

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Maleic anhydride $\geq 99,5$ %, for synthesis

article number: **0975**  
Version: **3.0 en**  
Replaces version of: 2020-06-12  
Version: (2)

date of compilation: 2016-11-25  
Revision: 2022-04-27

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

### 1.1 Product identifier

Identification of the substance	<b>Maleic anhydride <math>\geq 99,5</math> %, for synthesis</b>
Article number	0975
EC number	203-571-6
CAS number	108-31-6

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

Relevant identified uses:	Laboratory and analytical use Laboratory chemical
Uses advised against:	Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin. Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household).

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

Carl Roth GmbH + Co KG  
Schoemperlenstr. 3-5  
D-76185 Karlsruhe  
Germany

**Telephone:** +49 (0) 721 - 56 06 0  
**Telefax:** +49 (0) 721 - 56 06 149  
**e-mail:** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)  
**Website:** [www.carlroth.de](http://www.carlroth.de)

Competent person responsible for the safety data sheet: Department Health, Safety and Environment

**e-mail (competent person):** [sicherheit@carlroth.de](mailto:sicherheit@carlroth.de)

### 1.4 Emergency telephone number

Name	Street	Postal code/city	Telephone	Website
National Poisons Information Service City Hospital	Dudley Rd	B187QH Birmingham	844 892 0111	

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Classification acc. to GHS**

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Maleic anhydride $\geq 99,5$ %, for synthesis

article number: 0975

Section	Hazard class	Cat-egory	Hazard class and category	Hazard statement
3.10	Acute toxicity (oral)	4	Acute Tox. 4	H302
3.2	Skin corrosion/irritation	1B	Skin Corr. 1B	H314
3.3	Serious eye damage/eye irritation	1	Eye Dam. 1	H318
3.4R	Respiratory sensitisation	1	Resp. Sens. 1	H334
3.4S	Skin sensitisation	1A	Skin Sens. 1A	H317
3.9	Specific target organ toxicity - repeated exposure	1	STOT RE 1	H372

### Supplemental hazard information

Code	Supplemental hazard information
EUH071	corrosive to the respiratory tract

For full text of abbreviations: see SECTION 16

### The most important adverse physicochemical, human health and environmental effects

Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Delayed or immediate effects can be expected after short or long-term exposure.

## 2.2 Label elements

### Labelling

#### Signal word

**Danger**

#### Pictograms

GHS05, GHS07,  
GHS08



#### 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 (respiratory system) through prolonged or repeated exposure (if inhaled)

#### Precautionary statements

##### Precautionary statements - prevention

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

##### Precautionary statements - response

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Maleic anhydride $\geq 99,5$ %, for synthesis

article number: **0975**

P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P302+P352	IF ON SKIN: Wash with plenty of soap and water
P304+P340	IF INHALED: Remove person to fresh air and keep 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/doctor

### Supplemental hazard information

EUH071 Corrosive to the respiratory tract.

## 2.3 Other hazards

### Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Name of substance	Maleic anhydride
Molecular formula	$C_4H_2O_3$
Molar mass	98,06 g/mol
CAS No	108-31-6
EC No	203-571-6

Substance, Specific Conc. Limits, M-factors, ATE			
Specific Conc. Limits	M-Factors	ATE	Exposure route
Skin Sens. 1A; H317: C $\geq 0,001$ %	-	1.090 mg/kg	oral

## SECTION 4: First aid measures

### 4.1 Description of first aid measures



#### General notes

Take off immediately all contaminated clothing. Self-protection of the first aider.

#### Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following skin contact

After contact with skin, wash immediately with plenty of water. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure. In case of skin reactions, consult a physician.

#### Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Maleic anhydride $\geq 99,5$ %, for synthesis

article number: 0975

### Following ingestion

Rinse mouth immediately and drink plenty of water. Rinse mouth with water (only if the person is conscious). Call a physician immediately. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

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

Corrosion, Vomiting, Risk of blindness, Gastric perforation, Risk of serious damage to eyes, Allergic reactions, Cough, Dyspnoea

### 4.3 Indication of any immediate medical attention and special treatment needed

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings  
water, foam, alcohol resistant foam, dry extinguishing powder, ABC-powder

#### Unsuitable extinguishing media

water jet

### 5.2 Special hazards arising from the substance or mixture

Combustible. Vapours are heavier than air, spread along floors and form explosive mixtures with air.

#### Hazardous combustion products

In case of fire may be liberated: Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures



#### For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe dust.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised.

### 6.3 Methods and material for containment and cleaning up

#### Advice on how to contain a spill

Covering of drains. Take up mechanically.

