

1 Identification of the substances/ mixture and of the company/ undertaking**1.1 Product Identifiers**

Product Number RM2019
Product Name 2,3-Butanedione
CAS No. : 431-03-8
EC No. : 207-069-8

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

1.2.1 Relevant identified uses Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet

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1.4 Emergency Tel. No.

Emergency Tel. No. Please contact the regional HiMedia representation in your country

2 Hazards Identification**2.1 Classification of the substance or mixture**

CLP Classification-Regulation (EC) No. 1272/2008[EU-GHS/CLP]

Flammable liquids, (Category 2), H225
Acute toxicity, Oral, (Category 4), H302
Skin corrosion or irritation, (Category 2), H315
Serious eye damage or eye irritation, (Category 1), H318
Acute toxicity, Inhaled, (Category 3), H331
Specific target organ toxicity, single exposure, Respiratory tract irritation, (Category 3), H335

2.2 Label elements

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



Pictogram

Signal word Danger

Hazard Statement(s)

H225 Highly flammable liquid and vapour
H302 Harmful if swallowed
H315 Causes skin irritation
H318 Causes serious eye damage
H331 Toxic if inhaled

H335 May cause respiratory irritation

Precautionary Statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P311 Call a POISON CENTER or doctor/physician.

2.3 Other Hazards

Stench

3 Composition/Information On Ingredients

3.1 Substances

Synonym Diacetyl; Biacetyl
Molecular Formula : $C_4H_6O_2$
Molecular Weight : 86.09
CAS No. : 431-03-8
EC No. : 207-069-8

Component	Classification	Concentration
2,3-Butanedione		
CAS No. : 431-03-8 EC No. : 207-069-8	As Per EC Regulation 1272/2008 Flam. Liq. 2; Acute Tox.oral 4; Skin Irrit. 2; Eye Dam. 1; Acute Tox. inhal. 3; STOT SE 3 H225; H302; H315; H318; H331; H335	100%

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

4 First Aid Measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash with plenty of soap and water. Consult a physician.

In case of eye contact

Rinse immediately with plenty of water for at least 15 minutes. Consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. 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 labeling (see section 2.2) and/or in section 11.

4.3 Indication of immediate medical attention and special treatment needed

No data available

5 Fire Fighting Measures

5.1 Extinguishing media

Suitable extinguishing media

Dry powder and sand.

Unsuitable extinguishing media

No data available.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

5.3 Precautions for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary

5.4 Further information

No data available

6 Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation.

Evacuate personnel to safe areas.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal. Do not flush with water.

6.4 Reference to other sections

For disposal see Section 13.

7 Handling and Storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of heat and ignition - No smoking. For precautions see section 2.2

7.2 Conditions for safe storage, including any incompatibilities

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

Recommended Storage Temperature : Below 30°C

7.3 Specific end uses

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8 Exposure Controls/Personal Protection

8.1 Control parameters

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance to general industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Hygiene measure

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with the product.

Eye/face protection

Faceshield and safety goggles.

Skin protection

Handle with gloves.

Body protection

Complete suit protecting against chemicals.

Respiratory protection

Air-purifying respirators.

Environment exposure controls

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Yellow to yellow-green liquid.
Odour	No data available
Odour Threshold	No data available
pH	No data available
Melting/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	No data available
Upper/lower flammability or explosive limits	No data available
Evaporation rate	No data available
Flammability (Solid, gas)	No data available
Vapour pressure	No data available
Relative density	No data available
Water Solubility	No data available
Partition coefficient: n-octanol/water	No data available
Autoignition Temperature	No data available
Decomposition Temperature	No data available
Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available

Vapour density
Thermal decomposition

No data available
No data available

9.2 Other safety information
No data available

10 Stability and Reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Incompatible material

10.5 Incompatible materials

Oxidizing agents, Strong bases, Reducing agents, Metals

10.6 Hazardous decomposition products

Other decomposition products - refer section 5.2.

In the event of fire - refer section 5.

11 Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive 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

Additional Information

RTECS : EK2625000

12 Ecological Information

12.1 Toxicity

No data available

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 PBT and vPvB assessment

PBT and vPVB assessment not available Chemical safety assessment is not required

12.6 Other adverse effects

Discharge into the environment must be avoided.

13 Disposal Considerations

13.1 Waste treatments methods

Product

Burn in a chemical incinerator equipped with an after burner and scrubber but exert extra care in igniting as this material is highly flammable.

13.2 Contaminated packaging

Dispose of as unused product.

14 Transport Information

14.1 UN-No

ADNR : 2346 ADR : 2346 IATA_C : 2346 IATA_P : 2346 IMDG : 2346 RID : 2346

14.2 UN proper shipping name

ADNR : Butanedione

ADR : Butanedione

IATA_C : Butanedione

IATA_P : Butanedione

IMDG : Butanedione

RID : Butanedione

14.3 Transport hazard class(es)

ADNR : 3 ADR : 3 IATA_C : 3 IATA_P : 3 IMDG : 3 RID : 3

14.4 Packaging group

ADNR : II ADR : II IATA_C : II IATA_P : II IMDG : II RID : II

14.5 Environmental hazards

ADNR : No ADR : No IMDG : Marine Pollutant : No IATA_C : No IATA_P : No RID : No

14.6 Special precautions for use

No data available

15 Regulatory Information

This safety datasheet complies with the requirements of Regulation(EC) No. 1907/2006.

15.1 Safety health and environment regulations/legislation specific for the substance or mixture

No data available

15.2 Chemical Safety Assessment

No data available

16 Other information

Text of H-Statements and EUH-Phrases mentioned in section 3

H225	Highly flammable liquid and vapour
H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H331	Toxic if inhaled
H335	May cause respiratory irritation
Flam. Liq. 2	Flammable liquids, Category 2
Acute Tox.oral 4	Acute toxicity, oral, Category 4
Skin Irrit. 2	Skin corrosion or irritation, Category 2
Eye Dam. 1	Serious eye damage or eye irritation, Category 1
Acute Tox. inhal. 3	Acute toxicity, inhaled, Category 3
STOT SE 3	Specific target organ toxicity, single exposure, Respiratory tract irritation, Category 3

Further Information

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The information given in this safety data sheet is believed to be correct yet does not claim to be all inclusive. This document is intended only as a guide for appropriate precautionary handling of the material by properly trained individuals, information here being commensurate with the present state of our knowledge regarding the manner and conditions of use, handling, storage or disposal. The information provided herein shall not be considered as guarantee of the properties of the product. HiMedia Laboratories, shall not be held liable for any damage resulting from improper handling or contact with the above product. Unless explicitly stated on the product or in any of the documentation accompanying the product, it is intended for research or testing purpose only and is not to be used for any other purpose.