

Trade Name: TREOX D
Version: 17
Replaces version: 16

Created: 18.05.2020
Valid from: 18.05.2020

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

1.1 Product identifier

Substance trade name: TREOX D
Index-No.: See section 3.2
EG-No.: See section 3.2
CAS-No.: See section 3.2
BAUA-Registry No.: N-83976
BAUA- Registry No.: N-90312
Other designations: Not applicable.

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

1.2.1 Relevant identified uses of the substance or mixture

Disinfectant

Biocidal product

Product type 1 (human hygiene)
Product type 2 (disinfectants and algicides)
Product type 3 (veterinary hygiene)
Product type 4 (food and feed area)
Product type 5 (drinking water)
Product type 11 (Protective agents for liquids in cooling and processing systems)
Product type 12 (Slime control)

-> see also section 16

The marketability of the biocidal product results from the BAUA registration number N-83976 and a LoA (Letter of Access). The inclusion of Treox Industry GmbH in the article 95 list of active substances is completed according to ACC-D-1432836-52-00 / F.

-> see also section 15

1.2.2 Relevant identified uses of the substance or mixture advised against

So far, no uses have been identified that need to be discouraged.

1.3 Data about the manufacturer

Manufacturer / Supplier:

TREOX GmbH
Brokeloher Straße 18-22
DE - 31628 Landesbergen

Telefon / Telefax / E-Mail:

+49 5025 8923-0/ - / info@treox.de

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1.4 Emergency telephone number:

Emergency call: +49-30-19 240
Email: mail@giftnotruf.de
Giftnotruf Berlin
Charité-Universitätsmedizin Berlin

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Dermatological test at humans with "very good" passed.

Classification according to Regulation (EG) No. 1272/2008:

2.2 Label elements

Labeling elements according to regulation (EG) No. 1272/2008

Pictogram / Hazard symbol:
None.

Signal word / hazard designation:
Not applicable.

Hazardous components for labeling:
Not applicable.

Hazard statements:
None.

Safety instructions:
Safety instructions - prevention
P273 Avoid release to the environment.

Safety instructions - disposal
P501 Dispose of contents / container for disposal in accordance with local / regional / national / international regulations.

Other marking elements
Not applicable.

2.3 Other hazards

PBT and vPVB properties: Not applicable.

Special hazard warning for humans and the environment:

If the pH level falls below 6 by the addition of acids, the formation of elemental chlorine is possible (see Section 7).
The mixture is not suitable for drinking.

SECTION 3: Composition / information on ingredients

3.1 Substances

Not applicable. The substance is a mixture.

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3.2 Mixtures

Substances name: TREOX D

Active chlorine released from Hypochlorous acid,
Sodium hypochlorite
TREOX D contains up to 0,5 % active agents.

Components of the mixture:

Substances name: Hypochlorous acid
Molecular formula: HOCl
Molar mass: 52,46 g/mol
Index-No.: -
EG-No.: 232-232-5
CAS-No.: 7790-92-3
Proportion of: 0,005 – 0,05 % (50 - 500 mg/l (ppm))

Substances name: Sodium hypochlorite
Molecular formula: NaOCl
Molar mass: 74,46 g/mol
Index-No.: 017-011-00-1
EG-No.: 231-668-3
CAS-No.: 7681-52-9
Proportion of: 0,495 - 0,45 % (4950 - 4500 mg/l (ppm))
Hazard warnings: H314, H318, H400 (M=10) , H410 (M=1)

Substances name: Sodium chloride
Molecular formula: NaCl
Molar mass: 58,44 g/mol
Index-No.: -
EG-No.: 231-598-3
CAS-No.: 7681-52-9
Proportion of: 1,5 - 2.0 %

Substances name: Purified water
Molecular formula: H₂O
Molar mass: 18,02 g/mol
Index-No.: -
EG-No.: 231-791-2
CAS-No.: 7732-18-5
Proportion of: 98,0 – 97,5 %

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:

Skin, eye or respiratory reactions may occur in case of hypersensitivity.
If symptoms persist, call a physician.

After inhalation:

In case of incompatibility, give affected person fresh air. If symptoms persist, consult a physician.

