

SAFETY DATA SHEET



SDS No.: 5
Date Revised: April 23, 2018
Supercedes: March 9, 2017

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: EasiSolv 55 Stencil Remover Concentrate
General Use: Emulsion Remover
Product Description: Liquid

MANUFACTURER

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2. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

GHS CLASSIFICATION OF SUBSTANCE

Flammable Liquid	Not Applicable
Aspiration Toxicity	Not Applicable
Skin Corrosion/ Irritation	Category 1A - Corrosive
Eye Irritation	Category 1
Carcinogenicity	Not Rated Under GHS
Specific Organ Toxicity Repeated Exposure	Category 2 - thyroid
Specific Organ Toxicity Single Exposure	Not Rated Under GHS
Reproductive Toxicity	Not Rated Under GHS
Acute Toxicity	Not Rated Under GHS
Germ Cell mutagenicity	Not Rated Under GHS
Corrosive to Metals	Not Rated Under GHS; G31 Corrosion Test Completed for More Concentrated Similar Material.
Hazardous to the aquatic environment	Refer to Section 12

Hazard Category - means the division of criteria within each hazard class, e.g. acute toxicity includes five hazard categories and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class. "GHS Classification of Substance" means the material hazard class under that particular category and should not be taken as a comparison of hazard categories more generally. Degree of severity under GHS is "1" being the most severe and sequential numbers indicating correspondingly less severity. "Not Classified Under GHS" does not have characteristics that fall into any of the categories for that hazard class.

GHS LABEL ELEMENTS



DANGER

Hazard Statements

H314 - Causes severe skin burns and eye damage
H373 - May cause damage to thyroid through prolonged or repeated ingestion of iodine containing ingredients
H402 - Harmful to aquatic life

Precautionary Statements

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General:

P101-If medical advice is needed, have product container or label at hand.

P103-Read label before use.

Prevention:

P264 - Wash skin thoroughly after handling.

P280 - Wear protective gloves/protective clothing/eye protection/face protection

Response:

P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 - Immediately call a doctor, a POISON CENTER.

P314 - Get medical advice/attention if you feel unwell.

P321 - Specific treatment (see supplemental first aid instructions on the label or this SDS).

P363 - Wash contaminated clothing before reuse.

Storage/Disposal:

P405 - Store locked up.

P501-Dispose of contents/container in accordance with local/regional/federal regulations.

UN GHS

According to the Globally Harmonized Standard for Classification and Labeling (GHS), this product is considered hazardous based on its acidic pH and iodine content.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>wt%</u>	<u>CAS Registry #</u>
Sodium Metaperiodate	20 - 25	7790-28-5
Sulfuric Acid	5 - 10	7664-93-9
Sulfamic Acid	0.5 - 2	5329-14-6
Sodium Bisulfate	1 - 2	7681-38-1
Water	balance	

4. FIRST AID MEASURES

INHALATION:

Remove to fresh air and keep at rest in a comfortable position. Get medical attention if symptoms persist after moving to fresh air. Give oxygen if available, symptoms persist, and medical attention is not immediate.

EYE CONTACT:

Remove contact lens (if present). Rinse eyes immediately with plenty of clean water for at least 15 minutes. If necessary, gently hold the eyelid open during the flush. If eye irritation persists, seek medical attention.

SKIN CONTACT:

Wash skin with mild soap solution to remove material immediately after contact. Prolonged contact will increase the potential for skin irritation/corrosion.

INGESTION:

Not a likely route of exposure based on use. If accidental ingestion does occur, rinse mouth immediately with water. Seek immediate medical attention and provide SDS to attending medical personnel. DO NOT INDUCE VOMITING unless instructed to do so by trained medical personnel/Poison Control Center.

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5. FIRE FIGHTING MEASURES

Flashpoint and Method: Not Applicable
Flammable Limits: Not Applicable
Autoignition Temperature: Not Applicable

GENERAL HAZARD:

Product is water-based and not a significant fire hazard. Sodium metaperiodate is an oxidizer and may contribute oxygen to a fire.

FIRE FIGHTING INSTRUCTIONS:

Water fog or fine spray; dry chemical fire extinguishers; carbon dioxide fire extinguishers; foam; alcohol resistant foams (ATC type). Use water fog or fine spray for cooling exposed containers to control heating.

FIRE FIGHTING EQUIPMENT:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Do not enter an area having containers of this product without self-contained breathing apparatus.

FURTHER INFORMATION:

During a fire, smoke may contain the original material in addition to combustion products which might be more irritating.

HAZARDOUS COMBUSTION PRODUCTS:

Carbon dioxide, aldehydes, and iodine salts.

