



MATERIAL SAFETY DATA SHEET

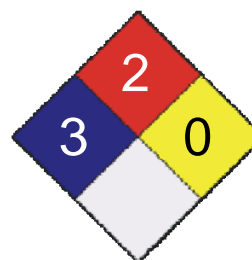
1. Product and Company Identification

Product Name Rhino Blast Graffiti Remover
CAS # Mixture
Product use Cleaner
Manufacturer Graffiti Solutions Canada
7785 Franktown Road
Richmond, ON K0A 2Z0 CA
Phone: 613-838-5842
Phone: 866-906-9273
Fax: 613-838-5843
613-996-6666

CANUTEC

LEGEND HMIS/NFPA	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

Health	* 3
Flammability	2
Physical Hazard	0
Personal Protection	B



2. Hazards Identification

Emergency overview DANGER -- CORROSIVE
Combustible liquid. Keep away from heat and flame.
Contains a potential mutagen.

Potential short term health effects

Routes of exposure Eye, Skin contact, Skin absorption, Inhalation, Ingestion.

Eyes May cause chemical burns. May cause blindness.

Skin May cause chemical burns. Harmful contact may not cause immediate pain. This product may be harmful if it is absorbed through the skin.

Inhalation Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).

Ingestion Harmful if swallowed. May cause chemical burns to mouth, throat and stomach. Acute oral exposure to aryl alcohol affects the nervous system (excitability, lethargy, incoordination, hindlimb paralysis, convulsions, prostration and dyspnea).

Target organs Eyes. Respiratory system. Liver. Skin.
Based on published data, if contact is repeated and prolonged, monoethanolamine may cause liver and kidney damage. These effects have not been observed in humans.

Chronic effects This product may be harmful if it is absorbed through the skin. Prolonged or repeated exposure to dilutions can cause drying, defatting and dermatitis.

Signs and symptoms The product causes burns of eyes, skin and mucous membranes.

3. Composition / Information on Ingredients

Ingredient(s)	CAS #	Percent (w/w)
Potassium hydroxide	1310-58-3	5 - 10
Aryl alcohol	HMIRC#7218	40 - 70
Monoethanolamine	141-43-5	1 - 5
Ethanol	64-17-5	0.1 - 1

Composition comments This product has been granted a trade secret exemption. The granted date associated with this trade secret exemption is March 3, 2009.

4. First Aid Measures

First aid procedures

Eye contact	Immediately flush the contaminated eye(s) with lukewarm gently flowing water for at least 60 minutes, while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye (or face).
Skin contact	Under running water, remove contaminated clothing, shoes and leather goods. Continuously flush the contaminated area with lukewarm gently flowing water for at least 60 minutes.
Inhalation	If symptoms develop, move victim to fresh air. If symptoms persist, obtain medical attention. If breathing has stopped, trained personnel should administer CPR immediately.
Ingestion	Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Obtain medical attention. Never give anything by mouth if victim is unconscious, or is convulsing.

General advice

Keep away from sources of ignition. No smoking. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Avoid contact with eyes and skin. Keep out of reach of children.

5. Fire Fighting Measures

Flammable properties	Combustible by WHMIS/OSHA criteria.
Extinguishing media	
Suitable extinguishing media	Carbon dioxide. Alcohol foam. Water spray. Water Fog. Dry chemical powder.
Unsuitable extinguishing media	Not available
Protection of firefighters	
Specific hazards arising from the chemical	Not available
Protective equipment for firefighters	Firefighters should wear full protective clothing including self contained breathing apparatus.
Hazardous combustion products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Oxides of sulphur.
Explosion data	
Sensitivity to mechanical impact	Not available
Sensitivity to static discharge	Not available

6. Accidental Release Measures

Personal precautions	Keep unnecessary personnel away. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.
Methods for containment	Stop leak if you can do so without risk. Prevent entry into waterways, sewers, basements or confined areas. Use water spray to reduce vapours or divert vapour cloud drift.
Methods for cleaning up	Remove sources of ignition. Before attempting clean up, refer to hazard data given above. Small spills may be absorbed with non-reactive absorbent and placed in suitable, covered, labelled containers. Prevent large spills from entering sewers or waterways. Contact emergency services and supplier for advice. Never return spills in original containers for re-use. Large Spills: Wet down with water and dike for later disposal. After removal flush contaminated area thoroughly with water.

