

# MATERIAL SAFETY DATA SHEET (SDS/MSDS)

## ACETYL ACETONE 98% FOR SYNTHESIS

CAS-No.: 123-54-6

Product Code: 00039

Molecular Formula:  $\text{CH}_3\text{COCH}_2\text{COCH}_3$

# MATERIAL SAFETY DATA SHEET (SDS/MSDS)

## ACETYL ACETONE 98% FOR SYNTHESIS

CAS-No.: 123-54-6

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

#### 1.1. Product identifier

Product form	:	Substance
Trade name	:	Acetyl Acetone 98% For Synthesis
EC-No.	:	204-634-0
CAS No	:	123-54-6
Synonyms	:	2,4-Pentanedione

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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Company : Chemnovo Synthesis Pvt Ltd.  
N-226 Near Kumbhavali Naka  
Tarapur MIDC, Boisar-401 506  
Palghar, Maharashtra  
Telephone : +91 7400096089  
Email: export@chemnovo.in

#### 1.4. Emergency telephone number

Emergency number : + 91 7400096089 (9:00am – 6:00 pm)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

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

Flammable liquids, H226

Category 3

Acute toxicity (oral), H302

Category 4

Full text of classification categories and H statements : see section 16

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

Xn; R22

R10

Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

#### 2.2. Label elements

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

Hazard pictograms (CLP) :

# MATERIAL SAFETY DATA SHEET (SDS/MSDS)

## ACETYL ACETONE 98% FOR SYNTHESIS

CAS-No.: 123-54-6



GHS02



GHS07

Signal word (CLP)	:	Warning
Hazard statements (CLP)	:	H226 – Flammable liquid and vapour H302 – Harmful if swallowed
Precautionary statements (CLP)	:	P210 – Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking P280 – Wear protective gloves, protective clothing, eye protection, face protection P304+P340 – IF INHALED: Remove person to fresh air and keep comfortable for breathing P302+P352 – IF ON SKIN: Wash with plenty of soap and water

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Name	:	Acetyl Acetone 98% For Synthesis
CAS No	:	123-54-6
EC no	:	204-634-0

Full text of R- and H-statements: see section 16

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation	:	Assure fresh air breathing. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
First-aid measures after skin contact	:	Get medical advice/attention. Wash with plenty of soap and water.
First-aid measures after eye contact	:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
First-aid measures after ingestion	:	Rinse mouth. Call a POISON CENTER or doctor/physician if you feel unwell.

## MATERIAL SAFETY DATA SHEET (SDS/MSDS)

### ACETYL ACETONE 98% FOR SYNTHESIS

CAS-No.: 123-54-6

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

Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide. Dry powder. Foam. Water spray.  
Unsuitable extinguishing media : Do not use extinguishing media containing water.

#### 5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour.  
Explosion hazard : May form flammable/explosive vapour-air mixture.

#### 5.3. Advice for firefighter

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

##### 6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required.  
Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Collect spillage.

#### 6.4. Reference to other sections

No additional information available

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.  
Precautions for safe handling : Keep away from sources of ignition – No smoking. Take precautionary measures



# MATERIAL SAFETY DATA SHEET (SDS/MSDS)

## ACETYL ACETONE 98% FOR SYNTHESIS

CAS-No.: 123-54-6

Hygiene measures	:	against static discharge. Use only non-sparking tools. Avoid contact with skin and eyes. Do not breathe vapours.
.	:	Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.
.	:	or in a well-ventilated area.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures	:	Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.
Storage conditions	:	Keep container tightly closed. Keep in fireproof place. Store in original container. Store in a well-ventilated place.
Incompatible materials	:	Heat sources.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Hand protection	:	protective gloves
Eye protection	:	Chemical goggles or safety glasses
Skin and body protection	:	Wear suitable protective clothing
Respiratory protection	:	wear respiratory protection.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Molecular mass	:	100.12 g/mol
Colour	:	colorless or slight yellow.
Odour	:	putrid odor.
Odour threshold	:	No data available
pH	:	No data available
Relative evaporation rate (butylacetate=1)	:	0.75
Melting point	:	-23 °C
Freezing point	:	No data available
Boiling point	:	139 - 141 °C
Flash point	:	34 °C
Auto-ignition temperature	:	340 °C
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Flammable
	:	Flammable liquid and vapour
Vapour pressure	:	6 mm Hg

