1 - Product and Company Information

ProductName	LEUKOTRIENE B4 ETHANOL SOLUTION

2 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Highly flammable.

3 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I
LEUKOTRIENE B4 ETHANOL SOLUTION	None	None	None

Ingredient Name	Percent	CAS #	EC no	Annex I
The hazards identified with this product are those associated with the following component(s):		None	None	None
ETHYL ALCOHOL, 99.99 NON-DENATURED, 200 PROOF Symbols: F R-Phrases: 11 Highly flammable.		64-17-5	200-578-6	None

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of contact, immediately wash skin with soap and copious amounts of water.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Carbon dioxide, dry chemical powder, or appropriate foam.

SPECIAL RISKS

Specific Hazard(s): Flammable liquid. Vapor may travel considerable distance to source of ignition and flash back.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

SPECIFIC METHOD(S) OF FIRE FIGHTING

Use water spray to cool fire-exposed containers.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area. Shut off all sources of ignition.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Conditions of Storage: Keep tightly closed. Keep away from heat, sparks, and open flame.
Store at -20°C

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Use only in a chemical fume hood. Safety shower and eye bath.

GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

EXPOSURE LIMITS

Country Source	Type	Value
Poland	NDS	1900 MG/M3
Poland	NDSCh	-
Poland	NDSP	-

EXPOSURE LIMITS - DENMARK

Source	Type	Value
OEL	TWA	1,900 mg/m3 1,000 ppm

EXPOSURE LIMITS - GERMANY

Source	Type	Value
TRGS 900	OEL	1,900 mg/m3 1,000 ppm

Remarks: 4

EXPOSURE LIMITS - NORWAY

Source	Type	Value
	OEL	950 mg/m3 500 ppm

EXPOSURE LIMITS - SWEDEN

Source	Type	Value
	LLV (Level	1,000 mg/m3 500 ppm

EXPOSURE LIMITS - SWITZERLAND

Source	Type	Value
OEL	OEL	960mg/m3* 500ppm*

Remarks: C

EXPOSURE LIMITS - UNITED KINGDOM

Source	Type	Value
OEL	OEL	1,920 mg/m3 1,000 ppm

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.
Hand Protection: Compatible chemical-resistant gloves.
Eye Protection: Chemical safety goggles.
Skin Protection: Chemical resistant apron.

9 - Physical and Chemical Properties

Appearance	Physical State: Clear liquid Color: Colorless

Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	78.0 - 80.0 °C	
MP/MP Range	N/A	
Flash Point	14 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	363 °C	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	Lower: 3.3 % Upper: 19 %	
Vapor Pressure	44.6 mmHg 20 °C	
SG/Density	0.79 g/cm3	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	Solubility in Water:Complete	

10 - Stability and Reactivity

STABILITY

Stable: Stable.
Conditions to Avoid: Moisture.
Materials to Avoid: Acids, Acid chlorides, Acid anhydrides, Alkali metals, Ammonia, Oxidizing agents, Peroxides.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

ACUTE TOXICITY

LC50
Inhalation
Rat
20,000 ppm
10 HR
LD50
Oral
Rat
7,060 mg/kg
LD50
Oral
Human
1,400 mg/kg

SIGNS AND SYMPTOMS OF EXPOSURE

Can cause CNS depression. Exposure can cause: To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Damage to the heart. Narcotic effect. Nausea, headache, and vomiting.

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: May cause eye irritation.
Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.
Ingestion: May be harmful if swallowed.

TARGET ORGAN INFORMATION

Heart. Liver. Nerves.

CONDITIONS AGGRAVATED BY EXPOSURE

Some leukotrienes are potent bronchoconstrictors that play an important role in immediate hypersensitivity reactions. In addition, they may be involved in the inflammatory process, some acting as potent chemotactic agents.

CHRONIC EXPOSURE - CARCINOGEN

Result: This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.

12 - Ecological Information

ECOTOXICOLOGICAL EFFECTS

Test Type: LC50 Fish
Species: Onchorhynchus mykiss (Rainbow trout)
Time: 96 h
Value: 13,000 mg/l

Test Type: EC50 Daphnia
Species: Daphnia magna
Time: 48 h
Value: 9.3 mg/l

Test Type: LC50 Fish
Species: Onchorhynchus mykiss (Rainbow trout)
Time: 96 h
Value: 10,400 mg/l

Test Type: LC50 Fish
Species: Pimephales promelas (Fathead minnow)
Time: 96 h
Value: 15,300 mg/l

Test Type: LC50 Fish
Species: other fish
Time: 24 h
Value: 10,000 mg/l

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 1170
Class: 3
PG: II
Proper Shipping Name: Ethanol solution

IMDG

UN#: 1170
Class: 3

PG: II
Proper Shipping Name: ETHANOL SOLUTIONS
Marine Pollutant: No
Severe Marine Pollutant: No

IATA

UN#: 1170
Class: 3
PG: II
Proper Shipping Name: Ethanol solution
Inhalation Packing Group I: No

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: F
Highly Flammable.
R-PHRASES: 11
Highly flammable.
S-PHRASES: 7-16
Keep container tightly closed. Keep away from sources of ignition - no smoking.

Caution: Substance not yet fully tested (EU).

COUNTRY SPECIFIC INFORMATION

Germany
WGK: 1
Self-Classification

16 - Other Information

LookChem
Look for Chemicals

www.lookchem.com

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