Chloroform, Reagent Grade

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name : **Chloroform, Reagent Grade**

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: **S25248**

Recommended uses of the product and uses restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331

Supplier Details:

Fisher Science Education
15 Jet View Drive, Rochester, NY 14624

Emergency telephone number:

Fisher Science Education Emergency Telephone No.: 800-535-5053

SECTION 2 : Hazards identification

Classification of the substance or mixture:

Health hazard
Specific target organ toxicity following repeated exposure, category 1
Reproductive toxicity, category 2
Carcinogenicity, category 2

Irritant
Acute toxicity (oral, dermal, inhalation), category 4
Skin irritation, category 2
Eye irritation, category 2A

Toxic
Acute toxicity (oral, dermal, inhalation), category 3

Acute toxicity - Oral - Acute Tox. 4
Acute toxicity - Inhalation - Acute Tox. 3
Skin corrosion/irritation - Skin Irrit. 2.
Serious Eye Damage/Eye Irritation - Eye Irrit. 2
Carcinogenicity - Carc. 2
Reproductive Toxicity - Repr. 2
Specific target organ toxicity - Repeated exposure - STOT RE 1

Signal word :Danger

Hazard statements:
Harmful if swallowed
Causes skin irritation
Causes serious eye irritation
Toxic if inhaled
Suspected of causing cancer
Suspected of damaging fertility or the unborn child

Causes damage to organs through prolonged or repeated exposure
Precautionary statements:
If medical advice is needed, have product container or label at hand
Keep out of reach of children
Read label before use
Do not handle until all safety precautions have been read and understood
Obtain special instructions before use
Avoid breathing dust/fume/gas/mist/vapours/spray
Use only outdoors or in a well-ventilated area
Use personal protective equipment as required
Wash skin thoroughly after handling
Do not eat, drink or smoke when using this product
Wear protective gloves/protective clothing/eye protection/face protection
Call a POISON CENTER or doctor/physician
If skin irritation occurs: Get medical advice/attention
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
IF exposed or concerned: Get medical advice/attention
Get Medical advice/attention if you feel unwell
Specific treatment (see supplemental first aid instructions on this label)
Rinse mouth
Take off contaminated clothing and wash before reuse
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 soap and water
Store in a well ventilated place. Keep container tightly closed
Store locked up
Dispose of contents and container as instructed in Section 13

Other Non-GHS Classification:

WHMIS

D1B 

D2B 

NFPA/HMIS

NFPA SCALE (0-4)

HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 67-66-3	Chloroform	100 %
		Percentages are by weight

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Loosen clothing as necessary and position individual in a comfortable position.Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen.Get medical assistance if cough or other symptoms appear.DO NOT use mouth-to-mouth resuscitation

After skin contact: Rinse/flush exposed skin gently using soap and water for 15-20 minutes.Seek medical advice if discomfort or irritation persists.

After eye contact: Protect unexposed eye.Rinse/flush exposed eye(s) gently using water for 15-20 minutes.Remove contact lens(es) if able to do so during rinsing.Seek medical attention if irritation persists or if concerned.

After swallowing: Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort, or vomiting persists.Never give anything by mouth to an unconscious person.Call Poison Control immediately

Most important symptoms and effects, both acute and delayed:

Aspiration hazard. May cause central nervous system effects. May cause gastrointestinal irritation, nausea, vomiting and diarrhea. Irritation- all routes of exposure.May cause irritation of respiratory tract. Inhalation may cause central nervous system effects. Headache.Shortness of breath.;Possible cancer hazard. Tumorigenic effects have been reported in experimental animals. May cause adverse liver and kidney effects. Central nervous system disorders. Cardiovascular. Preexisting eye disorders. Kidney disorders. Liver disorders. Skin disorders

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

For safety reasons unsuitable extinguishing agents:

Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors.Slight fire hazard when subjected to high heat

Advice for firefighters:

Protective equipment: Wear protective eyeware, gloves, and clothing. Refer to Section 8.Use NIOSH-approved respiratory protection/breathing apparatus.

Additional information (precautions): Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation.Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment.Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Wear protective eyeware, gloves, and clothing. Refer to Section 8.Always obey local regulations.Containerize for disposal. Refer to Section 13.If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Keep in suitable closed containers for disposal.

Reference to other sections:

SECTION 7 : Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing.Follow good hygiene procedures when handling chemical materials. Refer to Section 8.Follow proper disposal methods. Refer to Section 13.Do not eat, drink, smoke, or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages.Protect from freezing and physical damage.Provide ventilation for containers. Keep container tightly sealed.Store away from incompatible materials.

SECTION 8 : Exposure controls/personal protection

Control Parameters:	67-66-3, Chloroform, ACGIH TLV: 49 mg/m3 67-66-3, Chloroform, OSHA PEL: 240 mg/m3 67-66-3, Chloroform, OSHA PEL 50 ppm Ceiling; 240 mg/m3 Ceiling 67-66-3, Chloroform, ACGIH TLV TWA:10 ppm TWA 67-66-3, Chloroform, NIOSH REL: Ca ST 2 ppm (9.78 mg/m3) 60-minute 67-66-3, Chloroform, NIOSH IDLH: Ca 500 ppm
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.
Respiratory protection:	Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls.When necessary use NIOSH approved breathing equipment.
Protection of skin:	Select glove material impermeable and resistant to the substance.Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves.Wear protective clothing.
Eye protection:	Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).Safety glasses or goggles are appropriate eye protection.

