



# Material Safety Data Sheet

## Maleic anhydride

Version: 2.0 EN

Revision Date: 2025-03

### SECTION 1: IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

#### 1.1 Product identifiers

Product Name Maleic anhydride  
CAS No 108-31-6  
Synonyms 2,5-Furandione

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

Recommended Use Laboratory chemicals, Manufacture of substances

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

Company China lithium Products technology Company Limited  
9 HG ,No.99 LuJiang Road ,Xiamen city ,China  
Telephone +86 592 2687860  
Email info@lithium-chemical.com

#### 1.4 Emergency telephone number

Emergency phone # +86 592 2687860

### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

Acute toxicity, (Category 4) H302: Harmful if swallowed.  
Skin corrosion, (Sub-category 1B) H314: Causes severe skin burns and eye damage  
Serious eye damage, (Category 1) H318: Causes serious eye damage  
Respiratory sensitization,(Category 1) H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
Skin sensitization, (Sub-category 1A) H317: May cause an allergic skin reaction.  
Specific target organ toxicity - repeated exposure, (Category 1),Respiratory system H372: Causes damage to organs through prolonged or repeated exposure if inhaled.

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word Danger

Hazard statement(s)

H302 Harmful if swallowed



H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H372	Causes damage to organs (Respiratory system) through prolonged or repeated exposure if inhaled.

**Precautionary statement(s)****Prevention**

P260	Do not breathe dust
P280	Wear protective gloves/ protective clothing/ eye protection/ face 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 + P310	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS**

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**

Substance name	Maleic anhydride
Formula	C <sub>4</sub> H <sub>2</sub> O <sub>3</sub>
CAS No	108-31-6
EC No	203-571-6

**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. Call in physician

**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. Immediately call in ophthalmologist. Remove contact lenses.

**If swallowed**



After swallowing: make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise.

#### **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**

Water Foam Carbon dioxide (CO<sub>2</sub>) 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

Forms explosive mixtures with air on intense heating

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

#### **5.3 Advice for firefighters [www.lithium-chemical.com](http://www.lithium-chemical.com)**

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**

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: Avoid generation and inhalation of dusts in all circumstances. Avoid substance contact. Ensure adequate ventilation. 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

#### **6.3 Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

#### **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.

### 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

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons. Moisture sensitive.

### Storage class

Storage class (TRGS 510): 6.1D: Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

## 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 NIOSH (US) or EN 166(EU). Tightly fitting safety goggles

#### Skin protection

Wear appropriate protective gloves and clothing to prevent skin exposure

#### Respiratory protection

Recommended Filter type: Filter A-(P2) 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.

# SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

## 9.1 Information on basic physical and chemical properties

Appearance

Form: solid

Colour: white

Odour

No data available

Melting point/freezing point

Melting point/range: 52 - 54 °C

Melting point/range: 51 - 56 °C - lit.



Initial boiling point and boiling range	200 °C - lit
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	Upper explosion limit: 7.1 %(V)
	Lower explosion limit: 1.4 %(V)
Flash point	103 °C - c.c.
Autoignition temperature	No data available
Decomposition temperature	No data available
PH	No data available
Viscosity	Viscosity, kinematic: No data available
	Viscosity, dynamic: No data available
Water solubility	407 g/l at 20 °C - OECD Test Guideline 105
Partition coefficient: n-octanol/water	log Pow: -2.61 at 20 °C - Bioaccumulation is not expected.
Vapor pressure	No data available
Density	1.48 g/cm <sup>3</sup> at 20 °C
Relative density	1.48 at 20 °C
Relative vapor density	No data available
Particle characteristics	No data available
Explosive properties	No data available
Oxidizing properties	none

## 9.2 Other safety information

Dissociation constant 0.01 at 25 °C

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

Forms explosive mixtures with air on intense heating. A range from approx. 15 Kelvin below the flash point is to be rated as critical. The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### 10.2 Chemical stability

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

### 10.3 Possibility of hazardous reactions

Dangerous/dangerous reactions with: strong oxidiser, Alkali hydroxide (caustic alkali), Alkali metals, Alcohols, Amines, Strong alkali, Water

### 10.4 Conditions to avoid

Strong heating

### 10.5 Incompatible materials

No data available

### 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

##### **Carcinogenicity**

No data available

##### **Reproductive toxicity**

No data available

##### **Specific target organ toxicity - single exposure**

No data available

##### **Specific target organ toxicity - repeated exposure**

Inhalation - Causes damage to organs through prolonged or repeated exposure. - Respiratory system Remarks:  
Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

##### **Aspiration hazard**

No data available

##### **Additional Information**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Decomposition of the substance with tissue moisture. After absorption: Headache Nausea Impairment of vision Other dangerous properties can not be excluded. Handle in accordance with good industrial hygiene and safety practice.

### SECTION 12: ECOLOGICAL INFORMATION

#### 12.1 Toxicity

May cause long lasting harmful effects to aquatic life

#### 12.2 Persistence and degradability

Soluble in water Persistence is unlikely based on information available

#### 12.3 Bioaccumulative potential

No data available

#### 12.4 Mobility in soil

No data available

#### 12.5 Results of PBT and vPvB assessment

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

No data available

### SECTION 14: TRANSPORT INFORMATION



**DOT (US)**

ADR/RID: 2215	UN proper shipping name: MALEIC ANHYDRIDE	Passenger Aircraft: No
Packaging group:III	Transport hazard class(es): 8	Environmental hazards: No

**IMDG**

IMDG: 2215	UN proper shipping name:MALEIC ANHYDRIDE	Passenger Aircraft: No
Packaging group:III	Transport hazard class(es):8	Environmental hazards: No

**IATA**

IATA: 2215	UN proper shipping name: Maleic anhydride	Passenger Aircraft: No
Packaging group:III	Transport hazard class(es):8	Environmental hazards: No

**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 (EC) No. 1907/2006.

**15.2 Chemical safety assessment**

For this product a chemical safety assessment was not carried out

**SECTION 16: OTHER INFORMATION**

**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. China Lithium Product Technology Co., Ltd.( CLPC) and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.lithium-chemical.com](http://www.lithium-chemical.com) for additional terms and conditions of sale.