIR POLLUTANTS (HAP's): Toluene: 11-15 %, Hexane: 34-38 %.

CALIFORNIA VOC (Volatile Organic Compound) COMPLIANCE:

Contains Solvent.

SCAQMD Rule 1168: Not VOC compliant.

Grams of VOC less water and exempt compounds per Liter of Material - 351 grams/liter.

Grams of VOC less water and exempt compounds per Liter of Coating - 523 grams/liter.

SCAQMD Rule 443.1: Grams of VOC per Liter of Material - 574 grams/liter.

Grams of VOC per Liter of Coating - 574 grams/liter.

SECTION 16. OTHER INFORMATION

HMIS RATINGS: Health = 3* Flammability = 3 Reactivity = 0
Personal Protective Equipment = H * Denotes potential chronic health hazard
Hazard rating scale: 0=Minimal, 1=Slight, 2=Moderate, 3=Serious, 4=Severe

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PREPARED BY: R. W. Smith, Jr.

LABEL HAZARD WARNINGS

DANGER! EXTREMELY FLAMMABLE LIQUID AND VAPOR! VAPOR MAY CAUSE FLASH FIRE! HARMFUL OR FATAL IF SWALLOWED! HARMFUL IF INHALED! CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. CAN CAUSE BIRTH DEFECTS. CAUSES DAMAGE TO THE FOLLOWING TARGET ORGANS: KIDNEYS, LIVER, HEART, SKIN, EYES, CENTRAL NERVOUS SYSTEM, AND LUNGS.