

MATERIAL SAFETY DATA SHEET



Conforms to 93/112/EC and ISO 11014-1

1. Chemical Product and Company Identification

Product Name: Nuclear

Product Number: NC-200

Chemical Names/

Description:

Aqueous solution of nonionic surfactants, cosolvents and chelating agents (National Diagnostics

305 Patton Drive

Atlanta, GA 30336

Emergency Numbers

Chemtrec

(800) 424-9300 (U.S. & Canada)

01-703-527-3887 (outside U.S. & Canada)

(800) 52

(404) 69

2. Composition/Information on Ingredients

Component	% Comp.	CAS #	EINECS #	TLV (Units)
Butoxy Ethanol	5 - 10	111-76-2	203-805-0	25 ppm (skin)
Linear alkyl phenyl ethoxylates	10 - 30	9016-45-9		none established

3. Hazards Identification

Appearance and Odor

Clear, colorless liquid.

EMERGENCY OVERVIEW - IMMEDIATE HAZARD

Butoxy Ethanol

CAUTION! SEVERELY IRRITATING TO THE EYES. IRRITATING TO THE SKIN, NOSE THROAT AND RESPIRATORY TRACT. TOXIC IF INHALED, INGESTED OR ABSORBED THROUGH SKIN.

Linear alkyl phenyl ethoxylates

CAUSES EYE IRRITATION. MAY CAUSE RESPIRATORY TRACT IRRITATION.

EMERGENCY OVERVIEW - CHRONIC HAZARD WARNING:

Butoxy Ethanol

NO INFORMATION FOUND.

Linear alkyl phenyl ethoxylates

NO ADVERSE EFFECTS HAVE BEEN DOCUMENTED IN HUMANS AS A RESULT OF CHRONIC EXPOSURE.

Potential Health Effects

Inhalation

Butoxy Ethanol:

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

Linear alkyl phenyl ethoxylates:

Vapors or mist, especially as generated from heating the material or as from exposure in poorly ventilated areas or confined spaces, may be irritating and cause discomfort in nose and throat.

Prolonged exposure may cause difficulty breathing.

Ingestion

Butoxy Ethanol:

Moderately toxic if ingested.

Linear alkyl phenyl ethoxylates:

May be harmful by ingestion.

Skin

Butoxy Ethanol:

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

Linear alkyl phenyl 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.

Linear alkyl phenyl ethoxylates:

Causes irritation and possible injury to the cornea.

Signs and Symptoms of Overexposure

Inhalation

Butoxy Ethanol:

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

Linear alkyl phenyl ethoxylates:

Discomfort in nose and throat, nasal discharge, coughing, difficulty breathing.

Ingestion

Butoxy Ethanol:

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

Linear alkyl phenyl ethoxylates:

Abdominal discomfort, nausea, and diarrhea.

Skin

Butoxy Ethanol:

Redness, pain and itching.

Linear alkyl phenyl ethoxylates:

Local redness and swelling.

Eyes

Butoxy Ethanol:

Redness, tearing, and pain.

Linear alkyl phenyl ethoxylates:

Excess blinking and tear production. Marked redness and swelling of the eye with injury to the cornea.

Carcinogenicity

Butoxy Ethanol:

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

Linear alkyl phenyl ethoxylates:

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

Mutagenicity

Butoxy Ethanol:

No information found.

Linear alkyl phenyl 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.

Linear alkyl phenyl ethoxylates:

No information available.

Teratogenic Effects

Butoxy Ethanol:

Has not been shown to cause birth defects.

Linear alkyl phenyl ethoxylates:

No information available.

Routes of Entry

Butoxy Ethanol:

Inhalation, ingestion, skin contact.

Linear alkyl phenyl ethoxylates:

Ingestion, inhalation.

Target Organ Statement

Butoxy Ethanol:

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

Linear alkyl phenyl ethoxylates:

No information available.

4. 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.

5. Fire Fighting Measures

Flash Point	N.A.	Flammable Limits	N.A.
Flash Point Method	N.A.	Autoignition temperature	N.A.

Extinguishing media

Use media appropriate to the primary cause of fire.

Protective 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.

Hazardous Combustion Products

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

Unusual Fire and Explosion Hazards

N.A.

NFPA Codes: Health N.D. Flammability N.D. Reactivity N.D.

6. Accidental Release Measures

Steps to be taken in case material is released or spilled

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

Waste Disposal Method

Disposal must be made in accordance with applicable federal, state, and local regulations.

Personal Precautions

Wear appropriate protective equipment as specified in section 8.

7. Handling and Storage

Handling

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

Storage

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

Storage Temperature

Room Temperature

Disposal

Observe all national, state, and local regulations regarding product disposal. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquids).

8. Exposure Controls/Personal Protection

Airborne Exposure Limits

Component: Butoxy Ethanol

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

OSHA Permissible Exposure Limit
(PEL): 25 ppm

Component: Linear alkyl phenyl ethoxylates

ACGIH Threshold Limit Value (TLV): none established

OSHA Permissible Exposure Limit
(PEL):

Engineering Controls

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborn 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.

Other Control Measures

N.A.

9. Physical Properties

Boiling point	212F	Evaporation Rate	1.0 (H2O = 1)
Melting point	N.A.	Solubility in water	Soluble
Vapor pressure (mmHg)	760 mm Hg	pH	No Data
Vapor density (Air = 1)	1.0 (Air = 1)	Specific gravity (H2O = 1)	1.1
% Volatile by volume	75		

10. Stability and Reactivity

Stability

Stable under normal conditions of use and storage.

Conditions to Avoid

Heat, flame, incompatibles.

Hazardous Decomposition Products

Oxides of carbon, nitrogen, and sulfur.

Hazardous Polymerization

Will not occur

Incompatibles

Butoxy Ethanol:

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

Linear alkyl phenyl ethoxylates:

Oxidizing agents.

11. Toxicological Information

Product LD50 Values

Nuclear	Oral Rat LD50 (mg/kg):	5556
Nuclear	Dermal Rabbit LD50 (mg/kg):	4444

Component Cancer List Status

	NTP Carcinogen		IARC Category
	Known	Anticipated	
Butoxy Ethanol	No	No	None
Linear alkyl phenyl ethoxylates	No	No	None

12. Ecological Information

Butoxy Ethanol

No information available.

Linear alkyl phenyl ethoxylates

This product has been evaluated for RCRA characteristics and does not meet the criteria of a hazardous waste if discarded in its purchased form. Under RCRA is the responsibility of the user to determine, at the time of disposal, whether the product meets the criteria for hazardous waste.

13. Disposal Considerations

Observe all national, state, and local regulations regarding product disposal. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquids).

14. Transport Information

D.O.T.

Proper Shipping Name: Not Regulated
Hazard Class: N.A.
UN Number: N.A.
Packing Group: N.A.

I.A.T.A.

Proper Shipping Name: Not Regulated
Hazard Class: N.A.
UN Number: N.A.
Packing Group: N.A.

I.M.O.

Proper Shipping Name: Not Regulated
Hazard Class: N.A.
UN Number: N.A.
Packing Group: N.A.

15. Regulatory Information

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
Linear alkyl phenyl ethoxylates	No	No	No	Yes	No

Europe

EEC Regulatory

All intentional ingredients are listed on the European EINECS Inventory.

16. Other Information

NFPA Codes: Health N.D. Flammability N.D. Reactivity N.D.

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.