After skin contact:

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In case of incompatibility, rinse contaminated skin with copious amounts of water. Remove contaminated clothing and shoes. Wash before reuse. If symptoms persist, consult a physician.

After eye contact:

In case of incompatibility, rinse immediately with plenty of water with the eyelid open for at least 10 minutes. Check for contact lenses and remove if present. If symptoms persist, consult a physician.

After ingestion:

In case of incompatibility, rinse out the mouth. Drink water (200 - 300 ml) in small sips (dilution effect). For larger quantities, vomiting makes sense. No neutralization experiments. If symptoms occur, consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

The main known symptoms and effects are described in Section 11.
If used correctly, no danger is to be expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment of symptoms. No specific antidote known.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable:

Carbon dioxide (CO₂), alcohol resistant foam, dry chemical, water spray.
Extinguishing measures to suit the environment.

5.2 Special hazards arising from the substance or mixture

Non-combustible material.

5.3 Advice for firefighters

No special measures required, as substance is not combustible.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

None.

(General Advice in case of hypersensitivity: Avoid product contact and inhalation.)

6.2 Environmental precautions

The product is biodegradable and has a limited activity period so there is no risk to the environment.

6.3 Methods and material for containment and cleaning up

For larger quantities:

Pump off the product. Diluted with water it is disposable through the sewer.

After the end of the activity period, the product should be treated like salt water.

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For more information, contact the manufacturer.

In case of rests:

Remove material with normal disposable cloths. Collect small quantities (up to approx. 1 L) with suitable equipment and dispose of in the sewer.

6.4 Reference to other sections

None.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Measures for protection against fire and explosions:

Usual measures of preventive fire protection. No flammable substance.
Avoid contact with clothing with the concentrate as the textiles may discolor. The mixture is not suitable for drinking.
Keep container tightly closed when not in use.
Test textiles in an inconspicuous place with TREOX D. Discoloration may occur.

Measures for the prevention of dusts and aerosols:

None.

Measures to protect the environment:

None.

General hygiene measures:

None.

7.2 Conditions for safe storage, including any incompatibilities

Information on storage conditions:

Keep container tightly closed in a cool and dry place. Protect from heat and light.

Requirements for storage rooms and containers:

Storage in PE-HD containers. Other containers possible.
When using metal alloys, perform a corrosion test.

Storage class:

None.

7.3 Specific end use(s)

Sectoral and sectoral guidelines:

When stored properly, unopened containers can be stored for 12 months.
Use opened containers within 6 months.

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SECTION 8: Exposure controls / personal protection

8.1 Control parameters

8.1.1 Occupational Exposure Limits and / or Biological Occupational Exposure Limits (AGW) Germany

Substance name:	Sodium hypochlorite solution;
CAS No. : 7681-52-9	(No AGW set)
DNEL	Sodium hypochlorite solution ...% Cl active
DNEL workers:	Short-term exposure - systemic and local effects, inhalation: 3.1 mg/m ³
DNEL worker:	Long-term exposure - systemic and local effects, inhalation: 1.55 mg/m ³
DNEL consumers:	Long-term exposure - systemic and local effects, inhalation: 1.55 mg/m ³
DNEL consumer:	Long-term exposure - systemic effects, inhalation: 0.26 mg/m ³
PNEC values	Sodium hypochlorite solution ...% Cl active
Wastewater treatment plant:	0.03 mg/l
Seawater:	0.000042 mg/l
Fresh water:	0.00021 mg/l
Sporadic release:	0.00026 mg/l
Soil:	Exposure of the soil is not expected.
Sediment (seawater):	Exposure of the sediment is not expected.
Sediment (fresh water):	Sediment exposure is not expected.
Oral intake:	(Secondary 11.1 mg/kg poisoning)

Released products when the critical pH value falls below 6 caused by the improper mixing of TREOX D with acids.

The following information's are solely relevant in case of misuse of TREOX D.

