

## SAFETY DATA SHEET

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

## 1.1 Product identifiers

Product name Maleic Anhydride

CAS number 108-31-6

- Synonyms N/A
- 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses Laboratory Chemicals

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

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

## **1.4 Emergency telephone**

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

## **SECTION 2: Hazards identification**

## 2.1 Classification of the substance or mixture

## GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Acute toxicity (Oral) : Category 4 Skin corrosion : Sub-category 1B Serious eye damage : Category 1 Respiratory sensitisation : Category 1 Skin sensitisation : Sub-category 1A Specific target organ toxicity - repeated exposure (Inhalation) : Category 1 (Respiratory system) Short-term (acute) aquatic hazard : Category 3

## 2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Danger
Hazard statements	<ul> <li>H302 Harmful if swallowed.</li> <li>H314 Causes severe skin burns and eye damage.</li> <li>H317 May cause an allergic skin reaction.</li> <li>H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.</li> <li>H372 Causes damage to organs (Respiratory system) through prolonged or repeated exposure if inhaled.</li> <li>H402 Harmful to aquatic life.</li> </ul>
Precautionary statements	<ul> <li>Prevention:</li> <li>P260 Do not breathe dust.</li> <li>P264 Wash skin thoroughly after handling.</li> <li>P270 Do not eat, drink or smoke when using this product.</li> <li>P272 Contaminated work clothing must not be allowed out of the workplace.</li> <li>P273 Avoid release to the environment.</li> <li>P280 Wear protective gloves, protective clothing, eye protection and face protection.</li> <li>P285 In case of inadequate ventilation wear respiratory protection.</li> <li>Response:</li> <li>P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.</li> <li>P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.</li> <li>P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.</li> <li>P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ doctor.</li> <li>P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.</li> <li>P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.</li> <li>P362 + P364 Take off contaminated clothing and wash it before reuse.</li> <li>Storage:</li> <li>P405 Store locked up.</li> <li>Disposal:</li> <li>P501 Dispose of contents/ container to an approved waste disposal plant.</li> </ul>

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

None identified.

## **SECTION 3: Composition/information on ingredients**

## 3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
maleic anhydride		108-31-6	100%

#### **SECTION 4: First aid measures**

#### 4.1 Description of first-aid measures

General advice	First aiders need to protect themselves. Show this safety data sheet to the doctor in attendance.
lf 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** Treat symptomatically.

## **SECTION 5: Firefighting measures**

#### 5.1 Extinguishing media

Suitable extinguishing mediaWater, Foam, Carbon dioxide (CO2), Dry powder.Unsuitable extinguishing mediaFor this substance/mixture no limitations of extinguishing<br/>agents are given.

## 5.2 Specific hazards arising from the substance or mixture

Combustible. Vapours 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 Special protective equipment and precautions for firefighters

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

Flash Point	217 °F /	103 °	°C
<b>Autoignition Temperat</b>	ture	887	°F / 475 °C

## **Explosion limits**

Upper7.1 %(V)Lower1.4 %(V)Sensitivity to Mechanical ImpactSensitivity to Static DischargeNFPA

No data available. No data available.

Health	Flammability	Instability	Physical hazards
3	1	1	N/A

## **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. Advice for emergency responders: 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

No additional information.

## **SECTION 7: Handling and storage**

## 7.1 Precautions for 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.

## 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 authorised persons. Moisture sensitive.

#### Incompatibilities

No data available.

## **SECTION 8: Exposure controls/personal protection**

#### 8.1 Occupational exposure limits

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Туре	Value
Maleic Anhydride	TWA	0.25 ppm
,		1 mg/m3

#### **US. ACGIH Threshold Limit Values**

Component	Туре	Value
Maleic Anhydride	TWA (Inhalable fraction and vapor)	0.01 mg/m3

#### **US. NIOSH: Pocket Guide to Chemical Hazards**

Component	Туре	Value
Maleic Anhydride	TWA	0.25 ppm 1 mg/m3

#### **Biological occupational exposure limits**

No information available.

## 8.2 Exposure controls

#### Appropriate engineering controls

No data available.

#### 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 and body protection

Protective clothing

#### **Respiratory protection**

required when dusts are generated. Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### **Control of environmental exposure**

Prevent spills or leaks from entering drains or ground/surface water.

#### **SECTION 9: Physical and chemical properties**

## 9.1 Information on basic physical and chemical properties

Solid
White
No information available
No information available
No information available
124 - 133 °F / 51 - 56 °C
392 °F / 200 °C
No information available
No information available
No information available
Upper explosion limit: 7.1 %(V)
Lower explosion limit: 1.4 %(V)
No information available
No information available
1.48 g/cm3 (68 °F / 20 °C)
Solubility in water: 407 g/l (68 °F / 20 °C), pH: 7
log Pow: -2.61 (68 °F / 20 °C)pH: 4 - 9
887 °F / 475 °C
No information available
No information available
C4H2O3
98.06
No information available
None

## 9.2 Other safety information

No information available.

