



Safety Data Sheet

In accordance with the Regulation on Safety Data Sheets Regarding Hazardous Substances and Mixtures published in the Official Journal numbered 29204 on December 13, 2014

Date of issue: 11/09/2018
Revision date: 02/02/2020
Version: 0.1

MALEIC ANHYDRIDE

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

1.1. Product identifier

| | |
|---------------|--------------------|
| Product form | : Substance |
| Trade name | : MALEIC ANHYDRIDE |
| Chemical name | : maleic anhydride |
| EC Index-No. | : 607-096-00-9 |
| EC-No. | : 203-571-6 |
| CAS-No. | : 108-31-6 |

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

No additional information available

1.3. Details of the supplier of the safety data sheet

Bilim Endüstriyel Kimyasallar Sanayi ve Ticaret LTD.ŞTİ.
İkitelli Organize Sanayi Bölgesi Mahallesi, Enkoop Caddesi, Enkoop Sanayi Sitesi No:8 Başakşehir
İSTANBUL
T 0212 486 36 38 – 39 - F 0212 486 36 43
info@bilimkima.com - www.bilimkimya.com

1.4. Emergency telephone number

| Country | Organisation/Company | Address | Emergency number | Comment |
|---------|--|--|------------------|---|
| Turkey | Ulusal Zehir Merkezi (UZEM) Refik Saydam Hifzısıhha Merkezi Başkanlığı | Cemal Gürsel Cd. No: 18 Sıhhiye Çankaya 06590 Ankara | 114 | Information is provided to public and medical personnel on poisoning incidents via 114. |

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Classification, Labelling and Packaging of Substances and Mixtures (SEA) Regulation published in the Official Journal numbered 28848 on December 11, 2013.

| | |
|--|------|
| Acute toxicity (oral), Category 4 | H302 |
| Skin corrosion/irritation, Category 1B | H314 |
| Respiratory sensitisation, Category 1 | H334 |
| Skin sensitisation, Category 1 | H317 |

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects : Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

2.2. Label elements

Classification according to Classification, Labelling and Packaging of Substances and Mixtures (SEA) Regulation published in the Official Journal numbered 28848 on December 11, 2013.

Hazard pictograms (SEA) :



Signal word (SEA) :

Danger

Hazard statements (SEA) :

H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 - May cause an allergic skin reaction.

Precautionary statements (SEA) :

P264 - Wash hands, forearms and face with soap and water thoroughly after handling.



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P270 - Do not eat, drink or smoke when using this product.
P301+P312 - IF SWALLOWED: If you feel unwell, immediately dial 114 for the NATIONAL POISON CENTER or call a doctor/physician.
P330 - Rinse mouth.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Other hazards not contributing to the classification

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical name : maleic anhydride

| Name | Product identifier | % | Classification according to Classification, Labelling and Packaging of Substances and Mixtures (SEA) Regulation published in the Official Journal numbered 28848 on December 11, 2013. |
|------------------|---|-----|--|
| MALEIC ANHYDRIDE | (CAS-No.) 108-31-6 (EC-No.) 203-571-6 (EC Index-No.) 607-096-00-9 | 100 | Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Resp. Sens. 1, H334 Skin Sens. 1, H317 |

Full text of H-statements: see section 16

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or a doctor.
First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects after inhalation : May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact : Burns. May cause an allergic skin reaction.
Symptoms/effects after eye contact : Serious damage to eyes.
Symptoms/effects after ingestion : Burns.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.



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5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Mechanically recover the product.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapours/spray. Wear personal protective equipment.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station.

Hand protection : Protective gloves

Eye protection : Safety glasses

Skin and body protection : Wear suitable protective clothing

Respiratory protection : [In case of inadequate ventilation] wear respiratory protection.

Environmental exposure controls : Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Molecular mass : 98.06 g/mol

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| | |
|--|--|
| Colour | : white |
| Odour | : No data available |
| Odour threshold | : No data available |
| pH | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : 52.8 °C |
| Freezing point | : Not applicable |
| Boiling point | : 202 °C |
| Flash point | : Not applicable |
| Auto-ignition temperature | : Not applicable |
| Decomposition temperature | : No data available |
| Flammability (solid, gas) | : Non flammable. |
| Vapour pressure | : No data available |
| Relative vapour density at 20 °C | : No data available |
| Relative density | : Not applicable |
| Density | : 1.48 |
| Solubility | : No data available |
| Log Pow | : No data available |
| Viscosity, kinematic | : Not applicable |
| Viscosity, dynamic | : No data available |
| Explosive properties | : No data available |
| Oxidising properties | : No data available |
| Explosive limits | : Not applicable 1.4 vol % 7.1 vol % |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity**10.1. Reactivity**

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

Acute toxicity : Harmful if swallowed.

| MALEIC ANHYDRIDE (108-31-6) | |
|------------------------------------|------------|
| LD50 oral | 481 mg/kg |
| LD50 dermal rabbit | 2620 mg/kg |



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MALEIC ANHYDRIDE (108-31-6)

| | |
|------------------|----------------------|
| ATE (SEA) (oral) | 481 mg/kg bodyweight |
|------------------|----------------------|

| | |
|-----------------------------------|---|
| Skin corrosion/irritation | : Causes severe skin burns and eye damage. |
| Serious eye damage/irritation | : Serious eye damage, category 1, implicit |
| Respiratory or skin sensitisation | : May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction. |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Aspiration hazard | : Not classified |

SECTION 12: Ecological information

12.1. Toxicity

| | |
|---|---|
| Ecology - general | : Before neutralisation, the product may represent a danger to aquatic organisms. |
| Hazardous to the aquatic environment, short-term (acute) | : Not classified |
| Hazardous to the aquatic environment, long-term (chronic) | : Not classified |

