

SULFAMIC ACID 15% SOLUTION

HEALTH	0
FLAMMABILITY	1
REACTIVITY	0

EMERGENCY TELEPHONE NO: 1-800-255-3924 CHEM-TEL
 AND OTHER INFORMATION CALLS: 1-800-325-3312
 1-636-861-5500

(See Codes)

SECTION 1 - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	CAS#	ACGIL TLV	OSHA PEL	OSHA LISTED AS CARCINOGEN IN NTP
SULFAMIC ACID	5329-14-6	NA	NA	NO

SECTION 2 - HEALTH HAZARDS AND FIRST AID

PRODUCT DESCRIPTION: Sulfamic acid 15% solution.

FIRST AID:

INHALATION: NA
 EYES: Flush eyes with plenty of water for atleast 15 minutes.
 SKIN: Wash with soap and water after handling.
 INGESTION: DO NOT INDUCE VOMITING. Rinse mouth with water. Drink plenty of water to dilute.
 NOTE TO PHYSICIAN: None.

SECTION 3 - PHYSICAL AND CHEMICAL HAZARDS

STABILITY: UNSTABLE STABLE HAZARDOUS POLYMERIZATION: MAY OCCUR WILL NOT OCCUR

FLASH POINT (METHOD USED): NA
 EXTINGUISHING MEDIA: NA
 SPECIAL FIRE FIGHTING PROCEDURES: NA
 CONDITIONS TO AVOID: NA
 INCOMPATIBILITY (MATERIALS TO AVOID): NA
 HAZARDOUS DECOMPOSITION PRODUCTS OR BYPRODUCTS: NA

MC-SOLV

HEALTH	2
FLAMMABILITY	1
REACTIVITY	0

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(See Codes)

SECTION 1 - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	CAS#	% BY WT	ACGIL TLV	OSHA PEL	OSHA LISTED AS CARCINOGEN IN NTP
DICHLOROMETHANE (Methylene Chloride)	75-09-2	99-100	50P	50P	YES (2B IARC, 2NTP)

SECTION 2 - HEALTH HAZARDS AND FIRST AID

PRODUCT DESCRIPTION: Solvent degreaser. Colorless liquid, ether-like odor.
EMERGENCY OVERVIEW: WARNING! CAUSES EYE IRRITATION. MAY CAUSE SKIN IRRITATION. MAY BE HARMFUL IF INHALED OR SWALLOWED. KEEP OUT OF REACH IF CHILDREN. Possible cancer hazard. Contains methylene chloride which may cause cancer based on animal data.

ROUTES OF ENTRY: Primary-Eyes, skin and inhalation.
ACUTE SYMPTOMS OF EXPOSURE: Moderate eye and skin irritation producing redness. Prolonged skin exposure can lead to defatting, cracking and dermatitis. Inhalation over the exposure limits can irritate the upper respiratory system, produce central nervous system depression with symptoms such as dizziness, drowsiness, fatigue and nausea. Alcohol consumption may heighten symptoms.

CHRONIC HEALTH EFFECTS: Chronic overexposure to methylene chloride may cause liver and kidney damage.
MEDICAL CONDITIONS AGGRAVATED: Pre-existing disorders of the liver and kidneys.

FIRST AID:

INHALATION: If inhaled remove to fresh air. Give oxygen if breathing is difficult. Consult a physician if symptoms persist.
EYES: Immediately flush eyes with large quantities of water for at least 15 minutes, periodically lifting upper and lower lids to ensure washing of entire surface. Seek medical attention.
SKIN: Wash exposed areas thoroughly with soap and water. Wash contaminated clothing before reuse. If irritation persists contact a physician.
INGESTION: DO NOT INDUCE VOMITING. If vomiting occurs spontaneously keep head below hips to prevent aspiration. Get medical attention.
NOTE TO PHYSICIAN: Epinephrine and other stimulants may cause cardiac arrhythmias in persons exposed to methylene chloride.

SECTION 3 - PHYSICAL AND CHEMICAL HAZARDS

STABILITY: Stable
HAZARDOUS POLYMERIZATION: Will Not Occur

FLASH POINT (METHOD USED): None (Tag Closed Cup)
EXTINGUISHING MEDIA: Fires involving this product are unlikely, but should one occur, it may be controlled by CO₂, dry chemicals or water spray.

SPECIAL FIRE FIGHTING PROCEDURES: Use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing when this product is involved in a fire. Cool containers with water to prevent rupturing.

CONDITIONS TO AVOID: Closed containers may rupture at high temperatures which induce thermal decomposition producing irritating and corrosive HCl. Welding arcs can cause toxic phosgene to be generated. Do not store in containers such as aluminum. Amines and reactive metals.

