

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 07.13.2017

Page 1 of 10

## Bromoform

### SECTION 1: Identification

#### Product identifier

**Product name:** Bromoform

**Product code:** S25659

#### Recommended use of the product and restriction on use

**Relevant identified uses:** Produits chimiques de laboratoire

**Uses advised against:** Not determined or not applicable.

**Reasons why uses advised against:** Not determined or not applicable.

#### Manufacturer or supplier details

##### Manufacturer:

AquaPhoenix Scientific  
860 Gitts Run Road  
Hanover  
PA 17331  
(717) 632-1291

##### Supplier:

Fisher Science Education  
6771 Silver Crest Road  
Nazareth  
PA 18064  
800 955-1177

#### Emergency telephone number:

**United States**

Emergency Telephone No.: 800-255-3924

### SECTION 2: Hazard(s) identification

#### GHS classification:

Acute toxicity (oral), category 4

Skin irritation, category 2

Eye irritation, category 2A

Chronic aquatic hazard, category 2

Acute toxicity (inhalation), category 3

#### Label elements

##### Hazard pictograms:



**Signal word:** Danger

#### Hazard statements:

H302 Harmful if swallowed

H315 Causes skin irritation

H319 Causes serious eye irritation

H331 Toxic if inhaled

H411 Toxic to aquatic life with long lasting effects

#### Precautionary statements:

P264 Wash skin thoroughly after handling

P261 Avoid breathing dust/fume/gas/mist/vapors/spray

P270 Do not eat, drink or smoke when using this product

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 07.13.2017

Page 2 of 10

## Bromoform

P271 Use only outdoors or in a well-ventilated area  
P273 Avoid release to the environment  
P280 Wear protective gloves/protective clothing/eye protection/face protection  
P321 Specific treatment (see supplemental first aid instructions on this label).  
P301+P330+P312 IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.  
P362 Take off contaminated clothing and wash before reuse  
P302+P352 If on skin: Wash with soap and water  
P332+P313 If skin irritation occurs: Get medical advice/attention  
P304+P340+P311 If inhaled: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a poison center or doctor/physician  
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing  
P391 Collect spillage  
P403+P233 Store in a well ventilated place. Keep container tightly closed  
P405 Store locked up  
P501 Dispose of contents and container as instructed in Section 13

**Hazards not otherwise classified:** None

## SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 64-17-5	Ethyl alcohol	0.5-4
CAS number: 75-25-2	Bromoform	>95

**Additional Information:** None

## SECTION 4: First aid measures

### Description of first aid measures

#### General notes:

Not determined or not applicable.

#### After inhalation:

Loosen clothing as necessary and position individual in a comfortable position  
Maintain an unobstructed airway  
Get medical advice/attention if you feel unwell  
Move exposed individual to fresh air  
Call a POISON CONTROL CENTER or seek medical attention

#### After skin contact:

Rinse affected area with soap and water  
If symptoms develop or persist, seek medical attention  
Wash affected area with soap and water  
Seek medical attention if symptoms develop or persist

#### After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes  
Remove contact lenses, if present and easy to do  
Continue rinsing  
Get medical advice/attention

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 07.13.2017

Page 3 of 10

## Bromoform

Remove contact lens(es) if able to do so during rinsing  
Seek medical attention if irritation persists or if concerned

### After swallowing:

Rinse mouth and then drink plenty of water  
Do not induce vomiting  
Get medical advice/attention if you feel unwell  
Call a POISON CONTROL CENTER or seek medical attention if you feel unwell

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

#### Acute symptoms and effects:

Not determined or not applicable.

#### Delayed symptoms and effects:

Not determined or not applicable.

### Immediate medical attention and special treatment

#### Specific treatment:

Not determined or not applicable.

#### Notes for the doctor:

Not determined or not applicable.

## SECTION 5: Firefighting measures

### Extinguishing media

#### Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

#### Unsuitable extinguishing media:

Not determined or not applicable.

### Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

### Special protective equipment for firefighters:

Wear protective eye wear, gloves and clothing

Refer to Section 8

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

### Special precautions:

Heating causes a rise in pressure, risk of bursting and combustion

Shut off sources of ignition

Carbon monoxide and carbon dioxide may form upon combustion

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation

Ensure air handling systems are operational

Wear protective eye wear, gloves and clothing

### Environmental precautions:

Should not be released into the environment

Prevent from reaching drains, sewer or waterway

### Methods and material for containment and cleaning up:

Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay), acid binders, universal binders)

Dispose of contents / container in accordance with local regulations

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 07.13.2017

Page 4 of 10

## Bromoform

### Reference to other sections:

Not determined or not applicable.

