PAINT BOOTH STRIPPER 470 --

Section 1. Supplier Information

General Chemical Corp.
12336 Emerson Drive
Brighton , MI 48116
(248) 587-5600
Emergency Telephone: 1-800-424-9300

Section 2. Hazardous Ingredients

Hazardous Component(s)	CAS #	PEL TWA	PEL Ceiling	TLV TWA	TLV STEL	MFG Limits	WGT %
Monoethanolamine	141-43-5	3 ppm	N/E	3 ppm	6 ppm	N/E	< 5
Surfactant	Proprietary	N/E	N/E	N/E	N/E	N/E	1 - 10
2-(2-Butoxyethoxy) ethanol	112-34-5	N/E	N/E	N/E	N/E	35 ppm	5 - 15
Solvent naphtha, heavy arom.	64742-94-5	5 mg/m3	N/E	5 mg/m3*	10 mg/m	N/E	25 - 35
N-Methyl-2-pyrrolidone	872-50-4	N/E	N/E	N/E	N/E	N/E	50 - 60

N/A = Not Applicable; N/E = Not Established; * = Mists; # = Skin; ' = Respirable Dust; " = Total Dust; ^ = Vapor; ** = Fumes; C = Ceiling Limit

All components of this product are listed on the Toxic Substances Control Act (TSCA) Inventory and the Canadian Domestic Substances List (DSL), or are exempt from the listing.

Section 3. Hazards Identification

Primary Routes of Entry

Inhalation:	YES
Skin:	YES
Ingestion:	YES

Hazardous Materials Information System (HMIS) Ratings

Health:	*	3
Fire:		2
Reactivity:		0

0 = Minimal
1 = Slight
2 = Moderate
3 = Serious
4 = Severe
* = Chronic Hazard

Signs of Symptoms of Exposure:

INHALATION: High vapor or mist concentrations may produce nose, throat, and respiratory irritation and may cause central nervous system (CNS) depression.

SKIN: Can be a severe skin irritant. May be corrosive and cause severe burns if not washed immediately.

EYES: This product is destructive to eye tissues on contact. Will cause severe burns that result in damage to the eyes and even blindness.

INGESTION: This product, if swallowed, can cause severe burns and complete tissue

perforation of mucous membranes of the mouth, throat, esophagus, and stomach.

Chemical Listed as Potential Carcinogens:

NTP: NO IARC: NO OSHA: NO

Target Organs: Liver, kidneys, blood, skin, and eyes.

Section 4. Emergency And First Aid Procedures

INHALATION: If adverse effects such as dizziness, nausea, or irritation are noted, move person to fresh air. If not breathing, give artificial respiration. Get medical attention!

SKIN: Immediately wash skin with large amounts of soap and water. Remove contaminated clothing and shoes; wash before reuse. Get medical attention if irritation persists after washing.

EYES: THE OBJECT IS TO FLUSH MATERIAL OUT IMMEDIATELY, THEN SEEK MEDICAL ATTENTION! Immediately flush eyes with large amounts of water for at least 15 minutes, holding lids apart to ensure flushing of the entire surface. Washing eyes within several seconds is essential to achieve maximum effectiveness. SEEK MEDICAL ATTENTION IMMEDIATELY!

INGESTION: DO NOT INDUCE VOMITING! Contact a physician immediately!

Section 5. Fire Fighting Measures

Flash Point: > 156 ° F Method Used: Pensky-Martens Closed Cup

Flammable Limits in Air % by Volume: LEL: 1.3 UEL: 9.5; for n-methyl-2-pyrrolidone

Extinghisher Media: Carbon dioxide, dry chemical, foam, or water fog.

Special Fire Fighting Procedures: Firefighters should wear a self-contained breathing apparatus with a full facepiece operated in pressure demand or other positive pressure mode, and protective clothing.

Unusual Fire And Explosion Hazards: Vapors are heavier than air and may travel along the ground or be moved by ventilation and ignited at locations distant from handling point.

Section 6. Accidental Release Measures

If material is spilled, eliminate all ignition sources. Keep people away. Recover free product. Add sand, earth or other suitable absorbent to spill area; place in closed containers for disposal. Ventilate confined spaces. Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses, or extensive land areas. Continue to observe precautions for volatile, combustible vapors from absorbed material.

CERCLA (Superfund) Reportable Quantity (in lbs The naphthalene in this material is covered by CERCLA's petroleum exclusion (40 CFR 300.5), therefore, releases are not reportable under EPA-CERCLA.

Section 7. Handling and Storage

Handling: Avoid contact with skin and eyes; wash thoroughly after handling. Avoid breathing vapor; use with adequate ventilation.

