



Design Report of Safety Data Sheet

No.: JST2021120365E
Date: 2021/12/16
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| | | |
|--|--|---|
| Name of the sample | Methyl Ethyl Ketone | |
| Applicant | ZHENGZHOU BATONG INDUSTRIAL CO.,LTD | |
| Supplier | ZHENGZHOU BATONG INDUSTRIAL CO.,LTD | |
| Composition of the sample | Methyl Ethyl Ketone : 99.5% | |
| Warranty of Design | GLOBALLY HARMONIZED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS) Eighth revised edition | |
| Design Result of SDS please see next page. | | |
| Designer | 杨秋慧 | <i>For and on behalf of</i> CCIC JIANGSU CO., LTD. Approver 中国检验认证集团江苏有限公司 王珍 |

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授权签字人 Authorized Signature (S)

Notes: This SDS is valid before the implementation of the ninth revised edition GHS.



Section 1 Product and Company Identification

> **Product Identifier**

Product Name Methyl Ethyl Ketone
Synonyms -
CAS No. 78-93-3
EC No. 201-159-0
Molecular Formula C₄H₈O

> **Relevant Identified Uses of the Substance or Mixture and Uses Advised Against**

Relevant Identified Uses Please consult manufacturer.
Uses Advised Against Please consult manufacturer.

> **Details of the Supplier of the Safety Data Sheet**

Applicant Name ZHENGZHOU BATONG INDUSTRIAL CO.,LTD
Application Address Guandimiao Village, Yulong Town, Xingyang City
Applicant Post Code 450100
Applicant Telephone +86-371-68538712
Applicant Fax +86-371-68538725
Applicant E-mail Sales@batongchem.com
Supplier Name ZHENGZHOU BATONG INDUSTRIAL CO.,LTD
Supplier Address Guandimiao Village, Yulong Town, Xingyang City
Supplier Post Code 450100
Supplier Telephone +86-371-68538712
Supplier Fax +86-371-68538725
Supplier E-mail Sales@batongchem.com

> **Emergency Phone Number**

Emergency Phone Number +86-371-68538723

Section 2 Hazards Identification

Hazard class and label elements of the product according to GHS (the eighth revised edition):

> **GHS Hazard Class**

Flammable Liquids Category 2
Eye Damage/Irritation Category 2A



**Specific Target Organ
Toxicity (Single
Exposure)**

Category 3

> **GHS Label Elements**

Pictogram



Signal Word

Danger

> **Hazard Statements**

- H225 Highly flammable liquid and vapour
- H319 Causes serious eye irritation
- H336 May cause drowsiness or dizziness

> **Precautionary Statements**

Prevention

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- P233 Keep container tightly closed.
- P240 Ground and bond container and receiving equipment.
- P241 Use explosion-proof [electrical/ventilating/lighting] equipment.
- P242 Use non-sparking tools.
- P243 Take action to prevent static discharges.
- P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
- P264 Wash contact area thoroughly after handling.
- P271 Use only outdoors or in a well-ventilated area.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.

Response

- P319 Get medical help if you feel unwell.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P337+P317 If eye irritation persists: Get medical help.
- P370+P378 In case of fire: Use suitable extinguishing medium to extinguish.
- P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage

- P405 Store locked up.
- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P403+P235 Store in a well-ventilated place. Keep cool.



Tel: 0519-83277160

Add.: 47 Qingyang North Road, Tianning

Distribution, Changzhou, China

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Disposal

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

Section 3 Composition/Information on Ingredients

| Component | Concentration (weight percent, %) | CAS No. | EC No. |
|---------------------|-----------------------------------|---------|-----------|
| Methyl Ethyl Ketone | 99.5 | 78-93-3 | 201-159-0 |

Section 4 First Aid Measures

> Description of First Aid Measures

| | |
|-----------------------------------|---|
| General Advice | Immediate medical attention is required. Show this safety data sheet (SDS) to the doctor in attendance. |
| Eye Contact | Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable. |
| Skin Contact | Take off contaminated clothing and shoes immediately. Wash off with plenty of water for at least 15 minutes and consult a physician if feel uncomfortable. |
| Ingestion | Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a physician or Poison Control Center immediately. |
| Inhalation | Move victim into fresh air. If breathing is difficult, give oxygen. Do not use mouth to mouth resuscitation if victim ingested or inhaled the substance. If not breathing, give artificial respiration and consult a physician immediately. |
| Protecting of First-aiders | Ensure that medical personnel are aware of the substance involved. Take precautions to protect themselves and prevent spread of contamination. |

> Most Important Symptoms and Effects, both Acute and Delayed

- 1 Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure.

