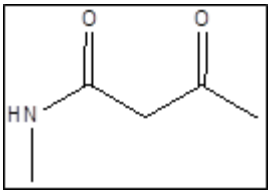
Date of Compilation	: May 02, 2018
Date of Revision	: April 04, 2024
Revision due date	: March, 2027
Revision Number	: 03
Version Name	: 0880 Gj Ghs03 Div.07 sds N-Methyl acetoacetamide
Supersedes date	: May 24, 2021
Supersedes version	: 0880 Gj Ghs02 Div.01 sds N-Methyl acetoacetamide

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

1.1. Product identifier

PRODUCT NAME : **N-Methyl Acetoacetamide**
CAS RN : 20306-75-6
EC# : 243-723-9
SYNONYMS : 2-Acetyl-N-methylacetamide, N-Methyl-3-oxobutanamide,Acetoacetic acid monomethylamide
SYSTEMATIC NAME : N-methylacetoacetamide
MOLECULAR FORMULA : C5H9NO2
STRUCTURAL FORMULA



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

1.2.1. Relevant identified uses
It is used as intermediate in Agrochemical industry for the manufacture of insecticides, e.g. monocrotophos (Azodrin) & dicrotophos (Bidrin). It is used as as a coupling agent for pigment manufacture, in textile processing, and in polyester curing.

1.2.2 Uses advised against: None

1.3. Details of the supplier of the safety data sheet

Jubilant Ingrevia Limited
FACTORY & REGISTERED OFFICE: Jubilant Ingrevia Limited., Bhartiagram, Gajraula, District: Amroha, Uttar Pradesh-244223, India
T +91-5924-267437& +91-5924-267438

HEAD OFFICE: Jubilant Ingrevia Limited., Plot 1-A, Sector 16-A, Institutional Area, Noida, Uttar Pradesh, 201301 – India
T +91-120-4361000 - F +91-120-4234881 / 84 / 85 / 87 / 95 / 96 support@jubl.com - www.jubilantingrevia.com

1.4. Emergency telephone number

For Chemical Emergency ONLY (in the case of fire, leak, spill, exposure or accident) Call
Chemtrec: 1-800-424-9300 (US), 1-703-527-3887 (Outside U.S.)
Chemtrec (India) : 000-800-100-7141

For ALL other emergencies call Emergency Control Room Gajraula at 99970 22412

SECTION 2: HAZARD(S) IDENTIFICATION

2.1. Classification of the substance or mixture

GHS-US classification
Acute toxicity Dermal: Category 4

2.2. Label Elements

Hazard Pictogram: GHS07
Signal Word: Warning!

HAZARD AND PRECAUTIONARY STATEMENTS:

HAZARD STATEMENTS

- H312: Harmful in contact with skin.

PRECAUTIONARY STATEMENTS

- P280: Wear protective gloves/protective clothing/eye protection/face protection
- P302+P352: IF ON SKIN: Wash with plenty of soap and water.
- P312: Call a POISON CENTER/doctor/physician if you feel unwell.
- P322: Specific measures (see….on this label).
- P363: Wash contaminated clothing before reuse.
- P501: Dispose of contents/container to local/regional/national/international regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical	CAS #	EC#	Purity
N-Methyl Acetoacetamide	20306-75-6	243-723-9	70.0%

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

- Remove affected person from danger area. Do not leave affected persons unsupervised. Seek medical treatment. First aid personnel should pay attention to their own safety. Take off all contaminated clothing immediately
- **Eyes**: If in eyes rinse cautiously with water for at least 15 minutes. Remove contact lenses if easy to do so. Continue rinsing. Seek medical attention.
- **Skin:** Immediately take off all contaminated clothing. Wash thoroughly with water for at least 15 minutes. Wash contaminated clothes before reuse. Seek immediate medical attention.
- **Inhalation**: Remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if you feel unwell.
- **Ingestion**: If swallowed call a poison center if you feel unwell. Rinse mouth. Do NOT induce vomiting by use of emetics. Seek medical attention.

