

MATERIAL SAFETY DATA SHEET



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

1. Chemical Product and Company Identification

Product Name: Bioscint**Product Number:** LS-309

Chemical Names/

Description:

Mixture of organic solvents, detergents, and phosphors

Manufacturer

National Diagnostics
305 Patton Drive
Atlanta, GA 30336

Telephone Numbers

(800) 526-3867
(404) 699-2121

Emergency Numbers

Chemtrec

(800) 424-9300 (U.S. & Canada)
01-703-527-3887 (outside U.S. & Canada)

2. Composition/Information on Ingredients

| Component | % Comp. | CAS # | EINECS # | TLV (Units) |
|------------------------------------|---------|------------|-----------|------------------|
| Phenyl Xylyl Ethane (PXE) | 60 - 70 | 6196-95-8 | | none established |
| Linear alkyl phenyl ethoxylates | 20 - 30 | 9016-45-9 | | none established |
| Butoxy Ethanol | 1 - 3 | 111-76-2 | 203-805-0 | 25 ppm (skin) |
| Alcohol ethoxylate phosphate ester | 1 - 3 | 51811-79-1 | | none established |

3. Hazards Identification

Appearance and Odor

Clear, colorless liquid

EMERGENCY OVERVIEW - IMMEDIATE HAZARD

Phenyl Xylyl Ethane (PXE)

MAY BE IRRITATING TO THE SKIN, EYES, AND RESPIRATORY TRACT.

Linear alkyl phenyl ethoxylates

CAUSES EYE IRRITATION. MAY CAUSE RESPIRATORY TRACT IRRITATION.

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.

Alcohol ethoxylate phosphate ester

CAUSES EYE IRRITATION. MAY CAUSE RESPIRATORY TRACT IRRITATION.

EMERGENCY OVERVIEW - CHRONIC HAZARD WARNING:

Phenyl Xylyl Ethane (PXE)

NO CHRONIC HEALTH HAZARDS KNOWN

Linear alkyl phenyl ethoxylates

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

Butoxy Ethanol

NO INFORMATION FOUND.

Alcohol ethoxylate phosphate ester

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

Potential Health Effects

Inhalation

Phenyl Xylyl Ethane (PXE):

Breathing of the mists, vapors or fumes may irritate the nose, throat and lungs.

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.

Butoxy Ethanol:

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

Alcohol ethoxylate phosphate ester:

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

Phenyl Xylyl Ethane (PXE):

May cause irritation of the mouth, throat, and gastrointestinal tract. Exposure may also cause central nervous system symptoms.

Linear alkyl phenyl ethoxylates:

May be harmful by ingestion.

Butoxy Ethanol:

Moderately toxic if ingested.

Alcohol ethoxylate phosphate ester:

May be harmful by ingestion.

Skin

Phenyl Xylyl Ethane (PXE):

May cause skin irritation.

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.

Butoxy Ethanol:

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

Alcohol ethoxylate phosphate ester:

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

Eyes

Phenyl Xylyl Ethane (PXE):

Exposure to vapors, fumes or mists may cause irritation. Direct contact may cause irritation.

Linear alkyl phenyl ethoxylates:

Causes irritation and possible injury to the cornea.

Butoxy Ethanol:

Causes severe eye irritation.

Alcohol ethoxylate phosphate ester:

Causes irritation and possible injury to the cornea.

Signs and Symptoms of Overexposure

Inhalation

Phenyl Xylyl Ethane (PXE):

Sore throat, coughing, labored breathing, sneezing and burning sensation, depending on the concentration and duration of exposure. May cause central nervous system depression or effects.

Symptoms may include headache, excitation, euphoria, dizziness, incoordination, drowsiness, light-headedness, blurred vision, fatigue, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death, depending on the concentration and duration of exposure.

Linear alkyl phenyl ethoxylates:

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

Butoxy Ethanol:

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

Alcohol ethoxylate phosphate ester:

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

Ingestion

Phenyl Xylyl Ethane (PXE):

Salivation, pain, nausea, vomiting and diarrhea. Exposure may also cause central nervous system symptoms similar to those listed under Inhalation.

Linear alkyl phenyl ethoxylates:

Abdominal discomfort, nausea, and diarrhea.

Butoxy Ethanol:

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

Alcohol ethoxylate phosphate ester:

Abdominal discomfort, nausea, and diarrhea.

Skin

Phenyl Xylyl Ethane (PXE):

Drying, reddening, itching, and cracking. Repeated or prolonged contact with large amounts of this material may result in absorption through the skin to produce toxic effects.

Linear alkyl phenyl ethoxylates:

Local redness and swelling.

Butoxy Ethanol:

Redness, pain and itching.

Alcohol ethoxylate phosphate ester:

Local redness and swelling.

Eyes

Phenyl Xylyl Ethane (PXE):

Redness, tearing, and blurred vision.

Linear alkyl phenyl ethoxylates:

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

Butoxy Ethanol:

Redness, tearing, and pain.

Alcohol ethoxylate phosphate ester:

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

Carcinogenicity

Phenyl Xylyl Ethane (PXE):

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

Linear alkyl phenyl ethoxylates:

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

Butoxy Ethanol:

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

Alcohol ethoxylate phosphate ester:

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

Mutagenicity

Phenyl Xylyl Ethane (PXE):

No information available.

Linear alkyl phenyl ethoxylates:

No information available.

Butoxy Ethanol:

No information found.

Alcohol ethoxylate phosphate ester:

No information available.

Reproductive Toxicity

Phenyl Xylyl Ethane (PXE):

No information available.

Linear alkyl phenyl ethoxylates:

No information available.

