



Safety Data Sheet

Maleic Anhydride

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

1.1 Product Identifier

Trade Name: Maleic Anhydride
CAS Number: 108-31-6

Revision Date: 3/10/2022

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

No information available.

1.3 Details of the supplier of the safety data sheet

Shrieve Chemical Company
1442 Lake Front Circle
Suite 500
THE WOODLANDS, TX 77380 US
phone: (800) 367-4226 Customer Service
e-mail: cust-serv@shrieve.com
website: www.shrieve.com

1.4 Emergency telephone number

CHEMTREC 800-424-9300 (US)
+1-703-741-5970 (International)

Additional Information

Poison Control: (800) 222-1222

SECTION 2: Hazards Identification

2.1 Classification of the substance or mixture

Acute Toxicity, Oral, Category. 4
Skin Corrosion, Category. 1B
Serious Eye Damage, Category. 1
Respiratory Sensitisation, Category. 1
Skin Sensitisation, Category. 1
Specific Target Organ Toxicity - RE, Inhalation (Respiratory system), Category. 1
Acute Aquatic Toxicity, Category. 3

2.2 Label elements



Signal Word Danger

Hazard Statements

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 through prolonged or repeated exposure.
H402-Harmful to aquatic life.

Precautionary Statements

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Prevention

- P260-Do not breathe dust/fume/gas/mist/vapors/spray.
P264-Wash skin thoroughly after handling.
P270-Do not eat, drink or smoke when using this product.
P272-Contaminated work clothing should not be allowed out of the workplace.
P273-Avoid release to the environment.
P280-Wear protective gloves/protective clothing/eye protection/face protection.
P285-In case of inadequate ventilation wear respiratory protection.

Response

- P301+P312-IF SWALLOWED: call a POISON CENTER or doctor IF you feel unwell.
P301+P330+P331-IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353-IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse SKIN with water.
P304+P340-IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338-IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310-Immediately call a POISON CENTER or doctor.
P330-Rinse mouth.
P333+P313-IF SKIN irritation or rash occurs: Get medical attention.
P342+P311-IF experiencing respiratory symptoms: call a POISON CENTER or doctor.
P363-Wash contaminated clothing before reuse.

Storage

- P405-Store locked up.

Disposal

- P501-Dispose of contents/container to a licensed contractor in accordance with local, state and federal regulations.

2.3 Other hazards

- Corrosive to the respiratory tract.
Sternutator.

2.4 Unknown Acute Toxicity (US)

- No information available.

SECTION 3: Composition/information on ingredients

Chemical Name	CAS Number	EC #	Concentration % by Weight	Classification
Maleic Anhydride	108-31-6		100	

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

After inhalation

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

After skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of



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After eye contact

water. Take victim immediately to hospital. Consult a physician.

After ingestion

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

Self-protection of the first aider

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

No information available.

4.2 Most important symptoms and effects, both acute and delayed

No information available.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable extinguishing media

No information available.

5.2 Special hazards arising from the substance or mixture

Special hazards arising from the substance include carbon oxides.

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2 Environmental precautions

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

6.3 Methods and material for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

No information available.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

7.2 Conditions for safe storage, including any incompatibilities

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

Moisture sensitive.

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

7.3 Incompatibilities/Specific end uses(s)

Incompatibilities

No information available.

Specific end use(s)

No information available.

SECTION 8: Exposure controls/personal protection

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8.1 Control parameters

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USA. ACGIH TLV	0.01 mg/m3 Dermal Sensitization, Respiratory Sensitization
USA. NIOSH Recommend Exposure Limits	0.25 ppm (1mg/m3)
California permissible exposure limits for Chemical Contaminants	0.1 ppm (0.4mg/m3)
USA. Occupational Exposure Limits	0.25 ppm (1mg/m3)

8.2 Engineering Controls/Exposure Controls

Engineering controls

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Environmental 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.

8.3 Protective Measures

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Hand protection

Handle with nitrile rubber gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Other Skin protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Other protection

No information available.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a fullface particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

General hygiene consideration

No information available.

Thermal hazards

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Property	Value
Appearance	Solid.
Autoignition Temperature	No information available.
Boiling Point	200°C/392°F.
Colors	White.
Decomposition Temperature	No information available.
Density	1.48 g/cm3 at 20°C/68°F.
Evaporation Rate	No information available.
Explosive Properties	No information available.
Flash Point	No information available.
Melting/Freezing Point	52-54°C/126-129°F.
Odor	No information available.
Odor Threshold (Detection)	No information available.
Oxidizing Properties	No information available.
Solubility	No information available.



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Vapor Density	No information available.
Vapor Pressure	0.2 hPa at 22°C/72°F.
Viscosity	No information available.
pH Value	No information available.

9.2 Other information

Additional Information

Partition coefficient: n-octanol/water: log Pow: -2.61 at 20°C/68°F.

SECTION 10: Stability and Reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No information available.

10.4 Conditions to avoid

No information available.

10.5 Incompatible materials

Strong oxidizing agents, strong acids, strong bases, strong reducing agents, alkali metals, amines.

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Source

Skin contact

No information available.

Eye contact

No information available.

Inhalation

No information available.

Ingestion

No information available.

Symptoms related to characteristics

No information available.

Acute effects

Acute oral toxicity - If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the oesophagus and the stomach.

Acute inhalation toxicity - mucosal irritations, Cough, Shortness of breath, Asthmatic appearance, Lung oedema, Possible damages:, damage of respiratory tract.

Chronic effects

No information available.

