
MATERIAL SAFETY DATA SHEET

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Revised 2/02/04
Replaces 8/12/03
Printed 2/03/04

RAM JET**MSDS ID: 03842**

I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: RAM JET

Product Descriptor: ALKALINE STEAM CLEANER

MANUFACTURER: JOHNSON DIVERSEY, INC.

EMERGENCY PHONE NUMBER: (800) 851-7145

3630 E. KEMPER ROAD

CINCINNATI, OH. 45241

II. HAZARDOUS COMPONENTS

Component Name	CAS Number	%	Exposure Limits	Units
DIETHYLENE GLYCOL MONOBUTYL ETHER	112-34-5	1 - 5%	None established	
LINEAR ALCOHOL ETHOXYLATE	68439-46-3	1 - 5%	None est.	
SODIUM HYDROXIDE	1310-73-2	1 - 5%	TLV-C 2	MG/M3

III. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

CORROSIVE MATERIAL - Causes severe burns to skin and eyes. Harmful if swallowed. Do not contact eyes, skin or clothing. Avoid breathing any dust, spray mist or vapors in spill area. Wash thoroughly after handling product. Wear eye protection, clothing and footwear to prevent skin contact.

POSSIBLE ROUTES OF ENTRY: Ingestion; Skin contact/absorption; Inhalation

SIGNS AND SYMPTOMS OF OVEREXPOSURE

ACUTE: EYES: Severe burns or irritation with pain, redness, swelling, and blurred or impaired vision. SKIN: Burns, blisters or rash with pain and swelling. INGESTION: Burns or irritation to mouth, throat with pain, nausea and vomiting. INHALATION: Spray or mist causes severe irritation with pain, choking, and breathing difficulty.

CHRONIC: Same as acute effects.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Dermatitis or sensitive skin.

TARGET ORGAN(S) OF CHEMICAL HAZARD(S): Eyes, skin and respiratory tract.

IV. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Hold eyelids apart to completely flush all chemicals from entire eye surface. Get immediate medical attention.

SKIN: Flush thoroughly with plenty of water. Wash with mild soap and water. Remove contaminated clothes and shoes and clean before reuse. Get medical attention for any painful, red or injured skin.

INGESTION: If swallowed, rinse mouth with water. Dilute by drinking several glasses of water. DO NOT induce vomiting. If patient vomits, rerinse mouth. Get immediate medical attention. NOTE: Never

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IV. FIRST AID MEASURES (Cont.)

give fluids by mouth to an unconscious person.
INHALATION: If inhaled, move to fresh air. If patient is not breathing, give artificial respiration. If breathing is difficult, give oxygen under the direction of trained personnel or a physician. Get immediate medical attention.

V. FIRE FIGHTING MEASURES

FLASH POINT (degrees F): NA **FLAME EXTENSION:** N/A
FLAMMABLE LIMITS IN AIR BY VOLUME: LEL: ND UEL: ND
UNUSUAL FIRE OR EXPLOSIVE HAZARDS: Toxic fumes or vapor may form during fire.
EXTINGUISHING MEDIA: Water spray, CO2, foam or dry powder.
FIRE FIGHTING INSTRUCTIONS: Wear full protective gear and positive pressure breathing apparatus (SCBA) in fire area.
SPECIAL INSTRUCTIONS: Spilled product may cause slippery surface and fall hazard.

VI. ACCIDENTAL RELEASE MEASURES

IF MATERIAL IS RELEASED OR SPILLED:
Contain spill. Wear protective clothing. Soak up or absorb liquid on suitable absorbent material. Collect and place in chemical waste container. Dispose of in accordance with local, State and Federal regulations. Flush spill area with water.
The Reportable Quantity (RQ) of Sodium Hydroxide, CAS #1310-73-2 is 3,802 gallons or 33,297 lbs.

