



Website:- chemicalbull.com

MATERIAL SAFETY DATA SHEET

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

1.1 Product identifiers

Product name : **Acetyl Acetone**

CAS-No. : 123-54-6

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

Identified uses : Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

Company : **ChemicalBull Pvt Ltd**
123/124, Panchratna, G.I.D.C
Char Rasta, Vapi-396195
Dist, Valsad, Gujarat, INDIA
Website:- chemicalbull.com
Email:- info@chemicalbull.com

1.4 Emergency telephone

Emergency Phone : **+91 9696960250**

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation

Flammable liquids Acute toxicity, Oral
Acute toxicity, Inhalation Acute toxicity, Dermal

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation

Pictogram



Signal word

Danger

Hazard statement(s)	
H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H311 + H331	Toxic in contact with skin or if inhaled.
Precautionary statement(s)	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.
P301 + P312	IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340 + P311	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.
Supplemental Hazard Statements	none

Reduced Labeling (<= 125 ml)

Pictogram



Signal word Danger

Hazard statement(s)

H311 + H331 Toxic in contact with skin or if inhaled.

Precautionary statement(s)

P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/ doctor.

Supplemental Hazard Statements none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : 2,4-Pentanedione

Formula : C₅H₈O₂

Molecular weight : 100.12 g/mol

CAS-No. : 123-54-6

Component	Classification	Concentration
Acetylacetone		
CAS-No.	123-54-6	Flam. Liq. 3; Acute Tox. 4; <= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

Carbon dioxide (CO₂) Foam Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

Combustible.

Vapors are heavier than air and may spread along floors.

Risk of dust explosion.

Forms explosive mixtures with air at elevated temperatures.

Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environmental precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions. Take up carefully with liquid-absorbent material. Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

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

Ingredients with workplace control parameters

8.2 Exposure controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as Safety glasses

Skin protection

required

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

Recommended Filter type for vapours of organic compounds

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|---|---|
| a) Appearance | Form: liquid
Color: colorless |
| b) Odor | ester-like |
| c) Odor Threshold | No data available |
| d) pH | No data available |
| e) Melting point/freezing point | Melting point/range: -23 °C - lit. |
| f) Initial boiling point and boiling range | 140,4 °C - lit. |
| g) Flash point | 35 °C - closed cup |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | No data available |
| j) Upper/lower flammability or explosive limits | Upper explosion limit: 11,4 %(V)
Lower explosion limit: 1,7 %(V) |

- | | | |
|----|---|---|
| k) | Vapor pressure | 7,9 hPa at 20 °C - OECD Test Guideline 104 |
| l) | Vapor density | No data available |
| m) | Relative density | 0,97 at 20 °C |
| n) | Water solubility | ca.153,8 g/l at 20 °C
A.6- completely soluble |
| o) | Partition coefficient:
n-octanol/water | log Pow: ca.0,68 at 40 °C - OECD Test Guideline 117 -
Bioaccumulation is not expected. |
| p) | Autoignition
temperature | No data available |
| q) | Decomposition
temperature | Distillable in an undecomposed state at normal pressure. |
| r) | Viscosity | Viscosity, kinematic: No data available
Viscosity, dynamic: ca.0,76 mPa.s at 20 °C
ca.0,63 mPa.s at 40 °C |
| s) | Explosive properties | No data available |
| t) | Oxidizing properties | No data available |

9.2 Other safety information

- | | |
|-----------------|--|
| Surface tension | 72 mN/m at 1g/l at 20 °C
- Regulation |
|-----------------|--|

SECTION 10: Stability and reactivity

10.1 Reactivity

Vapor/air-mixtures are explosive at intense warming.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Violent reactions possible with:

Acids

Bases

Amines

Aldehydes

anhydrides

Oxidizing agents

Hydrogen fluoride

Halogenated compounds

Cyanides

Isocyanates

alkalines

bases

Risk of ignition or formation of inflammable gases or vapours with:

hydrides

nitrides

Alkali metals

10.4 Conditions to avoid

Heating.

10.5 Incompatible materials

Mild steel, Zinc, Copper, Nickel, various alloys

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - female - 570 mg/kg

Remarks: (ECHA)

LC50 Inhalation - Rat - male and female - 4 h - 5,0305 mg/l

(OECD Test Guideline 403)

Symptoms: mucosal irritations, Cough

LD50 Dermal - Rabbit - female - 790 mg/kg

Remarks: (ECHA)

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h

Remarks: (ECHA)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: slight irritation

Remarks: (ECHA)

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Germ cell mutagenicity

Laboratory experiments have shown mutagenic effects.

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Metabolic activation: without metabolic activation

Method: OECD Test Guideline 473

Result: positive

Test Type: sister chromatid exchange assay

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 479

Result: positive

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Micronucleus test
Species: Mouse
Cell type: Bone marrow
Application Route: inhalation (vapor)
Method: US-EPA
Result: negative

Test Type: comet assay
Species: Rat
Cell type: Liver cells
Application Route: Oral

Result: negative
Remarks: (ECHA)

Carcinogenicity
No data available

Reproductive toxicity
Ingestion of excessive amounts by pregnant animals resulted in maternal and fetal 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

11.2 Additional Information

Repeated dose toxicity - Rabbit - male and female - Dermal - 9 Days - NOAEL (No observed adverse effect level) - 244 mg/kg - LOAEL (Lowest observed adverse effect level) - 975 mg/kg
Remarks: (ECHA)

Inhalation may provoke the following symptoms: Dizziness, Suffocation
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

After absorption:

Systemic effects:

Dizziness
Headache
Shortness of breath
respiratory arrest
Unconsciousness

Damage to:

Liver
Kidney

Other dangerous properties cannot be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish	flow-through test LC50 - Pimephales promelas (fathead minnow) - 104 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - 25,9 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	static test ErC50 - Pseudokirchneriella subcapitata (green algae) - 83,22 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test EC50 - activated sludge - 107,6 mg/l - 3 h (OECD Test Guideline 209)

12.2 Persistence and degradability

Biodegradability	aerobic - Exposure time 28 d Result: 83 - 100 % - Readily biodegradable. (OECD Test Guideline 301C)
Ratio BOD/ThBOD	5,6 % Remarks: (Lit.)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

See for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14: Transport information**14.1 UN number**

ADR/RID: 2310

IMDG: 2310

IATA: 2310

14.2 UN proper shipping name

ADR/RID: PENTANE-2,4-DIONE

IMDG: PENTANE-2,4-DIONE

IATA: Pentane-2,4-dione

14.3 Transport hazard class(es)

ADR/RID: 3 (6.1)

IMDG: 3 (6.1)

IATA: 3 (6.1)

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

14.6 Special precautions for user

No data available

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

This material safety data sheet complies with the requirements of Regulation

National legislation

Seveso of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

: ACUTE TOXIC
: FLAMMABLE LIQUIDS

Other regulations

Observe work restrictions regarding maternity protection in accordance to national regulations where applicable.

Take note on the protection of young people at work.

15.2 Chemical Safety Assessment

A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information**Full text of H-Statements referred to under sections 2 and 3.**

H226	Flammable liquid and vapor.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H311 + H331	Toxic in contact with skin or if inhaled.
H331	Toxic if inhaled.

Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. **ChemicalBull Pvt Ltd** and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

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