Numerical measures of Toxicity

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LC50 INHALATION RAT	>4.35 mg/l. 1h.
LD50 DERMAL RABBIT	2,620 mg/kg.
LD50 ORAL RAT	1,090 mg/kg. OECD Test Guideline

Skin corrosion/irritation

Skin - Rabbit

Result: Causes burns. - 4 h

Remarks: (ECHA)



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(Regulation (EC) No 1272/2008, Annex VI).

Serious eye damage/eye irritation

Eyes - Rabbit
Result: Corrosive
Remarks: (ECHA)
Causes serious eye damage.

Eyes - Rabbit
Result: Causes burns.
(OECD Test Guideline 405).

Respiratory sensitization

Local lymph node assay (LLNA) - Mouse
Result: positive
(OECD Test Guideline 429)
- Rat
Result: May cause sensitisation by inhalation.
Remarks: (ECHA)

Skin sensitization

No information available.

Carcinogenicity

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, NTP, or OSHA.

Germ cell mutagenicity

Ames test
Salmonella typhimurium
Result: negative
OECD Test Guideline 475
Rat - male and female - Bone marrow
Result: negative

Reproductive toxicity

No information available.

Specific target organ toxicity - single exposure

No information available.

Specific target organ toxicity - repeated exposure

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

Aspiration hazard

No information available.

Additional Information

Repeated dose toxicity - Rat - male - Oral - 90 Days - Lowest observed adverse effect level
- 100 mg/kg

(ECHA)
RTECS: ON3675000

Cough, Shortness of breath, Headache, Nausea, Vomiting

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.

SECTION 12: Ecological information

12.1 Toxicity

Harmful to aquatic life. Discharge into the environment must be avoided. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.



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EC50	42.81 mg/l. 48h. Daphnia magna (water flea) OECD Test Guideline 202.
ERC50	74.35 mg/l. 72h. Pseudokirchneriella subcapitata (green algae) OECD Test Guideline 201.
LC50	75 mg/l. 96h. Lepomis macrochirus (blyegill sunfish).

12.2 Persistence and degradability

Biodegradability:

aerobic - Exposure time 25 d

Result: > 90 % - Readily biodegradable.

(OECD Test Guideline 301B)

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

No information available.

12.7 Additional Information

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Handling for disposal

No information available.

Methods of disposal

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport Information

D.O.T/ADR/RID - Ground transportation

14.1 UN number

UN2215

14.2 UN proper shipping name

Maleic anhydride

14.3 Transport hazard class(es)

8

14.4 Packing group

III

Air transport (ICAO/IATA)

14.1 UN number

UN2215

14.2 UN proper shipping name

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14.3 Transport hazard class(es)

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14.4 Packing group	III
Sea transport (IMDG)	
14.1 UN number	UN2215
14.2 UN proper shipping name	Maleic anhydride
14.3 Transport hazard class(es)	8
14.4 Packing group	III
14.5 Environmental hazards	
No information available.	
14.6. Special precautions for user	
No information available.	
14.7. Transport in bulk according to Annex II of Marpol112 and the IBC Code	
No information available.	
Additional Information	
Reportable Quantity: 5000 lbs.	

SECTION 15: Regulatory information

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

U.S. - CAA (Clean Air Act) - 1990 Hazardous Air Pollutants

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U.S. - CAA (Clean Air Act) - HON Rule - SOCM Chemicals

Maleic anhydride (108-31-6)

U.S. - New Jersey - Environmental Hazardous Substances List

Maleic anhydride (108-31-6)

U.S. - New Jersey - Special Health Hazards Substances List

Maleic anhydride (108-31-6)

U.S. - CAA (Clean Air Act) - HON Rule - Organic HAPs

Maleic anhydride (108-31-6)

U.S. - CERCLA/SARA - Hazardous Substances and their Reportable Quantities

The following components are subject to reporting levels established by SARA Title II, Section 313:

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U.S. - CAA (Clean Air Act) - Volatile Organic Compounds (VOCs) in SOCM

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Massachusetts Right To Know Components

Maleic anhydride (108-31-6)

New Jersey Right To Know Components

Maleic anhydride (108-31-6)

Pennsylvania Right To Know Components

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Country or region	Inventory List	On Inventory (yes/no)
Australia	Australian Inventory of Industrial Chemicals (AIIC)	Yes
Canada	Canada Domestic Substance List (Canada DSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
European Union	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Japan	Japanese Existing and New Chemical Substances Inventory (ENCS) and Industrial Safety and Health Law Substances (ISHL)	Yes
South Korea	Korea Existing Chemicals Inventory (KECI / KECL)	Yes
Mexico	Mexican Chemical Inventory (INSQ)	Yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	Yes
Philippines	Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Thailand	Thailand Existing Chemicals Inventory (TECI)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States of America	U.S. - Toxic Substances Control Act (TSCA) - Inventory list	Yes
Vietnam	The Vietnam National Chemicals Inventory (NCI)	Yes

15.2 Chemical Safety Assessment

California Prop. 65 Statement: This product does not require a warning under California Prop. 65.

SECTION 16: Other Information

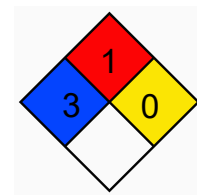
N/A

HEALTH	3
FLAMMABILITY	1
PHYSICAL HAZARD	0
PERSONAL PROTECTION	

3 - Extreme Danger

1 - Above 200°F

0 - Stable, even under fire conditions and will not re-act with water, etc.



The information is based on the data of which we are aware and is believed to be correct as of the data hereof. Since the information contained herein may be applied under conditions beyond our control and with which we may be unfamiliar and since data made available subsequent to the date hereof may suggest modification of the information, we do not assume any responsibility for the result of its use. This information is furnished upon condition that the person receiving it shall make his own determination of the suitability of the material for his particular purpose.

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