INCOMPATIBILITY (MATERIALS TO AVOID):
HAZARDOUS DECOMPOSITION PRODUCTS OR BYPRODUCTS: Hydrogen chloride and phosgene.

SECTION 4 - SPECIAL PROTECTION INFORMATION

VENTILATION TYPE: Adequate ventilation to keep vapor concentrations below exposure limits.
RESPIRATORY PROTECTION: Use of an air purifying respirator is limited to short-term, single exposures. In confined or poorly ventilated areas, use of a positive pressure supplied air respirator may be required. In emergencies, a positive pressure self-contained breathing apparatus may be required.
PROTECTIVE GLOVES: Viton or polyvinyl alcohol.
EYE PROTECTION: Safety glasses, chemical splash goggles preferred.
OTHER EQUIPMENT: Safety shower, eye bath and washing facilities should be available.

SECTION 5 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (°F)	104	SPECIFIC GRAVITY (WATER=1):	1.320
FREEZE POINT (°F):	-140	PERCENT VOLATILE BY VOLUME (%):	100
VAPOR PRESSURE (mmHg):	~350	EVAPORATION RATE (BUTYL ACETATE=1):	14.5
VAPOR DENSITY (AIR=1):	2.9	pH (AS RECEIVED):	ND
SOLUBILITY IN WATER:	Slight (< 2%)	APPEARANCE AND ODOR:	Colorless liquid, ether-like odor.

SECTION 6 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURE

HANDLING AND STORAGE: Avoid skin and eye contact by wearing protective equipment and clothing. Wash thoroughly after handling. Store closed containers in cool, well-ventilated area. **KEEP OUT OF REACH OF CHILDREN-FOR INDUSTRIAL USE ONLY.**

SPILL AND LEAK PROCEDURE: For small spills, absorb spillage with clay or other suitable absorbent and put in a container for disposal. For large spills, contain spill to prevent entering a sewer or waterway and pump to a suitable holding container for disposal. Absorb unrecoverable product. Transfer absorbent, soil and other materials to containers for disposal.

WASTE DISPOSAL: Disposal should be made in accordance with Federal, State and Local regulations.

OTHER PRECAUTIONS: Notify fire, health and environmental authorities where large spill enters sewers and waterways.

SECTION 7 - TRANSPORTATION AND REGULATORY INFORMATION

DOT SHIPPING NAME: Dichloromethane
DOT CLASSIFICATION: 6.1 **DOT LABELS:** KEEP AWAY FROM FOOD
PACKING GROUP: III **UN NUMBER:** UN1593
SARA Section 311/312 Hazard Categories: Immediate Health, Delayed Health
SARA Section 313 Toxic Chemicals: Methylene Chloride CAS# 75-09-2
CERCLA HAZARDOUS SUBSTANCES & RQ: Methylene Chloride CAS# 75-09-02, RQ 1,000 LBS

NOTICE: NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY OTHER NATURE, ARE MADE WITH RESPECT TO INFORMATION CONCERNING THE PRODUCT REFERRED TO IN THIS MATERIAL SAFETY DATA SHEET. The goal of defining precisely, in measurable terms, every possible health effect that may occur in the workplace as a result of chemical exposures cannot realistically be accomplished. The information and recommendations contained in the Material Safety Data Sheet are supplied pursuant to 29 C.F.R. 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. The information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof. NAVY BRAND MANUFACTURING COMPANY, however, makes no representations as to the completeness or accuracy thereof, and information is supplied upon the express condition that the persons receiving same will be required to make their own determination as to its suitability for their purpose prior to use. In no event will NAVY BRAND MANUFACTURING COMPANY be responsible for any damages of any nature whatsoever resulting from the use of, reliance upon, or the misuse of this information. The information as supplies herein is simply to be informative and intended solely to alert the user of the substance which is the subject matter of this Material Safety Data Sheet. The compliance with respect to products liability, rests solely upon the purchaser thereof.