Storage: Do not use aluminum or galvanized steel for pumping, storage, or transfer. Store in a dry location at room temperature. Keep container closed and maintain all original markings and labels.

Other: CAUTION! Do not use cutting or welding torches on containers, even when empty. Containers, even those that have been emptied, will retain product residue and vapors. Do not reuse container without recycling or reconditioning. Handle

empty containers as if they were full.

Section 8. Exposure Controls and Personal Protection

Respiratory Protection:	Use NIOSH / MSHA approved respirator where high vapor or mist concentrations are present.
Local Exhaust:	Special ventilation is suggested at points where vapors can be expected to escape to the workplace air.
Mechanical Exhaust:	Mechanical ventilation should be sufficient to maintain exposure levels below exposure limits.
Protective Gloves:	Solvent-resistant gloves such as Viton, polyvinyl alcohol, or equivalent.
Eye Protection:	Safety glasses with side shields. Do NOT wear contact lenses. Chemical goggles and/or faceshield should be worn where splashing is possible.
Other Protection:	Eye wash and safety shower should be readily available. Wear a chemical resistant apron and boots where splashing is possible.
Hygienic Practices:	Protective equipment and clothing should be selected, used and maintained according to applicable standards and regulations. For further information, contact the clothing or equipment manufacturer. Do not eat, drink, or smoke while using this product. Wash hands prior to eating, drinking, smoking, or using restrooms. Cleanse skin thoroughly after contact, before breaks and meals, and at the end of the work shift.

Section 9. Physical and Chemical Properties

Boiling Point:	212 ° F (initial)
Specific Gravity (H_2O=1):	0.98-0.99
Vapor Pressure (mm Hg):	N/E
Vapor Density (air=1)	> 1
Solubitity in Water:	Appreciable.
Reactivity in Water:	None.
Weight per Gallon (lb/gal):	8.1 - 8.3 lbs/gal
% Volatile by Volume:	> 98%
% Solid by Weight:	< 2%
Appearance and Odor:	Clear, colorless to dark amber, thick liquid with a slight amine odor.
Theoretical VOC: (>0.1 mm Hg @ 20 ° C)	6.9 - 7.1 lbs/gal
Analytical VOC : (EPA method 24)	7.4 - 7.6 lbs/gal
pH:	N/A, product is solvent based.

Degree of water solubility:
Negligible = Less than 0.1%
Slight = 0.1% - 1%
Moderate = 1% - 10%
Appreciable = More than 10%
Complete = 100%

Section 10. Stability and Reactivity

Stability: Stable. Hazard Polymerization: Will not occur.

Conditions to Avoid:	COMBUSTIBLE! Keep from heat, sparks, or open flame.
Incompatibility (Materials to Avoid):	Oxidizing agents, strong acids, strong bases, and salts of strong bases at elevated temperatures.
Hazardous Decomposition Products:	Unidentified organic compounds, nitrogen oxides, and oxides of carbon.

Section 11. Toxicological Information

Monoethanolamine [CASRN 000141-43-5]

ACUTE TOXICITY
Oral LD50 (rat) = 1.00 - 2.00 g/kg Eye irritation (rabbit): Draize; 80.0 - 110 ; extreme irritation
Dermal LD50 (rabbit) > 1.6 g/kg Skin irritation (rabbit): Draize; 6.5- 8.0 ; corrosive

Prolonged and repeated ingestion of monoethanolamine has caused kidney and liver damage in laboratory animals. [7,20-12,4,0-091200], [3-12-092600] & [20,2-12-061900]

Surfactant

ACUTE TOXICITY
Oral LD50 (rat, ♀) = 2.83 ml/kg Eye Irritation (rabbit) = 0.005 ml (severe corneal injury)
Oral LD50 (rat, ♂) = 2.33 ml/kg Eye Irritation (rabbit) = 0.5 ml; 15% dilution in water (severe corneal injury)
Dermal LD50 (rabbit, 24 hr) = 2.83 ml/kg Dermal Irritation (rabbit) - 24 hr. uncovered (minimal capillary injection)
Inhalation (rat, 8 hr, rm. tmp.) - mortality 0/6 Inhalation (rat, 8 hr, 170 °C) - mortality 0/6 [20,2-19,13,15,J,18-102300]

Ethanol, 2-(2-butoxyethoxy) [CASRN 000112-34-5]

ACUTE TOXICITY
Oral LD50 (rat) = 5.1-5.7 g/kg Eye Irritation: Moderate [Rabbit]
Oral LD50 (mouse) = 2.4 g/kg Skin Irritation: Slight [Rabbit]
Dermal LD50 (rabbit) ~ 4 g/kg Inhalation LC50 (rat) > 18 ppm; 7 hours

Other Information: Kidney effects in male rats were observed in laboratory animals exposed to this material. Effects were consistent with male rat hyaline droplet nephropathy, which is of questionable significance to human health.