# MATERIAL SAFETY DATA SHEET (SDS/MSDS)

## ACETYL ACETONE 98% FOR SYNTHESIS

CAS-No.: 123-54-6

Relative vapour density at 20 °C	:	3.5
Relative density	:	No data available
Density	:	0.973 g/cm <sup>3</sup>
Relative gas density	:	3.5
Solubility	:	Water: Complete
Log Pow	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	0.024 – 0.116 vol %

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Open flame. Heat. Sparks.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

May release flammable gases.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity	:	Oral: Harmful if swallowed.
Skin corrosion/irritation	:	Not classified
Serious eye damage/irritation	:	Not classified
Respiratory or skin sensitisation	:	Not classified
Germ cell mutagenicity	:	Not classified
Carcinogenicity	:	Not classified
Reproductive toxicity	:	Not classified
Specific target organ toxicity (single exposure)	:	Not classified
Specific target organ toxicity (repeated exposure)	:	

# MATERIAL SAFETY DATA SHEET (SDS/MSDS)

## ACETYL ACETONE 98% FOR SYNTHESIS

CAS-No.: 123-54-6

exposure)	:	Not classified
Aspiration hazard	:	Not classified
Potential adverse human health effects and symptoms	:	Harmful if swallowed.

### SECTION 12: Ecological information

#### 12.1. Toxicity

No additional information available

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Product/Packaging disposal recommendations	:	Dispose of contents/container to ...
Additional information	:	Handle empty containers with care because residual vapours are flammable.

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / AND

#### 14.1. UN number

UN-No. (ADR)	:	2310
UN-No. (IMDG)	:	2310
UN-No.(IATA)	:	2310
UN-No.(AND)	:	2310
UN-No. (RID)	:	2310

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR)	:	PENTANE-2,4-DIONE
Proper Shipping Name (IMDG)	:	PENTANE-2,4-DIONE
Proper Shipping Name (IATA)	:	PENTANE-2,4-DIONE
Proper Shipping Name (ADN)	:	PENTANE-2,4-DIONE
Proper Shipping Name (RID)	:	PENTANE-2,4-DIONE
Transport document description (ADR):		UN 2310 PENTANE-2,4-DIONE, 3 (6.1), III, (D/E)
Transport document description (IMDG)		UN 2310 PENTANE-2,4-DIONE, 3 (6.1), III (34°C c.c.)



# MATERIAL SAFETY DATA SHEET (SDS/MSDS)

## ACETYL ACETONE 98% FOR SYNTHESIS

CAS-No.: 123-54-6

Transport document description (IATA) : UN 2310 PENTANE-2,4-DIONE, 3 (6.1), III  
Transport document description (ADN) : UN 2310 PENTANE-2,4-DIONE, 3 (6.1), III  
Transport document description (RID) : UN 2310 PENTANE-2,4-DIONE, 3 (6.1), III

### 14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : 3 (6.1)

Danger labels (ADR) : 3, 6.1

:



IMDG

Transport hazard class(es) (IMDG) : 3 (6.1)

Danger labels (IMDG) : 3, 6.1

:



IATA

Transport hazard class(es) (IATA) : 3 (6.1)

Hazard labels (IATA) : 3, 6.1

:



AND

Transport hazard class(es) (ADN) : 3 (6.1)

Danger labels (ADN) : 3, 6.1

:



**MATERIAL SAFETY DATA SHEET (SDS/MSDS)****ACETYL ACETONE 98% FOR SYNTHESIS****CAS-No.: 123-54-6**

RID

Transport hazard class(es) (RID) : 3 (6.1)  
Danger labels (RID) : 3, 6.1

**14.4. Packing group**

Packing group (ADR) : III  
Packing group (IMDG) : III  
Packing group (IATA) : III  
Packing group (ADN) : III  
Packing group (RID) : III

**14.5. Environmental hazards**

Dangerous for the environment : No  
Marine pollutant : No  
Other information : No supplementary information available

**14.6. Special precautions for user**

– Overland transport

Classification code (ADR) : F11  
Limited quantities (ADR) : 5L  
Excepted quantities (ADR) : E1  
Packing instructions (ADR) : P001, IBC03, R001  
Mixed packing provisions (ADR) : Mp19  
Portable tank and bulk container : T4  
instructions (ADR)  
Portable tank and bulk container special  
provisions (ADR) : Tp1  
Tank code (ADR) : L4BH  
Tank special provisions (ADR) : Tu15  
Vehicle for tank carriage : FL  
Transport category (ADR) : 3

