

Safety data sheet as per Commission Regulation (EU) 2020/878

Product: Acetophenone



SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name	Acetophenone
Chemical Name	1-phenylethanone/ Acetophenone
CAS Number	98-86-2
EC Number	202-708-7

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

Relevant identified uses	Industrial use: pH regulators and water treatment products and laboratory chemicals Professional use: Used in perfumery and as a specialty solvent for plastics and resins Used as a chemical intermediate and flavoring agent Consumer use: washing & cleaning products, coating products, fillers, putties, plasters, modelling clay, air care products and lubricants and greases.
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Uses identified against Not for use other than those specified

1.3 Details of the supplier of the safety data sheet:

Manufacturer	Prasol Chemicals Limited Prasol House, Plot No.A-17/2/3, T.T.C. Industrial Area, Khairne M.I.D.C., Navi Mumbai - 400 710. Maharashtra, India.
Telephone	+91-22-69450600/ 61952500
Telefax	+91-22-61952577
e-mail address	sales@prasolchem.com; inquiry@prasolchem.com

1.4 Emergency telephone number

Telephone	+91-22- 7045783555/7045790555
Language	English

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

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

Acute Toxicity (Oral)	Category 4	H302	Harmful if swallowed
Eye Irritation	Category 2	H319	Causes serious eye irritation

Information concerning particular hazards for human and environment: No further information

2.2 Label elements

Labeling according to Regulation (EC) No 1272/2008 (CLP)

Hazard pictograms



GHS07

Signal word

Warning

Hazard statements

H302	Harmful if swallowed
H319	Causes serious eye irritation.

Precautionary statements

General	P103	Read label before use.
Prevention	P264	Wash hands thoroughly after handling.
	P270	Do not eat, drink or smoke when using this product.
	P280	Wear eye protection and face protection.
Response	P301 + P312	IF SWALLOWED: Call a doctor if you feel unwell
	P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
	P330	Rinse mouth.
	P337 + P313	If eye irritation persists: Get medical attention.
Storage	-	
Disposal	P501	Dispose of contents and container in accordance with national regulations

2.3 Other hazards

Not a PBT, vPVB substance according to the criteria of Annex XIII to REACH regulation

Not having endocrine disruptive properties as per criteria of Delegated Regulations (EC) 2017/2100 or (EC) 2018/605

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

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Name Acetophenone
CAS Number 98-86-2
EC Number 202-708-7
Molecular Formula C_8H_8O
Molecular Weight 120.15

Ingredient	Classification	Concentration (%)	SCL, M-factor, ATE
Acetophenone	Ac. Tox. 4, Eye Irrit. 2, H302, H319	100	Not defined

3.2 Mixtures not applicable

None of the ingredients present are classified as skin sensitisers 1A, respiratory sensitisers 1A, aspiration hazards and endocrine disruptors.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General information

Take off all contaminated clothing immediately.

After inhalation

If inhaled, remove to fresh air. If breathing is difficult, give oxygen. If unconscious, evaluate the need for artificial respiration. Get immediate medical attention

After skin contact

Wash off with plenty of water immediately, seek medical advice if necessary.

After eye contact

Rinse with plenty of water immediately and seek medical advice.

After swallowing

Do not induce vomiting and seek medical advice immediately.

4.2 Most important symptoms and effects, both acute and delayed

Not expected to present a significant hazard under anticipated conditions of normal use

After inhalation

EXPOSURE TO HIGH CONCENTRATIONS: Central nervous system depression. Headache. Dizziness. Coordination disorders. Narcosis. Impaired concentration. Respiratory difficulties.

After skin contact

Red skin. Tingling/irritation of the skin.

After eye contact

Irritation of the eye tissue. Inflammation/damage of the eye tissue.

After swallowing

AFTER INGESTION OF HIGH QUANTITIES: Vomiting. Nausea. Disturbances of consciousness

Chronic symptoms

Skin rash/inflammation

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically and supportively

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

CO₂, dry powder, foam or water spray

Unsuitable extinguishing media

water jet

5.2 Special hazards arising from the substance or mixture

May form toxic carbon oxides if burning.

Closed container may rupture if strongly heated.

Vapours can travel to a source of ignition and flash back.

Explosive mixtures may occur at temperatures at or above the flashpoint.

5.3 Advice for firefighters

Cool closed containers exposed to fire with water spray.

Wear self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For small spills and large spills: Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Clear spills immediately

For non-emergency personnel

Protective equipment: Gloves, Face shield, Protective clothing.

For emergency responders

Emergency procedures: Mark the danger area. No naked flames. Wash contaminated clothes.

Protective equipment: Equip cleanup crew with proper protection.

Emergency procedures: Ventilate area.

6.2 Environmental precautions

Do not allow to enter sewers, surface or ground water.

6.3 Methods and material for containment and cleaning up

For containment: Contain released product, collect/pump into suitable containers.

Plug the leak, cut off the supply.

