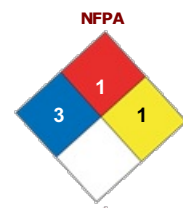


Personal Protective Equipment 				WHMIS Pictograms 		GHS Pictograms 	DOT Pictograms
Chemical Splash Goggles	Safety Glasses	Protective Gloves	Face shield	Corrosive Material	D2A Toxic	Causes severe skin burns and eye damage	Corrosive

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

Product Name: 5520
Product Code: 5520
MSDS Manufacturer Number: 5520
Product Use/Restriction: Metal cleaner
Manufacturer Name: Kester
Address: 800 W. Thorndale Avenue
Itasca, IL 60143
General Phone Number: (630)-616-4000
Customer Service Phone Number: (800)-2KESTER (253-7837)
CHEMTREC: For emergencies in the US, call CHEMTREC: 800-424-9300
Outside of the U.S. and Canada: (703) 527-3887
Website: msds@kester.com
MSDS Creation Date: August 15, 2008
MSDS Revision Date: September 17, 2009
MSDS Format: According to ANSI Z400.1-2004



HMS

Health Hazard	3
Fire Hazard	1
Reactivity	1
Personal Protection	x

* Chronic Health Effects

SECTION 2 - COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Ingredient Percent	EC Num.
1,2,3-Propanetricarboxylic acid, 2-hydroxy-	77-92-9	1 - 5 by weight	
Amino tris(methylenephosphonic acid)	6419-19-8	1 - 5 by weight	
Ammonium chloride	12125-02-9	5 - 10 by weight	
Formaldehyde	50-00-0	1 - 5 by weight	
Non Hazardous	N/A	60 - 100 by weight	
Proprietary ingredient(s)	Proprietary	10 - 30 by weight	

SECTION 3 - HAZARDS IDENTIFICATION

Emergency Overview: DANGER! Corrosive. Potential Sensitizer
Route of Exposure: Eyes. Skin. Inhalation. Ingestion.
Acute Health Effects: Corrosive. Causes burns.
Eye: Corrosive. Will cause eye burns and permanent tissue damage.
Skin: Contact causes severe skin irritation and possible burns. may cause permanent skin damage. May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.
Inhalation: May cause severe respiratory system irritation. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals.
Ingestion: Harmful if swallowed. Corrosive to the gastrointestinal tract. Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.
Chronic Health Effects: Prolonged skin contact causes burns. Repeated or prolonged inhalation may cause toxic effects.
Signs/Symptoms: Depending on solution concentration, material may be corrosive to skin, mucous membranes and eyes. Vapors may cause respiratory irritation.
Target Organs: Eyes. Skin. Respiratory system. Digestive system.

SECTION 4 - FIRST AID MEASURES

Eye Contact:	Immediately flush eyes with plenty of water for 15 to 20 minutes. Get medical attention, if irritation or symptoms of overexposure persists.
Skin Contact:	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point:	Not applicable.
Lower Flammable/Explosive Limit:	Not applicable.
Upper Flammable/Explosive Limit:	Not applicable.
Extinguishing Media:	Use alcohol resistant foam, carbon dioxide, dry chemical, or water fog or spray when fighting fires involving this material.
Unsuitable Media:	Do not use a solid water stream as it may scatter and spread fire.
Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Hazardous Combustion Byproducts:	Oxides of carbon, oxides of nitrogen, aliphatic aldehydes, and other organic substances may be formed during combustion..
NFPA Ratings:	
NFPA Health:	3
NFPA Flammability:	1
NFPA Reactivity:	1

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personnel Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area. Avoid breathing vapor, aerosol or mist. Avoid contact with skin, eyes and clothing.
Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.
Methods for containment:	Contain spills with an inert absorbent material such as soil, sand or oil dry.
Methods for cleanup:	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Clean up spills immediately observing precautions in the protective equipment section.