**MATERIAL SAFETY DATA SHEET (SDS/MSDS)****ACETYL ACETONE 98% FOR SYNTHESIS****CAS-No.: 123-54-6**

## Special provisions for carriage - Packages

(ADR)	:	V12
Special provisions for carriage - Loading, unloading and handling (ADR)	:	CV13, Cv28
Special provisions for carriage - Operation (ADR)	:	S2
Hazard identification number (Kemler No.)	:	36
Orange plates	:	

**36****2310**

Tunnel restriction code (ADR)	:	D/E
EAC code	:	•2Y
- Transport by sea		
Limited quantities (IMDG)	:	5 L
Excepted quantities (IMDG)	:	E1
Packing instructions (IMDG)	:	P001
IBC packing instructions (IMDG)	:	IBC03
Tank instructions (IMDG)	:	T4
Tank special provisions (IMDG)	:	Tp1
EmS-No. (Fire)	:	F-E
EmS-No. (Spillage)	:	S-D
Stowage category (IMDG)	:	A
Flash point (IMDG)	:	34°C c.c.
MFAG-No	:	131
- Air transport		
PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y343
PCA limited quantity max net quantity : (IATA)	:	2L
PCA packing instructions (IATA)	:	355
PCA max net quantity (IATA)	:	60L
CAO packing instructions (IATA)	:	366
CAO max net quantity (IATA)	:	220L
ERG code (IATA)	:	3P
- Inland waterway transport		
Classification code (ADN)	:	F11
Special provisions (ADN)	:	802
Limited quantities (ADN)	:	5 L
Excepted quantities (ADN)	:	E1
Equipment required (ADN)	:	PP, EP, EX, TOX, A

**MATERIAL SAFETY DATA SHEET (SDS/MSDS)****ACETYL ACETONE 98% FOR SYNTHESIS****CAS-No.: 123-54-6**

Ventilation (ADN)	:	VE01, Ve02
Number of blue cones/lights (ADN)	:	0
- Rail transport		
Classification code (RID)	:	Ft1
Limited quantities (RID)	:	5L
Excepted quantities (RID)	:	E1
Packing instructions (RID)	:	P001, IBC03, R001
Mixed packing provisions (RID)	:	Mp19
Portable tank and bulk container instructions (RID)	:	T4
Portable tank and bulk container special provisions (RID)	:	Tp1
Tank codes for RID tanks (RID)	:	L4BH
Special provisions for RID tanks (RID)	:	Tu15
Transport category (RID)	:	3
Special provisions for carriage – Packages (RID)	:	W12
Special provisions for carriage – Loading and unloading (RID)	:	CW13, Cw28
Colis express (express parcels) (RID)	:	Ce4
Hazard identification number (RID)	:	36

**14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. EU-Regulations**

No REACH Annex XVII restrictions

Acetylacetone 98% For Synthesis is not on the REACH Candidate List

Acetylacetone 98% For Synthesis is not on the REACH Annex XIV List

**15.1.2. National regulations****Germany**

AwSV/VwVwS Annex reference : Water hazard class (WGK) 1, slightly hazardous to water  
(Classification according to VwVwS, Annex 2; WGK No 168)

12th Ordinance Implementing the Federal

Immission Control Act – 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

**Denmark**

Class for fire hazard : Class II-1  
Store unit : 5 liter  
Classification remarks : R10 <H226;H302>; Emergency management guidelines for the storage of flammable liquids must be followed

**MATERIAL SAFETY DATA SHEET (SDS/MSDS)****ACETYL ACETONE 98% FOR SYNTHESIS****CAS-No.: 123-54-6**

Recommendations Danish Regulation :

Young people below the age of 18 years are not allowed to use the product

**15.2. Chemical safety assessment**

No additional information available

**SECTION 16: Other information**

Full text of R-, H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Flam. Liq. 3	Flammable liquids, Category 3
H226	Flammable liquid and vapour
H302	Harmful if swallowed
R10	Flammable
R22	Harmful if swallowed
Xn	Harmful

**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. Chemnovo Synthesis Pvt Ltd. and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.chemnovo.in](http://www.chemnovo.in) for additional terms and conditions of sale.

Version: 2.0

Revision Date: 09 December 2025