## **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

Exothermic reaction with: Alkali metals alkali hydroxides Amines strong alkalis pyridine alkaline earth hydroxides Alcohols Water Oxidizing agents sodium carbonate with Heat Generates dangerous gases or fumes in contact with: ammonium compounds

## **10.4** Conditions to avoid

Strong heating.

10.5 Incompatible materials

No data available.

## **10.6 Hazardous decomposition products**

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

## **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

#### **Product Information, Component Information**

#### Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Maleic Anhydride	LD50 Oral - Rat - male and female - 1,090 mg/kg	LD50 Dermal - Rabbit - female - 2,620 mg/kg	-

#### Skin corrosion/irritation

Skin - Rabbit Result: Causes burns. - 4 h

Serious eye damage/eye irritation Eyes - Rabbit Result: Irreversible effects on the eye - 2 s

#### Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse Result: positive (OECD Test Guideline 429) - Rat Result: positive Remarks: (ECHA)

#### Germ cell mutagenicity

Test Type: Chromosome aberration test Species: Rat Cell type: Bone marrow Application Route: Inhalation Method: OECD Test Guideline 475 Result: negative

#### Carcinogenicity

No components are identified as probable, possible or confirmed human carcinogens.

## Specific target organ toxicity - single exposure

No information available.

## Specific target organ toxicity - repeated exposure

Inhalation - Causes damage to respiratory system organs through prolonged or repeated exposure.

## **Reproductive toxicity**

No information available.

## Chronic effects

No information available.

## 11.2 Additional Information

No information available.

**SECTION 12: Ecological information** 

12.1 Toxicity

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 75 mg/l Exposure time: 96 h Test Type: static test Method: OECD Test Guideline 203 GLP: yes

Toxicity to daphnia and other aquatic invertebrates: EC50 (Daphnia magna (Water flea)): 42.81 mg/l End point: Immobilization Exposure time: 48 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 202 GLP: yes Remarks: (in analogy to similar products) The value is given in analogy to the following substances: maleic acid

Toxicity to algae/aquatic plants: ErC50 (Pseudokirchneriella subcapitata (green algae)): 74.35 mg/l Exposure time: 72 h Test Type: static test Analytical monitoring: yes Method: OECD Test Guideline 201 GLP: yes Remarks: The value is given in analogy to the following substances: The value is given in analogy to the following substances: maleic acid

## 12.2 Persistence and degradability

Biodegradability : aerobic Inoculum: activated sludge Concentration: 33.3 mg/l Result: Readily biodegradable. Biodegradation: > 90 % Exposure time: 28 d Method: OECD Test Guideline 301B GLP: yes Remarks: The value is given in analogy to the following substances: The value is given in analogy to the following substances: maleic acid

## 12.3 Bio accumulative potential

Bio accumulative potential is not expected due to partition coefficient.

## 12.4 Mobility in soil

No data available.

## 12.5 Results of PBT and vPvB assessment

No information available.

## 12.6 Endocrine disrupting properties

No data available.

## 12.7 Other adverse effects

No data available.

## **SECTION 13: Disposal considerations**

## 13.1 Waste Disposal Methods

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

## **SECTION 14: Transport information**

## DOT (US)

UN Number	UN 2215
Proper Shipping name	Maleic anhydride
Hazard Class	8
Packaging Group	III

## IMDG

UN Number	UN 2215
Proper Shipping name	MALEIC ANHYDRIDE
Hazard Class	8
Packaging Group	

## IATA

UN Number	UN 2215
Proper Shipping name	Maleic anhydride
Hazard Class	8
Packaging Group	III

## **SECTION 15: Regulatory information**

US federal regulations

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4) maleic anhydride, 108-31-6= 5000 lb RQ

**SARA 304 Emergency release notification** This material does not contain any components with a section 304 EHS RQ.

#### OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

## Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

This material does not contain any components with a section 302 EHS TPQ.

#### SARA 311/312 Hazardous

Acute Health Hazard.

#### SARA 313 (TRI reporting)

maleic anhydride, 108-31-6 >= 90 - <= 100 %

#### Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List maleic anhydride 108-31-6 >= 90 - <= 100 %

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130) Not listed.

#### Safe Drinking Water Act

maleic anhydride 108-31-6 >= 90 - <= 100 %

# FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

## **US state regulations**

# **US. Massachusetts RTK - Substance List** maleic anhydride 108-31-6

**US. New Jersey Worker and Community Right-to-Know Act** Product does not contain any listed chemicals.

# US. Pennsylvania Worker and Community Right-to-Know Law maleic anhydride 108-31-6

## California Proposition 65

Not listed.

#### **SECTION 16: Other information**

Date of Issue: 5/29/2025

**SECTION 17: Disclaimer** 

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.