

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

1.1. Product Identifier

Product Form: Substance

Product Name: Benzophenone

CAS No: 119-61-9

Product Code: VOLO10028

Standard InChI: InChI=1S/C13H10O/c14-13(11-7-3-1-4-8-11)12-9-5-2-6-10-12/h1-10H

1.2. Intended Use of the Product

Use of the substance/mixture: For laboratory research purposes

1.3. Name, Address, and Telephone of the Responsible Party

Manufacturer

Volochem, Inc.

2600 Hilltop Dr.

Bldg B #C211

Richmond, CA 94806

T 510.748.0159

www.volochem.com

1.4. Emergency Telephone Number

Emergency Number : 510-748-0159 (9a-5p M-F)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

Classification (GHS-US)

Skin irritation (Category 3)

Eye irritation (Category 2B)

Carcinogenicity (Category 2)

Acute aquatic toxicity (Category 1)

Chronic aquatic toxicity (Category 1)

2.2. Label Elements

GHS-US Labeling

Pictogram(s): GHS08, GHS09



Signal word: Warning

Hazard statement(s)

H316	Causes mild skin irritation.
H320	Causes eye irritation.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.

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P264	Wash thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/ eye protection/ face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P308+P313	If exposed or concerned: Get medical advice/attention.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3. Hazards not otherwise classified (HNOC) or not covered by GHS

Absorbed through the skin.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Name	Synonym(s)	Product Identifiers
Benzophenone	Diphenyl ketone	VOLO10028 CAS No. 119-61-9

SECTION 4: FIRST AID MEASURES

4.1. Description of First Aid Measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

Symptoms/Injuries: Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

Symptoms/Injuries After Inhalation: No data available.

Symptoms/Injuries After Skin Contact: Redness.

Symptoms/Injuries After Eye Contact: No data available.

Symptoms/Injuries After Ingestion: No data available.

Chronic Symptoms: The chronic effects of this substance are unknown.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

No data available

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Product is combustible. May release toxic gases under fire conditions.

Hazardous Combustion Products: Carbon oxides.

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Explosion Hazard: Product is not explosive.

5.3. Advice for Firefighters

Firefighting Instructions: Exercise caution when fighting any chemical fire.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Wear self contained breathing apparatus for fire fighting if necessary.

5.4. NFPA Rating

Health hazard:	1
Fire:	1
Reactivity Hazard:	0

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

6.1.1. For Non-emergency Personnel

Protective Equipment: Use appropriate personal protection equipment (PPE).

Emergency Procedures: Evacuate unnecessary personnel.

6.1.2. For Emergency Responders

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Ventilate area. Avoid dust formation. Avoid breathing vapors, mist or gas.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Material for Containment and Cleaning Up

For Containment: Contain and collect as any solid.

Methods for Cleaning Up: Collect spillage. Avoid generation of dust during clean-up of spills. Clear up spills immediately and dispose of waste safely.

6.4. Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Avoid contact with skin and eyes. Avoid inhalation of dust.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

7.3. Specific End Use(s)

For laboratory research purposes

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

Components	CAS-No.	Value	Control Parameters	Basis
Benzophenone	119-61-9	TWA	0.5 mg/m ³	USA. Workplace Environmental Exposure Levels (WEEL)

8.2. Exposure Controls

Appropriate Engineering Controls:

Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Avoid high dust concentration. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment:



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Hand Protection:	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Eye Protection:	Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Respiratory Protection:	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. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).
Skin and body protection:	Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Hygiene measures:	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State:	Solid
Appearance:	White flakes
Odor:	No data available
Odor Threshold:	No data available
pH:	No data available
Relative Evaporation Rate (butylacetate=1):	No data available
Melting Point:	Melting point/range: 47 - 51 °C (117 - 124 °F) - lit.
Boiling Point:	305 °C (581 °F) - lit
Flash Point:	146 °C [CHEMINFO]
Auto-ignition Temperature:	No data available
Decomposition Temperature:	No data available
Flammability (solid, gas):	No data available
Vapor Pressure:	1 hPa (1 mmHg) at 108 °C (226 °F)
Relative Vapor Density at 20 °C:	No data available
Relative Density:	No data available
Specific Gravity:	No data available
Solubility:	No data available
Log Pow:	3.18
Log Kow:	No data available
Viscosity, Kinematic:	No data available
Viscosity, Dynamic:	No data available
Explosive Properties:	No data available
Oxidizing Properties:	No data available
Explosive Limits:	No data available