> Indication of Any Immediate Medical Attention and Special Treatment Needed

- 1 Treat symptomatically.
- 2 Symptoms may be delayed.

Section 5 Fire Fighting Measures

> Extinguishing Media

| | |
|---------------------------------------|---|
| Suitable Extinguishing Media | Dry chemical, carbon dioxide or alcohol-resistant foam. |
| Unsuitable Extinguishing Media | Do not use a solid water stream as it may scatter or spread fire. |

> Specific Hazards Arising from the Substance or Mixture

- 1 Will form explosive mixtures with air.
- 2 Fire exposed containers may vent contents through pressure relief valves thereby increasing fire



intensity and/ or vapour concentration.

- 3 Vapours may travel to source of ignition and flash back.
- 4 Liquid and vapour are flammable.
- 5 Containers may explode when heated.
- 6 Fire exposed containers may vent contents through pressure relief valves.
- 7 May expansion or decompose explosively when heated or involved in fire.

> Advice for Firefighters

- 1 As in any fire, wear self-contained breathing apparatus (MSHA/NIOSH approved or equivalent) and full protective gear.
- 2 Fight fire from a safe distance, with adequate cover.
- 3 Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6 Accidental Release Measure

> Personal Precautions, Protective Equipment and Emergency Procedures

- 1 Avoid breathing vapors and contacting with skin and eye.
- 2 Beware of vapours accumulating to form explosive concentrations.
- 3 Vapours can accumulate in low areas.
- 4 Emergency personnel wear positive pressure self-contained breathing apparatus. Wear protective and anti-static clothing. Wear chemical impermeable gloves.
- 5 Ensure adequate ventilation. Remove all sources of ignition.
- 6 Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.
- 7 Use personal protective equipment. Avoid breathing vapours, mist, gas or dust.

> Environmental Precautions

- 1 Prevent further leakage or spillage if safe to do so.
- 2 Discharge into the environment must be avoided.

> Methods and Materials for Containment and Cleaning Up

- 1 Absorb spilled material in dry sand or inert absorbent. In case of large amount of spillage, contain a spill by bunding.
- 2 Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.
- 3 Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

Section 7 Handling and Storage

> Precautions for Handling

- 1 Avoid inhalation of vapors.



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- 2 Use only non-sparking tools.
- 3 To prevent fire caused by electrostatic discharge steam, equipment on all metal parts should be grounded.
- 4 Use explosion proof equipment.
- 5 Handling is performed in a well ventilated place.
- 6 Wear suitable protective equipment.
- 7 Avoid contact with skin and eyes.
- 8 Keep away from heat/sparks/open flames/ hot surfaces.
- 9 Take precautionary measures against static discharges.

> Precautions for Storage

- 1 Keep containers tightly closed.
- 2 Keep containers in a dry, cool and well-ventilated place.
- 3 Keep away from heat/sparks/open flames/ hot surfaces.
- 4 Store away from incompatible materials and foodstuff containers.

Section 8 Exposure Controls/Personal Protection

> Control Parameters

Occupational Exposure Limit Values

| Component | Country/Region | Limit Value - Eight Hours | | Limit Value - Short Term | |
|--------------------------------|----------------|---------------------------|-------------------|--------------------------|-------------------|
| | | ppm | mg/m ³ | ppm | mg/m ³ |
| Methyl Ethyl Ketone 78-93-3 | USA - OSHA | 200 | 590 | - | - |
| | South Korea | 200 | 590 | 300 | 885 |
| | Ireland | 200 | 600 | 300 | 900 |
| | Germany (AGS) | 200 | 600 | 200 | 600 |
| | Denmark | 50 | 145 | 100 | 290 |
| | Australia | 150 | 445 | 300 | 890 |

Biological Limit Values

No information available

Monitoring Methods

- 1 EN 14042 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.
- 2 GBZ/T 160 Determination of toxic substances in workplace air(Series effective standard)and GBZ/T 300 Determination of toxic substances in workplace air(Series standard).

