MANUDISH LEMON

WM 1113963 **Order number: 0712945**

Version 4.13 Revision Date 10.09.2026 Print Date 12.09.2026

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

1.1 Product identifier

Trade name	:	MANUDISH LEMON
UFI	:	X6F9-S0T5-T00Y-16E4

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

Use of the Substance/Mixture	:	Cleaning agent
		Restricted to professional users.

1.3 Details of the supplier of the safety data sheet

Company	:	Tana Chemie GmbH Rheinallee 96 55120 Mainz
Telephone	:	+49613196403
Telefax	:	+4961319642526
E-mail address	:	Produktsicherheit@werner-mertz.com
Responsible/issuing person		
Contact person	:	Product development / product safety

1.4 Emergency telephone

EU: 112

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

2.2 Label elements

Labeling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

Safety data sheet available on request.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Components

Chemical name	CAS-No. EC-No. Index-No. Registration number	Classification	Concentration (% w/w)
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	68891-38-3 500-234-8 01-2119488639-16	Skin Irrit. 2; H315 Eye Dam. 1; H318 --- specific concentration limit Eye Irrit. 2; H319 5 - < 10 % Eye Dam. 1; H318 >= 10,0 %	>= 3 - < 5

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice : No hazards which require special first aid measures.

If inhaled : Move to fresh air in case of accidental inhalation of dust or fumes from overheating or combustion.
If symptoms persist, call a physician.

In case of skin contact : Take off contaminated clothing and shoes immediately.
Wash off with soap and plenty of water.

In case of eye contact : Protect unharmed eye.
If easy to do, remove contact lens, if worn.
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

If swallowed : Clean mouth with water and drink afterwards plenty of water.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms : No information available.

Risks : No information available.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : For specialist advice physicians should contact the Poisons Information Service.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : No hazardous combustion products are known

No hazardous combustion products are known

5.3 Advice for firefighters

Special protective equipment for fire-fighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.

6.2 Environmental precautions

Environmental precautions : Do not flush into surface water or sanitary sewer system.

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Sweep up and shovel.
Wipe up with absorbent material (e.g. cloth, fleece).
Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For personal protection see section 8., Treat recovered material as described in the section "Disposal considerations"., Refer to section 15 for specific national regulation.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.
No special handling advice required.
Dispose of rinse water in accordance with local and national

regulations.

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Hygiene measures : Wash hands before breaks and at the end of workday.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container.

Advice on common storage : No special restrictions on storage with other products.

Further information on storage stability : No decomposition if stored and applied as directed.
Protect from frost.

7.3 Specific end use(s)

Specific use(s) : Cleaning agent

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Routes of exposure	Potential health effects	Value
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Workers	Inhalation	Long-term systemic effects	175 mg/m3
	Consumers	Inhalation	Long-term systemic effects	52 mg/m3
	Consumers	Ingestion	Long-term systemic effects	15 mg/kg bw/day
	Consumers	Skin contact	Long-term local effects	0,079 mg/cm2
	Workers	Skin contact	Long-term systemic effects	5830 mg/kg bw/day
	Consumers	Skin contact		2500 mg/kg bw/day
sodium chloride	Workers	Skin contact	Acute systemic effects	295,52 mg/kg bw/day
	Workers	Inhalation	Acute systemic effects	2068,62 mg/m3
	Workers	Skin contact	Long-term systemic effects	295,52 mg/kg bw/day

	Workers	Inhalation	Long-term systemic effects	2068,62 mg/m3
	Consumer use	Skin contact	Acute systemic effects	126,65 mg/kg
	Consumer use	Inhalation	Acute systemic effects	443,28 mg/m3
	Consumer use	Ingestion	Acute systemic effects	126,65 mg/kg
	Consumer use	Oral	Long-term systemic effects	126,65 mg/kg bw/day
	Consumer use	Inhalation	Long-term systemic effects	443,28 mg/m3
	Consumer use	Skin contact	Long-term systemic effects	126,65 mg/kg bw/day

