

Safety Data Sheet

CHLOROFOAM



SDS Revision Date:

01/23/2015

1. Identification

1.1. Product identifier

Product Identity CHLOROFOAM

Alternate Names CHLOROFOAM

1.2. Relevant identified uses of the substance or mixture and uses advised against

Intended use See Technical Data Sheet.

Application Method See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet

Company Name Pharmacal Research Labs., Inc.
562 Captain Neville Dr.
Waterbury, CT 06705, USA

24 hour Emergency Telephone No.:

CHEMTREC (USA) (800) 424-9300

IN CANADA CALL CANUTEC (613) 996-6666

Customer Service: Pharmacal Research Labs., Inc. 203-755-4908, (800)-243-5350

2. Hazard(s) identification

2.1. Classification of the substance or mixture

Skin Corr. 1A;H314 Causes severe skin burns and eye damage.

Eye Dam. 1;H318 Causes serious eye damage.

Aquatic Acute 1;H400 Very toxic to aquatic life.

Aquatic Chronic 2;H411 Toxic to aquatic life with long lasting effects.

2.2. Label elements

Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.



Danger

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H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

[Prevention]:

P260 Do not breathe mist / vapors / spray.

P264 Wash thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves / eye protection / face protection.

[Response]:

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.

P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.

P310 Immediately call a POISON CENTER or doctor / physician.

P363 Wash contaminated clothing before reuse.

P391 Collect spillage.

[Storage]:

P406 Store in corrosive resistant container with a resistant inner liner.

[Disposal]:

P501 Dispose of contents / container in accordance with local / national regulations.

3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

Ingredient/Chemical Designations	Weight %	GHS Classification	Notes
Sodium hydroxide CAS Number: 0001310-73-2	1.0 – 10	Skin Corr. 1A;H314 Acute Tox. 4;H312	[1][2]
Sodium hypochlorite CAS Number: 0007681-52-9	1.0 – 10	Skin Corr. 1B;H314 Aquatic Acute 1;H400	[1]
Dimethyldodecylamine oxide CAS Number: 0001643-20-5	1.0 – 10	Skin Irrit. 2;H315 Eye Dam. 1;H318	[1]

[1] Substance classified with a health or environmental hazard.

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[2] Substance with a workplace exposure limit.

[3] PBT-substance or vPvB-substance.

*The full texts of the phrases are shown in Section 16.

4. First aid measures

4.1. Description of first aid measures

General	In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
Inhalation	Corrosive and irritating to upper respiratory tract and mucous membranes. Remove affected person to fresh air; wash mouth and nasal passages with water repeatedly; if breathing difficulties persist, seek medical attention
Eyes	Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
Skin	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 - 20 minutes. Call a poison control center or doctor for treatment advice.
Ingestion	Drink large quantities of water or milk; give diluted vinegar or lemon juice to conscious person; DO NOT induce vomiting; seek medical attention immediately.

4.2. Most important symptoms and effects, both acute and delayed

Overview	EFFECTS OF OVEREXPOSURE: SKIN: Will cause severe irritation, redness, and, if untreated, can result in deep chemical burns. EYES: Corrosive to eyes resulting in irritation, reddening, chemical burns, and, if untreated, possibly permanent blindness. INGESTION: Will causes burns of the mucous membranes in the mouth, throat, esophagus, stomach, and can result in possible death. INHALATION: Airborne concentrations of dusts or mists will cause damage to the upper respiratory tract and lungs, which may result in chemical pneumonia. See section 2 for further details.
Eyes	Causes serious eye damage.
Skin	Causes severe skin burns and eye damage.

5. Fire-fighting measures

5.1. Extinguishing media

Use media appropriate for surrounding area.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition: Hydrogen chloride and chlorine. Chlorine gas rate of decomposition increases with the

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concentration with temperatures above 85 degrees F (30C).

Do not breathe mist / vapors / spray.

5.3. Advice for fire-fighters

Use full protective clothing and self-contained breathing apparatus. This material may be corrosive to human tissue and chlorine may be liberated. Approach fire from upwind to avoid hazardous vapors.

ERG Guide No. 154

6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up

Protective clothing and equipment must be worn. Contain spill or leakage in suitable container or holding area. Do not allow drainage to sewers, streams or storm drains. Recover with vacuum equipment and flush with water. Spilled material is slippery.