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

- To the best of our knowledge of this compound have not been fully investigated.

SECTION 5 : FIRE-FIGHTING MEASURES

5.1. Extinguishing media

- Dry chemical, CO2 , water spray, or alcohol-resistant foam. Consult with local fire authorities before attempting large scale fire fighting operations.

5.2. Special hazards arising from the substance or mixture

- **Fire hazar**d: Emits toxic fumes under fire conditions.
- **Explosion hazard**: No data available..
- **Reactivity in case of fire**: During fire, gases hazardous to health may be formed.. Hazardous Combustion Products Carbon oxides, nitrogen oxides (NOx)..
- **Hazardous decomposition products in case of fire**: Hazardous decomposition products may be released during prolonged heating like smokes, Carbon oxides, nitrogen oxides (NOx)..

5.3. Advice for firefighters

- **Precautionary measures fire:** Appropriate self-contained breathing apparatus may be required.
- **Firefighting instructions:** Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. In case of major fire, evacuate area.
- **Protective equipment for firefighters:** Do not enter fire area without proper protection equipment, including respiratory protection

SECTION 6 : ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

- Spill should be handled by trained cleaning personnel properly equipped with respiratory and eye protection.
- Avoid dust formation. Avoid breathing vapours, mist or gas. Avoid contact with skin and eyes.
- Wear protective clothing, full boots, impervious gloves, safety glasses and Self Contained Breathing Apparatus (SCBA), as may be deemed appropriate

6.2. Environmental precautions

- Place waste in an appropriately labeled, sealed container for disposal. Care should be taken to avoid environmental release

6.3. Methods and materials for containment and cleaning up

- Clean up all spills immediately following relevant Standard Operating Procedures.
- In case of a spill and/or a leak, always shut off any sources of ignition, ventilate the area, and exercise caution
- Wipe up spillage or collect spillage using a high-efficiency vacuum cleaner.
- Place spillage in appropriately labeled container for disposal. Wash spill site.

6.4. Reference to other sections

- For disposal see section 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

- Do not breathe dust, vapor or mist.
- Avoid contact with skin, eyes and clothing.
- If on skin or hair, IMMEDIATELY remove all contaminated clothing and rinse/shower with plenty of water.
- Use in a well-ventilated place/Use protective clothing commensurate with exposure levels.
- Handle in accordance with good industrial hygiene and safety procedures. Avoid Prolonged or repeated exposure. Take precautionary measures against electrostatic discharge

7.2. Storage

- Store at ambient temperature in a well-ventilated place.
- Keep container tightly closed when not in use.
- Do not store in open or unlabeled containers.
- Store away from incompatible materials

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SECTION 8 : EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

- **Exposure Limits Values**

Chemical name	ACGIH TLV	OSHA PEL	NIOSH
N-Methyl Acetoacetamide	Not Listed	Not Listed	Not Listed

Exposure Limits (International):

- Not available.

8.2. Exposure controls

Appropriate Engineering Controls:

- General industrial hygiene practice.
- Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits. Local ventilation is usually preferred. Ensure that eyewash stations and safety showers are close to the workstation location**.**

8.3. Personal Protection

- **Body protection:**
  Impervious clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- **Respiratory protection:**
  Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- **Eye 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:**
  Protective gloves

Additional Information

- Only use protective equipment in accordance with national/international regulations. Follow the national regulation about wearing personal protective equipment and the warranty given.
- Apply skin protective barrier cream
- Do not inhale substances, work under hood.

Control of environmental exposure

- Do not let product enter drains.
- Wash hands and face after working with the substance.
- Under no circumstances eat or drink at the workplace.
- Do not inhale substances, work under hood.

SECTION 9 : PHYSICAL AND CHEMICAL PROPERTIES

- Information on basic physical and chemical properties.