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Maleic anhydride  $\geq 99,5$  %, for synthesis

article number: 0975

## Advice on how to clean up a spill

Take up mechanically. Control of dust.

## Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

## 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Provision of sufficient ventilation. Handle and open container with care. Avoid dust formation. Clear contaminated areas thoroughly.

### Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

### 7.2 Conditions for safe storage, including any incompatibilities

Store in a dry place. Keep container tightly closed. Store contents under nitrogen.

### Incompatible substances or mixtures

Observe hints for combined storage.

### Consideration of other advice:

### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### National limit values

#### Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [mg/m <sup>3</sup> ]	STEL [mg/m <sup>3</sup> ]	Ceiling-C [mg/m <sup>3</sup> ]	Notation	Source
GB	maleic anhydride	108-31-6	WEL	1	3			EH40/2005

#### Notation

Ceiling-C  
STEL

Ceiling value is a limit value above which exposure should not occur  
Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA

Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Maleic anhydride  $\geq 99,5$  %, for synthesis

article number: 0975

## Human health values

Relevant DNELs and other threshold levels				
Endpoint	Threshold level	Protection goal, route of exposure	Used in	Exposure time
DNEL	0,4 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - systemic effects
DNEL	0,8 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - systemic effects
DNEL	0,4 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects
DNEL	0,8 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - local effects

## Environmental values

Relevant PNECs and other threshold levels				
End-point	Threshold level	Organism	Environmental compartment	Exposure time
PNEC	0,1 mg/l	aquatic organisms	freshwater	short-term (single instance)
PNEC	0,01 mg/l	aquatic organisms	marine water	short-term (single instance)
PNEC	44,6 mg/l	aquatic organisms	sewage treatment plant (STP)	short-term (single instance)
PNEC	0,334 mg/kg	aquatic organisms	freshwater sediment	short-term (single instance)
PNEC	0,033 mg/kg	aquatic organisms	marine sediment	short-term (single instance)
PNEC	0,042 mg/kg	terrestrial organisms	soil	short-term (single instance)

## 8.2 Exposure controls

### Individual protection measures (personal protective equipment)

#### Eye/face protection



Use safety goggle with side protection. Wear face protection.

#### Skin protection



#### • hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 ° C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Maleic anhydride ≥99,5 %, for synthesis

article number: 0975

- **type of material**

NBR (Nitrile rubber)

- **material thickness**

≥0,3 mm

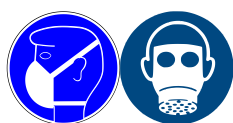
- **breakthrough times of the glove material**

>480 minutes (permeation: level 6)

- **other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

### Respiratory protection



Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). Type: A-P2 (combined filters against particles and organic gases and vapours, colour code: Brown/White).

### Environmental exposure controls

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

Physical state	solid
Colour	white
Odour	characteristic
Melting point/freezing point	53 °C
Boiling point or initial boiling point and boiling range	200,1 °C at 1.014 hPa (ECHA)
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	1,4 vol% (LEL) - 7,1 vol% (UEL)
Flash point	103 °C (c.c.)
Auto-ignition temperature	not determined
Decomposition temperature	290 °C (ECHA)
pH (value)	0,8 (in aqueous solution: 550 g/l, 20 °C) (Hydrolysis)
Kinematic viscosity	not relevant
Dynamic viscosity	1,6 mPa s at 60 °C
<u>Solubility(ies)</u>	
Water solubility	402 g/l at 20 °C (Hydrolysis) (ECHA)

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Maleic anhydride $\geq 99,5$ %, for synthesis

article number: **0975**

### Partition coefficient

Partition coefficient n-octanol/water (log value): -2,61 (19,8 °C) (ECHA)

Soil organic carbon/water (log KOC) 1,624 (ECHA)

### Vapour pressure

15,1 Pa at 22 °C  
37,7 Pa at 30 °C  
108 Pa at 40 °C

### Density and/or relative density

Density 1,48 g/cm<sup>3</sup> at 20 °C

Relative vapour density information on this property is not available

Bulk density 700 – 800 kg/m<sup>3</sup>

### Particle characteristics

No data available.

### Other safety parameters

Oxidising properties none

## 9.2 Other information

Information with regard to physical hazard classes: hazard classes acc. to GHS (physical hazards): not relevant

Other safety characteristics: There is no additional information.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 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

Keep away from heat. Decomposition takes place from temperatures above: 290 °C.

### 10.5 Incompatible materials

There is no additional information.

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.



# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Maleic anhydride  $\geq 99,5\%$  , for synthesis

article number: 0975

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

**Classification acc. to GHS**

**Acute toxicity**

Harmful if swallowed.

Acute toxicity					
Exposure route	Endpoint	Value	Species	Method	Source
oral	LD50	1.090 mg/kg	rat		ECHA
dermal	LD50	2.620 mg/kg	rabbit		ECHA

**Skin corrosion/irritation**

Causes severe skin burns and eye damage.

**Serious eye damage/eye irritation**

Causes serious eye damage.

**Respiratory or skin sensitisation**

May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.

**Germ cell mutagenicity**

Shall not be classified as germ cell mutagenic.

**Carcinogenicity**

Shall not be classified as carcinogenic.

**Reproductive toxicity**

Shall not be classified as a reproductive toxicant.

**Specific target organ toxicity - single exposure**

Shall not be classified as a specific target organ toxicant (single exposure).

**Specific target organ toxicity - repeated exposure**

Causes damage to organs (respiratory system) through prolonged or repeated exposure (if inhaled).

Hazard category	Target organ	Exposure route
1	respiratory system	if inhaled

**Aspiration hazard**

Shall not be classified as presenting an aspiration hazard.

**Symptoms related to the physical, chemical and toxicological characteristics**

• **If swallowed**

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects)

• **If in eyes**

causes burns, Causes serious eye damage, risk of blindness

• **If inhaled**

corrosive to the respiratory tract, May produce an allergic reaction, cough, Dyspnoea

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Maleic anhydride $\geq 99,5$ %, for synthesis

article number: 0975

### • If on skin

causes severe burns, causes poorly healing wounds, May produce an allergic reaction, pruritis, localised redness

### • Other information

none

## 11.2 Endocrine disrupting properties

Not listed.

## 11.3 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

Aquatic toxicity (acute)				
Endpoint	Value	Species	Source	Exposure time
LC50	75 mg/l	fish	ECHA	96 h
EC50	42,81 mg/l	aquatic invertebrates	ECHA	48 h
ErC50	74,35 mg/l	algae	ECHA	72 h

Aquatic toxicity (chronic)				
Endpoint	Value	Species	Source	Exposure time
EC50	77 mg/l	aquatic invertebrates	ECHA	21 d

### Biodegradation

The substance is readily biodegradable.

### 12.2 Process of degradability

Theoretical Oxygen Demand: 0,979 mg/mg  
Theoretical Carbon Dioxide: 1,795 mg/mg

Process of degradability		
Process	Degradation rate	Time
carbon dioxide generation	>90 %	25 d

### 12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

n-octanol/water (log KOW)	-2,61 (19,8 °C) (ECHA)
---------------------------	------------------------

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Maleic anhydride ≥99,5 %, for synthesis

article number: 0975

### 12.4 Mobility in soil

Henry's law constant	0 Pa m <sup>3</sup> /mol at 25 °C (ECHA)
The Organic Carbon normalised adsorption coefficient	1,624 (ECHA)

### 12.5 Results of PBT and vPvB assessment

Data are not available.

### 12.6 Endocrine disrupting properties

Not listed.

### 12.7 Other adverse effects

Data are not available.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

#### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Waste catalogue ordinance (Germany).

### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

## SECTION 14: Transport information

### 14.1 UN number or ID number

ADRRID UN 2215

IMDG-Code UN 2215

ICAO-TI UN 2215

### 14.2 UN proper shipping name

ADRRID MALEIC ANHYDRIDE

IMDG-Code MALEIC ANHYDRIDE

ICAO-TI Maleic anhydride

### 14.3 Transport hazard class(es)



# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Maleic anhydride $\geq 99,5$ %, for synthesis

article number: 0975

ADRRID	8
IMDG-Code	8
ICAO-TI	8
<b>14.4 Packing group</b>	
ADRRID	III
IMDG-Code	III
ICAO-TI	III
<b>14.5 Environmental hazards</b>	non-environmentally hazardous acc. to the dangerous goods regulations
<b>14.6 Special precautions for user</b>	
Provisions for dangerous goods (ADR) should be complied within the premises.	
<b>14.7 Maritime transport in bulk according to IMO instruments</b>	
The cargo is not intended to be carried in bulk.	
<b>14.8 Information for each of the UN Model Regulations</b>	
<b>Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information</b>	
Proper shipping name	MALEIC ANHYDRIDE
Particulars in the transport document	UN2215, MALEIC ANHYDRIDE, 8, III, (E)
Classification code	C4
Danger label(s)	8
	