SECTION 7 - HANDLING and STORAGE

Handling:	Corrosive. Use proper personal protective equipment as listed in section 8. Use with adequate ventilation. Avoid breathing vapor and fumes. Use only in accordance with directions.
Storage:	Store in a cool, dry, well ventilated area away from sources of heat and incompatible materials. Keep container tightly closed when not in use.
Hygiene Practices:	Wash thoroughly after handling. Avoid inhaling vapors, mists, or fumes.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION - EXPOSURE GUIDELINES

Engineering Controls:	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
Eye/Face Protection:	Tightly fitting safety goggles. Wear a face shield also when splash hazard exist.
Hand Protection Description:	Wear appropriate protective gloves. Consult glove manufacturer's data for permeability data. Nitrile rubber or natural rubber gloves are recommended.
Respiratory Protection:	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Ammonium chloride :

Guideline ACGIH: TLV-TWA: 10 mg/m³
TLV-STEL: 20 mg/m³

Formaldehyde :

Guideline ACGIH: Sensitizer: Sen
Guideline OSHA: Sensitizer: Sen
PEL-STEL: 2 ppm

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

Physical State Appearance: Liquid.
Color: Pink
Odor: Mild chemical.
Boiling Point: 102 °C (216 °F)
Melting Point: Not determined.
Density: 1.120 g/cm³ @ 20°C (68°F)
Vapor Pressure: 19 mm Hg @ 20°C (68°F)
pH: < 1.0 @ 20°C (68°F)
Flash Point: Not applicable.

SECTION 10 - STABILITY and REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.
Hazardous Polymerization: Not reported.
Conditions to Avoid: Heat, flames, incompatible materials, freezing or temperatures below 32 deg. F.
Incompatible Materials: Oxidizing agents. Strong acids and alkalis.
Special Decomposition Products: Carbon monoxide and carbon dioxide

SECTION 11 - TOXICOLOGICAL INFORMATION**1,2,3-Propanetricarboxylic acid, 2-hydroxy- :**

RTECS Number: GE7350000
Eye: Eye - Rabbit Standard Draize test: 750 ug/24H [severe] (RTECS)
Skin: Administration onto the skin - Rabbit Standard Draize test: 500 mg/24H [mild] (RTECS)
Ingestion: Oral - Rat LD50: 3 gm/kg [Details of toxic effects not reported other than lethal dose value.]
Oral - Mouse LD50: 5040 mg/kg [Lungs, Thorax, or Respiration - other changes Musculoskeletal - other changes]
Oral - Mouse LD50: 7280 mg/kg [Details of toxic effects not reported other than lethal dose value.] (RTECS)

Amino tris(methylenephosphonic acid) :

RTECS Number: SZ9860000
Eye: Eye - Rabbit Standard Draize test : 100 mg [Moderate] (RTECS)
Skin: Administration onto the skin - Rabbit Standard Draize test : 500 mg/24H
Administration onto the skin - Rabbit LD50 : >6310 mg/kg [Details of toxic effects not reported other than lethal dose value.] (RTECS)
Ingestion: Oral - Rat LD50 : 2100 mg/kg [Details of toxic effects not reported other than lethal dose value.] (RTECS)

Ammonium chloride :

RTECS Number: BP4570000

Formaldehyde :

RTECS Number: LP8925000
Eye: Eye - Rabbit Standard Draize test: 10 mg
Eye - Rabbit Standard Draize test: 37%
Eye - Rabbit Standard Draize test: 750 ug/24H
Eye - Rabbit Standard Draize test: 750 ug (RTECS)
Skin: Administration onto the skin - Human Standard Draize test: 2%/48H
Administration onto the skin - Human Standard Draize test: 150 ug/3D (intermittent)
Administration onto the skin - Rabbit Standard Draize test: 2 mg/24H
Administration onto the skin - Rabbit Open irritation test: 540 mg
Administration onto the skin - Rabbit Standard Draize test: 50 mg/24H
Administration onto the skin - Rabbit LD50: 270 uL/kg [Details of toxic effects not reported other than lethal dose value.]
Administration onto the skin - Rabbit LD50: 270 mg/kg [Details of toxic effects not reported other than lethal dose value.] (RTECS)
Inhalation: Inhalation. - Rat LC50: 250 ppm/4H [Details of toxic effects not reported other than lethal dose value.]
Inhalation. - Rat LC50: 815 ppm/0.5H [Details of toxic effects not reported other than lethal dose value.]
Inhalation. - Rat LC50: 203 mg/m³ [Peripheral Nerve and Sensation - spastic paralysis with or without sensory change Behavioral - convulsions or effect on seizure threshold Behavioral - excitement]
Inhalation. - Mouse LC50: 454 mg/m³/4H [Details of toxic effects not reported other than lethal dose value.]
Inhalation. - Mouse LC50: 505 mg/m³/2H [Behavioral - tetany Behavioral - coma Lungs, Thorax, or Respiration - acute pulmonary edema]
Inhalation. - Rat LC50: 578 mg/m³/2H [Behavioral - tetany Behavioral - coma

