

1. Identification

Product identifier Defcon 2

Other means of identification

SDS number 576N-102A

Product code HIL00455

Recommended use Degreaser / Cleaner

Recommended restrictions For Labeled Use Only

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name HILLYARD INDUSTRIES

Address 302 North Fourth St.
St. Joseph, MO 64501

Contact person Regulatory Affairs

Telephone number (800) 365-1555 (Ext. 8206)

Fax (816) 383-8406

E-mail regulatoryaffairs@hillyard.com

Emergency telephone # (800) 424-9300
(Only in the event of chemical emergency involving a spill, leak, fire, exposure or accident involving chemicals)

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Skin corrosion/irritation Category 1C
 Serious eye damage/eye irritation Category 1

Environmental hazards Hazardous to the aquatic environment, acute hazard Category 3

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement Causes severe skin burns and eye damage. Causes serious eye damage. Harmful to aquatic life.

Precautionary statement

Prevention Do not breathe mist or vapor. Wash thoroughly after handling. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.

Response If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse.

Storage Store locked up.

Disposal

Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law in compliance with applicable federal, state and local requirements. Soiled rags should be dampened with water before disposal or discarded in special containers for flammable material. CONTAINER DISPOSAL: Keep drum for next dilution of Defcon 2 or triple rinse (or equivalent); then offer clean, dry container for recycling or reconditioning.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%
*Complex Surfactant Blend		Proprietary	1 - < 3
Ethanolamine		141-43-5	< 1
Tetrasodium EDTA		64-02-8	< 1
Isopropanol		67-63-0	< 0.2
Other components below reportable levels			90 - 100

4. First-aid measures

Inhalation	Move to fresh air. Call a physician if symptoms develop or persist.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Methods and materials for containment and cleaning up

The product is completely soluble in water. Prevent product from entering drains.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage**Precautions for safe handling**

Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection**Occupational exposure limits**

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-1 Permissible Exposure Limits (PEL) for Air Contaminants (29 CFR 1910.1000)

Components	Type	Value
Ethanolamine (CAS 141-43-5)	PEL	6 mg/m ³ 3 ppm
Isopropanol (CAS 67-63-0)	PEL	980 mg/m ³ 400 ppm

US. ACGIH Threshold Limit Values (TLV)

Components	Type	Value
Ethanolamine (CAS 141-43-5)	STEL	6 ppm
	TWA	3 ppm
Isopropanol (CAS 67-63-0)	STEL	400 ppm
	TWA	200 ppm

NIOSH. Immediately Dangerous to Life or Health (IDLH) Values, as amended

Components	Type	Value
Ethanolamine (CAS 141-43-5)	IDLH	3 % 30 ppm
Isopropanol (CAS 67-63-0)	IDLH	2 % 2000 ppm

US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)

Components	Type	Value
Ethanolamine (CAS 141-43-5)	STEL	15 mg/m ³ 6 ppm
	TWA	8 mg/m ³ 3 ppm
Isopropanol (CAS 67-63-0)	STEL	1225 mg/m ³

US. NIOSH: Pocket Guide to Chemical Hazards Recommended Exposure Limits (REL)

Components	Type	Value
		500 ppm
	TWA	980 mg/m ³
		400 ppm

Biological limit values**ACGIH Biological Exposure Indices (BEI)**

Components	Value	Determinant	Specimen	Sampling Time
Isopropanol (CAS 67-63-0)	40 mg/l	Acetone	Urine	*

* - For sampling details, please see the source document.

Appropriate engineering controls

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Avoid contact with eyes. Use safety eyewear with splash guards or side shields, chemical goggles, or face shields.

Skin protection**Hand protection**

Use protective gloves when dealing with the concentrate.

Other

Avoid contact with the skin. Wear suitable protective clothing and gloves.

Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards

None known.

General hygiene considerations

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance Clear, Colorless to Light Amber Liquid

Physical state Liquid.

Form Liquid.

Color Colorless to light amber

Odor Non-objectional odor.

Odor threshold Not available.

pH 11 - 12.5

Melting point/freezing point Not applicable / Not available

Initial boiling point and boiling range 209 °F (98.33 °C)

Flash point >200.0 °F (>93.3 °C) Tag Closed Cup

Evaporation rate <1 Ethyl ether=1

Flammability (solid, gas) Not applicable.

Upper/lower flammability or explosive limits

Explosive limit - lower (%) Not available.

Explosive limit - upper (%) Not available.

Vapor pressure 17.49 mm Hg

Vapor density 0.64 Air=1

Relative density 1.006

Solubility(ies)

Solubility (water) 100 %

Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	8.38 lb/gal
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
Percent volatile	96 - 97 %
VOC	1.18 % Concentrate

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin contact	Causes severe skin burns.
Eye contact	Causes serious eye damage.
Ingestion	Causes digestive tract burns.