"EMPTY" CONTAINER WARNINGS: Do not reuse empty container. Triple rinse with water - dispose of in conformance with federal, state, and local regulations.

7. Handling and storage

7.1. Precautions for safe handling

Avoid storing next to strong acids. If product is added too rapidly, or without stirring it may become concentrated at the bottom of mixing vessel; excessive heat may be generated, resulting in dangerous boiling and splattering, and a possibly an immediate and violent reaction.

See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities

Handle containers carefully to prevent damage and spillage.

Incompatible materials: May react with water, acids, metals and reducing sugars (fructose). Avoid contact with "soft" metals such as magnesium, zinc and aluminum.

Keep in well ventilated area - store above 10°C (50°F). Use goggles or face shield, rubber gloves, and boots where contact is expected.

See section 2 for further details. - [Storage]:

7.3. Specific end use(s)

Keep out of reach of children.

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For professional use only.

Do not mix with any other chemicals unless compatibility has been established by the manufacturer.

8. Exposure controls and personal protection

8.1. Control parameters

Exposure

CAS No.	Ingredient	Source	Value
0001310-73-2	Sodium hydroxide	OSHA	TWA 2 mg/m ³
		ACGIH	Ceiling: 2 mg/m ³
		NIOSH	C 2 mg/m ³
		Supplier	No Established Limit
0001643-20-5	Dimethyldodecylamine oxide	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit
0007681-52-9	Sodium hypochlorite	OSHA	No Established Limit
		ACGIH	No Established Limit
		NIOSH	No Established Limit
		Supplier	No Established Limit

Carcinogen Data

CAS No.	Ingredient	Source	Value
0001310-73-2	Sodium hydroxide	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0001643-20-5	Dimethyldodecylamine oxide	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;
0007681-52-9	Sodium hypochlorite	OSHA	Select Carcinogen: No
		NTP	Known: No; Suspected: No
		IARC	Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;

8.2. Exposure controls

Respiratory

For mist use NIOSH approved respirator suitable for chlorine.

Eyes

Chemical Splash goggles or face shield

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- Skin** A rubber apron and boots are recommended to minimize contact. Protective gloves: Rubber
- Engineering Controls** Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.
- Other Work Practices** Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:

9. Physical and chemical properties

Appearance	Pale Yellow Liquid
Odor	Not Measured
Odor threshold	Not Measured
pH	13
Melting point / freezing point	Not Measured
Initial boiling point and boiling range	Not Measured
Flash Point	Not Measured
Evaporation rate (Ether = 1)	Not Measured
Flammability (solid, gas)	Not Applicable
Upper/lower flammability or explosive limits	Lower Explosive Limit: Not Measured Upper Explosive Limit: Not Measured
Vapor pressure (Pa)	Not Measured
Vapor Density	Not Measured
Specific Gravity	1.1
Solubility in Water	Complete @ 1 ATM and 25C
Partition coefficient n-octanol/water (Log Kow)	Not Measured
Auto-ignition temperature	Not Measured
Decomposition temperature	Not Measured
Viscosity (cSt)	Not Measured

9.2. Other information

Physical properties are approximate or typical values and should not be used for precise design purposes

10. Stability and reactivity

10.1. Reactivity

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Do not allow contact with acids

10.2. Chemical stability

Stable under normal circumstances.

10.3. Possibility of hazardous reactions

No data available.

10.4. Conditions to avoid

Avoid contact with strong acids

10.5. Incompatible materials

May react with water, acids, metals and reducing sugars (fructose). Avoid contact with "soft" metals such as magnesium, zinc and aluminum.

10.6. Hazardous decomposition products

Hydrogen chloride and chlorine. Chlorine gas rate of decomposition increases with the concentration with temperatures above 85 degrees F (30C).

11. Toxicological information

Acute toxicity

Ingredient	Oral LD50, mg/kg	Skin LD50, mg/kg	Inhalation Vapor LD50, mg/L/4hr	Inhalation Dust/Mist LD50, mg/L/4hr	Inhalation Gas LD50, ppm
Sodium hydroxide - (1310-73-2)	6,600.00, Mouse - Category: NA	1,350.00, Rabbit - Category: 4	600.00, Mouse - Category: NA	No data available	No data available
Sodium hypochlorite - (7681-52-9)	5,000.00, Rat - Category: 5	10,000.00, Rabbit - Category: NA	10.50, Rat - Category: 4	No data available	No data available
Dimethyldodecylamine oxide - (1643-20-5)	No data available	No data available	No data available	No data available	No data available

