

Material Safety Data Sheet

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name: Benzophenone
Chemical name: benzophenone
Synonyms: Diphenyl ketone, Diphenylmethanone

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

Identified uses: Benzophenone can be used as a photo initiator in UV-curing applications such as inks, imaging, and clear coatings in the printing industry. Benzophenone prevents ultraviolet (UV) light from damaging scents and colors in products such as perfumes and soaps. It also can be used as an intermediate for medicines and materials.

Uses advised against: No information available.

1.3 Details of the supplier of the SDS

Supplier: Shaoxing Jiaying photo-tech co., ltd.
Address: NO.1, WEISAN ROAD, HANGZHOU BAY SHANGYU FINE CHEMICAL ZOOM.
E-mail: alexfeng.garden@foxmail.com
Telephone: +86-575-82735630

1.4 Emergency telephone number

+86-575-82735630

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008[CLP]

Specific Target Organ Toxicity - Repeated Exposure, Category 2; H373

Hazardous to the Aquatic Environment – Chronic Hazard, Category 3;H412

Classification according to Directive 67/548/EEC[DSD] or Directive 1999/45/EC[DPD]

Xn; R48/22

Additional information

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Full text of R-phrase(s)/H-statement(s): see SECTION 16.

2.2 Label elements

Labelling according to Regulation (EC) No1272/2008[CLP]

Signal word: Warning

Hazard pictogram(s):



Hazard statement(s): H373: May cause damage to organs through prolonged or repeated exposure.

H412: Harmful to aquatic life with long lasting effects.

Precautionary statement(s):

Prevention: P260: Do not breathe dust/fume/gas/mist/vapours/spray.

P273: Avoid release to the environment.

Response: P314: Get medical advice/attention if you feel unwell.

Disposal: P501: Dispose of container in accordance with local/national regulation.

Supplemental Hazard information (EUH):

No information available.

Special rules for supplemental label elements for certain mixtures:

No information available.

2.3 Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1 Substance/Preparation information

Substance name: Substance

Index No.: Not listed

CAS No.: 119-61-9

EC No.: 204-337-6

Purity: > 99.5 %

Formula: $C_{13}H_{10}O$

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Molecular Weight: 182.2

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes:

In all cases of doubt, or when symptoms persist, seek medical attention.

Following inhalation:

Move immediately to fresh air, avoid exertion and seek medical attention. If breathing is difficult, give oxygen.

Following skin contact:

Wash with soap and plenty of water. If skin irritation occurs: Get medical attention.

Following eye contact:

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.

Following ingestion:

Rinse mouth. Call a POISON Center or doctor if you feel unwell. Do NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration into lungs.

4.2 Most important symptoms and effects, both acute and delayed

May cause damage to organs through prolonged or repeated exposure.

4.3 Indication of the immediate medical attention and special treatment needed

No information available.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Use dry chemical powder, carbon dioxide, water or chemical foams.

Unsuitable extinguishing media: No information available.

5.2 Special hazards arising from the substance or mixture

Substance is combustible. Vapors heavier than air. Forms explosive mixtures with air on intense heating. Development

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of hazardous combustion gases or vapors possible in the event of fire.

5.3 Advice for fire-fighters

Fire-fighters should wear appropriate breathing apparatus and protective equipment. Fire-fighting in the wind. Ensure adequate ventilation. Move container from fire area if it can be done without risk. Cool containers with water spray. Prevent fire-fighting water from entering surface water or groundwater. Evacuate all non-essential personnel.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Refer to SECTION 8 for personal protective equipment. Ensure adequate ventilation. Remove all ignition sources. Avoid contact with eyes and skin. Avoid generation of dust.

6.2 Environmental precautions

Do not discharge into drains/surface waters/groundwater. Discharge into the environment must be avoided. Inform the relevant authorities if the product has caused environmental pollution.

6.3 Methods and material for containment and cleaning up

Sweep up, place in a container and hold for waste disposal. Wash contaminated area with plenty of water. Avoid creation of dust.