## SECTION 7: Handling and storage

### Precautions for safe handling:

Do not eat, drink, smoke or use personal products when handling chemical substances.

Avoid breathing mist or vapor.

Use only with adequate ventilation.

### Conditions for safe storage, including any incompatibilities:

Store in a cool, well-ventilated area.

Store away from foodstuffs.

## SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

### Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
United States (OSHA)	Bromoform	75-25-2	8 hr Time Weighted Avg (TWA): 5 mg/3
	Bromoform	75-25-2	PEL : 0.5 ppm
	Ethyl alcohol	64-17-5	OSHA PEL TWA 1,000 ppm
	Ethyl alcohol	64-17-5	OSHA PEL TWA 1,900 mg/m <sup>3</sup>
NIOSH	Bromoform	75-25-2	8 hr Time Weighted Avg (TWA): 5 mg/3
	Ethyl alcohol	64-17-5	NIOSH REL TWA 1,000 ppm
	Ethyl alcohol	64-17-5	NIOSH REL TWA 1,900 mg/m <sup>3</sup>
ACGIH	Bromoform	75-25-2	Carcinogen Category: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans). The 8-Hour Exposure Limit (TLV-TWA): 0.5 ppm.
	Ethyl alcohol	64-17-5	ACGIH TLV TWA 1,000 ppm
	Ethyl alcohol	64-17-5	ACGIH TLV STEL 1,000 ppm

### Biological limit values:

No biological exposure limits noted for the ingredient(s).

### Information on monitoring procedures:

Not determined or not applicable.

### Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

### Personal protection equipment

#### Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

#### Skin and body protection:

Select glove material impermeable and resistant to the substance.

#### Respiratory protection:

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 07.13.2017

Page 5 of 10

## Bromoform

When necessary, use NIOSH-approved breathing equipment.

### General hygienic measures:

- Wash hands before breaks and at the end of work.
- Avoid contact with skin, eyes and clothing.
- Perform routine housekeeping.
- Wash contaminated clothing before reusing.

## SECTION 9: Physical and chemical properties

### Information on basic physical and chemical properties

Appearance	Clear to yellow liquid
Odor	Chloroform-like
Odor threshold	Not determined or not available.
pH	Not determined or not available.
Melting point/freezing point	8 °C
Initial boiling point/range	149-151 °C
Flash point (closed cup)	Not determined or not available.
Evaporation rate	Not determined or not available.
Flammability (solid, gas)	Not determined or not available.
Upper flammability/explosive limit	Not determined or not available.
Lower flammability/explosive limit	Not determined or not available.
Vapor pressure	4.4 mmHg @ 20 °C
Vapor density	8.7
Density	Not determined or not available.
Relative density	2.6-2.8
Solubilities	Soluble in water : 3.1 g/l
Partition coefficient (n-octanol/water)	Not determined or not available.
Auto/Self-ignition temperature	Not determined or not available.
Decomposition temperature	Not determined or not available.
Dynamic viscosity	Not determined or not available.
Kinematic viscosity	Not determined or not available.
Explosive properties	Not determined or not available.
Oxidizing properties	Not determined or not available.

### Other information

## SECTION 10: Stability and reactivity

### Reactivity:

Does not react under normal conditions of use and storage.

### Chemical stability:

Stable under normal conditions of use and storage.

### Possibility of hazardous reactions:

None under normal conditions of use and storage.

### Conditions to avoid:

None known.

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 07.13.2017

Page 6 of 10

## Bromoform

### Incompatible materials:

None known.

### Hazardous decomposition products:

None known.

## SECTION 11: Toxicological information

### Acute toxicity

**Assessment:** Harmful if swallowed Toxic if inhaled

**Product data:** No data available.

#### Substance data:

Name	Route	Result
Bromoform	oral	LD50 - Rat - 933 mg/kg

### Skin corrosion/irritation

**Assessment:** Causes skin irritation

**Product data:** No data available.

#### Substance data:

Name	Result
Bromoform	Causes skin irritation.

### Serious eye damage/irritation

**Assessment:** Causes serious eye irritation

**Product data:** No data available.

#### Substance data:

Name	Result
Bromoform	Causes serious eye irritation.