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9.2. Other Information No additional is information available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:	Hazardous reactions will not occur under normal conditions.
10.2. Chemical Stability:	Product is stable under recommended storage conditions.
10.3. Possibility of Hazardous Reactions:	No data available
10.4. Conditions to Avoid:	Direct sunlight, extremely high temperatures
10.5. Incompatible Materials:	Strong oxidizing agents, strong reducing agents
10.6. Hazardous Decomposition Products:	Carbon oxides (CO, CO ₂)

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects

Acute Toxicity:	Oral LD50 LD50 Oral - rat - > 10,000 mg/kg
	Inhalation LC50 No data available
	Dermal LD50 LD50 Dermal - rabbit - 3,535 mg/kg
	Other information on acute toxicity No data available
Skin Corrosion/Irritation:	No data available
Serious Eye Damage/Irritation:	No data available
Respiratory or Skin Sensitization:	No data available
Germ Cell Mutagenicity:	No data available
Carcinogenicity:	IARC: Possible carcinogen
Reproductive Toxicity:	No data available
Specific Target Organ Toxicity (Single Exposure):	No data available
Specific Target Organ Toxicity (Repeated Exposure):	No data available
Aspiration Hazard:	No data available

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Toxicity to fish	mortality NOEC - Pimephales promelas (fathead minnow) - 5.86 mg/l - 7.0 d mortality LOEC - Pimephales promelas (fathead minnow) - 9.24 mg/l - 7.0 d LC50 - Pimephales promelas (fathead minnow) - 14.2 mg/l - 96.0 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 0.28 mg/l - 24 h
Toxicity to algae	EC50 - SELENASTRUM - 19 mg/l - 72 h

12.2. Persistence and Degradability

Biodegradability – Result: 0% - According to the results of tests of biodegradability this product is not readily biodegradable.

12.3. Bioaccumulative Potential

No data available

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12.4. Mobility in Soil

No data available

12.5. Other Adverse Effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Very toxic to aquatic life with long lasting effects.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste Treatment Methods

Waste Disposal Recommendations: Contact a licensed professional waste disposal service to dispose of this material. Dispose of waste material in accordance with all local, regional, national, and international regulations.

SECTION 14: TRANSPORT INFORMATION

In Accordance With ICAO/IATA/IMDG/DOT

14.1. UN Number:	3077
14.2. UN Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Benzophenone)
14.3. Transport Hazard Class(es):	9
14.4. Packing Group:	III
14.5.1. Marine Pollutant:	Yes
14.5.2. Reportable Quantity:	No
14.6.1. Toxic Inhalation Hazard:	No
14.6.2. Mode Specific Comments:	See below
14.6.2.1. Ground Transportation - DOT (US):	No comments
14.6.2.2. Marine Transportation – IMDG:	EMS-No: F-A, S-F
14.6.2.3. Air Transportation - IATA/ICAO:	No comments

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

EPA TSCA Inventory

Listed

SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Components

Chronic Health Hazard

15.2. US State Regulations

California Proposition 65 List 2014

Not listed

Maine Chemicals of High Concern List 2012

Not listed

Massachusetts Right to Know Hazardous Substance List 2014

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Not listed

New Jersey Right to Know Hazardous Substance List 2010

Not listed

Pennsylvania Right to Know Hazardous Substance List 2010

Not listed

SECTION 16: OTHER INFORMATION

16.1. Other Classifications

HMIS Classification

Health Hazard:	1
Chronic Health Hazard:	*
Flammability:	1
Physical hazards:	0

16.2. References

International Chemical Safety Card 0389 (Validated May 4, 2010)

Revision date : 1/3/2015

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

Volochem chemicals are for research purposes only and are NOT intended for use as drugs, food additives, household goods, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.

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