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg
Transport category (TC)	3
Tunnel restriction code (TRC)	E
Hazard identification No	80
<b>Emergency Action Code</b>	2X
<b>Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) Additional information</b>	
<b>Classification code</b>	8
<b>Danger label(s)</b>	8
	
<b>Excepted quantities (EQ)</b>	E1
<b>Limited quantities (LQ)</b>	5 kg
<b>Transport category (TC)</b>	3


# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)




## Maleic anhydride $\geq 99,5$ %, for synthesis

article number: 0975

<b>Hazard identification No</b>	80
<b>International Maritime Dangerous Goods Code (IMDG) - Additional information</b>	
Proper shipping name	MALEIC ANHYDRIDE
Particulars in the shipper's declaration	UN2215, MALEIC ANHYDRIDE, 8, III
Marine pollutant	-
Danger label(s)	8
	
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg
EmS	F-A, S-B
Stowage category	A
<b>Segregation group</b>	1 - Acids

### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

Proper shipping name	Maleic anhydride
Particulars in the shipper's declaration	UN2215, Maleic anhydride, 8, III
Danger label(s)	8
	
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 kg

## SECTION 15: Regulatory information

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

#### Relevant provisions of the European Union (EU)

##### Seveso Directive

###### 2012/18/EU (Seveso III)

No	Dangerous substance/hazard categories	Qualifying quantity (tonnes) for the application of lower and upper-tier requirements	Notes
	not assigned		

##### Deco-Paint Directive

VOC content	100 % 1.480 g/l
-------------	--------------------

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



Maleic anhydride  $\geq 99,5$  %, for synthesis

article number: 0975

## Industrial Emissions Directive (IED)

VOC content	100 %
VOC content	1.480 g/l

## Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

## Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

## Water Framework Directive (WFD)

not listed

## Regulation on the marketing and use of explosives precursors

not listed

## Regulation on drug precursors

not listed

## Regulation on substances that deplete the ozone layer (ODS)

not listed

## Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

## Regulation on persistent organic pollutants (POP)

not listed

## National regulations(GB)

### List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

not listed

### Restrictions according to GB REACH, Annex 17

not listed

## Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

## National inventories

Country	Inventory	Status
AU	AIIC	substance is listed
CA	DSL	substance is listed
CN	IECSC	substance is listed
EU	ECSI	substance is listed
EU	REACH Reg.	substance is listed
JP	CSCL-ENCS	substance is listed
KR	KECI	substance is listed

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Maleic anhydride $\geq 99,5$ %, for synthesis

article number: 0975

Country	Inventory	Status
MX	INSQ	substance is listed
NZ	NZIoC	substance is listed
PH	PICCS	substance is listed
TR	CICR	substance is listed
TW	TCSI	substance is listed
US	TSCA	substance is listed

### Legend

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

## 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

Alignment to regulation:

Restructuring: section 9, section 14

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.1		Classification acc. to GHS: change in the listing (table)	yes
2.1		Supplemental hazard information: change in the listing (table)	yes
2.1		The most important adverse physicochemical, human health and environmental effects: Skin corrosion produces an irreversible damage to the skin; namely, visible necrosis through the epidermis and into the dermis. Delayed or immediate effects can be expected after short or long-term exposure.	yes
2.2		Hazard statements: change in the listing (table)	yes
2.2	Labelling of packages where the contents do not exceed 125 ml: Signal word: Danger		yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Maleic anhydride ≥99,5 %, for synthesis

article number: 0975

Section	Former entry (text/value)	Actual entry (text/value)	Safety-relevant
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.2		Labelling of packages where the contents do not exceed 125 ml: change in the listing (table)	yes
2.3	Other hazards: There is no additional information.	Other hazards	yes
2.3		Results of PBT and vPvB assessment: According to the results of its assessment, this substance is not a PBT or a vPvB.	yes

### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)
ATE	Acute Toxicity Estimate
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
EC50	Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EmS	Emergency Schedule
ErC50	≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control
GB REACH	The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
ICAO-TI	Technical instructions for the safe transport of dangerous goods by air
IMDG	International Maritime Dangerous Goods Code



# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## Maleic anhydride $\geq 99,5$ %, for synthesis

article number: 0975

Abbr.	Descriptions of used abbreviations
IMDG-Code	International Maritime Dangerous Goods Code
LC50	Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval
LD50	Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval
LEL	Lower explosion limit (LEL)
NLP	No-Longer Polymer
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)
STEL	Short-term exposure limit
TWA	Time-weighted average
UEL	Upper explosion limit (UEL)
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative
WEL	Workplace exposure limit

### Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
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).

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.