Sr.No.	Parameter	Typical value
1.	Appearance	Clear colorless to pale yellow liquid
2.	Molecular weight	115.13
3.	Odor	Fish like
4.	Odor Threshold	Not available
5.	pH	5.5 - 7.0
6.	Melting point	-3°C
7.	Boiling point	118 ºC at 6.7 hPa
8.	Flash point	141.4±22.8 °C (105ºC)
9.	Evaporation rate (n-BuAc=1)	Not available
10.	Flammability (Liquid)	Not available
11.	Upper/lower flammability or Explosive limits	Not available
12.	Vapor pressure	4.03E-3 Torr Temp.: 25 °C
13.	Density	1.0690g/cm3
14.	Solubility	Soluble in water and in polar organic solvents; slightly soluble in nonpolar organic solvents
15.	Partition coefficient (Octonol /water)	-0.79
16.	Auto-ignition temperature	485 °C
17.	Decomposition temperature	Not available
18.	Viscosity	8.3 Cp (predicted)
19.	Explosive property	Not available
20.	Oxidizing property	Not available

SECTION 10: STABILITY AND REACTIVITY

- **Reactivity:** No data available
- **Chemical Stability:** Stable under recommended storage condition
- **Conditions to avoid:** Keep away from heat, sparks, flame, high temperature and incompatible, strong oxidants.
- **Incompatible chemicals: Iron,** Strong oxidizing agents
- **Hazardous decomposition:** Hazardous decomposition products formed under fire conditions.-Carbon monoxide, Carbon dioxide & Nitrogen oxides
- **Hazardous Polymerization**: Not reported.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Oral- LD50 oral (rats) : 3,200 mg/kg..

Dermal- LD50 dermal (guinea pigs): >1000 mg/kg

RTECS # Not available

Skin corrosion/irritation	:	Skin - guinea pig - Mild skin irritation
Serious eye damage/irritation	:	Eyes - rabbit - Mild eye irritation
Respiratory or skin sensitization .	:	Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals .
Germ cell Mutagenicity	:	negative.

Carcinogenicity	:	Not listed by NTP, IARC and OSHA.
Reproductive toxicity	:	No data available.
STOT-single exposure	:	No data available
STOT- repeated exposure	:	No data available .
Aspiration Hazards	:	No data available.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

- 96-hr LC50 in Salmo gairdneri (rainbow trout) was > 1,000 mg/l
- 30 minute EC50 in activated sludge was > 16,000 mg/l

12.2. Persistence and degradability

N-Methyl Acetoacetamide (20306-75-6)	
Persistence and degradability	Not persistent and readily biodegradable

12.3. Bio accumulative potential

N-Methyl Acetoacetamide (20306-75-6)	
Bio concentration factor (BCF REACH)	3.162
Log Pow	-0.79

"low bioaccumulation potential

12.4. Mobility in soil

N-Methyl Acetoacetamide (20306-75-6)	
Soil Adsorp. Coeff.	Koc: 1.381, Log Koc: 0.140
Henry's Law Constant	1.65E-011 atm-m3/mole

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12.5. Other adverse effects

- **Environment Fate:**
  This material is not expected to be toxic to the animals or aquatic life. It is recommended that the material should not be disposed into the environment. The material should never be disposed into the sewage.

  In conclusion on the basis of the known facts and properties, a low concern for risk is to be expected to the human health or the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

- Contact a licensed professional waste disposal service to dispose of this material.
  Dispose in a safe manner in accordance with local/national regulation. Observe all federal, state and local environmental regulation
- Offer surplus and non-recyclable solutions to a licensed disposal company.

SECTION 14: TRANSPORT INFORMATION

- This substance is considered to be non Hazardous for transport by Air/Rail/Road and Sea and thus not regulated by IATA/ICAO/US DOT /IMO/IMDG.