CODES AND ABBREVIATIONS:

0-Insignificant	NA-NOT APPLICABLE	P-ppm
1-Slight	NE-NOT ESTABLISHED	M-mg/M3
2-Moderate	ND-NOT DETERMINED	c-Ceiling
3-High	UNK-UNKNOWN	STEL-SHORT TERM
4-Extreme	PEL-PERMISSIBLE EXPOSURE LIMIT	EXPOSURE LIMIT
		TLV-Threshold Limit Value

KLEENZ-IT

HEALTH	2
FLAMMABILITY	0
REACTIVITY	0

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1-636-861-5500

(See Codes)

SECTION 1 - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	CAS#	% BY WT.	ACGIL TLV	OSHA PEL	CARGINOGEN OSHA NTP IARC
PHOSPHORIC ACID	7664-38-2	20-22	1M	1M	No
OXYALKYLATED ALKYLPHENOLS	Trade Secret	1-5	NE	NE	No

SECTION 2 - HEALTH HAZARDS AND FIRST AID

PRODUCT DESCRIPTION: Multi-purpose acid-degreaser cleaner.
EMERGENCY OVERVIEW: Lt. yellow liquid. Mild odor. DANGER! CAUSES SEVERE BURNS OF EYES, SKIN AND MUCOUS MEMBRANES. KEEP OUT OF REACH OF CHILDREN.
ROUTES OF ENTRY: Primary-Eyes, Skin and Inhalation.
ACUTE SYMPTOMS OF EXPOSURE: Contact will cause severe burns to eyes & skin with possible irreversible damage to the eyes. Breathing mists & vapors can damage the upper respiratory tract and can cause serious damage to mucous membranes with possible perforation and scarring of affected tissue.
CHRONIC HEALTH EFFECTS: None Known.
MEDICAL CONDITIONS AGGRAVATED: Pre-existing eye, skin or upper respiratory conditions.

FIRST AID:

INHALATION: If inhaled, remove to fresh air. Give oxygen if breathing is difficult. Consult a physician if symptoms persist.
EYES: Immediately flush eyes with water for 15 minutes, periodically lifting upper and lower lids to ensure complete washing. Get medical attention.
SKIN: Flush with water while removing contaminated clothing and shoes. Follow by washing with soap and water. Do not reuse clothing and shoes until cleaned. Get medical attention if irritation persists.
INGESTION: DO NOT INDUCE VOMITING. If vomiting occurs spontaneously, keep head below hips to avoid aspiration. Call a physician.
NOTE TO PHYSICIAN: None.

SECTION 3 - PHYSICAL AND CHEMICAL HAZARDS

STABILITY: STABLE **HAZARDOUS POLYMERIZATION:** WILL NOT OCCUR

FLASH POINT (METHOD USED): None (Tag Closed Cup)
EXTINGUISHING MEDIA: Suitable for adjacent fire.
SPECIAL FIRE FIGHTING PROCEDURES: Use NIOSH/MSHA approved self-contaminated breathing apparatus and full protective clothing. Cool containers with water spray to prevent rupturing of containers.
CONDITIONS TO AVOID: Do not store in metal containers such as aluminum and galvanized steel. Corrosion could generate flammable hydrogen gas.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, alkalis, amines, cyanides and sulfides. Reaction with metals such as aluminum, tin and zinc generates flammable hydrogen. Hypochlorite bleach may produce skin sensitizing sultones.
HAZARDOUS DECOMPOSITION PRODUCTS OR BYPRODUCTS: Oxides of phosphorus.

SECTION 4 - SPECIAL PROTECTION INFORMATION

VENTILATION TYPE: Adequate ventilation to keep vapor concentrations below exposure limits.
 RESPIRATORY PROTECTION: None required.
 PROTECTIVE GLOVES: Rubber, neoprene.
 EYE PROTECTION: Safety glasses, chemical goggles or faceshield.
 OTHER EQUIPMENT: Safet shower, eye bath and washing facilities should be available.

SECTION 5 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (°F)	> 232	SPECIFIC GRAVITY (WATER=1):	1.141
FREEZE POINT (°F):	ND	PERCENT VOLATILE BY VOLUME (%):	NA
VAPOR PRESSURE (mmHg):	ND	EVAPORATION RATE (BUTYL ACETATE=1):	ND
VAPOR DENSITY (AIR=1):	ND	pH (AS RECEIVED):	~ 1
SOLUBILITY IN WATER:	Complete	APPEARANCE AND ODOR:	Lt. yellow liquid, mild odor

SECTION 6 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURE

HANDLING AND STORAGE: Corrosive liquid and vapors. Use with good ventilation. Use protective clothing and equipment. Check gloves for leaks before use. Do not get in eyes, on skin, or clothing. Wash contaminated clothing before reuse. Do not mix with other chemicals or spray this product through a sprayer. Store closed containers in cool, well ventilated ares. **KEEP OUT OF REACH OF CHILDREN-FOR INDUSTRIAL USE ONLY.** Do not store in metal containers such as aluminum, tin or zinc that can react and produce flammable hydrogen gas.

