Material Safety Data Sheet: BLUE FORCE ADVANCED

Supercedes Date 07/11/2012 **Issuing Date** 05/06/2013

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name BLUE FORCE ADVANCED
Recommended use Cleaning agent Stripping solution
Information on Manufacturer
CERTIFIED LABS, DIV. OF NCH CORP.
BOX 152170
IRVING, TEXAS 75015

Product Code 0750
Chemical nature Aqueous solution of surfactants and ethanolamine
Emergency Telephone Number
CHEMTREC® 800-424-9300

2. HAZARDS IDENTIFICATION

Emergency Overview
DANGER
Corrosive
Causes skin and eye burns
May cause allergic skin reaction
May cause allergic respiratory reaction
May cause delayed lung injury and burns
Harmful or fatal if swallowed

Color Blue **Physical State** Liquid **Odor** Glycol ether

Potential Health Effects

Principle Route of Exposure	Eye contact, Skin contact, Inhalation.
Primary Routes of Entry	Inhalation, Skin Absorption, Ingestion.
Acute Effects	
Eyes	Corrosive to the eyes and may cause severe damage including blindness.
Skin	Causes skin burns. May be absorbed through the skin in harmful amounts. May cause allergic skin reaction.
Inhalation	Harmful by inhalation. Causes burns. Inhalation may cause central nervous system effects. May cause central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. May cause allergic respiratory reaction.
Ingestion	Ingestion causes burns of the upper digestive and respiratory tracts. May be fatal if swallowed.
Chronic Toxicity	Liver and kidney injuries may occur. May cause sensitization by skin contact. May cause sensitization by inhalation. Inhaled corrosive substances can lead to a toxic edema of the lungs. Contains a known or suspected reproductive toxin.
Target Organ Effects	Liver, Kidney, Respiratory system, Central nervous system, Immune system, Reproductive System.
Aggravated Medical Conditions	Respiratory disorders, Neurological disorders, Skin disorders, Kidney disorders, Liver disorders.
Potential Environmental Effects	See Section 12 for additional Ecological information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No
Propylene glycol monomethyl ether	107-98-2
Ethanolamine	141-43-5
Surfactant blend HMIRC #8666 NJTSRN 100104-1004, 100104-1424, 100104-1351	TRADE SECRET

4. FIRST AID MEASURES

General advice	Do not get in eyes, on skin or on clothing. Do not breathe vapors or spray mist.
Eye Contact	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.
Skin Contact	Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.
Inhalation	Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention immediately.
Ingestion	Drink 1 or 2 glasses of water. Get medical attention immediately. Do NOT induce vomiting. Never give anything by mouth to an unconscious person.
Notes to physician	The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock therapy if needed. May cause sensitization of susceptible persons.

5. FIRE-FIGHTING MEASURES

Flash Point > 201 °F / > 94 °C **Method** Seta closed cup
Autoignition Temperature No information available.
Flammability Limits in Air % Mixture. **Upper** 23.5 **Lower** 1.6
Suitable Extinguishing Media
Alcohol-resistant foam. Dry chemical. Foam. Carbon dioxide (CO2). Water spray. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Specific hazards arising from the chemical
Material can create slippery conditions. Contact with metals may evolve flammable hydrogen gas.
Protective Equipment and Precautions for Firefighters
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA	**Health** 3	**Flammability** 1	**Instability** 0
HMIS	**Health** 3	**Flammability** 1	**Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
Environmental Precautions Do not flush into surface water or sanitary sewer system.
Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13)
Methods for Cleaning Up Pick up and transfer to properly labeled containers.
Neutralizing Agent Acetic acid, diluted.

7. HANDLING AND STORAGE

Handling Do not get in eyes, on skin or on clothing. Do not breathe vapors or spray mist.
Storage Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Metal containers must be lined. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.
Storage Temperature **Minimum** 35 °F / 2 °C **Maximum** 120 °F / 49 °C
Storage Conditions **Indoor** X **Outdoor** **Heated** **Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Propylene glycol monomethyl ether	TWA: 100 ppm STEL: 150 ppm	No data available	STEL 150 ppm STEL 540 mg/m^3 TWA: 100 ppm TWA: 360 mg/m^3
Ethanolamine	TWA: 3 ppm STEL: 6 ppm	TWA: 3 ppm TWA: 6 mg/m^3	IDLH: 30 ppm STEL 6 ppm STEL 15 mg/m^3 TWA: 3 ppm TWA: 8 mg/m^3
Surfactant blend HMIRC #8666 NJTSRN 100104-1004, 100104-1424, 100104-1351	No data available	No data available	No data available

Engineering Measures Use with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas.
Personal Protective Equipment
- **Eye/Face Protection** Tightly fitting safety goggles. Face-shield.
- **Skin Protection** Wear suitable protective clothing, Impervious gloves.
- **Respiratory Protection** In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General Hygiene Considerations Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Non viscous
Color	Blue	**Odor**	Glycol ether
Appearance	Transparent	**pH**	12.4
Specific Gravity	1.008	**Evaporation Rate**	0.5 (Butyl acetate=1)
Percent Volatile (Volume)	93	**VOC Content (%)**	17.5
VOC Photoreactive (Y/N)	Yes	**VOC Content (g/L)**	176
Vapor Pressure	16.53 mmHg @ 70°F	**Vapor Density**	0.6 (Air = 1.0)
Solubility	Completely soluble	**Boiling Point/Range**	> 105 °F / 41 °C