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.

Alcohol ethoxylate phosphate ester:

No information available.

Teratogenic Effects

Phenyl Xylyl Ethane (PXE):

No information available.

Linear alkyl phenyl ethoxylates:

No information available.

Butoxy Ethanol:

Has not been shown to cause birth defects.

Alcohol ethoxylate phosphate ester:

No information available.

Routes of Entry

Phenyl Xylyl Ethane (PXE):

Ingestion, inhalation, skin contact.

Linear alkyl phenyl ethoxylates:

Ingestion, inhalation.

Butoxy Ethanol:

Inhalation, ingestion, skin contact.

Alcohol ethoxylate phosphate ester:

Ingestion, inhalation.

Target Organ Statement

Phenyl Xylyl Ethane (PXE):

No information available.

Linear alkyl phenyl ethoxylates:

No information available.

Butoxy Ethanol:

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

Alcohol ethoxylate phosphate ester:

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 INDUCE VOMITING. If swallowed and the person is conscious, immediately give large amounts of water. 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 | > 93 C | Flammable Limits | N.D. |
| Flash Point Method | PMCC* | Autoignition temperature | N.D. |

* Flash point value determined by Pensky-Martin Closed Cup method (PMCC). Upon request, alternate Tagliabue Closed Cup data (TCC) has been provided in some instances to local regulatory agencies.

Extinguishing media

Water spray, dry chemical, alcohol-resistant foam, or carbon dioxide.

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

Fires involving this product may release carbon monoxide, carbon dioxide, reactive hydrocarbons and irritating vapors.

Unusual Fire and Explosion Hazards

Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back.

NFPA Codes: Health 1 Flammability 1 Reactivity 0

6. Accidental Release Measures

Steps to be taken in case material is released or spilled

Eliminate source of ignition. Ventilate area. Cover with absorbent material (soda ash) to confine spill and sweep or shovel into container. Close container tightly. Avoid breathing vapors.

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. Transfer methods should avoid static sparks. Do not eat, drink, or smoke in areas of use or storage.

Storage

Keep in a tightly closed container, stored in a cooled, dry, ventilated area away from sources of heat or ignition. Protect from physical damage.

Storage Temperature

Room Temperature

Disposal

Observe all national, state, and local regulations regarding disposal.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits

Component: Phenyl Xylyl Ethane (PXE)

ACGIH Threshold Limit Value (TLV): none established

OSHA Permissible Exposure Limit

(PEL):

Component: Linear alkyl phenyl ethoxylates

ACGIH Threshold Limit Value (TLV): none established

OSHA Permissible Exposure Limit

(PEL):

Component: Butoxy Ethanol

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

OSHA Permissible Exposure Limit

(PEL): 25 ppm

Component: Alcohol ethoxylate phosphate ester

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 substance is apparent, consult an industrial hygienist. For emergencies, or instances where the exposure levels are not known, use a full-facepiece

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 protective gloves and clean body covering clothing.

Other Control Measures

N.A.

9. Physical Properties

| | | | |
|--------------------------------|------------------|-----------------------------------|-------------------|
| Boiling point | 575 - 605 F | Evaporation Rate | Not measureable |
| Melting point | N.A. | Solubility in water | Slightly soluble. |
| Vapor pressure (mmHg) | | pH | N.A. |
| Vapor density (Air = 1) | Not determinable | Specific gravity (H2O = 1) | 0.91 |
| % volatile by volume | 100% | | |

10. Stability and Reactivity

Stability

Stable under ordinary conditions of use and storage.

Conditions to Avoid

Heat, sources of ignition.

Hazardous Decomposition Products

Combustion may produce toxic oxides of carbon and reactive hydrocarbons.

Hazardous Polymerization

Will not occur

Incompatibles

Phenyl Xylyl Ethane (PXE):

Oxidizing agents.

Linear alkyl phenyl ethoxylates:

Oxidizing agents.

Butoxy Ethanol:

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

Alcohol ethoxylate phosphate ester:

Oxidizing agents.

11. Toxicological Information

Product LD50 Values

Bioscint Oral Rat LD50 (mg/kg): > 1500 mg/kg
Bioscint Dermal Rabbit LD50 (mg/kg): No data

Component Cancer List Status

| | NTP Carcinogen | | IARC Category |
|------------------------------------|----------------|-------------|------------------|
| | Known | Anticipated | |
| Phenyl Xylyl Ethane (PXE) | No | No | None |
| Linear alkyl phenyl ethoxylates | No | No | None |
| Butoxy Ethanol | No | No | None |
| Alcohol ethoxylate phosphate ester | No | No | None |

12. Ecological Information

Phenyl Xylyl Ethane (PXE)

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 it is the responsibility of the user to determine, at the time of disposal, whether the product meets the criteria for hazardous waste.

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 it is the responsibility of the user to determine, at the time of disposal, whether the product meets the criteria for hazardous waste.

Butoxy Ethanol

No information available.

Alcohol ethoxylate phosphate ester

No information available.

13. Disposal Considerations

Observe all national, state, and local regulations regarding disposal.

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.

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 |
|------------------------------------|------|----------|------------|-------|---------|
| Phenyl Xylyl Ethane (PXE) | No | No | No | Yes | No |
| Linear alkyl phenyl ethoxylates | No | No | No | Yes | No |
| Butoxy Ethanol | Yes | No | No | Yes | No |
| Alcohol ethoxylate phosphate ester | No | No | No | Yes | No |

Europe

EEC Regulatory

All intentional ingredients are listed on the European EINECS Inventory.

16. Other Information

NFPA Codes: Health 1 Flammability 1 Reactivity 0

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.