Lungs, Thorax, or Respiration - acute pulmonary edema]
Inhalation. - Rat LC50: 250 ppm/2H [Behavioral - tetany Behavioral - coma
Lungs, Thorax, or Respiration - acute pulmonary edema] (RTECS)

Ingestion: Oral - Rat LD50: 100 mg/kg [Details of toxic effects not reported other than lethal dose value.]
Oral - Mouse LD50: 42 mg/kg [Behavioral - somnolence (general depressed activity) Behavioral - convulsions or effect on seizure threshold Behavioral - excitement]
Oral - Mouse LD50: 385 mg/kg [Details of toxic effects not reported other than lethal dose value.]
Oral - Mouse LD50: 500 mg/kg [Behavioral - tremor Liver - other changes Kidney/Ureter/Bladder - other changes]
Oral - Rat LD50: 500 mg/kg [Behavioral - tremor Liver - other changes Kidney/Ureter/Bladder - other changes] (RTECS)

Non Hazardous :
RTECS Number: ZC0110000
Ingestion: Oral - Rat LD50 : >90 mL/kg [Details of toxic effects not reported other than lethal dose value.] (RTECS)

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: No ecotoxicity data was found for the product.
Environmental Fate: No environmental information found for this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Waste Disposal: Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.

SECTION 14 - TRANSPORT INFORMATION

DOT Shipping Name: Corrosive liquid, acidic, organic, n.o.s. (Glycollic acid)
DOT UN Number: UN3265
DOT Hazard Class: 8
DOT Packing Group: III
IATA Shipping Name: Corrosive liquid, acidic, organic, n.o.s. (Glycollic acid)
IATA UN Number: UN3265
IATA Hazard Class: 8
IATA Packing Group: III
IMDG UN Number : UN3265
IMDG Shipping Name : Corrosive liquid, acidic, organic, n.o.s. (Glycollic acid)
IMDG Hazard Class : 8
IMDG Packing Group : III
RID UN Number : UN3265
RID Shipping Name : Corrosive liquid, acidic, organic, n.o.s. (Glycollic acid)
RID Hazard Class : 8
RID Packing Group : III

SECTION 15 - REGULATORY INFORMATION

Canada Reg. Status: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

Canada WHMIS: Controlled - Class E - Corrosive material
Controlled - Class: D2A Very Toxic

1,2,3-Propanetricarboxylic acid, 2-hydroxy- :

TSCA Inventory Status: Listed
Canada DSL: Listed

Amino tris(methylenephosphonic acid) :

TSCA Inventory Status: Listed
Canada DSL: Listed

Ammonium chloride :

TSCA Inventory Status: Listed
Canada DSL: Listed

Formaldehyde :

TSCA Inventory Status: Listed
Canada DSL: Listed

Non Hazardous :

TSCA Inventory Status: Listed
Canada DSL: Listed

WHMIS Pictograms



SECTION 16 - ADDITIONAL INFORMATION

General Use: Metal cleaner
HMIS Health Hazard: 3
HMIS Fire Hazard: 1
HMIS Reactivity: 1
HMIS Personal Protection: x
MSDS Creation Date: August 15, 2008
MSDS Revision Date: September 17, 2009

Disclaimer: The information contained herein is based on data considered accurate and is offered solely for information, consideration and investigation. Kester extends no warranties, makes no representations and assumes no responsibility as to the accuracy, completeness or suitability of this data for any purchaser's use. The data on this Material Safety Data Sheet relates only to this product and does not relate to use with any other material or in any process. All chemical products should be used only by, or under the direction of, technically qualified personnel who are aware of the hazards involved and the necessity for reasonable care in handling. Hazard communication regulations require that employees must be trained on how to use a Material Safety Data Sheet as a source for hazard information.

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