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
Alcohols, C12-14, ethoxylated, sulfates, sodium salts	Fresh water	0,129 mg/l
	Sea water	0,024 mg/l
	Fresh water sediment	4,835 mg/kg dry weight (d.w.)
	Sea sediment	0,4835 mg/kg dry weight (d.w.)
	Soil	7,5 mg/kg dry weight (d.w.)
	STP	10000 mg/l
	intermittent release	0,071 mg/l
sodium chloride	Fresh water	5 mg/l
	Soil	4,86 mg/kg dry weight (d.w.)
	STP	500 mg/l

8.2 Exposure controls

Personal protective equipment

Eye/face protection : not required under normal use

Hand protection

Material	:	For prolonged or repeated contact use protective gloves. It is suggested the usage of chemical resistant gloves made of butyl rubber or nitrile rubber category III according to EN 374. As alternative, a different type of gloves might be used if, accordingly to the recommendations of the producer, guarantee the same level of protection.
Material	:	not required under normal use
Remarks	:	Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).
Skin and body protection	:	not required under normal use
Respiratory protection	:	not required under normal use

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Color	:	yellow
Odor	:	pleasant
Melting point/freezing point	:	No data available
Boiling point/boiling range	:	No data available
Flammability (solid, gas)	:	No data available
Flammability (liquids)	:	No data available
Lower explosion limit	:	No data available
Upper explosion limit	:	No data available
Flash point	:	does not flash
Ignition temperature	:	No data available
Decomposition temperature	:	No data available
pH	:	ca. 5,3, 100 %

		at 20 °C
Viscosity, dynamic	:	ca. 5.000 mPa.s at 20 °C
Viscosity, kinematic	:	No data available
Water solubility	:	completely soluble
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	No data available
Vapor pressure	:	No data available
Density	:	ca. 1,025 g/cm3 at 20 °C
Relative density	:	No data available
Relative vapor density	:	No data available
Particle characteristics	:	No data available

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.
No dangerous reaction known under conditions of normal use.

10.2 Chemical stability

No decomposition if stored and applied as directed.

10.3 Possibility of hazardous reactions

Hazardous reactions : No hazards to be specially mentioned.

10.4 Conditions to avoid

Conditions to avoid : Protect from frost.

10.5 Incompatible materials

Materials to avoid : No data available

10.6 Hazardous decomposition products

No hazardous decomposition products are known.

SECTION 11: Toxicological information

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

Our company is strongly against animal testing.
Our company does not place any orders for animal testing for the finished product or the ingredients.

However, as a result of EU legislation (REACH Regulation), the manufacturers of ingredients or EU importers are obliged to test ingredients with regard to their effects on human health and the environment before they are brought onto the market. Some of the tests made necessary by this took place decades ago.

Acute toxicity

Acute toxicity : Not Rated

Components:

Alcohols, C12-14, ethoxylated, sulfates, sodium salts

68891-38-3:

Acute oral toxicity : LD50 (Rat): 2.000 - 5.000 mg/kg
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 Dermal (Rat): > 2.000 mg/kg
Method: OECD Test Guideline 402
GLP: yes

Skin corrosion/irritation

Product:

Remarks : According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

Components:

Alcohols, C12-14, ethoxylated, sulfates, sodium salts

68891-38-3:

Species : Rabbit
Assessment : Irritating to skin.
Method : OECD Test Guideline 404

Serious eye damage/eye irritation

Product:

Remarks : According to the classification criteria of the European Union, the product is not considered as being an eye irritant.

Components:

Alcohols, C12-14, ethoxylated, sulfates, sodium salts

68891-38-3:

Species : Rabbit
Assessment : Risk of serious damage to eyes.
Method : OECD Test Guideline 405

Respiratory or skin sensitization

Product:

Remarks : No data available

Components:

Alcohols, C12-14, ethoxylated, sulfates, sodium salts

68891-38-3:

Routes of exposure	:	Dermal
Species	:	Guinea pig
Result	:	Does not cause skin sensitization.