10. STABILITY AND REACTIVITY

Chemical Stability Stable. Hazardous polymerization does not occur.
Conditions to Avoid Heat, flames, and sparks
Incompatible Products Strong oxidizing agents, Reducing agents, Halogenated hydrocarbon, Aldehydes, Vinyl compounds, Ketones, Bases, Acids, Contact with metals liberates hydrogen gas.
Hazardous Decomposition Products Ammonia, Carbon oxides, Nitrogen oxides (NOx), Hydrogen chloride gas, Sulfur oxides, Halogenated compounds, Thermal decomposition can lead to release of irritating gases and vapors.
Possibility of Hazardous Reactions None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information No information available.

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Propylene glycol monomethyl ether	= 5200 mg/kg (Rat)	= 13000 mg/kg (Rabbit)	= 54.6 mg/L (Rat) 4 h > 24 mg/L (Rat) 1 h	no data available	no data available
Ethanolamine	= 1720 mg/kg (Rat)	= 1 mL/kg (Rabbit) = 1025 mg/kg (Rabbit)	no data available	no data available	no data available
Surfactant blend HMIRC #8666 NJTSRN 100104-1004, 100104-1424, 100104-1351	no data available	no data available	no data available	no data available	no data available

Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Propylene glycol monomethyl ether	no data available	no data available	X	no data available	eyes, CNS, respiratory system, skin, liver, kidney
Ethanolamine	no data available	Skin sensitization, Respiratory sensitization	no data available	X	eyes, CNS, respiratory system, skin, liver, kidney, reproductive system, immune system
Surfactant blend HMIRC #8666 NJTSRN 100104-1004, 100104-1424, 100104-1351	no data available	no data available	no data available	no data available	no data available

Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Other
Propylene glycol monomethyl ether	not applicable	not applicable	not applicable	not applicable	not applicable
Ethanolamine	not applicable	not applicable	not applicable	not applicable	not applicable
Surfactant blend HMIRC #8666 NJTSRN 100104-1004, 100104-1424, 100104-1351	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Propylene glycol monomethyl ether	no data available	LC50 = 20.8 g/L Pimephales promelas 96 h LC50 4600 - 10000 mg/L Leuciscus idus 96 h	no data available	EC50= 23300 mg/L 48 h	-0.437
Ethanolamine	EC50 = 15 mg/L Desmodesmus subspicatus 72 h	LC50 = 227 mg/L Pimephales promelas 96 h LC50 = 3684 mg/L Brachydanio rerio 96 h LC50 300 - 1000 mg/L Lepomis macrochirus 96 h LC50 114 - 196 mg/L Oncorhynchus mykiss 96 h LC50 > 200 mg/L Oncorhynchus mykiss 96 h	EC50 = 110 mg/L 17 h EC50 = 12200 mg/L 2 h EC50 = 13.7 mg/L 30 min	EC50= 65 mg/L 48 h	-1.91
Surfactant blend HMIRC #8666 NJTSRN 100104-1004, 100104-	no data available	no data available	no data available	no data available	N/A

1424, 100104-1351					

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Empty containers should be taken for local recycling, recovery, or waste disposal.

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name Amines, liquid, corrosive, n.o.s.
Hazard Class 8
UN-No UN2735
Packing Group II
Description Amines, liquid, corrosive, n.o.s.(Ethanolamine),8,UN2735,PG II

TDG

Proper shipping name Amines, liquid, corrosive, n.o.s.
Hazard Class 8
UN-No UN2735
Packing Group II
Description AMINES, LIQUID, CORROSIVE, N.O.S.(Ethanolamine),8,UN2735,PG II

ICAO

UN-No UN2735
Proper Shipping Name Amines, liquid, corrosive, n.o.s.*
Hazard Class 8
Packing Group II
Shipping Description Amines, liquid, corrosive, n.o.s.*(Ethanolamine),8,UN2735,PG II

IATA

UN-No UN2735
Proper Shipping Name Amines, liquid, corrosive, n.o.s.*
Hazard Class 8
Packing Group II
ERG Code 8L
Shipping Description UN2735,Amines, liquid, corrosive, n.o.s.*(Ethanolamine),8,PG II

IMDG/IMO

Proper Shipping Name Amines, liquid, corrosive, n.o.s.
Hazard Class 8
UN-No UN2735
Packing Group II
EmS No. F-A, S-B
Shipping Description UN2735, Amines, liquid, corrosive, n.o.s.(Ethanolamine),8,PG II

15. REGULATORY INFORMATION

Inventories
TSCA Complies
DSL Complies
U.S. Federal Regulations
SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	No	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Propylene glycol monomethyl ether	Not applicable	Not applicable
Ethanolamine	Not applicable	Not applicable

Surfactant blend HMIRC #8666 NJTSRN 100104-1004, 100104-1424, 100104-1351	Not applicable	Not applicable

Canada
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.
WHMIS Hazard Class
E Corrosive material D2A Very toxic materials D2B Toxic materials

16. OTHER INFORMATION

Prepared By	Angela Hutson
Supercedes Date	07/11/2012
Issuing Date	05/06/2013
Reason for Revision	No information available.
Glossary	No information available.
List of References.	No information available.

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