

SAFETY DATA SHEET

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

Revision date: 25 Mar 2026

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Mabanol Clean 16 Acidic

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

1.1. Product identifier

Trade name/designation:

Mabanol Clean 16 Acidic

UFI:

7X3Q-EMR2-SN1C-QDMU

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

Use of the substance/mixture:

Cleaning agent

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Mabanol GmbH & Co. KG

Am Strandkai 1

20457 Hamburg

Germany

Telephone: 0049 (0) 40 36809988

E-mail: info@mabanol.com

Website: www.mabanol.com

E-mail (competent person): giznord@giz-nord.de

1.4. Emergency telephone number

Giftinformationszentrale Göttingen , 24h: 0049 (0) 551 1 92 40

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements	Classification procedure
Serious eye damage/eye irritation (Eye Irrit. 2)	H319: Causes serious eye irritation.	
STOT-single exposure (STOT SE 3)	H335: May cause respiratory irritation.	

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms:



GHS07

Exclamation mark

Signal word: Warning

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Hazard components for labelling:

Citric acid

Hazard statements for health hazards

H319 Causes serious eye irritation.

H335 May cause respiratory irritation.

Precautionary statements Prevention

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

Precautionary statements Response

P312 Call a POISON CENTER/doctor/Emergency telephone number if you feel unwell.

P337 + P313 If eye irritation persists: Get medical advice/attention.

Precautionary statements Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

P405 Store locked up.

Additional information:

The mixture does not contain substances $\geq 0.1\%$ of substances that have endocrine disrupting properties according to Regulation (EC) No. 1907/2006, Article 59(1) or Regulation (EU) 2017/2100 or Regulation (EU) 2018/605.

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

Product identifiers	Substance name Classification according to Regulation (EC) No 1272/2008 [CLP]	Concentration
CAS No.: 77-92-9 EC No.: 201-069-1 Index No.: 607-750-00-3	Citric acid Eye Irrit. 2 (H319), STOT SE 3 (H335) Warning Acute Toxicity Estimate ATE (oral) 5,000 mg/kg ATE (dermal) > 2,000 mg/kg	50 - < 55 weight-%

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

Remove affected person from the danger area and lay down. When in doubt or if symptoms are observed, get medical advice.

Following inhalation:

Remove casualty to fresh air and keep warm and at rest.

In case of skin contact:

Take off immediately all contaminated clothing. After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, consult a physician.

After eye contact:

Rinse immediately carefully and thoroughly with eye-bath or water. Remove contact lenses, if present and easy to do. Continue rinsing. In case of eye irritation consult an ophthalmologist.

Following ingestion:

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting. Get medical help if you feel unwell.

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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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Foam. Extinguishing powder. Carbon dioxide (CO₂). Water spray jet. Water mist.

5.2. Special hazards arising from the substance or mixture

Hazardous combustion products:

In case of fire: Gases/vapours, toxic.

In case of fire may be liberated: Carbon dioxide (CO₂). Carbon monoxide.

5.3. Advice for firefighters

Do not inhale explosion and combustion gases. Wear a self-contained breathing apparatus and chemical protective clothing.

5.4. Additional information

Use water spray jet to protect personnel and to cool endangered containers. Move undamaged containers from immediate hazard area if it can be done safely. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Co-ordinate fire-fighting measures to the fire surroundings.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Remove persons to safety. Use personal protection equipment. Avoid contact with skin, eyes and clothes. Provide adequate ventilation. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.1.2. For emergency responders

Personal protection equipment:

Personal protection equipment: see section 8.

6.2. Environmental precautions

Do not allow uncontrolled discharge of product into the environment.

6.3. Methods and material for containment and cleaning up

For containment:

Cover drains. Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

Make sure spills can be contained, e.g. in sump pallets or kerbed areas.

For cleaning up:

Clear spills immediately. Wipe up with absorbent material (eg. cloth, fleece). Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Take up mechanically, placing in appropriate containers for disposal. Ventilate affected area. Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Personal protection equipment: see section 8

Disposal: see section 13

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Wear personal protection equipment (refer to section 8). Use only in well-ventilated areas. Handle and open container with care. Always close containers tightly after the removal of product. Avoid contact with skin, eyes and clothes. Do not breathe gas/fumes/vapour/spray.

Fire prevent measures:

Usual measures for fire prevention.

Environmental precautions:

Do not allow to enter into surface water or drains.

Advices on general occupational hygiene

When using do not eat, drink, smoke, sniff. Avoid contact with eyes and skin. Wash hands before breaks and after work. Do not put any product-impregnated cleaning rags into your trouser pockets. Use protective skin cream before handling the product. Take off contaminated clothing and wash it before reuse. Apply skin care products after work.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep/Store only in original container. Keep container tightly closed in a cool, well-ventilated place. Only use containers specifically approved for the substance/product. Protect containers against damage. Floors should be impervious, resistant to liquids and easy to clean.