Germ cell mutagenicity

Germ cell mutagenicity	:	Not Rated

Components:

Alcohols, C12-14, ethoxylated, sulfates, sodium salts

68891-38-3:

Genotoxicity in vitro	:	Method: OECD Test Guideline 471 Result: negative
Carcinogenicity	:	Not Rated
Reproductive toxicity	:	Not Rated
STOT-single exposure	:	The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT-repeated exposure	:	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration toxicity	:	Not Rated

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment	:	The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Further information

Product:

Remarks	:	No data available

SECTION 12: Ecological information

12.1 Toxicity

Components:

Alcohols, C12-14, ethoxylated, sulfates, sodium salts

68891-38-3:

Toxicity to fish	:	LC50 (Danio rerio (zebra fish)): 7,1 mg/l Exposure time: 96 h Test Type: flow-through test Method: OECD Test Guideline 203 GLP: yes LC50 (Fish): > 1 - 10 mg/l Test Type: flow-through test Method: OECD Test Guideline 203 LC50 (Leuciscus idus (Golden orfe)): 10 - 100 mg/l Method: OECD Test Guideline 203 NOEC (Oncorhynchus mykiss (rainbow trout)): 0,14 mg/l Exposure time: 28 d Test Type: flow-through test Method: OECD Test Guideline 204 LC50 (Brachydanio rerio (zebrafish)): 1 - 10 mg/l Exposure time: 96 h Test Type: flow-through test Method: OECD Test Guideline 203 LC50 (Brachydanio rerio (zebrafish)): 7,1 mg/l Exposure time: 96 h NOEC (Fish): 0,1 - 1 mg/l Exposure time: 28 Days
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia pulex (Water flea)): 7,4 mg/l Exposure time: 48 h Test Type: Immobilization Method: OECD Test Guideline 202 EC50 (Daphnia magna (Water flea)): > 1 - 10 mg/l Exposure time: 48 h Test Type: static test Method: OECD Test Guideline 202 NOEC (Daphnia magna (Water flea)): 0,27 mg/l Exposure time: 21 d Test Type: flow-through test Method: OECD Test Guideline 211 EC50 (Daphnia): 1 - 10 mg/l Exposure time: 48 h NOEC (Daphnia): 0,1 - 1 mg/l Exposure time: 21 Days
Toxicity to algae/aquatic plants	:	EC50 (Desmodesmus subspicatus (green algae)): 27,7 mg/l Exposure time: 72 h

Test Type: Growth inhibition
Method: OECD Test Guideline 201
GLP: yes

EC50 (Desmodesmus subspicatus (green algae)): > 10 - 100 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

NOEC : 0,95 mg/l
Test Type: Growth inhibition
Method: OECD Test Guideline 201

NOEC (Desmodesmus subspicatus (green algae)): 0,93 mg/l
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

EC50 (algae): 27,7 mg/l
Exposure time: 72 h
Test Type: Growth inhibition

NOEC (algae): 0,93 mg/l
Exposure time: 72 h

EC50 (algae): 10 - 100 mg/l
Exposure time: 72 h

NOEC (algae): 0,1 - 1 mg/l
Exposure time: 72 h

Toxicity to microorganisms : EC50 (Pseudomonas putida): > 10 g/l
Exposure time: 16 h
Test Type: Cell multiplication inhibition test
Method: DIN 38412
GLP: yes

EC10 (Pseudomonas putida): > 10 g/l
Exposure time: 16 h
Test Type: Cell multiplication inhibition test

Toxicity to fish (Chronic toxicity) : NOEC: 1 - 10 mg/l
Species: Leuciscus idus (Golden orfe)

NOEC: 0,14 mg/l
Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 204

NOEC: 0,2 mg/l
Exposure time: 28 d
Species: Fish

NOEC: > 0,1 - 1 mg/l
Exposure time: 28 d
Species: Oncorhynchus mykiss (rainbow trout)
Method: OECD Test Guideline 204

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: > 0,1 - 1 mg/l
Exposure time: 21 d
Species: Daphnia magna (Water flea)

Method: OECD Test Guideline 211

EC50: 0,37 mg/l
Exposure time: 21 d

0,74 mg/l
Exposure time: 21 d

NOEC: 0,27 mg/l
Exposure time: 21 d

Toxicity to soil dwelling organisms : NOEC: 750 mg/kg
Exposure time: 56 d
Species: Eisenia fetida (earthworms)
Method: OECD Test Guideline 222
Remarks: Information taken from reference works and the literature.

