

Revision nr. 1

Dated 05/12/2024 First compilation Printed on 05/12/2024

MKR-0110 - Acrylic Acid

Page n. 1/14

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

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

1.1. Product identifier

Code: MKR-0110 Product name Acrylic Acid INDEX number 607-061-00-8 EC number 201-177-9 CAS number 79-10-7

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

Intended use not available

1.3. Details of the supplier of the safety data sheet

Name Mikro Teknik Kimyevi Mad. Lab. Malz. ve Cih. San. Tic. Ltd. Şti.

Full address ULUDAĞ ORGANİZE SANAYİ BÖLGESİ KALE MAH.KILIÇLAR CAD. NO:10 KESTEL

District and Country 16450 BURSA

TR

Tel. +90 224 372 50 23 Fax +90 224 372 50 29

1.4. Emergency telephone number

+90 224 372 50 23 For urgent inquiries refer to

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Flammable liquid, category 3 H226 Flammable liquid and vapour. Acute toxicity, category 4 H302 Harmful if swallowed. Acute toxicity, category 4 H312 Harmful in contact with skin. Acute toxicity, category 4 H332 Harmful if inhaled.

Skin corrosion, category 1A H314 Causes severe skin burns and eye damage.

Serious eye damage, category 1 H318 Causes serious eye damage. Specific target organ toxicity - single exposure, category 3 H335 May cause respiratory irritation. Hazardous to the aquatic environment, acute toxicity, H400 Very toxic to aquatic life.

category 1 Classification note

according to Annex VI to the CLP



Revision nr. 1

Dated 05/12/2024 First compilation

MKR-0110 - Acrylic Acid

Printed on 05/12/2024
Page n. 2/14

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

Regulation: D

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:









Signal words: Danger

Hazard statements:

H226 Flammable liquid and vapour.

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

H314 Causes severe skin burns and eye damage.

H335 May cause respiratory irritation. **H400** Very toxic to aquatic life.

Precautionary statements:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260 Do not breathe dust / fume / gas / mist / vapours / spray.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue

rinsing.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

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

P310 Immediately call a POISON CENTER / doctor / . . .

Contains: ACRYLIC ACID

INDEX 607-061-00-8

2.3. Other hazards

The substance does not have persistence, bioaccumulation and toxicity (PBT) properties and is not very persistent and very bioaccumulative. (vPvB).

The substance does not have endocrine disrupting properties.

SECTION 3. Composition/information on ingredients

3.1. Substances

Contains:

Identification Conc. % Classification (EC) 1272/2008 (CLP)

ACRYLIC ACID



Revision nr. 1

Dated 05/12/2024
First compilation
Printed on 05/12/2024

MKR-0110 - Acrylic Acid

Page n. 3/14

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

INDEX 607-061-00-8 100

Flam. Liq. 3 H226, Acute Tox. 4 H302, Acute Tox. 4 H312, Acute Tox. 4 H332, Skin Corr. 1A H314, Eye Dam. 1 H318, STOT SE 3 H335, Aquatic Acute 1 H400 M=1. Classification note according to Annex VI to the CLP

Acute 1 H400 M=1, Classification note according to Annex VI to the CLP Regulation: D

STOT SE 3 H335:

5101 SE 31 1%

EC 201-177-9 CAS 79-10-7

STA Oral: 500 mg/kg, STA Dermal: 1100 mg/kg, STA Inhalation vapours: 11

mg/l

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 30-60 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Get medical advice/attention.

INGESTION: Have the subject drink as much water as possible. Get medical advice/attention. Do not induce vomiting unless explicitly authorised by a doctor.

INHALATION: Get medical advice/attention immediately. Remove victim to fresh air, away from the accident scene. If the subject stops breathing, administer artificial respiration. Take suitable precautions for rescue workers.

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

Information not available

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

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.



Revision nr. 1

Dated 05/12/2024

First compilation

Printed on 05/12/2024

MKR-0110 - Acrylic Acid

Page n. 4/14

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection



Revision nr. 1

Dated 05/12/2024
First compilation
Printed on 05/12/2024

MKR-0110 - Acrylic Acid

Page n. 5/14

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

8.1. Control parameters

Regulatory References:

GBR United Kingdom

OEL EU

EH40/2005 Workplace exposure limits (Fourth Edition 2020)

Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive

2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.

TLV-ACGIH ACGIH 2022

ACRYLIC ACID Threshold Limit Value							
Туре	Country	TWA/8h		STEL/15min	STEL/15min		
		mg/m3	ppm	mg/m3	ppm		
WEL	GBR	29	10	59	20		STEL: 1-minute
OEL	EU	29	10	59	20		STEL: 1'
TLV-ACGIH		6	2			SKIN	

Legend:

(C) = CEILING; INHAL = Inhalable Fraction; RESP = Respirable Fraction; THORA = Thoracic Fraction.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves.