6.4 Reference to other SECTIONS

See SECTION 7 for information on safe handling.
See SECTION 8 for information on personal protection equipment.
See SECTION 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Use this material with adequate ventilation. Do not get in eyes, on skin, or on clothing. Use personal protective equipment as required. Keep away from heat, sparks, open flame, and hot surfaces - No smoking. Do not eat, drink, or smoke when using this product. Wash thoroughly after handling. Avoid breathing dust.

7.2 Conditions for safe storage, including any incompatibilities

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Keep container tightly closed in a dry and well-ventilated place at 15 °C – 25 °C. Keep away from heat and ignition sources. Keep away from incompatible materials.

7.3 Specific end use(s)

Apart from the uses mentioned in SECTION 1.2 no other specific uses are stipulated.

SECTION 8 : Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values: Not established.

DNEL (Derived No Effect Level) for workers and the general population:

Not available.

PNEC (Predicted No Effect Concentration) values:

Not available.

8.2 Exposure controls

Appropriate engineering controls:

Provide local exhaust or process enclosure ventilation system. Prepare safety shower and eye wash equipments.

Personal protective equipment:

Eye and protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Hand protection: Wear nitrile rubber gloves to prevent hand exposure.

Skin protection: Wear suitable protective clothing.

Respiratory protection: Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

Environmental exposure controls:

Avoid entering into surface water or sanitary sewer system.

SECTION 9: Physical and chemical properties

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9.1 Information on basic physical and chemical properties

Appearance:	White flake or crystal
Odour:	Persistent rose-like odor
pH:	Not applicable.
Melting point:	47-49 °C
Boiling point:	305.4 °C (1013hPa)
Flash point:	143 °C
Evaporation rate:	Not applicable.
Flammability (solid, gas):	combustible
Upper/lower flammability or explosive limits:	Not available.
Vapour pressure:	0.04hPa (20°C)
Density:	1.111 g/cm ³
Solubility(ies):	43mg/l (20°C)
Partition coefficient: n-octanol/water:	3.58
Auto-ignition temperature:	Not available.
Decomposition temperature:	Not available.
Viscosity:	Not applicable.
Explosive properties:	Not available.
Oxidising properties:	Not available.

9.2 Other information

No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage and handling conditions (see SECTION 7, handling and storage).

10.2 Chemical stability

Stable under normal conditions of use.

10.3 Possibility of hazardous reactions

Violent reactions possible with strong oxidizing agents.

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10.4 Conditions to avoid

Strong heating, incompatible materials.

10.5 Incompatible materials

Strong oxidizing materials.

10.6 Hazardous decomposition products

None when used as directed. Thermal decomposition will lead to the release of carbon monoxide (CO) and carbon dioxide (CO₂).

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity:

Oral: LD₅₀>10000 mg/kg (Rat); LD₅₀=2895 mg/kg (mouse)

Inhalation: No data available.

Dermal: LD₅₀= 3535 mg/kg (rabbit)

Skin corrosion/irritation:

Rabbit test: Not irritating.

Serious eye damage/irritation:

Rabbit test: slightly irritating.

Respiratory or skin sensitization:

Guinea pig: not sensitizing.

Germ cell mutagenicity:

Negative

LOAEL: 15 mg/kg bw/day(oral)

Carcinogenicity:

Not Classified

Effects on fertility: NOAEL: 130 mg/kg bw/day(oral)

Reproductive toxicity:

Developmental toxicity: NOAEL: 25 mg/kg bw/day(oral)

Not classified.

STOT-single exposure:

No information available.

NOAEL(90d)=20 mg/kg b.w. Sprague-Dawley Rat

STOT-repeated exposure:

LOAEL(28d)=100mg/kg b.w. Sprague-Dawley Rat

May cause damage to organs through prolonged or repeated exposure.

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Aspiration hazard: No information available.

