Date of issue: 2017/12/05
Date of revision: 2023/02/13

# Safety Data Sheet

## Section 1. Identification of the substance/mixture and of the company/undertaking

Product identifier:

Product name: Benzophenone

SDS No. : 0802E-3

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

Research and Development

Details of the supplier of the safety data sheet

Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.
Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN
Division: Chemical Safety Management Department
Telephone number: +81-6-6946-8061
FAX: +81-6-6946-1607

## Section 2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

Acute toxicity (Oral): Category 4

Carcinogenicity: Category 1B

Specific target organ toxicity - repeated exposure: Category 2 (liver, kidneys)

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment, short-term (acute): Category 2

Hazardous to the aquatic environment, long-term (chronic): Category 2

(Note) GHS classification without description: Not classified/Classification not possible

Label elements

Signal word: Danger

HAZARD STATEMENT

Harmful if swallowed

May cause cancer

May cause damage to organs through prolonged or repeated exposure (liver, kidneys)

Toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

Avoid release to the environment.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash contaminated parts thoroughly after handling.

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

Response

Collect spillage.

Get medical advice/attention if you feel unwell.

IF exposed or concerned: Get medical advice/attention.

IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.

IF SWALLOWED: Rinse mouth.

Disposal

Dispose of contents/container in accordance with local/national regulation.

## Section 3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Benzophenone

Content (%):99(min)

Chemical formula:C6H5COC6H5

Chemicals No, Japan:3-1258;4-125

CAS No.:119-61-9

MW:182.22

ECNO:204-337-6

Note : The figures shown above are not the specifications of the product.

## Section 4. First-aid measures

Descriptions of first-aid measures

General measures

Get medical advice/attention if you feel unwell.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Call a POISON CENTER/doctor/physician if you feel unwell.

IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water or shower.

If skin irritation or rash occurs: 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 SWALLOWED

Rinse mouth.

Call a POISON CENTER/doctor/physician if you feel unwell.

## Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire resistant or flame retardant clothing.

Wear protective gloves/protective clothing/eye protection/face protection.

Firefighters should wear self-contained breathing apparatus with full face peace operated positive pressure mode.

Section 6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Ventilate area until material pick up is complete.

Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.

Methods and materials for containment and cleaning up

Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident

Collect spillage.

Section 7. Handling and storage

Precautions for safe handling

Preventive measures

(Exposure Control for handling personnel)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Protective measures against fire and explosion)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.

Avoid contact with eyes.

Safety Measures

Wear protective gloves, protective clothing or face protection.

When using do not eat, drink or smoke.

Any incompatibilities

See "10.Stability and Reactivity"

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

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

Storage

Conditions for safe storage

Keep container tightly closed.

Store in a cool, dry place. Do not store in direct sunlight.

Container and packaging materials for safe handling

Glass

Stainless steel

Section 8. Exposure controls/personal protection

Control parameters

Exposure controls

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures

Respiratory protection

Wear respiratory protection.

Hand protection

Wear protective gloves.

Eye protection

Wear eye/face protection.

## Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Crystals

Color: Colorless, clear to white

Odor: Characteristic odor

Melting point/Freezing point: 49℃

Boiling point or initial boiling point: (Benzophenone)305℃

Boiling range data is not available.

Flammability (gases, liquids and solids) data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: None

n-Octanol/water partition coefficient: log Pow3.38

Vapor pressure data is not available.

Density and/or relative density: 1.1

Relative vapor density (Air=1): 6.3

Particle characteristics data is not available.

## Section 10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

On combustion, forms toxic gases. Reacts with strong oxidants. This generates fire and explosion hazard. (ICSC 0389)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon oxides

## Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Data for components of the product]

[GHS Cat. Japan, base data]

(Benzophenone)

rat LD50=1900mg/kg (MOE Result of the initial environmental risk assessment of chemicals,

2019)
Acute toxicity (Dermal)
[Data for components of the product]
[GHS Cat. Japan, base data]
(Benzophenone)
rabbit LD50 >2000mg/kg (AICIS IMAP, 2015)
Irritant properties
Skin corrosion/irritation data is not available.
Serious eye damage/irritation data is not available.
Allergenic and sensitizing effects data is not available.
Mutagenic effects data is not available.
Carcinogenicity
[Data for components of the product]
[GHS Cat. Japan, base data]
(Benzophenone)
cat.1B; (ECHA RAC Opinion, 2019 et al.)
[IARC]
(Benzophenone)
Group 2B : Possibly carcinogenic to humans
Reproductive toxicity data is not available.
Specific target organ toxicity (STOT)
STOT-single exposure data is not available.
STOT-repeated exposure
[Data for components of the product]
[cat.2]
[GHS Cat. Japan, base data]
(Benzophenone)
liver, kidneys (MOE Result of the initial environmental risk assessment of chemicals, 2019)
Aspiration hazard data is not available.

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Section 12. Ecological Information
Toxicity
Aquatic toxicity
[Data for components of the product]
Hazardous to the aquatic environment, short-term (acute)
[GHS Cat. Japan, base data]
(Benzophenone)
Algae (Pseudokirchneriella subcapitata) ErC50=3.53mg/L/72hr (MOE Japan, 1998)
Hazardous to the aquatic environment, long-term (chronic)
[GHS Cat. Japan, base data]
(Benzophenone)
Crustacea (Daphnia magna) NOEC=0.2mg/L/21days (MOE Japan, 1998)
Water solubility
(Benzophenone)
none (ICSC, 2010)
Persistence and degradability
[Data for components of the product]
(Benzophenone)
BOD_Degradation : 0% (METI existing chemical safety inspections, 1980)
Bioaccumulative potential
[Data for components of the product]
(Benzophenone)
log Pow=3.38 (ICSC, 2010)

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

## Section 13. Disposal considerations

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging

Waste treatment methods

Avoid release to the environment.

Dispose of contents/container in accordance with local/national regulation.

## Section 14. Transport Information

UN Number or ID Number : 3077

UN Proper Shipping Name :

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Class or division (Transport hazard class) : 9

Packing group : III

ERG GUIDE No.: 171

Special provisions No.: 274; 331; 335; 375

IMDG Code (International Maritime Dangerous Goods Regulations)

UN Number or ID Number : 3077

UN Proper Shipping Name :

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Class or division (Transport hazard class) : 9

Packing group : III

Special provisions No.: 274; 335; 966; 967; 969

IATA (Dangerous Goods Regulations)

UN Number or ID Number : 3077

UN Proper Shipping Name :

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Class or division (Transport hazard class) : 9

Hazard labels : Miscellaneous & Environmentally hazardous

Packing group : III

Special provisions No.: A97; A158; A179; A197; A215

Environmental hazards

Marine pollutants (yes/no) : yes

## Section 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

Benzophenone

Other regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

Section 16. Other information

GHS classification and labelling

Acute toxicity, Category 4: H302 Harmful if swallowed
Carcinogenicity, Category 1B: H350 May cause cancer
STOT - Repeated exposure, Category 2: H373 May cause damage to organs through prolonged or repeated exposure
Hazardous to the aquatic environment, short-term (acute), Category 2: H401 Toxic to aquatic life
Hazardous to the aquatic environment, long-term (chronic), Category 2: H411 Toxic to aquatic life with long lasting effects

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 21th edit., 2019 UN
IMDG Code, 2020 Edition (Incorporating Amendment 40-20)
IATA Dangerous Goods Regulations (62nd Edition) 2021
2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2022 TLVs and BEIs. (ACGIH)
Supplier's data/information

General Disclaimer

This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.
The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.
The GHS classification data given here is based on current Japan official data (NITE published in 2021).