The following should be considered when choosing work glove material (see standard EN 374): compatibility, degradation, failure time and permeability. The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION

Wear category III professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

EYE PROTECTION

Wear a hood visor or protective visor combined with airtight goggles (see standard EN 166).

In the presence of risks of exposure to splashes or squirts during work, adequate mouth, nose and eye protection should be used to prevent accidental

RESPIRATORY PROTECTION



Revision nr. 1

Dated 05/12/2024
First compilation
Printed on 05/12/2024

MKR-0110 - Acrylic Acid

Page n. 6/14

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties Appearance	Value not available		
Colour	not available		
Odour	not available		
Melting point / freezing point	13 °C		
Initial boiling point	141 °C		
Flammability	not available		
Lower explosive limit	not available		
Upper explosive limit	not available		
Flash point	48,5 °C		
Auto-ignition temperature	not available		
Decomposition temperature	not available		
рН	not available		
Kinematic viscosity	not available		
Solubility	not available		
Partition coefficient: n-octanol/water	not available		
Vapour pressure	not available		
Density and/or relative density	1,06		
Relative vapour density	not available		
Particle characteristics	not applicable		

Information

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available



Revision nr. 1

Dated 05/12/2024 First compilation

Printed on 05/12/2024

Page n. 7/14

MKR-0110 - Acrylic Acid

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

9.2.2. Other safety characteristics

Information not available

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

Keep away from: oxidising agents.Maintaining a temperature of less than 13°C/55°F.May polymerise if exposed to: heat.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

Risk of explosion on contact with: oxidising agents,oxygen,peroxides.May polymerise on contact with: alkaline hydroxides,amines,ammonia,sulphuric acid.Forms explosive mixtures with: hot air.

10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

Avoid exposure to: light, sources of heat, naked flames. Avoid contact with: oxygen.

10.5. Incompatible materials

Incompatible with: peroxides,oxidising substances,strong acids,strong bases,amines,iron salts,oleum,chlorosulphuric acid.

10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

SECTION 11. Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Metabolism, toxicokinetics, mechanism of action and other information

Information not available



Revision nr. 1

Dated 05/12/2024 First compilation

Printed on 05/12/2024

Page n. 8/14

MKR-0110 - Acrylic Acid

Safety Data Sheet	According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH
Information on likely routes of exp	<u>osure</u>
Information not available	
Delayed and immediate effects as	well as chronic effects from short and long-term exposure
Information not available	
Interactive effects	
Information not available	
ACUTE TOXICITY	
ACRYLIC ACID	
LD50 (Dermal): STA (Dermal): LD50 (Oral): STA (Oral): LC50 (Inhalation vapours): STA (Inhalation vapours):	> 2000 mg/kg Rabbit 1100 mg/kg estimate from table 3.1.2 of Annex I of the CLP 151 mg/kg Rat 500 mg/kg estimate from table 3.1.2 of Annex I of the CLP > 5,1 mg/l/4h Rat 11 mg/l estimate from table 3.1.2 of Annex I of the CLP
SKIN CORROSION / IRRITATION	Į
Corrosive for the skin	
SERIOUS EYE DAMAGE / IRRITA	<u>ATION</u>
Causes serious eye damage	

RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class



Revision nr. 1

Dated 05/12/2024 First compilation

Printed on 05/12/2024

Page n. 9/14

MKR-0110 - Acrylic Acid

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

May cause respiratory irritation

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

11.2. Information on other hazards

Based on the available data, the substance is not listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

SECTION 12. Ecological information

This product is dangerous for the environment and highly toxic for aquatic organisms.

12.1. Toxicity



Revision nr. 1

Dated 05/12/2024
First compilation
Printed on 05/12/2024

MKR-0110 - Acrylic Acid

Page n. 10/14

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

ACRYLIC ACID

LC50 - for Fish 315 mg/l/96h Leuciscus idus melanotus

EC50 - for Crustacea 765 mg/l/48h Daphnia magna EC50 - for Algae / Aquatic Plants 118 mg/l/72h Chlorococcales

12.2. Persistence and degradability

ACRYLIC ACID

Solubility in water 1000000 mg/l

Rapidly degradable

12.3. Bioaccumulative potential

ACRYLIC ACID

Partition coefficient: n-octanol/water 0,46 BCF 0,491

12.4. Mobility in soil

ACRYLIC ACID

Partition coefficient: soil/water 0,78

12.5. Results of PBT and vPvB assessment

The substance does not have persistence, bioaccumulation and toxicity (PBT) properties and is not very persistent and very bioaccumulative. (vPvB). **12.6. Endocrine disrupting properties**