### Respiratory or skin sensitization

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Carcinogenicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

#### International Agency for Research on Cancer (IARC):

Name	Classification
Ethyl alcohol	Group 1 - Carcinogenic to humans

#### National Toxicology Program (NTP):

Name	Classification
Bromoform	Reasonably anticipated to be human carcinogens

### Germ cell mutagenicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Reproductive toxicity

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 07.13.2017

Page 7 of 10

## Bromoform

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Specific target organ toxicity (single exposure)

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Specific target organ toxicity (repeated exposure)

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Aspiration toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

**Information on likely routes of exposure:** No data available.

**Symptoms related to the physical, chemical and toxicological characteristics:** No data available.

**Other information:** No data available.

## SECTION 12: Ecological information

### Acute (short-term) toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:**

Name	Result
Bromoform	LC50 - Crustaceans - 46 mg/l - 48 h
	LC50 - Fish - 29 mg/l - 96 h
	EC50 - Algae - 42 mg/l - 72h or 96 h

### Chronic (long-term) toxicity

**Product data:** No data available.

**Substance data:** No data available.

### Persistence and degradability

**Product data:** No data available.

**Substance data:** No data available.

### Bioaccumulative potential

**Product data:** No data available.

**Substance data:** No data available.

### Mobility in soil

**Product data:** No data available.

**Substance data:** No data available.

**Other adverse effects:** No data available.

## SECTION 13: Disposal considerations

### Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11)

# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200



Initial preparation date: 07.13.2017

Page 8 of 10



## Bromoform

### SECTION 14: Transport information



#### United States Transportation of dangerous goods (49 CFR DOT)

UN number	UN 2515
UN proper shipping name	Bromoform
UN transport hazard class(es)	6.1  
Packing group	III
Environmental hazards	Marine Pollutant Bromoform
Special precautions for user	None
Passenger air/rail	60 L
Cargo aircraft only	220 L
Stowage category	A

#### International Maritime Dangerous Goods (IMDG)

UN number	UN 2515
UN proper shipping name	Bromoform
UN transport hazard class(es)	6.1  
Packing group	III
Environmental hazards	Marine Pollutant Bromoform
Special precautions for user	None
EmS number	F-A, S-A
Stowage category	Category A. Keep as cool as reasonably practicable. Clear of living quarters.
Excepted quantities	E1
Limited quantity	5 L

#### International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	UN 2515
UN proper shipping name	Bromoform
UN transport hazard class(es)	6.1  
Packing group	III
Environmental hazards	Marine Pollutant Bromoform
Special precautions for user	None
ERG code	6L
Excepted quantities	E1
Passenger and cargo	60 L
Cargo aircraft only	220 L



# Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 07.13.2017

Page 9 of 10

## Bromoform

Limited quantity	2 L
------------------	-----

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	
Bulk Name	None
Ship type	None
Pollution category	None

## SECTION 15: Regulatory information

### United States regulations

#### Inventory listing (TSCA):

75-25-2	Bromoform	Listed
64-17-5	Ethyl alcohol	Listed

**Significant New Use Rule (TSCA Section 5):** Not determined.

**Export notification under TSCA Section 12(b):** Not determined.

#### SARA Section 311/312 hazards:

Acute	Chronic	Fire	Pressure	Reactive
Yes	No	No	No	No

**SARA Section 302 extremely hazardous substances:** Not determined.

#### SARA Section 313 toxic chemicals:

75-25-2	Bromoform	Listed
---------	-----------	--------

#### CERCLA:

75-25-2	Bromoform	Listed	100 lbs.
---------	-----------	--------	----------

**RCRA:** Not determined.

**Section 112(r) of the Clean Air Act (CAA):** Not determined.

#### Massachusetts Right to Know:

75-25-2	Bromoform	Listed
64-17-5	Ethanol Ethyl alcohol	Listed

#### New Jersey Right to Know:

75-25-2	Bromoform	Listed
75-25-2	Bromoform	Listed
64-17-5	Ethanol Ethyl alcohol	Not Listed

#### New York Right to Know:

75-25-2	Bromoform	Listed
75-25-2	Bromoform	Listed
64-17-5	Ethanol Ethyl alcohol	Listed

#### Pennsylvania Right to Know:

75-25-2	Bromoform	Listed
64-17-5	Ethanol Ethyl alcohol	Listed

**California Proposition 65:** Not determined.

## SECTION 16: Other information

**Abbreviations and Acronyms:** None

## Safety Data Sheet

According to OSHA Hazard Communication Standard, 29 CFR 1910.1200

Initial preparation date: 07.13.2017

Page 10 of 10

### Bromoform

#### Disclaimer:

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

**NFPA:** 2-0-0

**HMIS:** 2-0-0

**Initial preparation date:** 07.13.2017

**End of Safety Data Sheet**