7. Handling and Storage

Handling	Use good industrial hygiene practices in handling this material. Do not get this material in your eyes, on your skin, or on your clothing.
Storage	Keep out of reach of children. Do not store at temperatures above 120°F (49°C). Store in a closed container away from incompatible materials.

8. Exposure Controls / Personal Protection

Exposure limits

Ingredient(s)	Exposure Limits
Aryl alcohol	ACGIH-TLV Not established OSHA-PEL Not established
Ethanol	ACGIH-TLV TWA: 1000 ppm OSHA-PEL TWA: 1000 ppm
Monoethanolamine	ACGIH-TLV TWA: 3 ppm STEL: 6 ppm OSHA-PEL TWA: 3 ppm
Potassium hydroxide	ACGIH-TLV Ceiling: 2 mg/m ³ OSHA-PEL Not established

Aryl alcohol has an AIHA WEEL exposure limit of 10ppm (8hr TWA).

Engineering controls General ventilation normally adequate.

Personal protective equipment

Eye / face protection	Wear chemical goggles.
Hand protection	Rubber gloves. Confirm with a reputable supplier first.
Skin and body protection	As required by employer code.
Respiratory protection	Where exposure guideline levels may be exceeded, use an approved NIOSH respirator.
General hygiene considerations	Use good industrial hygiene practices in handling this material. When using do not eat or drink. Wash hands before breaks and immediately after handling the product.

9. Physical & Chemical Properties

Appearance	White
Color	White.
Form	gel
Odor	faint aromatic
Odor threshold	Not available
Physical state	Liquid
pH	11.6
Melting point	Not available
Freezing point	-24 °C (-11.20 °F)
Boiling point	200 °C (392.00 °F)
Flash point	92 °C (197.60 °F) Tag Closed Cup
Evaporation rate	Not available
Flammability limits in air, lower, % by volume	Not available
Flammability limits in air, upper, % by volume	Not available
Vapor pressure	Not available
Vapor density	Not available
Specific gravity	Not available
Octanol/water coefficient	Not available

Solubility (H2O)	Not available
Auto-ignition temperature	Not available
VOC (Weight %)	Not available
Viscosity	Viscous
Percent volatile	Not available

10. Stability & Reactivity

Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Do not mix with other chemicals. Reacts violently with acids. This product may react with oxidizing agents. Avoid high temperatures.
Incompatible materials	Acids. Oxidizing agents.
Hazardous decomposition products	May include and are not limited to: Oxides of carbon. Oxides of nitrogen. Oxides of sulphur.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Acute effects Monoethanolamine has a dermal LD50 (rabbit) of 1.0 mL/Kg (1018 mg/kg; specific gravity at 20°C = 1.018 g/mL)

Component analysis - LC50

Ingredient(s)	LC50
Aryl alcohol	8.8 mg/l/4h rat
Ethanol	31623 ppm rat
Monoethanolamine	1210 mg/m3 mouse
Potassium hydroxide	Not available

Component analysis - Oral LD50

Ingredient(s)	LD50
Aryl alcohol	1230 mg/kg rat
Ethanol	3450 mg/kg mouse; 7060 mg/kg rat
Monoethanolamine	1720 mg/kg rat; 700 mg/kg mouse
Potassium hydroxide	214 mg/kg rat

Effects of acute exposure

Eye	May cause chemical burns. May cause blindness.
Skin	May cause chemical burns. Harmful contact may not cause immediate pain. This product may be harmful if it is absorbed through the skin.
Inhalation	Excessive intentional inhalation may cause respiratory tract irritation and central nervous system effects (headache, dizziness).
Ingestion	Harmful if swallowed. May cause chemical burns to mouth, throat and stomach. Acute oral exposure to aryl alcohol affects the nervous system (excitability, lethargy, incoordination, hindlimb paralysis, convulsions, prostration and dyspnea).

Sensitization

Aryl alcohol has caused skin sensitization in workers and animals.