> Engineering Controls

- 1 Ensure adequate ventilation, especially in confined areas.
- 2 Ensure that eyewash stations and safety showers are close to the workstation location.
- 3 Use explosion-proof electrical/ventilating/lighting/equipment.



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4 Set up emergency exit and necessary risk-elimination area.

> Personal Protection Equipment

| | |
|---------------------------------|--|
| Eye Protection | Tightly fitting safety goggles (approved by EN 166(EU) or NIOSH (US). |
| Hand Protection | Wear protective gloves (such as butyl rubber) , passing the tests according to EN 374(EU),US F739 or AS/NZS 2161.1 standard. If exposure limits are exceeded or if irritation or other symptoms are |
| Respiratory protection | experienced, use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges. |
| Skin and Body Protection | Wear fire/flame resistant/retardant clothing and antistatic boots. |

Section 9 Physical and Chemical Properties

| | |
|---|--|
| Appearance: Colorless liquid. | Odor: No information available |
| Odor Threshold: No information available | pH: No information available |
| Melting Point/Freezing Point (°C): -86 | Initial Boiling Point and Boiling Range (°C): 80 |
| Flash Point (°C)(Closed Cup): -9 | Evaporation Rate: No information available |
| Flammability: Not applicable | Upper/lower explosive limits[%(v/v)]: Upper limit: 11.5; Lower limit: 1.8 |
| Vapor Pressure (KPa): 10.5 (20°C) | Relative Vapour Density(Air = 1): 2.41 |
| Relative Density(Water=1): 0.81 (20°C) | Solubility: Partly miscible with water |
| n-Octanol/Water Partition Coefficient: 0.29 | Auto-Ignition Temperature(°C): 505 |
| Decomposition Temperature (°C): No information available | Kinematic Viscosity (mm²/s): No information available |
| Particle characteristics: Not applicable | |

Section 10 Stability and Reactivity

| | |
|---|--|
| Reactivity | Contact with incompatible substances can cause decomposition or other chemical reactions. |
| Chemical Stability | Stable under proper operation and storage conditions. |
| Possibility of Hazardous Reactions | In contact with oxidants may cause a fire or an explosion. |
| Conditions to Avoid | Incompatible materials, heat, flame and spark. |
| Incompatible Materials | Oxidants, chloroform, bromoform and other organic solvents. |
| Hazardous Decomposition products | Under normal conditions of storage and use, hazardous decomposition products should not be produced. |

Section 11 Toxicological Information



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> Acute Toxicity

| Component | CAS No. | LD ₅₀ (Oral) | LD ₅₀ (Dermal) | LC ₅₀ (Inhalation, 4h) |
|---------------------|---------|-------------------------|---------------------------|-----------------------------------|
| Methyl Ethyl Ketone | 78-93-3 | 2737mg/kg(Rat) | 6480mg/kg(Rabbit) | 32mg/L(Mouse) |

> Skin Corrosion/Irritation

No information available

> Serious Eye Damage/Irritation

Causes serious eye irritation(Category 2A)(Methyl Ethyl Ketone)

> Skin Sensitization

No information available

> Respiratory Sensitization

No information available

> Germ Cell Mutagenicity

No information available

> Carcinogenicity

| ID | CAS No. | Component | IARC | NTP |
|----|---------|---------------------|------------|------------|
| 1 | 78-93-3 | Methyl Ethyl Ketone | Not Listed | Not Listed |

> Reproductive Toxicity

No information available

> Reproductive Toxicity (Additional)

No information available

> STOT-Single Exposure

May cause drowsiness or dizziness(Category 3)(Methyl Ethyl Ketone)

