

SAFETY DATA SHEET



Conforms to regulation (EC) no. EU 453/2010

SECTION 1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product Identifier

Product Name: Nuclean

Product Number: NC-200

1.2 Relevant Identified Uses of the Substance/Mixture and Uses Advised Against

Investigational research by professional users

1.3 Details of the Supplier of the Safety Data Sheet

Manufacturer

National Diagnostics
305 Patton Drive
Atlanta, GA 30036
(404) 699-2121
(800) 526-3867
info@nationaldiagnostics.com

1.4 Emergency Telephone Number

ChemTel Inc.

Contract number MIS8894340
1-800 255-3924 (United States, Canada, Puerto Rico & US Virgin Islands)
01-800-099-0731 (Mexico)
400-120-0751 (China)
000-800-100-4086 (India)
1-300-954-583 (Australia)
0-800-591-6042 (Brazil)
+1-813-255-3924 (All other regions)

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

Classification according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]

H302 - Acute Toxicity-Oral (Category 4)
H315 - Skin Corrosion/Irritation (Category 2)
H319 - Serious Eye Damage/Eye Irritation (Category 2A)
H332 - Acute Toxicity-Inhalation (Category 4)
H412 - Chronic Hazards to the Aquatic Environment (Category 3)

2.2 Label Elements

GHS LABEL ELEMENTS AND CLASSIFICATION

GHS Label Elements



WARNING

H302 - Harmful if swallowed
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.
H412 - Harmful to aquatic life with long lasting effects.
P262 - Do not get into eyes, on skin or on clothing.
P273 - Avoid release to the environment.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P308+P313 - IF exposed or concerned: Call a POISON CENTER or doctor/physician.
P337+P313 - IF eye irritation persists: Get medical advice/attention.

2.3 Other Hazards

None found.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixture

Chemical Names/Description

Aqueous solution of nonionic surfactants, cosolvents and chelating agents (<1%)

Component List

Component	% Comp.	CAS #	EC #	1278/2008 Classification
Butoxy Ethanol	5 - 10	111-76-2	203-905-0	H302, H312, H315, H319, H332
Octylphenol Ethoxylates	10 - 25	9002-93-1		H302, H319, H411

SECTION 4 - FIRST AID MEASURES

4.1 Description of First Aid Measures

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Ingestion

Do not give liquids if victim is unconscious or very drowsy. Otherwise, give no more than 2 glasses of water and induce vomiting. Keep victim's head below hips while vomiting. Get medical attention.

Skin

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes

Immediately flush eyes with plenty of water for at least fifteen minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

4.2 Most Important Symptoms and Effects, Both Acute and Delayed

Inhalation

Butoxy Ethanol:

Burning in nose and throat, coughing. Headache, dizziness, drowsiness, fatigue, nausea.

Octylphenol Ethoxylates:

Coughing, shortness of breath.

Ingestion

Butoxy Ethanol:

Headache, dizziness, drowsiness, fatigue, nausea, vomiting.

Octylphenol Ethoxylates:

Nausea, vomiting, and diarrhea.

Skin

Butoxy Ethanol:

Redness, pain and itching.

Octylphenol Ethoxylates:

Irritation, local redness and swelling.

Eyes

Butoxy Ethanol:

Redness, tearing, and pain.

Octylphenol Ethoxylates:

Inflammation, tearing, blinking, redness, swelling of the conjunctiva, and chemical burns of the cornea.

4.3 Indication of Any Immediate Medical Attention and Special Treatment Needed

Unknown/not applicable

SECTION 5 - FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use media appropriate to the primary cause of fire.

5.2 Special Hazards Arising from the Substance/Mixture

Hazardous Combustion Products

Carbon monoxide and unidentified organic compounds may be formed during combustion if water solvent has evaporated.

Hazardous Decomposition Products

Oxides of carbon, nitrogen, and sulfur.

Hazardous Polymerization

Will not occur under normal conditions of use (See Sections 10.4 & 10.5).

5.3 Advice for Firefighters

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.

5.4 Further Information

No data available.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions

Wear appropriate protective equipment as specified in Section 8.

6.2 Environmental Precautions

Prevent discharge into the environment. Dike spills and stop leakage where practical. Do not allow material to enter drains.

6.3 Methods and Materials for Containment and Cleaning Up

Contain and clean up spill immediately, prevent from entering floor drains. Contain liquids using absorbents. Shovel all spill materials into disposal drum.

6.4 References to Other Sections

For disposal information, see Section 13. For protective clothing and equipment, see Section 8.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for Safe Handling

Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling.

