



# SAFETY DATA SHEET

## ABZOL® LS Cleaner

Preparation Date : 17-Apr-2014

Revision Date: 23-Dec-2015

Revision Number: 2

### 1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

#### Product Identifier

**Product Name** ABZOL® LS Cleaner

#### Other means of identification

**CAS-No** Mixture

#### Recommended use of the chemical and restrictions on use

**General function** Cleaners containing n-propyl bromide are for use in confined systems or into applications where human exposure is controlled.

**Uses advised against** No information available

#### Details of the supplier of the safety data sheet

**Company** Albemarle Corporation  
451 Florida Street  
Baton Rouge, LA 70801

**For Non-Emergency** 800-535-3030

**'Competent Body for SDS'** HSE@Albemarle.com

#### Emergency telephone number

**Emergency Telephone Numbers** +1-225-344-7147

### 2. HAZARDS IDENTIFICATION

#### Classification

Skin Corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Carcinogenicity	Category 2
Reproductive toxicity	Category 1B
Specific target organ toxicity (single exposure)	Category 3 - (H335,H336)
Specific target organ toxicity (repeated exposure)	Category 2
Chronic aquatic toxicity	Category 3

#### Label elements

#### Emergency Overview

##### **Danger**

##### **Hazard Statements**

Causes skin irritation  
Causes serious eye irritation  
Suspected of causing cancer  
May damage fertility or the unborn child  
May cause respiratory irritation. May cause drowsiness or dizziness  
May cause damage to organs through prolonged or repeated exposure  
Harmful to aquatic life with long lasting effects

**Physical state** Liquid**Color** Colourless.**Odor** Characteristic. Pungent.**Prevention**

Obtain special instructions before use  
Do not handle until all safety precautions have been read and understood  
Use personal protective equipment as required  
Wash face, hands and any exposed skin thoroughly after handling  
Wear eye/face protection  
Do not breathe dust/fume/gas/mist/vapors/spray  
Use only outdoors or in a well-ventilated area  
Avoid release to the environment

**Response**

IF exposed or concerned: Get medical advice/attention  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
If eye irritation persists: Get medical advice/attention  
IF ON SKIN: Wash with plenty of soap and water  
If skin irritation occurs: Get medical advice/attention  
Take off contaminated clothing and wash before reuse  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
IF SWALLOWED: Rinse mouth Drink plenty of water

**Storage**

Store locked up  
Store in a well-ventilated place. Keep container tightly closed

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Not applicable

**Other Information**

- May be harmful if swallowed

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS-No	Weight %
1-bromopropane; n-propyl bromide	106-94-5	99.8-99.9

Note: The exact concentrations of the above listed chemicals are being withheld as a trade secret.

**4. FIRST AID MEASURES****First aid measures****Eye contact**

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

<b>Skin Contact</b>	After contact with skin, wash immediately with plenty of water. Remove contaminated clothing and shoes. Seek medical advice.
<b>Inhalation</b>	Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration, preferably mouth to mouth. Seek medical advice.
<b>Ingestion</b>	Rinse mouth with water. Give 500 ml water to drink. Do not induce vomiting. Seek medical advice.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** No information available.

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Extinguishing media**

**Suitable extinguishing media** Use water spray to cool fire exposed containers.

**Unsuitable Extinguishing Media** No information available.

**Specific Hazards Arising from the Chemical**

**Combustion/explosion hazards** No information available.

**Hazardous Combustion Products** Oxides of carbon and nitrogen. Bromine. Hydrogen bromide.

**Explosion Data**

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

**Protective Equipment and Precautions for Firefighters**

In the event of fire, wear self contained breathing apparatus.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Wear suitable gloves and eye/face protection.

**Environmental Precautions**

**Environmental precautions** Prevent product from entering drains. Contain any spill with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods and material for containment and cleaning up**

**Methods for Containment** Prevent further leakage or spillage if safe to do so.

**Methods for Cleaning up** Take up small spills with dry chemical absorbent. Large spills may be taken up with pump or vacuum and finished off with dry chemical absorbent. May require excavation of contaminated soil.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Handling** Avoid contact with skin, eyes and clothing.