SPILL AND LEAK PROCEDURE: Small spill-absorb spillage with clay or other siutable absorbent and put in a container for disposal. Large spill-Wearing protective clothing and equipment, dike to prevent material from entering sewers or waterways. Pump liquid to suitable holding container. Neutralize residues with soda ash or lime and put in container for disposal. Flush cleaned area with water.

WASTE DISPOSAL: Disposal should be made in accordance with Federa, State and Local regulations.

OTHER PRECAUTIONS: Material is acidic. Wear protective cequpment to avoid skin & eye contact.

SECTION 7 - TRANSPORTATION AND REGULATORY INFORMATION

DOT SHIPPING NAME: Cleaning Liquid Compound

DOT CLASS: None UN/NA NUMBER:: None PACKING GROUP: None DOT LABEL: None

SARA Section 311/312 Hazard Categories: Immediate-Health.
 SARA Section 313 Toxic Chemicals: Phosphoric Acid CAS# 7664-38-2.
 CERCLA HAZARDOUS SUBSTANCES & RQ: Phosphoric Acid CAS# 7664-38-2, RQ, 5,000 LBS.

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CODES AND ABBREVIATIONS:

0-Insignificant	NA-NOT APPLICABLE	P-ppm
1-Slight	NE-NOT ESTABLISHED	M-mg/M3
2-Moderate	ND-NOT DETERMINED	c-Ceiling
3-High	UNK-UNKNOWN	STEL-SHORT TERM
4-Extreme	PEL-PERMISSIBLE	EXPOSURE LIMIT
	EXPOSURE LIMIT	TLV-Threshold Limit Value

DATE: 11/22/07

BLAST OFF-T

HEALTH	2
FLAMMABILITY	1
REACTIVITY	0

(See Codes)

EMERGENCY TELEPHONE NO. 1-800-255-3924 CHEM-TEL
AND OTHER INFORMATION CALLS: 1-800-325-3312
1-636-861-5500

SECTION 1 - HAZARDOUS INGREDIENTS

HAZARDOUS INGREDIENTS	CAS#	% BY WT.	ACGIH TLV	OSHA PEL	CARCINOGEN OSHA NTP IARC
SODIUM METASILICATE PENTAHYDRATE	6834-92-0	5%	2 mg/m3	2mg/m3	No
TETRAPOTASSIUM PYROPHOSPHATE	7320-34-5	5%	10 mg/m3	15 mg/m3	No

SECTION 2 - HEALTH HAZARDS AND FIRST AID

PRODUCT DESCRIPTION: Water-based cleaner/degreaser. Greenish-yellow liquid, no odor.
EMERGENCY OVERVIEW: May cause eye and skin irritation.
ROUTES OF ENTRY: Primary - Eyes, and Skin.
ACUTE SYMPTOMS OF EXPOSURE: Moderate eye irritation and moderate skin irritation.
MEDICAL CONDITIONS AGGRAVATED: Pre-existing eye and skin conditions.

FIRST AID:

INHALATION: N/A
EYES: Immediately flush eyes with water, periodically lifting upper and lower lids to ensure complete washing. Get medical attention.
SKIN: Wash exposed areas with soap and water. Wash contaminated clothing before reuse.
INGESTION: Call a physician. ONLY induce vomiting at the instructions of a physician.
NOTE TO PHYSICIAN: None.

SECTION 3 - PHYSICAL AND CHEMICAL HAZARDS

STABILITY: STABLE
FLASH POINT (METHOD USED): > 200°F (Tag Closed Cup)
EXTINGUISHING MEDIA: Water spray, fog, carbon dioxide, dry chemical, alcohol-type or universal-type foams applied by manufacturers' recommended technique.
SPECIAL FIRE FIGHTING PROCEDURES: Use NIOSHA/MSHA approve self-contained breathing apparatus and full protective clothing when this product is involved in a fire.
CONDITIONS TO AVOID: Do not store in metal containers such as aluminum and galvanized steel. Corrosion could generate flammable hydrogen gas.
INCOMPATIBILITY (MATERIALS TO AVOID): Strong acids such as hydrochloric and sulfuric acids.
HAZARDOUS DECOMPOSITION
PRODUCT OR BYPRODUCTS: N/A

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR
FLAMMABLE LIMITS (% IN AIR): LEL ND; UEL ND

SECTION 4 - SPECIAL PROTECTION INFORMATION

VENTILATION TYPE: None required.
 RESPIRATORY PROTECTION: None required.
 PROTECTIVE GLOVES: Rubber, neoprene.
 EYE PROTECTION: Chemical splash goggles.
 OTHER EQUIPMENT: Safety shower, eye bath and washing facilities should be available.