7.2 Conditions for Safe Storage (including any incompatibles)

Keep in a tightly closed container, stored in a cooled, dry, ventilated area. Protect from physical damage. Isolate from incompatible materials (section 10).

Incompatibles

Butoxy Ethanol:

Strong oxidizing agents. Strong bases and salts of strong bases at elevated temperatures. Aluminum surfaces.

Octylphenol Ethoxylates:

Strong oxidizing agents.

7.3 Specific End Uses

Investigational research by professional users

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PRECAUTIONS

8.1 Control Parameters

Component: Butoxy Ethanol

ACGIH Threshold Limit Value (TLV): 25 ppm (skin)

OSHA Permissible Exposure Limit (PEL): 25 ppm

Component: Octylphenol Ethoxylates

ACGIH Threshold Limit Value (TLV): 1 ppm

OSHA Permissible Exposure Limit (PEL): None established

8.2 Exposure Controls

Engineering Controls

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source.

Respiratory Protection

For conditions of use where exposure to the dust or mist is apparent, a full-face dust/mist respirator may be worn. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator.

Eye Protection

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

Skin Protection

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical & Chemical Properties

a. Appearance	Clear, colorless liquid	b. Odor	None
c. Odor Threshold	N.A.	d. pH	No Data
e. Melting/Freezing Point (°C)	0	f. Boiling point (°C)	100
g. Flash Point (°C)	N.A.	h. Evaporation Rate	1.0 (H2O = 1)
i. Flammability	N.A.	j. Upper/Lower Flammability or Explosive Limits	N.A.
k. Vapor Pressure	760 mm Hg	l. Vapor Density (Air = 1)	1.0 (Air = 1)
m. Relative Density	1.1	n. Water Solubility	Soluble
o. Partition Coefficient n-octanol/water	Mixture	p. Autoignition Temperature (°C)	N.A.

q. Decomposition Temperature (°C) N.A.

r. Viscosity No data available.

s. Explosive Properties N.A.

t. Oxidizing Properties N.A.

SECTION 10 - STABILITY AND REACTIVITY

10.1 Reactivity

Not reactive under recommended conditions of use and storage.

10.2 Chemical Stability

Stable under normal conditions of use and storage.

10.3 Possibility of Hazardous Reactions

Will not occur under normal conditions of use (See Sections 10.4 & 10.5).

10.4 Conditions to Avoid

Heat, flame, incompatibles.

10.5 Incompatible Materials

Butoxy Ethanol:

Strong oxidizing agents. Strong bases and salts of strong bases at elevated temperatures. Aluminum surfaces.

Octylphenol Ethoxylates:

Strong oxidizing agents.

10.6 Hazardous Decomposition Products

Oxides of carbon, nitrogen, and sulfur.

SECTION 11 - TOXICOLOGICAL INFORMATION

Product LD50 Values

Oral Rat LD50 (mg/kg)

5556

Dermal Rabbit LD50 (mg/kg)

4444

Component Cancer List Status

	NTP Carcinogen		IARC Category
	Known	Anticipated	
Butoxy Ethanol	No	No	None
Octylphenol Ethoxylates	No	No	None

Potential Health Effects

Inhalation

Butoxy Ethanol

Vapors may cause irritation to the nose, throat, and respiratory tract and are toxic if inhaled.

Octylphenol Ethoxylates

Vapors or mist, in excess of permissible concentrations, or in unusually high concentrations generated from spraying, heating the material or as from exposure in poorly ventilated areas or confined spaces, may cause irritation to the nose and throat.

Ingestion

Butoxy Ethanol

Moderately toxic if ingested.

Octylphenol Ethoxylates

May cause abdominal discomfort, nausea, and diarrhea. Aspiration into the lungs may occur during swallowing or vomiting, resulting in lung damage.

Skin

Butoxy Ethanol

Product is mildly irritating to the skin and toxic if absorbed through the skin.

Octylphenol Ethoxylates

Brief contact may cause slight irritation. Prolonged contact, as with clothing wetted with material, may cause more severe irritation and discomfort.

Eyes

Butoxy Ethanol

Causes severe eye irritation.

Octylphenol Ethoxylates

Can cause severe eye irritation.

Carcinogenicity

Butoxy Ethanol

Not listed as a known or anticipated carcinogen by NTP or IARC.

Octylphenol Ethoxylates

This product may contain residual (less than 100 ppm) concentrations of ethylene oxide. Ethylene oxide causes tumors in laboratory animals.

Mutagenicity

Butoxy Ethanol

No information found.

Octylphenol Ethoxylates

No information available.