General hygienic measures: Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing.Before wearing wash contaminated clothing.

SECTION 9 : Physical and chemical properties

Appearance (physical state,color):	Clear Liquid	**Explosion limit lower**: **Explosion limit upper**:	Not determined Not determined
Odor:	Aromatic Chloroform Odor	**Vapor pressure**:	213 mbar @ 20 °C
Odor threshold:	Not determined	**Vapor density**:	4.12 (Air = 1.0)
pH-value:	Not determined	**Relative density**:	Not determined
Melting/Freezing point:	-63°C / -81.4°F	**Solubilities**:	Slightly soluble
Boiling point/Boiling range:	60.5 - 61.5°C / 140.9 - 142.7°F	**Partition coefficient (n-octanol/water)**:	Not determined
Flash point (closed cup):	Not determined	**Auto/Self-ignition temperature**:	Not determined
Evaporation rate:	11.6 (Butyl Acetate = 1.0)	**Decomposition temperature**:	290°C
Flammability (solid,gaseous):	Not determined	**Viscosity**:	a. Kinematic:Not determined b. Dynamic: Not determined
Density: Not determined **Specific Gravity:**1.480			

SECTION 10 : Stability and reactivity

Reactivity: Nonreactive under normal conditions.
Chemical stability: Stable under normal conditions.Light sensitive
Possible hazardous reactions: None under normal processing.
Conditions to avoid: Incompatible materials.Excess heat
Incompatible materials: Alkali metals, strong caustics and oxidizers
Hazardous decomposition products: Oxides of sodium. Emits very toxic fumes of chlorine and phosgene gas

SECTION 11 : Toxicological information

Acute Toxicity:		
Oral:	67-66-3	LD50 oral-rat: 695mg/kg
Chronic Toxicity:		
Inhalation:	67-66-3	May cause adverse liver effects. May cause adverse kidney effects
Corrosion Irritation: No additional information.		
Sensitization:		No additional information.

Single Target Organ (STOT):	No additional information.
Numerical Measures:	No additional information.
Carcinogenicity:	Possible cancer hazard based on tests with laboratory animals.: Tumorigenic effects have been reported in experimental animals.. OSHA: Carcinogen (67-66-3)
Mutagenicity:	Mutagenic effects have occurred in experimental animals
Reproductive Toxicity:	Experiments have shown reproductive toxicity effects on laboratory animals. Developmental effects have occurred in experimental animals.Teratogenic effects have occurred in experimental animals

SECTION 12 : Ecological information

Ecotoxicity Persistence and degradability:
Bioaccumulative potential:
Mobility in soil: log Pow: 2
Other adverse effects: Chloroform has moderate acute and chronic toxicity to aquatic life, especially brittle roots and chromosomal damage

SECTION 13 : Disposal considerations

Waste disposal recommendations:

Contact a licensed professional waste disposal service to dispose of this material.U.S. - RCRA (Resource Conservation & Recovery Act) - U Series Wastes - Acutely Toxic Wastes & Other Hazardous Characteristics waste number U044 (Chloroform) . U.S. - RCRA (Resource Conservation & Recovery Act) - Basis for Listing - Appendix VII Included in waste streams: F024, F025, F039, K009, K010, K019, K020, K021, K029, K073, K116, K149, K150, K151, K158 (Chloroform) . U.S. - RCRA (Resource Conservation & Recovery Act) - D Series Wastes - Max Conc of Contaminants for the Tox Characteristic 6.0 mg/L regulatory level (Chloroform) . Dispose of empty containers as unused product.Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14 : Transport information

UN-Number

1888

UN proper shipping name

Poisonous material, Chloroform

Transport hazard class(es)

Class:
6.1 Toxic substances

Packing group:III

Environmental hazard:
Transport in bulk:
Special precautions for user:

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute, Chronic

SARA Section 313 (Specific toxic chemical listings):

67-66-3 Chloroform 0.1 % de minimis concentration

RCRA (hazardous waste code):

67-66-3 Chloroform waste codeU044

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

67-66-3 Chloroform

Proposition 65 (California):

Chemicals known to cause cancer:

67-66-3 Chloroform

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

Chemicals known to cause developmental toxicity:

67-66-3 Chloroform

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

67-66-3 Chloroform

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients is listed

SECTION 16 : Other information

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.Note:. 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.
GHS Full Text Phrases:

Abbreviations and acronyms:
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
CFR: Code of Federal Regulations (USA)
SARA: Superfund Amendments and Reauthorization Act (USA)
RCRA: Resource Conservation and Recovery Act (USA)
TSCA: Toxic Substances Control Act (USA)
NPRI: National Pollutant Release Inventory (Canada)
DOT: US Department of Transportation

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