12.2 Persistence and degradability

Components:

Alcohols, C12-14, ethoxylated, sulfates, sodium salts

68891-38-3:

Biodegradability : Test Type: aerobic
Result: rapidly biodegradable
Biodegradation: > 70 %
Exposure time: 28 d
Method: OECD 301 A

Test Type: anaerobic
Result: Biodegradable
Biodegradation: > 60 %
Exposure time: 41 d
Method: OECD 301 D

Result: Readily biodegradable.
Biodegradation: 93 %
Exposure time: 28 d

Biochemical Oxygen Demand (BOD) : 285 mg/g
Incubation time: 5 d

Chemical Oxygen Demand (COD) : 518 mg/g

12.3 Bioaccumulative potential

Components:

Alcohols, C12-14, ethoxylated, sulfates, sodium salts

68891-38-3:

Bioaccumulation : Remarks: Bioaccumulation is unlikely.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be

either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:

Alcohols, C12-14, ethoxylated, sulfates, sodium salts

68891-38-3:

Assessment : Not very persistent and very bioaccumulative (vPvB).. Not persistent, bioaccumulative, and toxic (PBT).

12.6 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

Product:

Additional ecological information : There is no data available for this product.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : In accordance with local and national regulations.

Contaminated packaging : Empty remaining contents.
Empty containers should be taken to an approved waste handling site for recycling or disposal.

Waste Code European Waste Catalog
20 01 29*
According to the European Waste Catalog, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user, preferably in discussion with the waste disposal authorities.

SECTION 14: Transport information

14.1 UN number or ID number

ADR
Not dangerous goods
IMDG
Not dangerous goods
IATA
Not dangerous goods

14.2 UN proper shipping name

Not regulated as a dangerous good

14.3 Transport hazard class(es)

ADR
Not dangerous goods

IMDG
Not dangerous goods
IATA
Not dangerous goods

14.4 Packing group
ADR
Not dangerous goods
IMDG
Not dangerous goods
IATA
Not dangerous goods

14.5 Environmental hazards
ADR
Not dangerous goods
IMDG
Not regulated as a dangerous good
IATA
Not dangerous goods

14.6 Special precautions for user
Not applicable

For personal protection see section 8.

14.7 Maritime transport in bulk according to IMO instruments
Not applicable for product as supplied.

SECTION 15: Regulatory information

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

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals	:	Not applicable
REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	Not applicable
Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.	:	Not applicable
TA Luft List (Germany)	:	Total dust: Not applicable
	:	Inorganic substances in powdered form: Not applicable
	:	Inorganic substances in vapor or gaseous form: : portionClass 3: 1,3 %
	:	Organic Substances: : portionClass 1: 0,77 %
	:	Carcinogenic substances: Not applicable
	:	mutagenic: Not applicable
	:	Toxic to reproduction: Not applicable
Volatile organic compounds (VOC) content	:	Directive 2010/75/EU of 24 November 2010 on industrial and livestock rearing emissions (integrated pollution prevention and control) Update: Percent volatile: 0,7 %

according to Detergents Regulation EC 648/2004	:	5 - <15% anionic surfactants, <5% amphoteric surfactants, non-ionic surfactants, perfumes, SODIUM BENZOATE

15.2 Chemical Safety Assessment

SECTION 16: Other information

Full text of H-Statements

H315	:	Causes skin irritation.
H318	:	Causes serious eye damage.

Full text of other abbreviations

Eye Dam.	:	Serious eye damage
Skin Irrit.	:	Skin irritation

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardization; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organization for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorization and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - substance of very high concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Further information

Classification of the mixture: **Classification procedure:**

Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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