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

MALEIC ANHYDRIDE (108-31-6)

| | |
|---------------------------|-------------------------------------|
| Bioaccumulative potential | No additional information available |
|---------------------------|-------------------------------------|

12.4. Mobility in soil

MALEIC ANHYDRIDE (108-31-6)

| | |
|------------------|-------------------------------------|
| Mobility in soil | No additional information available |
|------------------|-------------------------------------|

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

| | |
|-----------------------|---------------------------------------|
| Ozone | : Not classified |
| Other adverse effects | : No additional information available |

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR | IMDG | IATA | ADN | RID |
|---------------------------------------|------------------|------------------|------------------|------------------|
| 14.1. UN number | | | | |
| 2215 | 2215 | 2215 | 2215 | 2215 |
| 14.2. UN proper shipping name | | | | |
| MALEIC ANHYDRIDE | MALEIC ANHYDRIDE | Maleic anhydride | MALEIC ANHYDRIDE | MALEIC ANHYDRIDE |
| Transport document description | | | | |
| UN 2215 MALEIC | UN 2215 MALEIC | UN 2215 Maleic | UN 2215 MALEIC | UN 2215 MALEIC |








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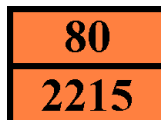
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| ADR | IMDG | IATA | ADN | RID |
|---|---|---|--|---|
| ANHYDRIDE, 8, III, (E) | ANHYDRIDE, 8, III | anhydride, 8, III | ANHYDRIDE, 8, III | ANHYDRIDE, 8, III |
| 14.3. Transport hazard class(es) | | | | |
| 8 | 8 | 8 | 8 | 8 |
|  |  |  |  |  |
| 14.4. Packing group | | | | |
| III | III | III | III | III |
| 14.5. Environmental hazards | | | | |
| Dangerous for the environment : No | Dangerous for the environment : No Marine pollutant : No | Dangerous for the environment : No | Dangerous for the environment : No | Dangerous for the environment : No |
| No supplementary information available | | | | |

14.6. Special precautions for user**- Overland transport**

| | |
|---|---------------------|
| Classification code (ADR) | : C4 |
| Limited quantities (ADR) | : 5kg |
| Excepted quantities (ADR) | : E1 |
| Packing instructions (ADR) | : P002, IBC08, R001 |
| Special packing provisions (ADR) | : B3 |
| Mixed packing provisions (ADR) | : MP10 |
| Portable tank and bulk container instructions (ADR) | : T1 |
| Portable tank and bulk container special provisions (ADR) | : TP33 |
| Tank code (ADR) | : SGAV |
| Vehicle for tank carriage | : AT |
| Transport category (ADR) | : 3 |
| Special provisions for carriage - Bulk (ADR) | : VC1, VC2, AP7 |
| Hazard identification number (Kemler No.) | : 80 |
| Orange plates | : |



Tunnel restriction code (ADR) : E

- Transport by sea

| | |
|---------------------------------|--------------|
| Packing instructions (IMDG) | : P002 |
| IBC packing instructions (IMDG) | : IBC08 |
| IBC special provisions (IMDG) | : B3 |
| Tank instructions (IMDG) | : T1 |
| Tank special provisions (IMDG) | : TP33 |
| EmS-No. (Fire) | : F-A |
| EmS-No. (Spillage) | : S-B |
| Stowage category (IMDG) | : A |
| Segregation (IMDG) | : SG50, SG57 |



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Properties and observations (IMDG) : White powder, needles, flakes, pellets, rods, briquettes, lumps or fused mass. Melting point: about 53°C . Fumes and dust are irritating to skin, eyes and mucous membranes. Inhalation can cause respiratory trouble.

- Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y845
PCA limited quantity max net quantity (IATA) : 5kg
PCA packing instructions (IATA) : 860
PCA max net quantity (IATA) : 25kg
CAO packing instructions (IATA) : 864
CAO max net quantity (IATA) : 100kg
Special provisions (IATA) : A803
ERG code (IATA) : 8L

- Inland waterway transport

Classification code (ADN) : C4
Limited quantities (ADN) : 5 kg
Excepted quantities (ADN) : E1
Equipment required (ADN) : PP, EP
Number of blue cones/lights (ADN) : 0

- Rail transport

Classification code (RID) : C4
Excepted quantities (RID) : E1
Packing instructions (RID) : P002, IBC08, R001
Special packing provisions (RID) : B3
Mixed packing provisions (RID) : MP10
Portable tank and bulk container instructions (RID) : T1
Portable tank and bulk container special provisions (RID) : TP33
Tank codes for RID tanks (RID) : SGAV
Transport category (RID) : 3
Special provisions for carriage – Bulk (RID) : VC1, VC2, AP7
Colis express (express parcels) (RID) : CE11
Hazard identification number (RID) : 80

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****15.1.1. National regulations**

This product doesn't contain any substances that is controlled or prohibited for use according to the Regulation for Reduction of Ozone Depleting Substances published in the Official Journal numbered 27052 on November 12, 2008.

SECTION 16: Other information

Data sources : CosIng. Annex VI.

Full text of H-statements

| | |
|---------------------|---------------------------------------|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Resp. Sens. 1 | Respiratory sensitisation, Category 1 |



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| | |
|---------------|--|
| Skin Corr. 1B | Skin corrosion/irritation, Category 1B |
| Skin Sens. 1 | Skin sensitisation, Category 1 |
| 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. |

Safety Data Sheet author's

Name : Emel ÇAVDAR
Certificate number : KDU-A-0053
Certificate valid until : 25/10/2024
Contact information : emel@bilimkimya.com

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.