6. ACCIDENTAL RELEASE MEASURES

LAND SPILL RESPONSE:

Absorb small spills with inert material such as sand or earth. Containerize waste material. Dike large spills to contain the area of the spill. Use clean up procedures that minimize contamination to earth or water bodies.

WATER SPILL:

Material is water-based and is expected to mix immediately with the water body. Collection will be difficult but restrict transfer to the localized spill area in the case of a large spill (many gallons) by diking or other means as this product is aquatically toxic based on pH and iodine content.

RECOMMENDED DISPOSAL:

Disposal options may be dictated by other materials mixed with this material. Dispose of in accordance with local, state, and federal regulations using methods which consider recycling/reclamation.

7. HANDLING AND STORAGE

STORAGE TEMPERATURE: Ambient

STORAGE PRESSURE: Atmospheric

GENERAL:

Keep the container tightly closed. Store in a dry, cool, and well-ventilated place away from incompatible materials such as caustics. Preferable storage is a restricted area designed for acids and oxidizers.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200 and other agencies)

Component	EXPOSURE LIMITS 8 hrs TWA (ppm)				
	OSHA PEL	ACGIH TLV	NIOSH REL	AIHA WEEL	Other
Sodium Metaperiodate	None Established	0.01 ppm*	None Established		
Sulfuric Acid	1 mg/m ³	0.2 mg/m ³	1 mg/m ³		
Sulfamic Acid	None Established	None Established	None Established		
Sodium Bisulfate	None Established	None Established	None Established		

* - ACGIH TLV set for iodides in general as inhalable fraction and vapor and not specific for sodium metaperiodate.

Components are not sufficiently volatile to produce a vapor inhalation hazard. The product does present an inhalation hazard as a mist. Sodium metaperiodate is a moderately strong oxidizing agent. Inhalation of a mist should be viewed as producing as inhaling an acid mist/oxidizer.

ENGINEERING CONTROLS:

Provide adequate general and local exhaust ventilation to maintain exposure below established exposure limits. Provide eyewash stations and safety showers in locations available to material users. Provide hand washing facilities for routine use by personnel using the material. Spill control supplies should be available in a location known to the material user.

PERSONAL PROTECTION:

Splash goggles and apron should be worn when pouring this material to avoid contact with the liquid. Hand protection is recommended up to the elbow when there is possible direct contact with the liquid. Glove choice should be appropriate for the chemical blend and the specific activity being performed. NOTE: nitrile gloves are a general purpose glove available in a wide variety of thicknesses and protect against most chemicals. Respiratory protection should be appropriate for acids/oxidizer exposure and utilized if ventilation cannot be established to adequately maintain exposure within exposure limits such as might occur when cleaning up spills.

EXPOSURE EVALUATION:

The only established exposure limits for this product are for sulfuric acid. The American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit value (TLV) for iodides of 0.01 ppm can be applied to sodium metaperiodate exposure. Exposure monitoring can be performed if information as to personal exposure is desired and the product is used in a form that it can be inhaled. There are existing sampling methods for sulfuric acid. Sodium metaperiodate may be determined by analyzing for the iodine and assuming the source is all sodium metaperiodate. It is recommended that exposure monitoring be performed if this product is applied as a mist in even dilute form even when respiratory protection is provided.

9. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure:	unknown	Vapor Density:	Unknown
Specific Gravity:	1.31	Evaporation Rate:	Unknown
Solubility in Water:	soluble	Freezing Point:	Unknown
pH:	<2 (10% solution)	Odor:	Mild
Boiling Point:	100 °C/212 °F	Appearance:	Clear, colorless to light yellow
Viscosity:	<10 cps	Physical State:	Liquid
Flash Point:	Not Applicable	Flammable Range:	Not Applicable
		VOC content:	None

10. STABILITY AND REACTIVITY

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GENERAL:

The sodium metaperiodate component is an oxidizer and may intensify a fire by providing oxygen.

INCOMPATIBLE MATERIALS AND CONDITIONS TO AVOID:

Combustible materials, reducing agents, organic materials, caustics

HAZARDOUS DECOMPOSITION:

Heating will cause decomposition resulting in corrosive acid residues to metal surfaces that need to be removed to be removed to prevent shortened life span.