6.4 Reference to other sections

Section 8 for information on personal protection equipment.

Section 13 for disposal information



SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Protective measures

Measures to prevent fire: Keep away from naked flames/heat. Use spark-/explosion proof appliances.

Measures to prevent aerosol and dust generation: Measure the concentration in the air regularly. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Thoroughly clean/dry the installation before use.

Measures to protect the environment: Keep container tightly closed. If possible, use material transfer, metering and blending plants that are closed.

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Advice on general occupational hygiene

7.2 Conditions for safe storage, including any incompatibilities

Advice on protection against fire and explosion

Follow normal measures for preventive fire protection.

Technical measures and storage conditions

Keep only in the original container in a cool, well ventilated place away from ignition sources and incompatible materials. Keep container closed when not in use

Follow normal measures for preventive fire protection.

Packaging material

SUITABLE MATERIAL: steel, stainless steel, carbon steel, aluminium, copper, bronze, glass

Incompatible products

Strong bases. Strong acids, reducers, acid anhydrides

Storage conditions

Store in a cool, dry area. Ventilation at floor level. Store at ambient temperature. Keep container tightly closed in a dry and well-ventilated place. Residual vapours might explode on ignition; do not apply heat, cut, drill and grind or weld on or near the container.

Advice on common storage

Observe prohibition against storing together!

Storage stability

Stable under recommended storage conditions

Storage class

10 Combustible liquid

7.3 Specific end use(s)

No further relevant information available

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Occupational Exposure Limit DNEL/DMEL (Workers)

10ppm TLV

Acute - local effects, inhalation

No hazard identified

Long-term - systemic effects, dermal

0.35 mg/kg bodyweight/day

Long-term - systemic effects, inhalation

1.23 mg/m³

Long-term - local effects, inhalation

No hazard identified

DNEL/DMEL (General population)

Acute - local effects, inhalation

No hazard identified

Long-term - systemic effects, oral

0.125 mg/kg bodyweight/day

Long-term - systemic effects, inhalation

0.22 mg/m³

Long-term - systemic effects, dermal

0.125 mg/kg bodyweight/day

Long-term - local effects, inhalation

No hazard identified

PNEC (Water)

PNEC aqua (freshwater)

0.086 mg/l

PNEC aqua (marine water)

0.009 mg/l

PNEC (Sediment)

PNEC sediment (freshwater)

1.13 mg/kg dwt

PNEC sediment (marine water)

0.113 mg/kg dwt

PNEC (Soil)

PNEC soil

0.175 mg/kg dwt

PNEC (STP)

PNEC sewage treatment plant

34.6 mg/l

8.2 Exposure controls

Appropriate engineering controls

If possible, use material transfer, metering and blending plants that are closed

Personal protective equipment

For eye/ face protection

closed goggles, face shield

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For skin protection

Hand protection

Type of material
Butyl-rubber

Thickness
0.5 mm

Breakthrough time
> 480 min

Body protection

Boots, body suit

For respiratory protection

Respiratory equipment with suitable filter or a self-contained respiratory apparatus.

Thermal hazards

Do not expose to excessive heat.

For environmental exposure

If possible use closed metering and blending plants. Do not inhale vapours / aerosols. Avoid contact with skin and eyes. Remove immediately all contaminated clothing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Color	Colorless
Odour	mildly pungent, somewhat aromatic
Odour threshold	20ppm
Melting point	19-20°C
Boiling point	202°C
Flammability (solid, gas)	not applicable (product is a liquid)
Flammability limits	1.4 - 5.2 Vol %
Flash point	78°C (Closed cup)
Ignition temperature	535°C
Decomposition temperature	no data available
pH	5-6
Viscosity at 20 °C	0.585 mPas (dynamic)
Solubility in water	6.1 g/l at 25°C (soluble)
Partition coefficient	1.61 log Kow (n-octanol/water) at 25°C
Vapour pressure	0.45 hPa at 25°C
Vapour density	3.5 (air =1)
Relative density	1.028 at 20°C
Particle characteristics	Not applicable (substance is a liquid)

9.2 Other information

Evaporation rate	1.6 (nBuAc=1)
Explosive properties	no explosive properties based on chemical structure
Oxidizing properties	no oxidizing properties based on chemical structure
Heat of combustion	-4148.9kJ/mol
Heat of vaporization	52.6kJ/mol

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity	No hazardous reaction when handled and stored according to provisions.
10.2 Chemical stability	Under storage at normal ambient temperatures (-40°C to +40°C), the product is stable.
10.3 Possibility of hazardous reactions	No known hazardous reactions if used as directed
10.4 Conditions to avoid	Avoid excessive heat and sources of ignition
10.5 Incompatible materials	None known
10.6 Hazardous decomposition products	Thermal decomposition products- carbon oxides

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

LD50	oral	rat	2081 mg/kg bw	Ac. Tox. Cat 4, H302
LC50	inhalation	rat	saturated vapor, 8h	no mortality
LD50	Dermal	rat	3.30 mg/kg bw	slight toxicity
LD50	Injection	rat	1070mg/kg bw	respiratory depression