SECTION 5 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (°F):	> 220	SPECIFIC GRAVITY (WATER=1):	0.987
FREEZE POINT (°F):	ND	PERCENT VOLATILES:	88
VAPOR PRESSURE(psig @70°F):	< 17	EVAPORATION RATE (BUTYL ACETATE=1):	< 1
VAPOR DENSITY (AIR=1):	> 1	pH (AS RECEIVED):	9-11
SOLUBILITY IN WATER:	Complete	APPEARANCE AND ODOR:	Greenish-yellow liquid, no odor

SECTION 6 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURE

HANDLING PRECAUTIONS: Wash thoroughly after handling.
 STORAGE PRECAUTIONS: KEEP OUT OF REACH OF CHILDREN - FOR INDUSTRIAL USE ONLY.
 SMALL SPILL: Absorb spillage with clay or other suitable absorbent and put in a container for disposal.
 ILARGE SPILL: Contain spill to prevent entering a sewer or waterway and pump to a suitable holding container for disposal.
 SPECIAL SPILL CONSIDERATIONS: N/A
 WASTE DISPOSAL: Disposal should be made in accordance with Federal, State and local regulations.

SECTION 7 - TRANSPORTATION AND REGULATORY INFORMATION

DOT SHIPPING NAME: None

DOT CLASS: None UN/NA NUMBER: None PACKING GROUP: None DOT LABEL: None

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CODES AND ABBREVIATIONS:

0 - Insignificant	NA - NOT APPLICABLE	P - ppm
1 - Slight	NE - NOT ESTABLISHED	M - mg/M ³
2 - Moderate	ND - NOT DETERMINED	C - Ceiling
3 - High	UNK - UNKNOWN	STEL - SHORT TERM
4 - Extreme	PEL - PERMISSIBLE	EXPOSURE LIMIT
	EXPOSURE LIMIT	TLV - Threshold Limit Value

REV. DATE: 5/1/07

AC-40

HEALTH	3
FLAMMABILITY	0
REACTIVITY	0

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1-636-861-5500

(See Codes)

SECTION 1 - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	CAS#	% BY WT.	ACGIL TLV	OSHA PEL	OSHA LISTED AS CARCINOGEN IN NTP
HYDROCHLORIC ACID (HCl)	7647-01-0	~ 8	5P, C STEL	NE	NO
OXYALKYLATED ALKYLPHENOLS INHIBITOR	Trade Secret Blend	-1.5 < 1	NE NE	NE NE	NO See Note

Note: Contains formaldehyde 0.01% which is less than 0.10% de minimis level

-SECTION 2 - HEALTH HAZARDS AND FIRST AID

PRODUCT DESCRIPTION: Multi-purpose lime calcium and scale remover. Light green liquid, pungent suffocating odor.

EMERGENCY OVERVIEW: DANGER! CAUSES SEVERE BURNS OF EYES, SKIN AND MUCOUS MEMBRANES. KEEP OUT OF REACH OF CHILDREN.

ROUTES OF ENTRY: Primary - Eyes, Skin and Inhalation.

ACUTE SYMPTOMS OF EXPOSURE: Contact will cause severe burns to the eyes, skin and respiratory tract producing redness of eyes and skin. Inhalation can cause painful breathing. Ingestion will produce gastrointestinal burns and discomfort.

CHRONIC HEALTH EFFECTS: Hydrochloric acid has exhibited some mutagenic effects. Formaldehyde is below 0.01% de minimis level but carcinogenic effects are documented.

MEDICAL CONDITIONS AGGRAVATED: Respiratory and skin problems such as open cuts and sores.

FIRST AID:

INHALATION: If inhaled, remove to fresh air. Give oxygen if breathing is difficult. Consult a physician if symptoms persist.

EYES: Immediately flush eyes with water for 15 minutes, periodically lifting upper and lower lids to ensure complete washing. Get medical attention.

SKIN: Flush with water while removing contaminated clothing and shoes. Follow by washing with soap and water. Do not reuse clothing or shoes until cleaned. Get medical attention if irritation persists.

INGESTION: DO NOT INDUCE VOMITING. If vomiting occurs spontaneously, keep head below hips to avoid aspiration. Call a physician.

NOTE TO PHYSICIAN: If swallowed, gastric lavage should be used with extreme caution.

SECTION 3 - PHYSICAL AND CHEMICAL HAZARDS

STABILITY: STABLE **HAZARDOUS POLYMERIZATION:** WILL NOT OCCUR

FLASH POINT (METHOD USED): None (Tag Closed Cup)

EXTINGUISHING MEDIA: Suitable for adjacent fire.