Chronic effects

Based on published data, if contact is repeated and prolonged, monoethanolamine may cause liver and kidney damage. These effects have not been observed in humans.

Carcinogenicity

See below.

ACGIH - Threshold Limit Values - Carcinogens

Ethanol 64-17-5 A4 - Not Classifiable as a Human Carcinogen

IARC - Group 1 (Carcinogenic to Humans)

Ethanol 64-17-5 Monograph 96 [2007] (in alcoholic beverages)

Mutagenicity

Aryl alcohol has caused an increase in chromosomal aberrations in Chinese hamster ovary cells. Mutagenic effects were observed in somatic and reproductive cells of live animals (rats and mice) exposed to high oral doses of ethanol.

Reproductive effects

Non-hazardous by WHMIS/OSHA criteria.

Teratogenicity

Animal studies demonstrate that ingestion of ethanol can cause embryotoxicity, teratogenicity and fetotoxicity in the presence of maternal toxicity.

12. Ecological Information

Ecotoxicity Components of this product have been identified as having potential environmental concerns.

Ecotoxicity - Freshwater Algae Data

Aryl alcohol	Trade Secret	3 Hr EC50 Anabaena variabilis: 35 mg/L
Monoethanolamine	141-43-5	72 Hr EC50 Scenedesmus subspicatus: 15 mg/L

Ecotoxicity - Freshwater Fish Species Data

Aryl alcohol	Trade Secret	96 Hr LC50 Pimephales promelas: 460 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 10 mg/L [static]
Ethanol	64-17-5	96 Hr LC50 Oncorhynchus mykiss: 12900 mg/L [flow-through] (30 days old); 96 Hr LC50 Pimephales promelas: 14.2 mg/L
Monoethanolamine	141-43-5	96 Hr LC50 Pimephales promelas: 227 mg/L [flow-through]; 96 Hr LC50 Brachydanio rerio: 3684 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 329.16 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 150 mg/L [static]
Potassium hydroxide	1310-58-3	24 Hr LC50 Gambusia affinis: 80.0 mg/L

Ecotoxicity - Microtox Data

Aryl alcohol	Trade Secret	5 Min EC50 Photobacterium phosphoreum: 63.7 mg/L; 15 min EC50 Photobacterium phosphoreum: 63.7 mg/L; 30 min EC50 Photobacterium phosphoreum: 71.4 mg/L; 5 min EC50 Photobacterium phosphoreum: 50 mg/L
Ethanol	64-17-5	5 Min EC50 Photobacterium phosphoreum: 35470 mg/L; 30 min EC50 Photobacterium phosphoreum: 34634 mg/L
Monoethanolamine	141-43-5	30 Min EC50 Photobacterium phosphoreum: 13.7 mg/L; 17 Hr EC50 Pseudomonas putida: 110 mg/L; 2 Hr EC50 Nitrosomonas: 12200 mg/L

Ecotoxicity - Water Flea Data

Aryl alcohol	Trade Secret	48 Hr EC50 water flea: 23 mg/L
Ethanol	64-17-5	48 Hr EC50 Daphnia magna: 9268 mg/L; 24 Hr EC50 Daphnia magna: 10800 mg/L
Monoethanolamine	141-43-5	48 Hr EC50 Daphnia magna: 65 mg/L

Environmental effects	Not available
Aquatic toxicity	Not available
Persistence / degradability	Not available
Bioaccumulation / accumulation	Not available
Partition coefficient	Not available
Mobility in environmental media	Not available
Chemical fate information	Not available
Other adverse effects	Not available

13. Disposal Considerations

Waste codes	Not available
Disposal instructions	Dispose in accordance with all applicable regulations.
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14. Transport Information

U.S. Department of Transportation (DOT)

Basic shipping requirements:

Proper shipping name	Corrosive liquids, n.o.s. (POTASSIUM HYDROXIDE RQ = 13280 lbs)
Hazard class	8
UN number	UN1760
Packing group	II
Additional information:	
Special provisions	B2, IB2, T11, TP2, TP27
Packaging exceptions	154
ERG number	154



Transportation of Dangerous Goods (TDG - Canada)

