

MATERIAL SAFETY DATA SHEET



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

1. Chemical Product and Company Identification

Product Name: Ecoscint Flow

Product Number: LS-288

Chemical Names/

Description:

Blend of scintillators in chiral phenylalkanes.

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)	50 - 70	6196-95-8		none established
Primary Alcohol Ethoxylate	5 - 10	68439-46-3		none established
Butoxy Ethanol	5 - 10	111-76-2	203-805-0	25 ppm (skin)
Linear alkyl phenyl ethoxylates	20 - 30	9016-45-9		none established

EEC LABEL SYMBOL AND CLASSIFICATION



IRRITANT

R: 36/38

Irritating to eyes and skin.

S: 26-36

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

3. Hazards Identification

Appearance and Odor

Nearly odorless, clear blue-violet fluorescent liquid.

EMERGENCY OVERVIEW - IMMEDIATE HAZARD

Phenyl Xylyl Ethane (PXE)

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

Primary Alcohol Ethoxylate

NO INFORMATION FOUND.

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.

EMERGENCY OVERVIEW - CHRONIC HAZARD WARNING:

Phenyl Xylyl Ethane (PXE)

NO CHRONIC HEALTH HAZARDS KNOWN

Primary Alcohol Ethoxylate

NO INFORMATION FOUND.

Butoxy Ethanol

NO INFORMATION FOUND.

Potential Health Effects

Inhalation

Phenyl Xylyl Ethane (PXE):

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

Primary Alcohol Ethoxylate:

Information not found.

Butoxy Ethanol:

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

Ingestion

Phenyl Xylyl Ethane (PXE):

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

Primary Alcohol Ethoxylate:

Moderately toxic by ingestion.

Butoxy Ethanol:

Moderately toxic if ingested.

Skin

Phenyl Xylyl Ethane (PXE):

May cause skin irritation.

Primary Alcohol Ethoxylate:

Severely irritating to the skin and moderately toxic if absorbed through the skin.

Butoxy Ethanol:

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

Eyes

Phenyl Xylyl Ethane (PXE):

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

Primary Alcohol Ethoxylate:

Severely irritating to the eyes.

Butoxy Ethanol:

Causes severe eye irritation.

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.

Primary Alcohol Ethoxylate:

Butoxy Ethanol:

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

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.

Primary Alcohol Ethoxylate:

Butoxy Ethanol:

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

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.

Primary Alcohol Ethoxylate:

Butoxy Ethanol:

Redness, pain and itching.

Eyes

Phenyl Xylyl Ethane (PXE):

Redness, tearing, and blurred vision.

Primary Alcohol Ethoxylate:

Butoxy Ethanol:

Redness, tearing, and pain.

Carcinogenicity

Phenyl Xylyl Ethane (PXE):

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

Primary Alcohol Ethoxylate:

No information available.

Butoxy Ethanol:

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

Mutagenicity

Phenyl Xylyl Ethane (PXE):

No information available.

Primary Alcohol Ethoxylate:

No information available.

Butoxy Ethanol:

No information found.

Reproductive Toxicity

Phenyl Xylyl Ethane (PXE):

No information available.

Primary Alcohol Ethoxylate:

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.

Teratogenic Effects

Phenyl Xylyl Ethane (PXE):

No information available.

Primary Alcohol Ethoxylate:

No information available.

Butoxy Ethanol:

Has not been shown to cause birth defects.

Routes of Entry

Phenyl Xylyl Ethane (PXE):

Ingestion, inhalation, skin contact.

Primary Alcohol Ethoxylate:

Inhalation, ingestion, skin contact.

Butoxy Ethanol:

Inhalation, ingestion, skin contact.

Target Organ Statement

Phenyl Xylyl Ethane (PXE):

No information available.

Primary Alcohol Ethoxylate:

No information available.

Butoxy Ethanol:

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

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	91 C	Flammable Limits	ND
Flash Point Method	PMCC*	Autoignition temperature	> 707 F

* 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

Thermal decomposition products may include carbon monoxide, carbon dioxide, and hydrocarbons.

Unusual Fire and Explosion Hazards

Emits toxic fumes under fire conditions.

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: Primary Alcohol Ethoxylate

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

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.

Primary Alcohol Ethoxylate:

Strong oxidizing agents. Aluminum surfaces at temperatures above 120 degrees..

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

Ecoscint Flow	Oral Rat LD50 (mg/kg):	No Data
Ecoscint Flow	Dermal Rabbit LD50 (mg/kg):	No Data

Component Cancer List Status

	NTP Carcinogen		IARC Category
	Known	Anticipated	
Phenyl Xylyl Ethane (PXE)	No	No	None
Primary Alcohol Ethoxylate	No	No	None
Butoxy Ethanol	No	No	None
Linear alkyl phenyl ethoxylates	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.

Primary Alcohol Ethoxylate

If this product becomes waste, it would not be a hazardous waste by RCRA criteria. Place in an appropriate disposal facility in compliance with local regulations.

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 it 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 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.

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
Phenyl Xylyl Ethane (PXE)	No	No	No	Yes	No
Primary Alcohol Ethoxylate	No	No	No	Yes	No
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.

EEC LABEL SYMBOL AND CLASSIFICATION



R: 36/38

Irritating to eyes and skin.

S: 26-36

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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.