Hints on storage assembly:

Keep away from: Oxidizing agent.

Do not store together with: Food and feedingstuffs.

Storage class (TRGS 510, Germany): 10 - Combustible liquids that cannot be assigned to any of the above storage classes

Further information on storage conditions:

Recommended storage temperature: 5 - 40°C.

Protect against: Frost. Heat. UV-radiation/sunlight. Water. Humidity.
storage stability: max. 12 month(s).

7.3. Specific end use(s)

No data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

Limit value type (country of origin)	Substance name	① Long-term occupational exposure limit value ② Short-term occupational exposure limit value ③ Instantaneous value ④ Monitoring and observation processes ⑤ Remark
TRGS 900 (DE) from 7 Jun 2018	Citric acid CAS No.: 77-92-9 EC No.: 201-069-1	① 2 mg/m ³ ② 4 mg/m ³ ⑤ (einatembare Fraktion) DFG, Y

8.1.2. Biological limit values

No data available

8.1.3. DNEL-/PNEC-values

No data available

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8.2. Exposure controls

8.2.1. Appropriate engineering controls

Use only in well-ventilated areas. If handled uncovered, arrangements with local exhaust ventilation should be used if possible. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means. Technical measures and the application of suitable work processes have priority over personal protection equipment.

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection (EN 166).

Skin protection:

The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. Tested protective gloves must be worn (EN ISO 374). Do not wear gloves near rotary machines and tools.

Suitable material: NBR (Nitrile rubber).

Wearing time with permanent contact:

Thickness of the glove material: 0,70 mm. Breakthrough time:: > 480 min.

Wearing time with occasional contact (splashes):

Thickness of the glove material: 0,40 mm. Breakthrough time:: > 30 min.

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. Check leak tightness/impermeability prior to use.

Suitable protective clothing: Not readily flammable.

Respiratory protection:

Usually no personal respirative protection necessary.

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Respiratory protection necessary at: exceeding exposure limit values. insufficient ventilation. aerosol or mist formation.

Suitable respiratory protection apparatus: Combination filtering device.

8.2.3. Environmental exposure controls

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid

Colour: colourless

Odour: not determined

flammability: No data available

Safety relevant basis data

Parameter	Value	at °C	① Method ② Remark
pH	2.1	20 °C	② 3 weight-%
Melting point	No data available		
Freezing point	No data available		
Initial boiling point and boiling range	No data available		
Flash point	> 100 °C		① EN ISO 2592 ② Contains: Water.
Evaporation rate	No data available		
Auto-ignition temperature	No data available		
Upper/lower flammability or explosive limits	No data available		
Vapour pressure	No data available		
Vapour density	No data available		
Density	1.268 g/cm ³	15 °C	① DIN EN ISO 12185

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Parameter	Value	at °C	① Method ② Remark
Bulk density	<i>not applicable</i>		
Water solubility	miscible	20 °C	
Dynamic viscosity	<i>No data available</i>		
Kinematic viscosity	≈ 20.5 mm ² /s	20 °C	① EN ISO 3104

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

No information available.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No known hazardous decomposition products.

SECTION 11: Toxicological information

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

Citric acid CAS No.: 77-92-9 EC No.: 201-069-1

LD₅₀ oral: 5,000 mg/kg (Mouse)

LD₅₀ dermal: >2,000 mg/kg

Acute oral toxicity:

No data available. The statement is derived from the properties of the single components.
Based on available data, the classification criteria are not met.

Acute dermal toxicity:

Based on available data, the classification criteria are not met.

Acute inhalation toxicity:

Based on available data, the classification criteria are not met.

Skin corrosion/irritation:

Based on available data, the classification criteria are not met.

Serious eye damage/irritation:

Causes serious eye irritation.

Respiratory or skin sensitisation:

Based on available data, the classification criteria are not met.

Germ cell mutagenicity:

Based on available data, the classification criteria are not met.

Carcinogenicity:

Based on available data, the classification criteria are not met.

Reproductive toxicity:

Based on available data, the classification criteria are not met.

STOT-single exposure:

Based on available data, the classification criteria are not met.

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STOT-repeated exposure:

Based on available data, the classification criteria are not met.

Aspiration hazard:

Based on available data, the classification criteria are not met.

For viscosity data, see section 9.

Additional information:

Frequently or prolonged contact with skin may cause dermal irritation.

11.2. Information on other hazards

Endocrine disrupting properties:

No information available.

SECTION 12: Ecological information

12.1. Toxicity

Citric acid CAS No.: 77-92-9 EC No.: 201-069-1

LC₅₀ : >440 mg/L 2 d (fish)

Aquatic toxicity:

Harmless to aquatic organisms up to the tested concentration.

Additional ecotoxicological information:

There are no data available on the mixture itself. The ecotoxicological properties of this mixture are determined by the ecotoxicological properties of the single components (see section 3).