SPECIAL FIRE FIGHTING PROCEDURES: Use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing. Cool containers with water spray to prevent rupturing of containers.

CONDITIONS TO AVOID: At high temperatures toxic and irritating fumes are released.

INCOMPATIBILITY (MATERIALS TO AVOID): Strong oxidizers, alkalis, amines, cyanides and sulfides. Reaction with metals such as aluminum, tin and zinc generates flammable hydrogen.

HAZARDOUS DECOMPOSITION PRODUCTS OR BYPRODUCTS: Hydrogen chloride, chlorine.

SECTION 4 - SPECIAL PROTECTION INFORMATION

VENTILATION TYPE: Local exhaust required.
 RESPIRATORY PROTECTION: When exposure limits are exceeded, use of a NIOSH/MSHA approved acid-type vapor respirator or airline mask is recommended.
 PROTECTIVE GLOVES: Rubber, neoprene.
 EYE PROTECTION: Chemical goggles or faceshield.
 OTHER EQUIPMENT: Chemical impervious apron and boots. Safety shower, eye bath and washing facilities should be available.

SECTION 5 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (°F)	ND	SPECIFIC GRAVITY (WATER=1):	1.036
FREEZE POINT (°F):	ND	PERCENT VOLATILE BY VOLUME (%):	> 95
VAPOR PRESSURE (mmHg):	28	EVAPORATION RATE (BUTYL ACETATE=1):	ND
VAPOR DENSITY (AIR=1):	1.27	pH (AS RECEIVED):	< 1
SOLUBILITY IN WATER:	Complete	APPEARANCE AND ODOR:	Light green liquid, pungent suffocating odor

SECTION 6 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURE

HANDLING AND STORAGE: Corrosive liquid and vapors. Use with good ventilation. Use protective clothing and equipment. Check gloves for leaks before use. Do not get in eyes, on skin or clothing. Wash contaminated clothing before reuse.
 STORAGE PRECAUTIONS: Store closed containers in cool, well ventilated area. KEEP OUT OF REACH OF CHILDREN-FOR INDUSTRIAL USE ONLY. Do not store in metal containers such as aluminum, tin or zinc that can react and produce flammable hydrogen gas.
 SMALL SPILL: Absorb spillage with clay or other suitable absorbent and put in a container for disposal.
 LAGRE SPILL: Wear protective clothing and equipment, dike to prevent material from entering sewers or waterways. Pump liquid to suitable holding container. Neutralize residues with soda ash or lime and put in container for disposal. Flush cleaned area with water.
 WASTE DISPOSAL: Disposal should be made in accordance with Federal, State and Local regulations.
 OTHER PRECAUTIONS: Notify fire, health and environmental authorities where ;large spill enters sewers or waterways.

SECTION 7 - TRANSPORTATION AND REGULATORY INFORMATION

DOT SHIPPING NAME: Hydrochloric acid, solution
 DOT CLASSIFICATION: 8 DOT LABELS: Corrosive UNPACKING GROUP: II UN NUMBER: UN1789

SARA Section 311/312 Hazard Categories: Immediate Health, Delayed Health
 SARA Section 313 Toxic Chemicals: Hydrochloric Acid as HCl
 CERCLA HAZARDOUS SUBSTANCES & RQ: Hydrochloric Acid and RQ, 5,000 LBS.
 SARA Section 302/Extremely Hazardous Substances: Contains formaldehyde CAS# 50-00-0 TPQ=500LBS.

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1-Slight	NE-NOT ESTABLISHED	M-mg/M3
2-Moderate	ND-NOT DETERMINED	c-Ceiling
3-High	UNK-UNKNOWN	STEL-SHORT TERM
4-Extreme	PEL-PERMISSIBLE	EXPOSURE LIMIT
	EXPOSURE LIMIT	TLV-Threshold Limit Value

SA-47

HEALTH	2
FLAMMABILITY	2
REACTIVITY	0

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AND OTHER INFORMATION CALLS: 1-800-325-3312
1-636-861-5500

(See Codes)

SECTION 1 - HAZARDOUS INGREDIENTS

HAZARDOUS COMPONENTS	CAS#	% BY WT	ACGIL TLV	OSHA PEL	OSHA LISTED AS CARCINOGEN IN NTP
ALPHATIC NAPHTHA SOLVENT	64742-88-7	30-35	100p	100p	NO
AROMATIC NAPHTHA SOLVENT (Exposure limits for Naphtholene)	64742-94-5	35-40	10p	10p	NO
PERCHLOROETHYLENE	127-18-4	20-25	25p	25p	YES
OXYALKYLATED ALCOHOLS & ALKYLPHENOLS	Mixture	5-10	NE	NE	NO

SECTION 2 - HEALTH HAZARDS AND FIRST AID

PRODUCT DESCRIPTION: Automotive and industrial solvent cleaner. Amber liquid, sweet solvent/ether type odor.
EMERGENCY OVERVIEW: CAUTION! CAUSES EYE AND SKIN IRRITATION. MAY BE HARMFUL IF INHALED OR SWALLOWED. KEEP OUT OF REACH OF CHILDREN.