Based on the available data, the substance is not listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. UN number or ID number



Revision nr. 1

Dated 05/12/2024 First compilation

Printed on 05/12/2024 Page n. 11/14

code: (D/E)

Packaging

instructions:

MKR-0110 - Acrylic Acid

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

ADR / RID, IMDG, IATA: 2218

14.2. UN proper shipping name

ADR / RID: ACRYLIC ACID, STABILIZED IMDG: ACRYLIC ACID, STABILIZED ACRYLIC ACID, STABILIZED IATA:

14.3. Transport hazard class(es)

ADR / RID: Class: 8 Label: 8 (3)

Label: 8 (3) IMDG: Class: 8

IATA: Class: 8 Label: 8 (3)





14.4. Packing group

ADR / RID, IMDG, IATA:

14.5. Environmental hazards

ADR / RID: Environmentally

Hazardous

IMDG: Marine Pollutant

NO IATA:

IATA:

For Air transport, environmentally hazardous mark is only mandatory for UN 3077 and UN 3082.

14.6. Special precautions for user

ADR / RID: HIN - Kemler: 839 Limited Tunnel Quantities: 1 restriction

Special provision: -

IMDG: EMS: F-E, S-C Limited

Quantities: 1

Maximum

Cargo: quantity: 30 L

855 Passengers: Maximum Packaging

quantity: 1 L instructions: 851

A209 Special provision:



Revision nr. 1

Dated 05/12/2024 First compilation

MKR-0110 - Acrylic Acid Printed on 05/12/2024
Page n. 12/14

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EU: P5c-E1

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

<u>Product</u>

Point 3 - 40

Contained substance

Point 75

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the



Revision nr. 1

Dated 05/12/2024
First compilation
Printed on 05/12/2024

MKR-0110 - Acrylic Acid

Page n. 13/14

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

Has not been performed / is not yet available a chemical safety assessment for the substance.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 3 Flammable liquid, category 3

Acute Tox. 4 Acute toxicity, category 4

Skin Corr. 1A Skin corrosion, category 1A

Eye Dam. 1 Serious eye damage, category 1

STOT SE 3 Specific target organ toxicity - single exposure, category 3

Aquatic Acute 1 Hazardous to the aquatic environment, acute toxicity, category 1

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

H312 Harmful in contact with skin.

H332 Harmful if inhaled.

H314 Causes severe skin burns and eye damage.

H318 Causes serious eye damage.
 H335 May cause respiratory irritation.
 H400 Very toxic to aquatic life.

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006



Revision nr. 1

Dated 05/12/2024 First compilation

Printed on 05/12/2024

Page n. 14/14

MKR-0110 - Acrylic Acid

Safety Data Sheet

According to Annex II to REACH - Regulation (EU) 2020/878 and to Annex II to UK REACH

- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

- 1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
- 2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
- 3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
- 4. Regulation (EC) 790/2009 (I Atp. CLP) of the European Parliament
- 5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
- 6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament 7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
- 8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
- 9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
- 10. Regulation (EÚ) 2015/1221 (VII Atp. CLP) of the European Parliament
- 11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
- 12. Regulation (EU) 2016/1179 (IX Atp. CLP)
- 13. Regulation (EU) 2017/776 (X Atp. CLP)
- 14. Regulation (EU) 2018/669 (XI Atp. CLP)
- 15. Regulation (EU) 2019/521 (XII Atp. CLP)
- 16. Delegated Regulation (UE) 2018/1480 (XIII Atp. CLP)
- 17. Regulation (EU) 2019/1148
- 18. Delegated Regulation (UE) 2020/217 (XIV Atp. CLP)
- 19. Delegated Regulation (UE) 2020/1182 (XV Atp. CLP)
- 20. Delegated Regulation (UE) 2021/643 (XVI Atp. CLP)
- 21. Delegated Regulation (UE) 2021/849 (XVII Atp. CLP)
- 22. Delegated Regulation (UE) 2022/692 (XVIII Atp. CLP)
 The Merck Index. 10th Edition
- Handling Chemical Safety
- INRS Fiche Toxicologique (toxicological sheet)
- Patty Industrial Hygiene and Toxicology
- N.I. Sax Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- **FCHA** website
- Database of SDS models for chemicals Ministry of Health and ISS (Istituto Superiore di Sanità) Italy

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

Begüm ALTUNKAYA

CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.