Do not allow uncontrolled discharge of product into the environment.

12.2. Persistence and degradability

Biodegradation:

The surfactant contained in this mixture complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents.

12.3. Bioaccumulative potential

Accumulation / Evaluation:

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

Citric acid CAS No.: 77-92-9 EC No.: 201-069-1

Results of PBT and vPvB assessment: This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

No information available.

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of waste according to applicable legislation. The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product

07 06 01 *	aqueous washing liquids and mother liquors
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*: Evidence for disposal must be provided.

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Waste treatment options

Appropriate disposal / Product:

Consult the appropriate local waste disposal expert about waste disposal.

Appropriate disposal / Package:

Non-contaminated packages may be recycled. Packing which cannot be properly cleaned must be disposed of.

SECTION 14: Transport information

Land transport (ADR/RID)	Inland waterway craft (ADN)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1. UN number or ID number			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
14.2. UN proper shipping name			
No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.	No dangerous good in sense of these transport regulations.
14.3. Transport hazard class(es)			
not relevant	not relevant	not relevant	not relevant
14.4. Packing group			
not relevant	not relevant	not relevant	not relevant
14.5. Environmental hazards			
not relevant	not relevant	not relevant	not relevant
14.6. Special precautions for user			
not relevant	not relevant	not relevant	not relevant

14.7. Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

15.1.1. EU legislation

Restrictions on use:

Use restriction according to REACH annex XVII, no.: 3. 75.

Other regulations (EU):

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]: This product is not assigned to a hazard category.

Directive 2010/75/EU on industrial emissions [Industrial Emissions Directive]: No information available.

Directive 2004/42/EC on the limitation of emissions of volatile organic compounds: No information available.

Observe in addition any national regulations!

Labelling for contents according to regulation (EC) No. 648/2004:

non-ionic surfactants < 5%

Directive 2004/42/EC on the limitation of emissions of volatile organic compounds:

Volatile organic compound (VOC) content: 0 weight-%

15.1.2. National regulations

[DE] National regulations

Störfallverordnung (12. BImSchV)

for substances contained in the product:

This product is not assigned to a hazard category.

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Technische Anleitung zur Reinhaltung der Luft (TA-Luft)

Remark:

Weight fraction (Number 5.2.5. I): 50 - 55 %.

No flammable liquid according to BetrSichV.

Water hazard class

WGK:

1 - slightly hazardous to water

Remark:

Self-classification (mixture; calculation rule).

15.2. Chemical Safety Assessment

No information available.

15.3. Additional information

Water hazard class (WGK): 1 (slightly hazardous to water).

SECTION 16: Other information

16.1. Indication of changes

No data available

16.2. Abbreviations and acronyms

ACGIH: American Conference of Governmental Industrial Hygienists

ADR: Accord européen sur le transport des marchandises dangereuses par Route (International Carriage of Dangerous Goods by Road)

AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen

CAS Chemical Abstracts Service

DNEL: Derived No Effect Level

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)

LOAEL: Lowest observed adverse effect level

LOAEC: Lowest observed adverse effect concentration

LC₅₀: Lethal concentration, 50 percent

LD₅₀: Lethal dose, 50 percent

NIOSH: National Institute of Occupational Safety and Health

NOAEL: No observed adverse effect level

NOAEC: No observed adverse effect level

NTP: National Toxicology Program

N/A: not applicable

OEL: Occupational Exposure limit (Arbeitsplatzgrenzwert)

OSHA: Occupational Safety and Health Administration

PEL: permissible exposure limit (Zulässiger Expositionsgrenzwert)

PBT: persistent bioaccumulative toxic

PNEC: predicted no effect concentration

REL: Recommended exposure limit (Empfohlene Expositionsgrenze)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

SARA: Superfund Amendments and Reauthorization Act

STEL: Short Term Exposure Limit (Kurzzeitgrenzwert) (15 min)

SVHC: substance of very high concern

TLV: Threshold Limit Values (Schwellwert Grenzwerte)

TRGS Technische Regeln für Gefahrstoffe

TSCA: Toxic Substances Control Act

TWA: Time Weighted Average (Zeitlich gewichteter Mittelwert) (8 h)

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VOC: Volatile Organic Compounds
vPvB: very persistent and very bioaccumulative
VwVwS: Verwaltungsvorschrift wassergefährdender Stoffe
WGK: Wassergefährdungsklasse

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

Hazard classes and hazard categories	Hazard statements	Classification procedure
Serious eye damage/eye irritation (<i>Eye Irrit. 2</i>)	H319: Causes serious eye irritation.	
STOT-single exposure (<i>STOT SE 3</i>)	H335: May cause respiratory irritation.	

16.5. List of relevant hazard statements and/or precautionary statements from sections 2 to 15

Hazard statements	
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.

16.6. Training advice

No data available

16.7. Additional information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.