ADR/ RID/ DOT	IMDG	IATA
14.1. UN number		
Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name		
Not dangerous goods	Not dangerous goods	Not dangerous goods
14.3. Transport hazard class(es)		
Not applicable	Not applicable	Not applicable
14.4. Packing group		
Not applicable	Not applicable	Not applicable

14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No
No supplementary information available		

SECTION 15: REGULATORY INFORMATION

Classification as per CLP Regulation 1272/2008:

- **Hazards Class and Category**: Acute toxicity Dermal: Category 4

Hazard Statements: H312

Chemical Inventory Lists:	***Status***
TSCA:	***Listed***
EINECS:	***Listed***
EC Inventory	***243-723-9***
Canada(DSL/NDSL):	***Listed (NDSL)***
China Catalog of Hazardous chemicals 2015	***Not Listed***
New Zealand Inventory of Chemicals (NZIoC)	***Listed***
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	***Listed***
Inventory of Existing and New Chemical Substances (ENCS)	***Listed.***
Japan ISHL Existing Substances List (ISHL)	***Not Listed***
China: IECSC	***Listed***
Existing Chemicals List (KECI)	***Listed***
Australian Inventory of Chemical Substances (AICS)	***Listed***

SECTION 16: OTHER INFORMATION

a) Compilation information of safety data sheet

Date of compilation	: May 02, 2018
Chemical	: N-Methyl Acetoacetamide
CAS #	: 20306-75-6
File Name	: 0880 Gj Ghs03 Div.7 sds N-Methyl Acetoacetamide
Revision Number	: 03
Date of Revision	: April 04, 2024
Revision Due Date	: March, 2027
Supersedes date	: May 24, 2021

b) A key or legend to aberrations and acronyms used in the safety data sheet

- PBT =Persistent Bio accumulative and Toxic.
- vPvB= Very Persistent and Very Bio accumulative.
- SCBA= Self Contained Breathing Apparatus.
- NIOSH REL= National Institute for Occupational Safety and Health Recommended Exposure Limit.
- OSHA PEL=Occupational Safety and Health Administration Permissible Exposure Limit.

- OELTWA= Occupational Exposure Limit Time Weighted Averages.
- IDLH= Immediately Dangerous to Life or Health.
- UEL= Upper Explosive Limit.
- LEL= Lower Explosive Limit.
- RTECS= Registry of Toxic Effects of Chemical Substances.
- NTP=National Toxicology Program.
- IARC= International Agency for Research on Cancer.
- EPA=Environmental Protection Agency.
- TSCA= Toxic Substances Control Act.
- CERCLA= Comprehensive Environmental Response, Compensation, and Liability Act.
- SARA= Superfund Amendments and Reauthorization Act.
- NFPA= National Fire Protection Association.
- WHIMS= Workplace Hazardous Materials Information System.
- DSL/NDSL= Domestic/Non-Domestic Substances List.
- BCF = Bio Concentration Factor.
- DNEL = Derived No Effect Level.
- PNEC = Predicted No Effect Concentration.
- TLV = Threshold Limit Value.
- ACGIH = American Conference of Governmental Industrial Hygienists.
- REACH = Registration, Evaluation .Authorization and Restriction of Chemicals.
- CLP = Classification, Labeling and Packaging.
- LD / LC = Lethal Doses / Lethal Concentration.
- GHS = Globally Harmonized System.
- IMDG-Code = International Maritime Code for Dangerous Goods.
- EmS = Emergency measures on Sea.
- ICAO = International Civil Aviation Organization.
- IATA/DGR= International Air Transport Association/Dangerous Goods Regulation.

c) Key Literature reference and sources for data

Biographical reference and data sources

- Globally Harmonized System of Classification and Labelling of Chemicals.
- CLP REG (regulation) (EC) no. 1272/2008, last modification by regulation (EC) no. 790/2009
- REG (EC) no. 1907/2006, last modification by REG (EC) Nr. 830/2015

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

(End of Safety Data Sheet)