11. TOXICOLOGICAL INFORMATION

TOXICITY TO ANIMALS:

<u>Component</u>	<u>Acute Test</u>	<u>Value</u>	<u>Species</u>
Sulfamic Acid	LD50 oral	3160 mg/kg	Rat
Sodium Metaperiodate	LD50 intraperitoneal	58 mg/kg	Mouse
Sodium Metaperiodate	EPISKIN Human Skin Model Test	Corrosive Category 1C (exposures between 1 and 4 hrs with observations up to 14 days)	
Sodium Metaperiodate	LD50 oral	264 mg/kg	Rat
Sulfuric Acid	LD50 oral	2140 mg/kg	Rat
Sulfuric Acid	LC50 inhalation	510 mg/m ³ - 2hr	Rat
Sodium Bisulfate	LD50 oral	>2800 mg/m ³	Rat
Sodium Bisulfate	Primary skin irritation study	toxicity category IV	Rabbit

ROUTES OF ENTRY:

Not sufficiently volatile for the vapor to produce an inhalation hazard. Inhalation can occur if product is used as an aerosol or mist. Product is corrosive and oxidizer and is a skin and eye exposure hazard.

CHRONIC EFFECTS ON HUMANS:

Long-term or repeated exposure to sodium metaperiodate can result in cumulative effects from exposure to the iodine component. Possible products of the reaction of sodium metaperiodate with various body materials produce iodine and iodide. Iodine is essential to the thyroid but over supply causes goiter and changes in the activity of the thyroid gland. Ingredients are not identified as suspect carcinogens, sensitizers, and germ cell mutagens. Reproductive hazard exists with excessive iodine exposure via the oral route but this is unlikely based on prescribed product use.

Eyes:

The product chemical mixture is strongly corrosive to eyes. The solution in dilute form makes the hazard correspondingly less hazardous, however, splashes in the eyes require immediate attention as there is potential for eye damage if the eyes are not immediately washed.

Skin:

The product mixture is strongly corrosive to skin. The solution in dilute form makes the hazard correspondingly less hazardous, however, product should be washed promptly from skin if contact occurs.

Ingestion:

Not a likely route of exposure based on product use, however, both the corrosive potential and the iodine component needs to be addressed by medical personnel.

Inhalation:

Not a likely route of exposure based on low volatility of the concentrated material. Aerosolizing the product to produce a mist will create an inhalation hazard. Personal protection, including respiratory protection, needs to be utilized if using the product in an aerosol/mist.

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12. ECOLOGICAL INFORMATION

<u>Species</u>	<u>Test Information</u>	<u>Concentration</u>	<u>Component</u>
Oncorhynchus mykiss (rainbow trout)	semi-static LC50	>0.17 mg/l-96hr	Sodium periodate
Daphnia magna (Water flea)	static test LC50	>0.18 mg/l-48hr	Sodium periodate
Pimephales promelas	LC50	42.25 mg/l	Sulfamic Acid

There is very little data available on ecological toxicity of product ingredients, however, it likely to reduce to iodides in the environment, is acidic, and is likely to be harmful to aquatic life when introduced in volume.

PRODUCTS OF BIODEGRADATION:

Product iodine-containing component is likely to reduce to iodides in the environment. Depending on the quantity, these could be hazardous to aquatic life.

13. DISPOSAL CONSIDERATIONS

Dispose of any waste in compliance with local, state, and federal regulations. Determine EPA RCRA waste categorization at the time of disposal as mixing with other materials may change its categorization. Containers may contain residue that needs to be addressed at time of disposal. Recycling containers needs to address any remaining residues.

14. TRANSPORT INFORMATION

The following proper shipping name, hazard class and packing group are in accordance to 49 CFR Department of Transportation (U.S. DOT) regulatory requirements from 172.101 Hazardous Materials Table

49 CFR Shipping Information	EasiSolv55
Symbols	"G" - identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parantheses, in association with the basic description. See 172.203(k).
UN Number	UN3264
Proper Shipping Name	Corrosive liquid, acidic, inorganic, n.o.s. (sodium metaperiodate)
Hazard Class	8
Packing Group	II
Label Codes	8
Special Provisions (172.102)	B2,IB2,T11,TP2,TP27
Packaging - Exceptions	consult 49 CFR 173.154
Packaging - Nonbulk	Consult 49 CFR 173.202
Packaging - bulk	Consult 49 CFR 173.242
Quantity Limitations - Passenger aircraft/rail	1 L
Quantity Limitations - Cargo aircraft only	30 L

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Vessel stowage - Location	B-(i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.
Vessel stowage - Other	40 - stow clear of living quarters

INTERNATIONAL AIR TRANSPORT ASSOCIATION (IATA)