**Conditions for safe storage, including any incompatibilities**

**Storage** Keep in a dry, cool and well-ventilated place. Mechanical ventilation is recommended.

**Incompatible Materials** None known based on information supplied.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

### Exposure Guidelines

Component	CAS-No	ACGIH TLV (TWA)	OSHA PEL (TWA)	NIOSH IDLH
1-bromopropane; n-propyl bromide	106-94-5	TWA: 0.1 ppm	-	-

### Appropriate engineering controls

**Engineering Controls**

- Showers.
- Eyewash stations.
- Ventilation systems.

### Individual protection measures, such as personal protective equipment

**Eye/face Protection** Chemical goggles or face shield with safety glasses.

**Skin Protection** If skin contact or contamination of clothing is likely, protective clothing should be worn.

**Hand protection** Gloves resistant to chemical permeation.

**Respiratory protection** Full facepiece, NIOSH approved organic vapor respirator.

**General Hygiene Considerations** Handle in accordance with good industrial hygiene and safety practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Physical state</b>	Liquid
<b>Color</b>	Colourless.
<b>Odor</b>	Characteristic. Pungent.
<b>Odor Threshold</b>	No information available
<b>Molecular Weight</b>	No information available
<b>pH</b>	Not available
<b>Melting point/freezing point</b>	No data available
<b>Boiling Point/Range</b>	71 °C / 160 °F (760 mmHg)
<b>Flash Point</b>	None (TCC).
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid, gas)</b>	No information available
<b>Flammability Limit in Air</b>	
Upper flammability limit:	8 vol%
Lower flammability limit:	4 vol%
<b>Vapor Pressure</b>	18531.758 (25°C)
<b>Vapor Density</b>	No data available
<b>Relative density</b>	1.33
<b>Solubility(ies)</b>	
Water Solubility	Very slightly soluble.
Solubility in other solvents	No information available
<b>Partition coefficient :</b>	
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Viscosity, kinematic</b>	No information available
<b>Dynamic viscosity</b>	No information available
<b>Explosive Properties</b>	No information available
<b>Oxidizing Properties</b>	No information available

## 10. STABILITY AND REACTIVITY

<b>Reactivity Hazard</b>	No data available.
<b>Stability</b>	Stable under normal conditions.
<b>Hazardous Reactions</b>	No hazardous reaction expected under normal handling.
<b>Hazardous Polymerization</b>	None under normal processing.
<b>Conditions to Avoid</b>	Vapors can be ignitable within a narrow concentration range of 3% to 9% by volume in air.
<b>Materials to avoid</b>	Avoid strong alkalis, oxidizers and reactive metals (i.e. potassium, sodium). Prolonged contact with free water may result in corrosion and diminished stabilizer levels.
<b>Hazardous decomposition products</b>	Nitrogen oxides (NOx). Carbon oxides. Bromine. Hydrogen bromide.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

<b>Inhalation</b>	May cause irritation of respiratory tract.
<b>Eye contact</b>	Irritating to eyes.
<b>Skin Contact</b>	Irritating to skin.
<b>Ingestion</b>	Not expected to be acutely toxic.

### Potential Health Effects

#### Acute Effects

**Skin Corrosion/irritation** Irritating to skin.

**Serious eye damage/eye irritation** Irritating to eyes.

**Respiratory irritation :** Irritating to respiratory system

**Sensitization** Not expected to be a sensitizer.

**STOT - single exposure** May cause respiratory irritation. May cause drowsiness or dizziness.

#### Chronic Effects

**Mutagenic Effects** In vivo mutagenicity tests:.. negative.

#### **Carcinogenicity**

This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), potentially carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B).

Component	CAS-No	ACGIH Carcinogens	IARC	NTP	OSHA Carcinogens
1-bromopropane; n-propyl bromide	106-94-5	A3	-	Reasonably Anticipated	X

**Reproductive Effects** May impair fertility. May cause harm to the unborn child.

**STOT - repeated exposure** May cause damage to organs through prolonged or repeated exposure.

**Chronic Effects** Longterm overexposure may cause adverse effects in the liver, respiratory system, kidney, reproductive system, and central nervous system.

**Target Organ Effects** Central nervous system (CNS), Liver, Respiratory system, Kidney, Reproductive System.

**Aspiration hazard** No information available.

**Numerical measures of toxicity****Product Information**

No information available.

The following values are calculated based on chapter 3.1 of the GHS document .