SECTION 12: Ecological information

12.1 Toxicity

Acute fish toxicity: LC₅₀=15.3 mg/l/96h (Pimephales promelas)
Acute daphnia toxicity: EC₅₀=6.784 mg/l/48h (Daphnia magna)
Acute algae toxicity: EC₅₀=3.5 mg/l/72h (Daphnia magna)

12.2 Persistence and degradability

Under test conditions (OECD301C) no biodegradation observed.
Benzophenone is generally resistant to hydrolysis.

12.3 Bioaccumulative potential

BCF for benzophenone is 15.1 L/kg wet weight.

12.4 Mobility in soil

Koc at 20°C: 517
Based on these results a low to moderate mobility in soil is to be expected.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment information is not available as chemical safety assessment not conducted.

12.6 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose in accordance with all applicable federal, state/regional and local laws and regulations. Recommended wash container recycling.

SECTION 14: Transport information

14.1 UN Number

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None. Not classified as dangerous good.

14.2 UN proper shipping name

None. Not classified as dangerous good.

14.3 Transport hazard class(es)

None. Not classified as dangerous good.

14.4 Packing group

None. Not classified as dangerous good.

14.5 Environmental hazards

None. Not classified as dangerous good.

14.6 Special precautions for user

No information available.

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

No information available.

SECTION 15: Regulatory information

NATIONAL INVENTORIES		
Is the substance (or for mixtures all the intentionally added components /substances) listed in the following National Inventories?		Listed / Registered
Canada (CEPA)	DSL	Listed
	NDSL	Not listed
Europe (EC)	EINECS	Listed
	ELINCS*	/
	NLP	/
United States (EPA)	TSCA	Listed

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Australia (NICNAS)	AICS	Listed
China (SEPA)	IECSC	Listed
Japan (METI)	ENCS	Listed
Malaysia (EHSNR)	EHSNR	Not listed
New Zealand (ERMA)	HSNO	Listed
Philippines (DENR)	PICCS	Listed
South Korea (KCMA)	ECL, TCCA**	Listed
Switzerland (FOPH)	BAG	Listed
Taiwan (ECN)/(NCN)	ECN	Listed
Turkey (CICR)	CICR	Listed

15.2 Chemical Safety Assessment

Chemical Safety Assessment has been carried out for this product.

SECTION 16: Other information

16.1 Revision Information

Date of the previous revision: Not applicable.

Date of this revision: 08/07/2014

Revision summary: The hazard classification information changed compared to the 1st version.

Classification according to Regulation (EC) No 1272/2008[CLP]

The classification of Hazardous to the Aquatic Environment – Chronic Hazard was changed to the follow
Hazardous to the Aquatic Environment – Chronic Hazard, Category 3;H412

Classification according to Directive 67/548/EEC[DSD] or Directive 1999/45/EC[DPD]

Xn; R48/22

N; R51/53 was removed in this version.

16.2 Abbreviations and acronyms

- CLP:** EU regulation (EC) No 1272/2008 on classification, labelling and packaging of chemical substances and mixtures.
- CAS:** Chemical Abstracts Service (division of the American Chemical Society).
- EINECS:** European Inventory of Existing Commercial Chemical Substances.
- DSD:** Dangerous Substance Directive (67/548/EEC).

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16.3 Key literature references and sources for data

REACH dossier and CSR.

16.4 Relevant R-phrases/H-statements

R48/22: Harmful: danger of serious damage to health by prolonged exposure if swallowed.

16.5 Training advice

Provide adequate information, instruction and training for operators.

16.6 Declare to reader

The information in this SDS is provided all the relevant data fully and truly. However, the information is provided without any warranty on their absolute extensiveness and accuracy. This SDS was prepared to provide safety preventive measures for the users who have got professional training. The personal user who obtained this SDS should make independent judgment for the applicability of this SDS under special conditions. In these special cases, we do not assume responsibility for the damage. According to REACH Article 31(5), the SDS shall be supplied in an official language of the Member State(s) where the substance or mixture is placed on the market, unless the recipient Member State(s) concerned provide otherwise. It should also be noted that this SDS is applicable to the countries with English as an official language.

----- End of the SDS -----