SHIPLEY

MATERIAL SAFETY DATA SHEET
EAGLE 2009 REMOVER
32732 5.00 US US MSDS_US

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Code	32732
Trade Name	EAGLE 2009 REMOVER
Manufacturer/Supplier	Shipley Company
Address	455 Forest St. Marlborough, Massachusetts 01752
Phone Number	(508) 481-7950
Emergency Phone Number	(508) 481-7950
Chemtrec #	(800) 424-9300
MSDS first issued	22 October 1996
MSDS data revised	14 May 1998
Prepared By:	Amy C. Nichols
Local Sales Company	Shipley Company, 455 Forest Street, Marlboro, MA 01752 (508-481-7950)

2. COMPOSITION/INFORMATION ON THE INGREDIENTS

Components in Product

Component Name	CAS# / Codes	Concentration
potassium hydroxide	1310-58-3	1.00 - 5.00
water	7732-18-5	1.00 - 5.00
ethylene glycol n-butyl ether	111-76-2	53.00 - 58.00
monoethanolamine	141-43-5	37.00 - 42.00

3. HAZARD IDENTIFICATION

Main Hazards	- Corrosive - Combustible - Skin - Eye - Liver - Kidney - Nervous System - Blood - Respiratory System
Routes of Entry	Inhalation, ingestion, eye and skin contact, absorption.
Carcinogenic Status	Not considered carcinogenic by NTP, IARC and OSHA
Target Organs	- Eye - Skin - Liver - Kidney - Blood - Nervous System - Respiratory System
Health Effects - Eyes	Liquid will cause severe conjunctival irritation, corneal damage, and may result in loss of vision. Vapor or mist will cause severe conjunctival irritation and corneal damage.
Health Effects - Skin	Material will cause severe irritation and may cause chemical

3. HAZARD IDENTIFICATION

burns. Repeated and/or prolonged contact may lead to: - drowsiness - kidney damage - hemolysis - central nervous system depression - reduction in the oxygen carrying capacity of the blood
Material is toxic by skin absorption.

Health Effects - Ingestion

Swallowing may have the following effects:
- corrosion of mouth, throat and digestive tract
A large dose may have the following effects:
- drowsiness - liver damage - kidney damage - central nervous system depression - reduction in the oxygen carrying capacity of the blood

Health Effects - Inhalation

Exposure to vapor or mist may have the following effects:
- severe irritation of nose, throat and respiratory tract
Exposure to mist at high concentrations may have the following effects:
- severe irritation to nose, throat and respiratory tract and possibly lung damage - liver damage - kidney damage - central nervous system depression - reduction in the oxygen carrying capacity of the blood

4. FIRST AID MEASURES

First Aid - Eyes

Immediately flush the eye with plenty of water for at least 20 minutes, holding the eye open. Obtain medical attention immediately.

First Aid - Skin

Immediately flush the skin with large quantities of water, preferably under a shower. Remove contaminated clothing while flushing skin. Continue washing for at least 15 minutes. Contaminated clothing should be washed or dry-cleaned before re-use. Obtain medical attention immediately.

First Aid - Ingestion

Do not induce vomiting. Wash out mouth with water. Obtain medical attention immediately

First Aid - Inhalation

Remove from exposure. If there is difficulty in breathing, give oxygen. Obtain medical attention immediately

Advice to Physicians

Treat symptomatically. Treat skin burns conventionally.

5. FIRE FIGHTING MEASURES

Extinguishing Media	Use water spray, foam, dry chemical or carbon dioxide. Keep containers and surroundings cool with water spray.
Special Fire-Fighting Procedures	This product may give rise to hazardous vapors in a fire. Vapors can travel a considerable distance to a source of ignition and result in flashback.
Unusual Fire & Explosion Hazards	Pressure may build up in closed containers with possible liberation of combustible vapors.
Protective Equipment for Fire-Fighting	Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures	Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal. Finally flush area with plenty of water.
Personal Precautions	Wear appropriate protective clothing. Wear respiratory protection. Eliminate all sources of ignition.
Environmental Precautions	Prevent the material from entering drains or water courses.

7. HANDLING AND STORAGE

Handling	Use local exhaust ventilation. Avoid contact with eyes, skin and clothing. Emergency shower and eye wash facilities should be readily available. Avoid inhaling vapor Keep container tightly closed when not in use.
Storage	Store in original containers. Storage area should be: - cool - dry - well ventilated - out of direct sunlight - away from incompatible materials

Other
None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Standards

potassium hydroxide	ACGIH: 2mg/m3 Ceiling limit. UK EH40: OES 2mg/m3 15min TWA.
ethylene glycol n-butyl ether	ACGIH: TLV 25ppm (120mg/m3) 8h TWA. OSHA: PEL 50ppm (240mg/m3) 8h TWA. Can be absorbed through skin.
monoethanolamine	ACGIH: TLV 3ppm (7.5mg/m3) 8h TWA. ACGIH: STEL 6ppm (15mg/m3) 15min TWA. OSHA: PEL 3ppm (6mg/m3) 8h TWA.
Engineering Control Measures	Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical ventilation (local exhaust), and control of process conditions.
Respiratory Protection	Respiratory protection if there is a risk of exposure to high vapor concentrations. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.
Hand Protection	Nitrile rubber gloves.
Eye Protection	Chemical goggles and face shield.
Body Protection	- rubber apron

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Color	Natural, slightly white
Odor	Glycol Ethereal
VOC (g/l)	917.70
Specific Gravity	0.966
pH	>13
Boiling Range/Point (°C/F)	Not determined.
Flash Point (PMCC) (°C/F)	73 / 163
Explosion Limits (%)	ethylene glycol n-butyl ether: Lower limit 1.1%
Solubility in Water	Completely soluble.
Vapor Density (Air = 1)	Not applicable.
Evaporation Rate	Slower than ether
Vapor Pressure	ethylene glycol n-butyl ether: 0.6 mmHg at 20 °C. monoethanolamine: <0.1 mmHg at 20 °C.

10. STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Conditions to Avoid	- contact with incompatible materials
Incompatibilities	- Acids - Oxidizing agents
Hazardous Polymerization	Will not occur.
Hazardous Decomposition Products	- oxides of nitrogen - carbon monoxide - Carbon Dioxide

11. TOXICOLOGICAL INFORMATION

Acute Data	Ethylene glycol n-butyl ether: Oral LD50 (rat) 470mg/kg. Oral LD50 (guinea pig) 1,400mg/kg. Dermal LD50 (rabbit) 220mg/kg. Dermal LD50 (guinea pig) >2000mg/kg. Inhalation LC50 (mouse) 700ppm 7h. Inhalation LC50 (rat) 450ppm 4h.
Chronic/Subchronic Data	No adverse effects are expected.
Genotoxicity	Ethylene glycol n-butyl ether: Invitro tests were inconclusive. Animal tests negative.
Reproductive/Developmental Toxicity	Experimental studies in animals have provided some evidence of embryo/fetotoxicity and birth defects only at doses producing marked maternal toxicity.
Additional Data	None.

12. ECOLOGICAL INFORMATION

Mobility	The product will dissolve rapidly in water. The product is poorly absorbed onto soils or sediments. The product will leach into soil.
Persistence/Degradability	The organic part of the product is expected to be readily biodegradable This products contains inorganic salts and/or elements which can persist indefinitely. The term "biodegradation" does not apply to inorganics.
Bio-accumulation	The organic part of this product is not expected to bioaccumulate. The inorganic(s) is taken up by plants and animals and used as an essential nutrient.

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is rated as practically non-toxic to aquatic species.
Ethylene glycol n-butyl ether: Tests on the following species gave a 96h LC50 of >1,000mg/litre:
- rainbow trout
Tests on the following species gave a 96h LC50 of 127mg/litre:
- bluegills

Monoethanolamine: Tests on the following species gave a 96h LC50 of 140mg/litre:
- daphnia
Tests on the following species gave a 96h LC50 of 150mg/litre:
- rainbow trout

13. DISPOSAL CONSIDERATIONS

Product Disposal

Dispose of in accordance with all applicable local and national regulations.

Container Disposal

Labels should not be removed from containers until they have been cleaned. Empty containers may contain hazardous residues. Dispose of containers with care.

14. TRANSPORT INFORMATION

DOT Ground:	Corrosive liquid, N.O.S.
UN Proper Shipping Name	Corrosive liquid, n.o.s.
UN Class	(8) Corrosive
UN Number	UN 1760
UN Packaging Group	II
N.O.S. 1:	Potassium Hydroxide Solution
N.O.S. 2:	Monoethanolamine
Subsidiary Risks	None.
ADR/RID Substance Identification Number	Data not available.
CERCLA RQ	Potassium Hydroxide (1000#)
Marine Pollutant	None.

15. REGULATORY INFORMATION

TSCA Listed	Yes

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15. REGULATORY INFORMATION

TSCA Exemptions	
WHMIS Classification	E, B.3, D.2.B.
MA Right To Know Law	All components have been checked for inclusion on the Massachusetts Substance List (MSL). Those components present at the de minimus concentration have been identified in the hazardous ingredients section of the MSDS.
California Proposition 65	This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm.
SARA TITLE III-Section 311/312 Categorization (40 CFR 370)	Immediate, delayed health hazard
SARA TITLE III-Section 313 (40 CFR 372)	This product contains a chemical which is listed in Section 313 at or above de minimis concentrations. The following listed chemicals are present: (quantity present is found elsewhere on this MSDS) - 2-butoxyethanol as glycol ethers (111-76-2)

16. OTHER INFORMATION

NFPA Rating- FIRE	2
NFPA Rating- HEALTH	2
NFPA Rating- REACTIVITY	0
NFPA Rating- SPECIAL	None.
Revisions Highlighted	Hazard Identification Occupational Exposure Standards Toxicological Information
Abbreviations	CAS#: Chemical Abstract Services Number ACGIH: American Conference of Governmental Industrial Hygienists OSHA: Occupational Safety and Health Administration TLV: Threshold Limit Value PEL: Permissible Exposure Limit STEL: Short Term Exposure Limit NTP: National Toxicology Program IARC: International Agency for Research on Cancer R: Risk S: Safety LD50: Lethal Dose 50% LC50: Lethal Concentration 50% BOD: Biological Oxygen Demand Koc: Soil Organic Carbon Partition Coefficient.

16. OTHER INFORMATION

TLm: Median Tolerance Limit

Disclaimer

The data contained herein is based on information that Shipley Company believes to be reliable, but no expressed or implied warranty is made with regard to the accuracy of such data or its suitability for a given situation. Such data relates only to the specific product described and not to such products in combination with any other product and no agent of Shipley Company is authorized to vary any of such data. Shipley Company and its agents disclaim all liability for any action taken or foregone on reliance upon such data.