Reproductive Toxicity

Butoxy Ethanol

Inhalation exposure of pregnant rabbits caused some lethality to the dam and fetus at 200 ppm, but there were no effects at 100 ppm and below. Inhalation exposure to pregnant rats caused irritancy to the dams and related fetotoxicity at 200 and 100 ppm, but there were no effects at 50 ppm and below.

Octylphenol Ethoxylates

No information available.

Teratogenic Effects

Butoxy Ethanol

Has not been shown to cause birth defects.

Octylphenol Ethoxylates

No information available.

Routes of Entry

Butoxy Ethanol

Inhalation, ingestion, skin contact.

Octylphenol Ethoxylates

No information available.

Target Organ Statement

Butoxy Ethanol

Preexisting skin, eye, and lung disorders may be aggravated by exposure.

Octylphenol Ethoxylates

No information available.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Toxicity

COMPONENT: Butoxy Ethanol

	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	LC50 (96hr, trout) 1464mg/l	EC50 (48 hr daphnia) 1800 mg/L	EC50 (72 hr) 911mg/l	Toxicity Threshold 483mg/L
	Birds	Arthropods	Plants	Microorganisms
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

COMPONENT: Octylphenol Ethoxylates

	Vertebrates	Invertebrates	Algae	Microorganisms
Aquatic Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data
	Birds	Arthropods	Plants	Microorganisms
Terrestrial Environment Toxicity (ppm unless otherwise noted)	No data	No data	No data	No data

12.2 Persistence and Degradability

Butoxy Ethanol

Readily biodegradable (90% in 28 days)

Octylphenol Ethoxylates

No data

12.3 Bioaccumulative Potential

Butoxy Ethanol
No data

Octylphenol Ethoxylates
No data

12.4 Mobility in Soil

Butoxy Ethanol
No data

Octylphenol Ethoxylates
No data

12.5 Results of PBT and vPvB Assessment

Butoxy Ethanol
Not PBT/vPvB

Octylphenol Ethoxylates
No data

12.6 Other Adverse Effects

Butoxy Ethanol
None

Octylphenol Ethoxylates
None

SECTION 13 - DISPOSAL CONSIDERATIONS

13.1 Waste Treatment Methods

Offer surplus or non-recyclable product to licensed disposal company. Disposal is subject to user compliance with applicable law and product characteristics at time of disposal. Dispose of packaging as product.

SECTION 14 - TRANSPORT INFORMATION

	ADR/RID	IATA	IMO	DOT
14.1 UN Number	N.A.	N.A.	N.A.	N.A.
14.2 Shipping Name	Not Regulated	Not Regulated	Not Regulated	Not Regulated
14.3 Hazard Class	N.A.	N.A.	N.A.	N.A.
14.4 Packing Group	N.A.	N.A.	N.A.	N.A.
14.5 Environmental Hazards	N.A.	N.A.	N.A.	N.A.
14.6 Special Precautions	N.A.	N.A.	N.A.	N.A.

SECTION 15 - REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations/Legislation Specific for the Substance/Mixture

United States

TSCA Regulatory Statement

All intentional ingredients are listed on the TSCA Inventory.

SARA 311/312 Hazard Categories

Component	Fire	Pressure	Reactivity	Acute	Chronic
Butoxy Ethanol	Yes	No	No	Yes	No
Octylphenol Ethoxylates	No	No	No	Yes	No

Europe

EEC Regulatory

All intentional ingredients are listed on the European EINECS Inventory.

SECTION 16 - OTHER INFORMATION

Revisional Updates

4/26/2019 - Updated Section 1.4
5/29/2015 - Updated Sections 2.1 and 3.2
11/22/2013 - Updated Sections 2, 3, 4, 7, 8, 10, 11, 12 and 15
9/7/2013 - Released Version 1.0

NFPA Codes

Health N.D. Flammability N.D. Reactivity N.D.

Dangers

Butoxy Ethanol
H302 - Harmful if swallowed
H312 - Harmful in contact with skin.
H315 - Causes skin irritation.

H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.

Octylphenol Ethoxylates

H302 - Harmful if swallowed
H319 - Causes serious eye irritation.
H411 - Toxic to aquatic life with long lasting effects.

MANUFACTURER DISCLAIMER: The information given herein is offered in good faith as accurate, but without guarantee. Conditions of the use and suitability of the product for particular uses are beyond our control. All risks of use of the product are therefore assumed by the user. Nothing is intended as a recommendation for uses which infringe valid patents or as extending license under valid patents. Appropriate warnings and safe handling procedures should be provided to handlers and users.