Mutagenicity: Animal mutagenicity studies were negative. In vitro mutagenicity studies were negative in some cases and positive in other cases. [3-3,3,1,6,4-121600], [18,7-1,3,6,4-020901], & [4,16-6,4,3,1-022001]

Solvent naphtha (petroleum), heavy aromatic [CASRN 064742-94-5]

ACUTE TOXICITY
Oral LD50 (rat) = 10 ml/kg Eye irritation (rabbit): slightly irritating.
Dermal LD50 (rat) > 4.0 ml/kg Dermal irritation (rabbit, 4 hrs.): slightly irritating.
Inhalation LC50 (rat) > 710 ppm, 4 hr

Other Testing: Repeated inhalation exposure of rats to a related material at irritating concentrations caused decreased white blood cell counts. [18,7-18,0,B,F,A-060500]

N-methyl-2-pyrrolidone [CASRN 000872-50-4]

ACUTE TOXICITY
Oral LD50 (rat) = 4,990 mg/kg (moderately toxic) Eye Irritation (rabbit) - markedly irritating
Oral LD50 (mouse) = 5,270 mg/kg (slightly toxic) Skin irritation (rabbit) - markedly irritating
Inhalation LC50 (rat) > 5.1 mg/L, 4 hr (moderately toxic) Inhalation safety screen (rat), 8 hr - slightly irritating (No deaths)

Acute Overexposure Effects: Contact with the liquid can result in irritation. Skin contact should be avoided. Prolonged skin contact may result in redness and dermatitis. NMP is moderately toxic by all routes of exposure; however, due to its low vapor pressure, dermal exposure represents the primary hazard in most settings. Contact with the liquid results in moderate eye irritation and may cause temporary corneal clouding. Skin contact results in mild irritation; prolonged skin contact may cause redness and dermatitis. Inhalation of the vapors of NMP may result in respiratory irritation. Accidental ingestion of the liquid causes gastric disturbances and may result in nausea and vomiting.

Reproductive / Development Effects: In animal studies NMP was embryotoxic by the oral, dermal and intraperitoneal routes, but only after repeated high doses that approached the LD50 or were maternally toxic. Embryotoxicity without maternal toxicity was observed at a high concentration in one rat inhalation study, but not in others. Testicular effects in rats were noted after repeated, high-dose oral and inhalation exposures. NMP was not carcinogenic in rats receiving lifetime exposures via inhalation (100 ppm) or the diet. NMP was not fetotoxic or teratogenic in rats exposed to NMP vapors up to 0.36 mg/l during gestation (Fund. and Appl. Tox. 9:222-235, 1987). NMP has been reported to cause aneuploidy in saccharomyces, but is not mutagenic in the Ames test (Env. and Molec. Mut. 11(1) 31-40, 1988). [1-13,12,15-062001], [11,24-13,12,15-110200]

Section 12. Ecological Information

Monoethanolamine [CASRN 000141-43-5]

ECOTOXICITY
48 hr - LC50 (daphnia) = 33-93 mg/L 96 hr - LC50 (fathead minnow) = 125-206 mg/l
IC50 (bacteria) > 700 mg/l
IC50 Activated Sludge Respiration Inhibition Test (OECD Test No. 209) is >1000 mg/L.

FATE
BOD Day 5 - 52-60% Theoretical Oxygen Demand (ThOD): 1.31 mg/mg, calc.
BOD Day 10 - 73-75% Octanol/Water Partition Coefficient : -1.31, measured
BOD Day 20 - 90-100 % Henry's law constant (H): 2.45E-7 atm m3/mole (estimated)
Log Koc: 0.70 (estimated)
CO2 Evolution test (Modified Sturm test, OECD Test 301 B) after 28 days: 97%. Modified OECD Screening test (OECD Test 301 E) after 28 days: 94%.
Manometric Respirometry test (OECD Test 301 F) after 28 days: > 70%
[7,20-12,4,0-091200], [3-12-092600] & [20,2-12-061900]

Surfactant

ECOTOXICITY
48 hr - LC50 (daphnia magna) = 21.4 mg/L 96 hr - LC50 (fathead minnow) = 4.8 - 7.7 mg/L
96 hr - LC50 (fathead minnow) = 6.6 mg/L IC50 (bacteria) > 5000 mg/L