**ATEmix (oral)**

3605 mg/kg

**LD50 Oral:**

Rat Oral LD50: &gt; 2000 mg/kg

**LD50 Dermal:**

Rat Dermal LD50: &gt; 2000 mg/kg

**Inhalation LC50:**

LC50/inhalation/4h/rat : 35 mg/L

**Component Information**

No information available.

Component	Rat Oral LD50:	Rabbit Dermal LD50:	Rat Dermal LD50 :	Rat Inhalation LC50:
1-bromopropane; n-propyl bromide 106-94-5	> 2000 mg/kg bw	-	> 2000 mg/kg bw	= 253 g/m <sup>3</sup> ( Rat ) 30 min

**Other data**

May cause Central Nervous System (CNS) depression at high doses; this may cause dizziness, loss of balance, slurred speech and unconsciousness. Toxic effects on the liver and lung may be exerted at doses causing anesthesia.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

Harmful to aquatic life with long lasting effects

LC50/96h/fish: 67.3 mg/L (n-Propyl Bromide)

Component	Freshwater Algae EC50/72h :	Freshwater Fish LC50/96h :	Water Flea EC50/48h :
1-bromopropane; n-propyl bromide (CAS #: 106-94-5)	72.3 mg/l	24.3 mg/L	99.3 mg/l

**Persistence/Degradability**

No information available.

**Bioaccumulation/ Accumulation**

No information available.

**Mobility in Environmental Media**

No information available.

Component	Partition coefficient :
1-bromopropane; n-propyl bromide 106-94-5	2.1

**Other adverse effects**

No information available

## 13. DISPOSAL CONSIDERATIONS

**Waste treatment methods****Waste Disposal Method**

Dispose in a safe manner in accordance with local/national regulations.

**Contaminated Packaging**

Do not reuse container.

## 14. TRANSPORT INFORMATION

**DOT**

Proper Shipping Name	NOT REGULATED FOR TRANSPORTATION
Hazard Class	Not regulated
UN No.	Not regulated
Packing Group	Not regulated
Description	Not regulated

**IMDG/IMO**

IMO Class	Not regulated
Packing Group	Not regulated
UN-No	Not regulated
IMO Labelling and Marking	Not regulated
Proper Shipping Name	Not regulated
EmS	Not regulated
Marpol - Annex II	Not regulated
Marpol - Annex III	Not regulated
Transport Description	Not regulated

**IATA/ICAO**

IATA/ICAO Class	Not regulated
Packing Group	Not regulated
UN-No	Not regulated
IATA/ICAO Labelling/Marking	Not regulated
Passenger Aircraft	Not regulated
Cargo aircraft only	Not regulated
Proper shipping name	Not regulated
Transport Description	Not regulated

## 15. REGULATORY INFORMATION

International Inventories	TSCA	DSL	NDSL	AICS	EINECS	ENCS	KECL	PICCS	IECSC	NZIoC	TCSI
ABZOL® LS Cleaner	X	X	-	X	X	X	X	X	X	X	X

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Component	Weight %	SARA 313 - De minimis
1-bromopropane; n-propyl bromide (CAS #: 106-94-5)	99.8-99.9	0.1

**SARA 311/312 Hazardous Categorization**

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**Reportable and Threshold Planning Quantities**

The following components have RQs and/or TPQs under SARA and/or CERCLA

**State Right-to-Know**

This product contains the following chemicals regulated in the states listed below.

Component	California Prop. 65	New Jersey	Massachusetts	Pennsylvania
1-bromopropane; n-propyl bromide (CAS #: 106-94-5)	Developmental Female Reproductive Male Reproductive	X	X	X

**16. OTHER INFORMATION**

<b>NFPA</b>	Health 2	Flammability 1	Instability 0	Physical Hazards -
<b>HMIS</b>	Health 2	Flammability 1	Physical Hazards 0	

**Prepared By** Health & Environment Department Albemarle Corporation

FOR ADDITIONAL NONEMERGENCY PRODUCT INFORMATION, CONTACT:

HEALTH AND ENVIRONMENT DEPARTMENT  
ALBEMARLE CORPORATION  
451 FLORIDA ST.  
BATON ROUGE, LA. 70801  
(800) 535-3030

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**Disclaimer:**

The information contained herein is accurate to the best of our knowledge. The Company makes no warranty of any kind, express or implied, concerning the safe use of this material in your process or in combination with other substances.

**End of Safety Data Sheet**