ROUTES OF ENTRY: Primary-Eyes, skin and inhalation.

ACUTE SYMPTOMS OF EXPOSURE: Mild to moderate eye and skin irritant producing redness. Prolonged skin exposure can lead to defatting, cracking and dermatitis. Inhalation can irritate the upper respiratory system, produce central nervous system depression with symptoms such as dizziness, nausea or unconsciousness. Ingestion can cause similar symptoms to those of inhalation plus vomiting. Vomiting can aspirate material into the lungs causing chemical pneumonia.

CHRONIC HEALTH EFFECTS: Perchloroethylene is listed as a possible carcinogen for humans based on animal data. Chronic effects include damage to the liver, kidneys and blood.

MEDICAL CONDITIONS AGGRAVATED: Pre-existing disorders of the eyes, skin and kidneys.

FIRST AID:

INHALATION: Remove to fresh air. If breathing is difficult give oxygen. Give artificial respiration or cardiopulmonary resuscitation (CPR) if required. Get medical attention.

EYES: Immediately flush eyes with large quantities of water for at least 15 minutes, periodically lifting upper and lower lids to ensure washing of entire surface. Seek medical attention.

SKIN: Wash thoroughly with soap and water. Wash contaminated clothing before reuse. If irritation persists contact a physician.

INGESTION: DO NOT INDUCE VOMITING. If vomiting occurs spontaneously keep head below hips to prevent aspiration. Get medical attention.

NOTE TO PHYSICIAN: If swallowed, gastric lavage should be used with extreme caution.

SECTION 3 - PHYSICAL AND CHEMICAL HAZARDS

STABILITY: Stable **HAZARDOUS POLYMERIZATION:** Will Not Occur

FLASH POINT (METHOD USED): 140°F (Tag Closed Cup)

EXTINGUISHING MEDIA: Water spray, fog, carbon dioxide, dry chemical, alcohol-type or universal-type foams applied by manufacturers' recommended technique.

SPECIAL FIRE FIGHTING PROCEDURES: Use NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing when this product is involved in a fire. Cool containers with water spray to prevent rupturing of containers.

CONDITIONS TO AVOID: Flammable liquid, Keep away from heat, sparks and open flames. Closed containers may rupture/explode when exposed to temperatures above 120°F. Never use welding or cutting torches on or near container. Can ignite vapors or liquid explosively. Do not store in containers such as aluminum.

INCOMPATIBILITY (MATERIALS TO AVOID): Welding arcs, strong oxidizers, strong alkalis and reactive metals such as aluminum and magnesium.

HAZARDOUS DECOMPOSITION PRODUCTS OR BYPRODUCTS: Hydrogen chloride and phosgene.

SECTION 4 - SPECIAL PROTECTION INFORMATION

VENTILATION TYPE: Adequate ventilation to keep vapor concentrations below exposure limits.
 RESPIRATORY PROTECTION: None required for normal use. When exposure limits are exceeded, use of a NIOSH/MSHA approve organic vapor, dust/mist respirator is recommended.
 PROTECTIVE GLOVES: Solvent resistant rubber, neoprene or vinyl.
 EYE PROTECTION: Chemical splash goggles.
 OTHER EQUIPMENT: Safety shower, eye bath and washing facilities should be available.

SECTION 5 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (°F)	270-400	SPECIFIC GRAVITY (WATER=1):	0.949
FREEZE POINT (°F):	< 32	PERCENT VOLATILE BY VOLUME (%):	> 95
VAPOR PRESSURE (mmHg):	ND	EVAPORATION RATE (BUTYL ACETATE=1):	< 1
VAPOR DENSITY (AIR=1):	> 1	pH (AS RECEIVED):	ND
SOLUBILITY IN WATER:	Emulsifies	APPEARANCE AND ODOR:	Amber liquid, sweet/ether-type odor

SECTION 6 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURE

HANDLING AND STORAGE: Flammable liquid and vapor. Avoid heat, sparks and open flames. Avoid inhaling or contact with eyes or skin. Store closed containers in cool, well-ventilated area. Do not store above 130°F. KEEP OUT OF REACH OF CHILDREN-FOR INDUSTRIAL USE ONLY.

