

**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** (816) 233-1321 (Ext. 8285)

**Fax** (816) 383-8485

**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<sub>2</sub>).

**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/vapors. 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.

**Methods and materials for containment and cleaning up**

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 breathe mist/vapors. 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 Limits for Air Contaminants (29 CFR 1910.1000)**

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

**US. ACGIH Threshold Limit Values**

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

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value
Ethanolamine (CAS 141-43-5)	STEL	15 mg/m <sup>3</sup>
		6 ppm
		8 mg/m <sup>3</sup>
Isopropanol (CAS 67-63-0)	STEL	3 ppm
		1225 mg/m <sup>3</sup>
		500 ppm
		980 mg/m <sup>3</sup>
		400 ppm

**Biological limit values****ACGIH Biological Exposure Indices**

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

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

<b>Appropriate engineering controls</b>	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.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Avoid contact with eyes. Use safety eyewear with splash guards or side shields, chemical goggles, or face shields.
<b>Skin protection</b>	
<b>Hand protection</b>	Use protective gloves when dealing with the concentrate.
<b>Other</b>	Avoid contact with the skin. Wear suitable protective clothing and gloves.
<b>Respiratory protection</b>	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.
<b>Thermal hazards</b>	None known.
<b>General hygiene considerations</b>	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

<b>Appearance</b>	Clear, Colorless to Light Amber Liquid
<b>Physical state</b>	Liquid.
<b>Form</b>	Liquid.
<b>Color</b>	Colorless to light amber
<b>Odor</b>	Non-objectional odor.
<b>Odor threshold</b>	Not available.
<b>pH</b>	11 - 12.5
<b>Melting point/freezing point</b>	Not applicable / Not available
<b>Initial boiling point and boiling range</b>	209 °F (98.33 °C)
<b>Flash point</b>	> 200.0 °F (> 93.3 °C) Tag Closed Cup
<b>Evaporation rate</b>	< 1 Ethyl ether=1
<b>Flammability (solid, gas)</b>	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	17.49 mm Hg
<b>Vapor density</b>	0.64 Air=1
<b>Relative density</b>	1.006
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	100 %
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	8.38 lb/gal
<b>Explosive properties</b>	Not explosive.
<b>Oxidizing properties</b>	Not oxidizing.
<b>Percent volatile</b>	96 - 97 %
<b>VOC</b>	1.18 % Concentrate

## 10. Stability and reactivity

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

## 11. Toxicological information

### Information on likely routes of exposure

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

### Information on toxicological effects

**Acute toxicity** Not known.

<b>Product</b>	<b>Species</b>	<b>Test Results</b>
Defcon 2		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	117500 mg/kg
<b>Inhalation</b>		
LC50	Rat	19200 mg/l, 4 Hours
<b>Oral</b>		
LD50	Rat	186200 mg/kg
<b>Components</b>		
Ethanolamine (CAS 141-43-5)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	1025 mg/kg
<b>Oral</b>		
LD50	Rat	10.2 g/kg
Isopropanol (CAS 67-63-0)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	12800 mg/kg
<b>Oral</b>		
LD50	Rat	4.7 g/kg
<b>Skin corrosion/irritation</b>	Causes severe skin burns and eye damage.	
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Not a respiratory sensitizer.	
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.	
<b>Germ cell mutagenicity</b>	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

**Ecotoxicity** Harmful to aquatic life.

Product		Species	Test Results
Defcon 2			
<b>Aquatic</b>			
Crustacea	EC50	Daphnia	74352.4297, 48 hours
Fish	LC50	Fish	32936.7422, 96 hours
<i>Acute</i>			
Crustacea	EC50	Daphnia	28663.2188, 48 hours estimated
Fish	LC50	Fish	7296.916, 96 hours estimated

Components		Species	Test Results
Ethanolamine (CAS 141-43-5)			
<b>Aquatic</b>			
<i>Acute</i>			
Fish	LC50	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	>= 114 - <= 196 mg/l, 96 hours
Isopropanol (CAS 67-63-0)			
<b>Aquatic</b>			
<i>Acute</i>			
Fish	LC50	Bluegill (Lepomis macrochirus)	> 1400 mg/l, 96 hours
Tetrasodium EDTA (CAS 64-02-8)			
<b>Aquatic</b>			
<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** No data available.

**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

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	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.
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	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

<b>UN number</b>	UN1760
<b>UN proper shipping name</b>	Corrosive liquids, n.o.s.
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	8
<b>Packing group</b>	III
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	B2, IB2, T11, TP2, TP27
<b>Packaging exceptions</b>	154
<b>Packaging non bulk</b>	202
<b>Packaging bulk</b>	242

PACKAGES 1 GALLON AND SMALLER ARE SHIPPED LIMITED QUANTITY OR ORM-D

#### IATA

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

#### IMDG

<b>UN number</b>	UN1760
<b>UN proper shipping name</b>	CORROSIVE LIQUID, N.O.S. (Tetrasodium ethylenediamine tetraacetate)
<b>Transport hazard class(es)</b>	
<b>Class</b>	8
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	8
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	No.
<b>EmS</b>	F-A, S-B
<b>Special precautions for user</b>	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

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Isopropanol (CAS 67-63-0)

### 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](http://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

<b>Issue date</b>	08-09-2021
<b>Revision date</b>	10-01-2021
<b>Version #</b>	02
<b>HMIS® ratings</b>	Health: 3 Flammability: 0 Physical hazard: 0

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**Revision information** Physical & Chemical Properties: Multiple Properties  
Transport Information: Material Transportation Information