> STOT-Repeated Exposure

No information available

> Aspiration Hazard

No information available

Section 12 Ecological Information



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> Acute Aquatic Toxicity

| Component | CAS No. | Fish | Crustaceans | Algae |
|---------------------|---------|---|-----------------------------------|--------------------------------------|
| Methyl Ethyl Ketone | 78-93-3 | LC ₅₀ : 3220mg/L (96h)(Fish) | EC ₅₀ : 5090mg/L (48h) | ErC ₅₀ : > 1200mg/L (72h) |

> Chronic Aquatic Toxicity

| Component | CAS No. | Fish | Crustaceans | Algae |
|---------------------|---------|--------------------------|---------------|--------------|
| Methyl Ethyl Ketone | 78-93-3 | No information available | NOEC: 100mg/L | NOEC: 93mg/L |

> Others

Persistence and Degradability

No information available

Bioaccumulative Potential

No information available

Mobility in Soil

No information available

Results of PBT and vPvB Assessment

Methyl Ethyl Ketone does not meet the criteria for PBT and vPvB according to Regulation (EC) No 1907/2006, annex XIII.

Section 13 Disposal Considerations

Waste Chemicals

Before disposal should refer to the relevant national and local laws and regulation. Recommend the use of incineration disposal.

Contaminated Packaging Disposal Recommendations

Containers may still present chemical hazard when empty. Keep away from hot and ignition source of fire. Return to supplier for recycling if possible. Refer to Waste chemicals and Contaminated packaging.

Section 14 Transport Information

Transporting Label



Marine pollutant

None

UN Number

1193

UN Proper Shipping Name

ETHYL METHYL KETONE(METHYL ETHYL KETONE)

Transport Hazard Class

3

Transport Subsidiary Hazard Class

NONE

Packing Group

II

Section 15 Regulatory Information



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> International Chemical Inventory

| Component | EINECS | TSCA | DSL | IECSC | NZIoC | PICCS | KECI | AICS | ENCS |
|---------------------|--------|------|-----|-------|-------|-------|------|------|------|
| Methyl Ethyl Ketone | √ | √ | √ | √ | √ | √ | √ | √ | √ |

【EINECS】 European Inventory of Existing Commercial Chemical Substances.

【TSCA】 United States Toxic Substances Control Act Inventory.

【DSL】 Canadian Domestic Substances List.

【IECSC】 China Inventory of Existing Chemical Substances.

【NZIoC】 New Zealand Inventory of Chemicals.

【PICCS】 Philippines Inventory of Chemicals and Chemical Substances.

【KECI】 Existing and Evaluated Chemical Substances.

【AICS】 Australia Inventory of Chemical Substances.

【ENCS】 Existing And New Chemical Substances.

Note

"√" Indicates that the substance included in the regulations

"x" That no data or included in the regulations

Section 16 Additional Information

Creation Date 2021/12/16

Revision Date 2021/12/16

Reason for Revision -

> Disclaimer

This Safety Data Sheet (SDS) was prepared according to UN GHS (the 8th revised edition). The data included was derived from international authoritative database and provided by the enterprise. Other information was based on the present state of our knowledge. We try to ensure the correctness of all information. However, due to the diversity of information sources and the limitations of our knowledge, this document is only for user's reference. Users should make their independent judgment of suitability of this information for their particular purposes. We do not assume responsibility for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.



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Terms of the Using of the Report

1. The report is issued by CCIC according to the information of the chemicals and the information of its shipping provided by the applicant (shipper or his agent).
2. According to the demand of this SDS, CCIC requires the applicant to provide true and exact sample and data.
3. Information from applicant is the key of this SDS, so the center will not respond for the wrong of applicant.
4. Unless otherwise stated, the results shown in this test report refer only to the sample(s) tested.
5. This report will be effective only after it is signed by the inspector, approver and stamped by CCIC.
6. Our center guarantees the objectivity and fairness of this report, and carries out confidentiality obligations on business secrets such as business information, technical documents and so on.
7. The partly duplicating of this report is prohibited without the written approver of CCIC.
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