Skin irritation

not irritating (rabbit)

Serious eye irritation

irritating (rabbit) Eye Irrit. Cat. 2, H319

Respiratory or skin sensitization

No sensitizing effects known

Germ cell mutagenicity

non mutagenic (Ames test)

Carcinogenicity

non-carcinogenic

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Reproductive toxicity	no adverse effect on reproduction (rat)
STOT-single exposure	irritating to eye and skin, may be irritating to the respiratory system
STOT-repeated exposure	LOAEL 750 mg/kg bw/day; rat (oral)
Aspiration hazard	no further data available
11.2 Information on other hazards	
Endocrine disrupting properties	No endocrine disrupting properties
Other information	No further information

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity	
Aquatic toxicity	
Toxicity to fish	LC50 96h 162mg/L <i>Pimephales promelas</i>
Toxicity to aquatic invertebrates	LC50 48h 528 mg/L <i>Daphnia magna</i>
Toxicity to aquatic algae and cyanobacteria	ECb50 72h 40 mg/L <i>Pseudokirchneriella subcapitata</i>
Toxicity to microorganisms	IC50 3h >1000mg activated sludge
12.2 Persistence and degradability	
Biodegradation	readily biodegradable (95% in 28days)
12.3 Bioaccumulative potential	
Bioconcentration factor	0.4749; fish;
Will bio accumulate only to a minor degree	
12.4 Mobility in soil	log Koc = 1.34-2.43 (soil and sediment)- medium to high mobility
12.5 Results of PBT and vPvB assessment	Not a PBT, vPvB substance according to the REACH regulation
12.6 Endocrine disrupting properties	No endocrine disrupting properties
12.7 Other adverse effects	No further information available

SECTION 13: Disposal considerations

13.1 Waste treatment methods	Observe all national, state and local environmental regulations.
Product disposal	Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Packaging disposal	Clean container with water. Recover waste water for processing later. Destroy packaging by incineration at an approved waste disposal site.
Sewage disposal	Do not dispose in sewage.

SECTION 14: TRANSPORT INFORMATION

	ADR/RID	IMDG	ICAO/IATA
14.1 UN Number	Non hazardous for road and		3334
14.2 UN proper shipping name	sea transport		Aviation regulated liquid, n.o.s. (Acetophenone)
14.3 Transport hazard class	-		9
14.4 Packaging group	-		III
14.5 Environmental hazards	not environmentally hazardous, not a marine pollutant		
14.6 Special precautions for the user	Combustible liquid; Flash point 78°C (closed cup)		
14.7 Maritime transport in bulk according to IMO instruments	Ship type: 3; Pollution Category: Z		

SECTION 15: REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture	
Major accident hazard	Seveso III no
International Chemical Inventory Status	
USA (TSCA)	Listed (Tracking No. 1833)
Canada (DSL)	listed
Australia (AICS)	listed
Japan (MITI)	listed
Korea (KECL)	Listed (KE-28355)
Philippines (PICCS)	listed
China	listed
New Zealand	listed
Taiwan	listed
15.2 Chemical safety assessment	A Chemical Safety Assessment will be carried out at the time of REACH registration

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SECTION 16: OTHER INFORMATION

Indication of changes: Sections in which changes have been made since the last version are marked with a diamond ♦ in the left hand margin.

Abbreviations and acronyms:

ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
AICS	Australian Inventory of Chemical Substances
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (division of the American Chemical Society)
CLP	Classification for Labeling and Packaging
DMEL	Derived minimal effect level
DNEL	Derived No-Effect Level
DSL	Domestic Substances List
EC	European Commission
EC50	Half maximal effective concentration
EINECS	European Inventory of Existing Commercial Chemical Substances
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
IATA	International Air Transport Association
IBC	International Bulk Chemical
ICAO	International Civil Aviation Organization
IMDG	International Maritime Code for Dangerous Goods
KECL	Korea Existing Chemicals List
KOC	Soil adsorption coefficient
KOW	Partition Coefficient octanol-water
LC50	Lethal concentration, 50 percent
LD50	Lethal dose, 50 percent
M-factor	Multiplication Factor
MITI	Ministry of International Trade and Industry
PBT	Persistent, bioaccumulative and toxic substances
PICCS	Philippine Inventory of Chemicals and Chemical Substances
PNEC	Predicted No-Effect Concentration
RID	Regulations Concerning the International Transport of Dangerous Goods by Rail
SCL	Specific concentration limit
STOT	Specific target organ toxicity
TSCA	Toxic Substances Control Act
UN	United Nations
vPVB	(very) Persistent, (very) Bioaccumulative

Key literature references and sources for data

Commission Regulation (EU) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

ECHA CHEM <https://chem.echa.europa.eu/100.002.462/overview?searchText=98-86-2>

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-End of safety data sheet-