IATA 58th Edition Information	EasiSolv 55
UN Number	3264
Proper Shipping Name Description	Corrosive liquid, acidic, inorganic, n.o.s. (sodium metaperiodate)
Class or Division	8
Hazard Label(s)	Corrosive
Packing Group	II
EQ - 2.6 Dangerous Goods in Excepted Quantities	E2
Passenger Aircraft - Limited Quantity Packing Instructions	Y840
Passenger Aircraft - Limited Quantity Max net Qty/Pkg	0.5 L
Passenger Aircraft - Packing Instructions	851 - the substances must be compatible with their packagings as required by 5.0.2.6; metal packagings must be corrosion resistant or with protection against corrosion; substances of Class 8 are permitted in glass inner packagings only if the substance is free from hydrofluoric acid. net quantity per inner packaging is 1.0 L; total quantity per package is 1.0 L (consult 851 detail for more information).
Passenger Aircraft - Quantity Max Net Qty/Pkging	1 L
Cargo Aircraft only - Packing Instructions	855 - the substances must be compatible with their packagings as required by 5.0.2.6; metal packagings must be corrosion resistant or with protection against corrosion; substances of Class 8 are permitted in glass inner packagings only if the substance is free from hydrofluoric acid. net quantity per inner packaging is 2.5 L with a total net of 30 L per package. (consult 855 detail for more information.)
Cargo Aircraft only - Max Net Qty/Pkging	30 L
Special Provisions 4.4	A803
ERG Code	8L

INTERNATIONAL MARITIME DANGEROUS GOODS CODE (IMDG CODE)

IMDG 2016 EDITION	EasiSolv 55
UN Number	3264
Proper Shipping Name Description	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (SODIUM METAPERIODATE)
Class or Division	8
Subsidiary Risks	NA
Packing Group	II
Special Provisions	274 - For the purposes of documentation and package marking, the proper shipping name shall be supplied with the technical name (see 3.1.2.8.1)
Limited Quantities	1 L
Excepted Quantities	E 2
Packing Instructions	P001
Packing Provisions	NA
IBC Instructions 4.1.4	IBC02
IBC Provisions 4.1.4	NA
Portable tanks and bulk containers - tank instructions	T7

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Portable tanks and bulk containers - provisions	TP2, TP28
EmS	F-A, S-B
Stowage and Handling	Category A SW2 - on deck or under deck for cargo ships or passenger ships carrying passengers limited to 25 or 1 per 3 m of overall length. SW2 - away from living quarters.
Segregation	Blank
Properties and observations	Causes burns to skin, eyes and mucous

15. REGULATORY INFORMATION

Chemical Inventory Status

Ingredients listed on: TSCA, DSL, Japan, and EC inventories.

SARA Section 302 - Emergency Planning Notification - Sulfuric Acid

SARA Section 304 - Emergency Release Notification - Sulfuric Acid

SARA 311/312 - Hazard categories for SARA Section 311/312 Reporting -

Immediate (acute) health hazard, Delayed (chronic) health hazard

CERCLA - Hazardous Substance - Sulfuric Acid

RCRA Hazardous Waste Classification - None

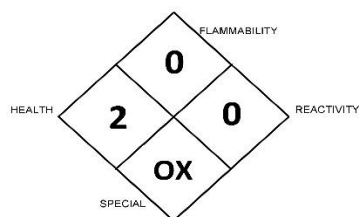
California Proposition 65:

No components listed on current CA Prop 65 list.

16. OTHER INFORMATION

UNITED STATES NATIONAL FIRE PROTECTION ASSOCIATION (U.S. NFPA)

NFPA 704 "fire diamond" is used by emergency personnel to quickly identify the risks posed by the material during response to a fire or a spill or other unusual event.



NFPA rating explanation as applied to EasiSolv 55 Stencil Remover Concentrate

FLAMMABILITY 0 - Will not burn

HEALTH 2 - Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury

REACTIVITY 0 - Normally stable, even under fire exposure conditions, and is not reactive with water.

SPECIAL - Sodium Metaperiodate is a Class I oxidizer (slightly increases the burning rate of combustible materials but does not cause spontaneous ignition when they come in contact with them).

The Hazardous Materials Identification System (HMIS) is a numerical hazard rating that incorporates the use of labels with color developed by the American Coatings Association as a compliance aid for the OSHA Hazard Communication Standard.

EasiSolv 55	
HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	H

HEALTH -
FLAMMABILITY-
REACTIVITY-

2 - Temporary or minor injury may occur.
0 - Materials that will not burn.

0-Materials that are normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Nonexplosives.

PERSONAL PROTECTION-

Gloves. Protective goggles. Protective clothing. Insufficient ventilation: wear respiratory protection.

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CREATION/REVISION SUMMARY:

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