ENVIRONMENTAL FATE

BOD 5	3-18 %	Closed Bottle BOD (% Oxygen cons.) = 16%
BOD 10	32-36 %	Chemical Oxygen Demand (COD) - 2.23 mg/mg, measured
BOD 20	42-51%	Chemical Oxygen Demand (COD) - 2.09 mg/mg, calc
DOC 7	61%	STURM (% Carbon dioxide evolved) = 52.4-59%
DOC 14	66%	Theoretical Oxygen Demand (ThOD) - 2.09 mg/mg, measured
DOC 21	70%	
DOC 28	72%	

Appropriate treatment of effluents will reduce levels of nonylphenol ethoxylate (NPE) residues to concentrations that should pose no harm to the environment, including protection for weak estrogen-mimetic activity observed for some degradation intermediates. [20,2-19,13,15,J,18-102300]

Ethanol, 2-(2-butoxyethoxy) [CASRN 000112-34-5]

ECOTOXICITY
LC50 (Poecilia reticulata) = 1150 mg/L LC50 (Lepomis macrochirus) = 1300 mg/L LC50 (Leuciscus idus) = 1805-2304 mg/L LC50 (Menidia beryllina) = 2000 mg/L
LC50 (Carassius auratus) = 2700 mg/L LC50 (Daphnia magna) = 2850 mg/L
LC50 (Notropis atherinoides) > 500 mg/L Growth inhibition IC50 (bacteria) = 255 mg/L

MOVEMENT & PARTITIONING: Bioconcentration potential is low (BCF less than 100 or Log Pow less than 3). Log octanol/water partition coefficient (log Pow) is 0.56. Potential for mobility in soil is high (Koc between 50 and 150). Log soil organic carbon partition coefficient (log Koc) is estimated to be 1.88. Henry's Law Constant (H) is estimated to be 1.52E-9 atm.m3/mol.

DEGRADATION & PERSISTENCE: Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD greater than 40%). Degradation is expected in the atmospheric environment within minutes to hours. 5-Day biochemical oxygen demand (BOD5) is 0.05 p/p. 10-Day biochemical oxygen demand (BOD10) is 0.39 p/p. 20-Day biochemical oxygen demand (BOD20) is 1.08 p/p. Theoretical oxygen demand (ThOD) is calculated to be 2.17 p/p. Biodegradation rate may increase in soil and/or water with acclimation. [3-3,3,1,6,4-121600]

N-methyl-2-pyrrolidone [CASRN 000872-50-4]

ECOTOXICITY
96 hr LC50 (golden orfe) = 4,000 mg/l, static 24 hr EC/LC50 (daphnia magna) > 1000 mg/l
72 hr EC/LC50 (algal) > 500 mg/l IC50 (bacteria) > 9000 mg/l

Fate: Abiotic Degradability: Photolysis Half-Life 5.2 hrs. Biotic Degradability: BOD 92% (14 day). Theo. BOD (Modified MITI Test) 73 % (28 day)
Elimination (method not specified) > 90 %, Readily Biodegradable
Chemical Oxygen Demand: 1600 mg/l, Readily Biodegradable
Biological Oxygen Demand, 5 day: 1100 mg/l, Readily Biodegradable
Octanol/Water partition coefficient (log POW): -0.46 [11,24-13,12,15-110200], [1-13,12,15-062001]

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Section 13. Disposal Considerations

Waste Disposal Methods (Federal, State, Local):

In accordance with all federal, state and local requirements.

RCRA Hazardous Waste Number: N/A

Section 14. Transport Information

Hazardous Material Description:

(Proper shipping name, hazard class, hazard ID#, packing group)

Domestic ground non-bulk:	UN2491, ETHANOLAMINES SOLUTION, 8, PG III
Domestic ground bulk:	UN2491, ETHANOLAMINES SOLUTION, 8, PG III
International:	UN2491, ETHANOLAMINES SOLUTION, 8, PG III

Section 15. Regulatory Information

SARA 313 Information 'This product contains the following chemical(s) above deminis concentrations and may be subject to reporting under section 313:

N-methyl-2-pyrrolidone, CAS# 872-50-4, 50 - 60%.

1,2,4-Trimethylbenzene (in solvent naphtha), CAS# 95-63-6, 6 - 10%.

Reportable Category: Certain glycol ethers, 1 - 10%.

Naphthalene (in solvent naphtha), CAS# 91-20-3, 1.5% (max).

Section 16. Other Information

This MSDS contains revisions in the following sections: New product

Prepared by: Andrew J. Thomas Chemist

Revised by:

The development of this Material Safety Data Sheet (MSDS) relies upon information provided to us by each of our raw material suppliers. This MSDS will be updated as changes occur to their MSDS(s).
We believe the recommendations and technical information contained herein to be accurate. However, they are given without warranty or guarantee, expressed or implied, and we assume no responsibility for losses or damage, direct or indirect, as a result of their use.