SPILL AND LEAK PROCEDURE: Eliminate all sources of ignition. For small spills, absorb spillage with clay or other suitable absorbent and put in a container for disposal. For large spills, contain spill to prevent entering sewer or waterway and pump to a suitable holding container for disposal.

WASTE DISPOSAL: Disposal should be made in accordance with Federal, State and Local regulations.

OTHER PRECAUTIONS: Notify, fire, health and environmental authorities where large spill enters sewers and waterways.

SECTION 7 - TRANSPORTATION AND REGULATORY INFORMATION

DOT SHIPPING NAME: Flammable Liquid, Toxic, N.O.S. (Contains Naptha Solvent, Perchloroethylene)

DOT CLASSIFICATION: 3 (6.1) DOT LABELS: Flammable (3) PACKING GROUP: III UN NUMBER: UN1992
 Keep Away From Food (Subsidiary)

Reportable Quantity (RQ) for Perchloroethylene is applicable in containers > 55 gallons.
 SARA Section 311/312 Hazard Categories: Fire, Immediate Health, Delayed Health.
 SARA Section 313 Toxic Chemicals: Perchloroethylene CAS# 127-18-4
 CERCLA HAZARDOUS SUBSTANCE & RQ: Perchloroethylene CAS# 127-18-4, RQ 100 LBS.

NOTICE: NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR OF ANY OTHER NATURE, ARE MADE WITH RESPECT TO INFORMATION CONCERNING THE PRODUCT REFERRED TO IN THIS MATERIAL SAFETY DATA SHEET. The goal of defining precisely, in measurable terms, every possible health effect that may occur in the workplace as a result of chemical exposures cannot realistically be accomplished. The information and recommendations contained in the Material Safety Data Sheet are supplied pursuant to 29 C.F.R. 1910.1200 of the Occupational Safety and Health Standards Hazard Communication Rule. The information and recommendations set forth herein are presented in good faith and believed to be correct as of the date hereof. NAVY BRAND MANUFACTURING COMPANY, however, makes no representations as to the completeness or accuracy thereof, and information is supplied upon the express condition that the persons receiving same will be required to make their own determination as to its suitability for their purpose prior to use. In no event will NAVY BRAND MANUFACTURING COMPANY be responsible for any damages of any nature whatsoever resulting from the use of, reliance upon, or the misuse of this information. The information as supplies herein is simply to be informative and intended solely to alert the user of the substance which is the subject matter of this Material Safety Data Sheet. The compliance with respect to products liability, rests solely upon the purchaser thereof.

CODES AND ABBREVIATIONS:

0-Insignificant	NA-NOT APPLICABLE	P-ppm
1-Slight	NE-NOT ESTABLISHED	M-mg/M3
2-Moderate	ND-NOT DETERMINED	c-Ceiling
3-High	UNK-UNKNOWN	STEL-SHORT TERM
4-Extreme	PEL-PERMISSIBLE	EXPOSURE LIMIT
	EXPOSURE LIMIT	TLV-Threshold Limit Value

SECTION 4 - SPECIAL PROTECTION INFORMATION

VENTILATION TYPE: Normal
 RESPIRATORY PROTECTION: None required
 PROTECTIVE GLOVES: Chemical resistant gloves.
 EYE PROTECTION: Safety glasses or goggles.
 OTHER EQUIPMENT: None known.

SECTION 5 - PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT (°F):	212	SPECIFIC GRAVITY (WATER=1):	8.5
FREEZE POINT (°F):	32	PERCENT VOLATILE BY VOLUME (%):	ND
VAPOR PRESSURE (mmHg):	ND	EVAPORATION RATE (BUTYL ACETATE=1):	1.5
VAPOR DENSITY (AIR=1):	1	pH (AS RECEIVED):	3.5
SOLUBILITY IN WATER:	Complete	APPEARANCE AND ODOR:	Clear liquid, mild odor

SECTION 6 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURE

HANDLING AND STORAGE: Incompatible with inorganic bases. KEEP OUT OF REACH OF CHILDREN.
 SPILL AND LEAK PROCEDURE: Flush with water.
 WASTE DISPOSAL: Dispose of in accordance with Federal, State and Local regulations.
 OTHER PRECAUTIONS: None.

SECTION 7 - TRANSPORTATION AND REGULATORY INFORMATION

DOT SHIPPING NAME: Sulfamic Acid Solution
 DOT CLASSIFICATION: 8 DOT LABELS: Corrosive liquid UN NUMBER: UN2967

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DATE: 4/30/00