Basic shipping requirements:

Proper shipping name	CORROSIVE LIQUID, N.O.S. (POTASSIUM HYDROXIDE)
Hazard class	8
UN number	UN1760
Packing group	II
Additional information:	
Special provisions	16



15. Regulatory Information

Canadian federal regulations This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Canada - WHMIS - Ingredient Disclosure List

Aryl alcohol	Trade Secret	1 %
Ethanol	64-17-5	0.1 %
Monoethanolamine	141-43-5	1 %
Potassium hydroxide	1310-58-3	1 %

US Federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

Potassium hydroxide	1310-58-3	1000 Lb final RQ; 454 kg final RQ
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U.S. - CWA (Clean Water Act) - Hazardous Substances

Potassium hydroxide	1310-58-3	Present
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Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity

Potassium hydroxide: 1000.0000
Sodium dodecylbenzene sulfonate: 1000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - Yes
Pressure Hazard - No
Reactivity Hazard - No

Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes

Clean Air Act (CAA) Not available

Clean Water Act (CWA) Not available

Safe Drinking Water Act (SDWA) Not available

Drug Enforcement Agency (DEA) Not available

Food and Drug Administration (FDA) Not available

WHMIS status Controlled

WHMIS classification Class B - Division 3 - Combustible Liquid, Class D - Division 2A, Class E - Corrosive Material

WHMIS labeling



State regulations

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

U.S. - California - 8 CCR Section 339 - Director's List of Hazardous Substances

Ethanol	64-17-5	Present (refers to solutions greater than or equal to 25% which are not beverage alcohols)
Monoethanolamine	141-43-5	Present
Potassium hydroxide	1310-58-3	Present

U.S. - California - Proposition 65 - Developmental Toxicity

Ethanol	64-17-5	developmental toxicity, initial date 10/1/87 (when in alcoholic beverages)
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U.S. - Illinois - Toxic Air Contaminants

Monoethanolamine	141-43-5	Present
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U.S. - Louisiana - Reportable Quantity List for Pollutants

Potassium hydroxide	1310-58-3	1000 Lb final RQ; 454 kg final RQ
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U.S. - Massachusetts - Right To Know List

Aryl alcohol	Trade Secret	Present
Ethanol	64-17-5	Teratogen
Monoethanolamine	141-43-5	Present
Potassium hydroxide	1310-58-3	Present

U.S. - Minnesota - Hazardous Substance List

Aryl alcohol Ethanol	Trade Secret	Present
Monoethanolamine	64-17-5	Present
Potassium hydroxide	141-43-5	Present
	1310-58-3	Present

U.S. - New Jersey - Right to Know Hazardous Substance List

Aryl alcohol Ethanol	Trade Secret	sn 2079
Monoethanolamine	64-17-5	sn 0844
Potassium hydroxide	141-43-5	sn 0835
	1310-58-3	sn 1571

U.S. - New York - Reporting of Releases Part 597 - List of Hazardous Substances

Potassium hydroxide	1310-58-3	1000 Lb RQ (air); 100 lb RQ (land/water)
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U.S. - Pennsylvania - RTK (Right to Know) List

Aryl alcohol	Trade Secret	Present
Ethanol	64-17-5	Present
Monoethanolamine	141-43-5	Present
Potassium hydroxide	1310-58-3	Environmental hazard

U.S. - Rhode Island - Hazardous Substance List

Ethanol	64-17-5	Toxic; Flammable
Monoethanolamine	141-43-5	Toxic; Flammable
Potassium hydroxide	1310-58-3	Toxic; Flammable

Inventory name

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

16. Other Information

Disclaimer

Information contained herein was obtained from sources considered technically accurate and reliable. While every effort has been made to ensure full disclosure of product hazards, in some cases data is not available and is so stated. Since conditions of actual product use are beyond control of the supplier, it is assumed that users of this material have been fully trained according to the requirements of all applicable legislation and regulatory instruments. No warranty, expressed or implied, is made and supplier will not be liable for any losses, injuries or consequential damages which may result from the use of or reliance on any information contained in this document.

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Prepared by

Dell Tech Laboratories Ltd. (519) 858-5021