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification	Category	Hazard Description
Acute toxicity (oral)	---	Not Applicable
Acute toxicity (dermal)	---	Not Applicable
Acute toxicity (inhalation)	---	Not Applicable
Skin corrosion/irritation	1A	Causes severe skin burns and eye damage.
Serious eye damage/irritation	1	Causes serious eye damage.
Respiratory sensitization	---	Not Applicable

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Skin sensitization	---	Not Applicable
Germ cell mutagenicity	---	Not Applicable
Carcinogenicity	---	Not Applicable
Reproductive toxicity	---	Not Applicable
STOT-single exposure	---	Not Applicable
STOT-repeated exposure	---	Not Applicable
Aspiration hazard	---	Not Applicable

12. Ecological information

12.1. Toxicity

Very toxic to aquatic life.

Toxic to aquatic life with long lasting effects.

No additional information provided for this product. See Section 3 for chemical specific data.

Aquatic Ecotoxicity

Ingredient	96 hr LC50 fish, mg/l	48 hr EC50 crustacea, mg/l	ErC50 algae, mg/l
Sodium hydroxide - (1310-73-2)	196.00, <i>Poecilia reticulata</i>	40.38, <i>Ceriodaphnia dubia</i>	Not Available
Sodium hypochlorite - (7681-52-9)	0.08, <i>Pimephales promelas</i>	0.032, <i>Daphnia magna</i>	0.40 (72 hr), <i>Dunaliella primolecta</i>
Dimethyldodecylamine oxide - (1643-20-5)	Not Available	Not Available	Not Available

12.2. Persistence and degradability

There is no data available on the preparation itself.

12.3. Bioaccumulative potential

Not Measured

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects

No data available.

13. Disposal considerations

13.1. Waste treatment methods

Observe all federal, state and local regulations when disposing of this substance.

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14. Transport information

	DOT (Domestic Surface Transportation)	IMO / IMDG (Ocean Transportation)	ICAO/IATA
14.1. UN number	UN3266	UN3266	UN3266
14.2. UN proper shipping name	Corrosive Liquid,Basic, Inorganic, NOS (Sodium Hydroxide and Sodium Hypochlorite)	Corrosive Liquid,Basic, Inorganic, NOS (Sodium Hydroxide and Sodium Hypochlorite)	Corrosive Liquid,Basic, Inorganic, NOS (Sodium Hydroxide and Sodium Hypochlorite)
14.3. Transport hazard class(es)	DOT Hazard Class: 8 DOT Label: 8	IMDG: 8 Sub Class: Not Applicable	Air Class: 8
14.4. Packing group	II	II	II
14.5. Environmental hazards			
IMDG	Marine Pollutant: Yes (Sodium hypochlorite)		
14.6. Special precautions for user:	No further information		

15. Regulatory information

Regulatory Overview	The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.
Toxic Substance Control Act (TSCA)	All components of this material are either listed or exempt from listing on the TSCA Inventory.
WHMIS Classification	D2B E
US EPA Tier II Hazards	Fire: No Sudden Release of Pressure: No Reactive: No Immediate (Acute): Yes Delayed (Chronic): No
EPCRA 311/312 Chemicals and RQs (lbs):	
	Sodium hydroxide (1,000.00)
	Sodium hypochlorite (100.00)
EPCRA 302 Extremely Hazardous:	
	To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.
EPCRA 313 Toxic Chemicals:	

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To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Carcinogens (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (>0.0%):

To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

N.J. RTK Substances (>1%):

Sodium hydroxide

Sodium hypochlorite

Penn RTK Substances (>1%):

Sodium hydroxide

Sodium hypochlorite

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.

The full text of the phrases appearing in section 3 is:

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H400 Very toxic to aquatic life.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

The information and recommendations contained herein are, to the best of Pharmacal's knowledge and belief, accurate and reliable as of the date issued. Pharmacal does not warrant or guarantee their accuracy or reliability, and Pharmacal shall not be liable for any loss or damage arising out of there use thereof.

The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use.

The hazardous materials identification system (HMIS) and national fire protection association ratings have been included by Pharmacal research laboratories INC. In order to provide additional health and hazard information. The

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ratings recommended are based upon criteria supplied by the developers of these rating systems, together with Pharmacal's interpretation of the available data.

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