VII. HANDLING AND STORAGE

HANDLING AND STORAGE PRECAUTIONS: Store in a cool, dry area, keep away from acids. Keep container closed when not in use. Wear protective gear when handling or using. Do not pressurize container to empty.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE/FACE PROTECTION: Chemical goggles if contact or splash hazard exists.
PROTECTIVE GLOVES: Alkali resistant.
RESPIRATORY PROTECTION: Use NIOSH/MSHA approved respirator where TLV/PEL may be exceeded.
OTHER PROTECTIVE CLOTHING/EQUIPMENT: Rubber boots and chemical resistant apron if contact or splash hazard exists.
ENGINEERING CONTROLS:
VENTILATION: Good general ventilation should be sufficient to control airborne levels.

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IX. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR: Clear, light green liquid; mild odor.

BOILING POINT (DEG F): 212	FREEZING POINT: ND
SPECIFIC GRAVITY/BULK DENSITY: 1.05	
pH: 13	pH 1% SOLUTION: 11.3
VOLATILE BY VOLUME: 89.4	
SOLUBILITY IN WATER: Soluble	
VAPOR PRESSURE(mmHg): ND at ND	VAPOR DENSITY: ND

X. STABILITY AND REACTIVITY

CHEMICAL STABILITY: Product stable.
INCOMPATIBILITY WITH OTHER MATERIALS: Acids; Oxidizing agents
HAZARDOUS DECOMPOSITION PRODUCTS: Incomplete combustion forms; oxides of oxygen; oxides of carbon
HAZARDOUS POLYMERIZATION: None known.

XI. TOXICOLOGICAL INFORMATION

TOXICOLOGICAL TESTING: Toxicological testing has not been performed on the product. Listed below is the available toxicology test data for components of the product.

TOXICITY TEST DATA:

Sodium Hydroxide:

Acute Oral LD50 (rat)	500 mg/kg (RTECS)
Acute Skin LD50 (rabbit)	1350 mg/kg (MSI)

XII. ECOLOGICAL INFORMATION

ECOTOXICITY TEST DATA:

No data available.

ENVIRONMENTAL FATE: No data available.

XIII. DISPOSAL CONSIDERATIONS

RCRA REGULATED: RCRA Regulated Hazardous Waste D002 - Corrosivity Characteristic.

Adjust pH of diluted product and discharge to industrial sewer in accordance with discharge permit or local POTW regulations. Use product in container until empty. Triple rinse container with water and add to process. Recycle or dispose of container according to product labeling or Federal, State or local regulations.

XIV. TRANSPORT INFORMATION

Please refer to the Bill of Lading/receiving documents for up to date shipping information.

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XV. REGULATORY INFORMATION

U.S. Federal Regulations:

TSCA: All ingredients in this product are on TSCA inventory.

HAPS: Di Ethylene Glycol Monobutyl Ether, CAS #112-34-5 at 1%.

VOC CONTENT (EPA Method 24A): % VOC: 1 Lb/Gal VOC: 0.09

CERCLA/EPCRA:

Section 313 Toxic Chemicals:

DIETHYLENE GLYCOL MONOBUTYL ETHER -

CAS #112-34-5 AT 1%.

SARA Section 311/312:

ACUTE: YES CHRONIC: NO FIRE: NO REACTIVITY: NO

SUDDEN RELEASE OF PRESSURE: NO

LISTED CARCINOGEN: NONE

NTP: NO IARC: NO OSHA: NO

HMIS RATINGS: HEALTH: 3 FIRE: 0 REACTIVITY: 0

PERSONAL PROTECTIVE EQUIPMENT: D

NFPA RATING: HEALTH: 3 FIRE: 0 REACTIVITY: 0 SPECIAL: Alkaline

STATE RIGHT-TO-KNOW INFORMATION:

WATER - CAS #7732-18-5

SODIUM HYDROXIDE - CAS #1310-73-2

DIETHYLENE GLYCOL MONOBUTYL ETHER - CAS #112-34-5

LINEAR ALCOHOL ETHOXYLATE - CAS #68439-46-3

CALIFORNIA PROPOSITION 65:

None of the ingredients are on the California proposition 65 list.

XVI. OTHER INFORMATION

Disclaimer: The information contained in this material safety data sheet is based on the knowledge of this specific product and current national legislation. It applies to the product as sold, use dilutions may be less hazardous. It may not be valid for this material if used in combination with any other materials or in a process. It is the user's responsibility to evaluate the handling, and use.