Symptoms related to the physical, chemical and toxicological characteristics	Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
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Information on toxicological effects

Acute toxicity	Not known.
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Product	Species	Test Results
Defcon 2		
<u>Acute</u>		
Dermal		
LD50	Rabbit	117514 mg/kg
Inhalation		
LC50	Rat	19200 mg/l, 4 Hours
Oral		
LD50	Rat	186179 mg/kg

Components	Species	Test Results
Ethanolamine (CAS 141-43-5)		
<u>Acute</u>		
Dermal		
LD50	Rat	1 g/kg

Components	Species	Test Results
Isopropanol (CAS 67-63-0)		
Acute		
Dermal		
LD50	Rabbit	12800 mg/kg
Inhalation		
LC50	Rat	51.05 mg/l, 8 Hours
Oral		
LD50	Rat	4710 mg/kg
Skin corrosion/irritation	Causes severe skin burns and eye damage.	
Serious eye damage/eye irritation	Causes serious eye damage.	
Respiratory or skin sensitization		
Respiratory sensitization	Not a respiratory sensitizer.	
Skin sensitization	This product is not expected to cause skin sensitization.	
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.	
Carcinogenicity	Not classifiable as to carcinogenicity to humans.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Not listed.		
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)		
Not listed.		
US. National Toxicology Program (NTP) Report on Carcinogens		
Not listed.		
Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity - single exposure	Not classified.	
Specific target organ toxicity - repeated exposure	Not classified.	
Aspiration hazard	Not an aspiration hazard.	
Chronic effects	Prolonged inhalation may be harmful.	

12. Ecological information

Product	Species	Test Results
Defcon 2		
Aquatic		
Crustacea	EC50 Daphnia	74352.4297 mg/l, 48 hours
Fish	LC50 Fish	32936.7422 mg/l, 96 hours
<i>Acute</i>		
Crustacea	EC50 Daphnia	28636.6563 mg/l, 48 hours estimated
Fish	LC50 Fish	6761.438 mg/l, 96 hours estimated
Components	Species	Test Results
Ethanolamine (CAS 141-43-5)		
Aquatic		
<i>Acute</i>		
Fish	LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss)	114 - 196 mg/l, 96 hours

Components	Species	Test Results
Isopropanol (CAS 67-63-0)		
Aquatic		
<i>Acute</i>		
Fish LC50	Bluegill (Lepomis macrochirus)	> 1400 mg/l, 96 hours
Tetrasodium EDTA (CAS 64-02-8)		
Aquatic		
<i>Acute</i>		
Fish LC50	Bluegill (Lepomis macrochirus)	472 - 500 mg/l, 96 hours

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Ethanolamine	-1.31
Isopropanol	0.05

Mobility in soil This product is completely water soluble and will disperse in soil.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations. Buyer assumes all risk and liability associated with disposal of this product (original concentration or dilution) in violation of applicable law.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code D002: Waste Corrosive material [pH ≤2 or =>12.5, or corrosive to steel]
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal. Triple rinse (or equivalent). Then offer clean, dry container for recycling or reconditioning.

14. Transport information

DOT

UN number	UN1760
UN proper shipping name	Corrosive liquids, n.o.s.
Transport hazard class(es)	
Class	8
Subsidiary hazard	-
Label(s)	8
Packing group	III
Environmental hazards	
Marine pollutant	No.
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	B2, IB2, T11, TP2, TP27
Packaging exceptions	154
Packaging non bulk	202
Packaging bulk	242

PACKAGES 1 GALLON AND SMALLER ARE SHIPPED LIMITED QUANTITY

IATA

UN number	UN1760
UN proper shipping name	Corrosive liquid, n.o.s. (Tetrasodium ethylenediamine tetraacetate)
Transport hazard class(es)	
Class	8
Subsidiary hazard	-
Label(s)	8
Packing group	III
Environmental hazards	No.
ERG Code	154
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Other information	
Passenger and cargo aircraft	Allowed with restrictions.
Cargo aircraft only	Allowed with restrictions.

IMDG

UN number	UN1760
UN proper shipping name	CORROSIVE LIQUID, N.O.S. (Tetrasodium ethylenediamine tetraacetate)
Transport hazard class(es)	
Class	8
Subsidiary hazard	-
Label(s)	8
Packing group	III
Environmental hazards	
Marine pollutant	No.
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not established.

DOT



IATA; IMDG



15. Regulatory information

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

Toxic Substances Control Act (TSCA)

One or more components of the mixture are not on the TSCA 8(b) inventory or are designated "inactive".

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)**SARA 302 Extremely hazardous substance**

Not listed.

SARA 311/312 Hazardous chemical Yes**Classified hazard categories** Skin corrosion or irritation
Serious eye damage or eye irritation**SARA 313 (TRI reporting)**

Not regulated.

Other federal regulations**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Contains component(s) regulated under the Safe Drinking Water Act.**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**

Isopropanol (CAS 67-63-0) Low priority

US state regulations**California Proposition 65**California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.**International Inventories**

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)
 A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date	08-09-2021
Revision date	04-08-2026
Version #	03
HMIS® ratings	Health: 3 Flammability: 0 Physical hazard: 0

Disclaimer

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Revision information

This document has undergone significant changes and should be reviewed in its entirety.