Substance name:	Chlorine
CAS No. : 7681-52-9	Sodium hypochlorite solution;
CAS No.: 7782-50-5	Chlorine
Type:	Limit
Germany, BGW Long-term:	No information available.
Europe, EU; STEL :	0.5 ppm
Germany, TRGS 900	
- AGW :	0.5 ppm; 1.5 mg / m ³
- peak limit:	1 (l)
- Remarks:	
DFG:	Senate Commission for the Testing of Hazardous Substances of the DFG (MAK Commission).
EU	European Union (The EU has set an air threshold: deviations in value and peak limitation are possible).
Y	There is no risk of damage to the fetus if the occupational exposure limit value and the biological limit value (BGW) are observed.

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8.2 Exposure controls / Personal protection equipment

Appropriate engineering controls:

A limit is not expected. Only by spraying (aerosol formation) is there a burden on the respiratory air.

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Ensure good ventilation. This can be achieved by local exhaust or general exhaust air.

Appropriate assessment methods for verifying the effectiveness of the protective measures taken include metrological and non-metrological investigative methods such as those specified in the Technical Rules for Hazardous Substances (TRGS) 402 and BS EN 14042 "Workplace Areas, Guidance for the Implementation and Application of Procedures for Assessing Exposure to Chemical and Biological Agents . " are described.

Personal protective equipment:

If used properly, no protective equipment is required. In case of hypersensitivity, the use of personal protective equipment should be determined according to quantity and concentration.

Respiratory protection:

When used properly, respiratory protection is not required.

Skin protection:

When used properly no skin protection is required.

Gloves:

If used properly, no gloves are required.

For sensitive skin, it is recommended to wear solvent- and alkali-resistant protective gloves according to EN 374.

With full contact:

Glove material:	Butyl rubber
Layer thickness (mm):	0.7
Breakthrough time (min.):	> 480

In splash contact:

Glove material:	Nitrile rubber
Layer thickness (mm):	0.4
Breakthrough time (min.):	> 120

Eye protection:

If used properly, eye protection is not required.

Limitation and monitoring of environmental exposure:

See sections 6 and 7.

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SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid
Odour: Light swimming pool smell
Appearance: Colorless, clear liquid

Safety relevant basis data:

Parameter	Value	Methode	Comment
Vapor pressure (50°C)	-		n.d.
Flammability (solid, gaseous)	-		n.d.
Flash point (° C)	-		n.d.
Odor threshold	-		n.d.
Solubility in water (20th°C)	unlimited		
lower explosion limit	-		n.d.
Upper explosion limite	-		n.d.
Oxidizing properties	Ca. 840mV		
PH value (20 ° C) concentrate	9,0-9,5		n.d.
PH value (20 ° C) application solution	8,9-9,4		
Vapor density (20 ° C)	-		n.d.
Relative density (20 ° C)	Ca. 1Kg/L		
Initial boiling point / range (° C)	-		n.d.
Melting point / freezing point (° C)	-		n.d.
Self-decomposition temperature (° C)	-		n.d.
Evaporation rate	-		n.d.
Partition coefficient	-		n.d.
Viscosity, flow time (23 ° C)	-		n.d.
Viscosity, dynamic (mPas / 20 ° C)	-		n.d.
Explosive properties	-		n.a.

n.d. = not determined n.a. = not applicable

9.2. Other information

Subject dispensers to a corrosion test.
Do not allow textiles to come into contact with the concentrate. Discoloration possible.
Test textiles in an inconspicuous place with TREOX D. Discoloration may occur.

SECTION 10: Stability and reactivity

10.1. Reactivity

No hazardous reactions if stored and handled as prescribed / indicated. Lowering the PH value below 6 by the addition of acids will allow the release of small amounts of chlorine (see section 7).

10.2. Chemical stability

The product is chemically stable if the regulations / instructions for storage and handling are observed.

10.3. Possibility of hazardous reactions

If used properly, no hazardous reactions are expected.

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10.4. Conditions to avoid

The product should not be heated above 60 ° C. Mixing with acids should be avoided.

10.5. Incompatible materials

For metals, there is a risk of corrosion. Alloys are to be tested for resistance.

10.6. Hazardous decomposition products

See section 5.2: Non-combustible material.

If the pH falls below 6 by the addition of acids, the formation of elemental chlorine is possible.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

There are no toxicological findings on the mixture.

Dermatological test on humans with "very good" passed.

Acute toxicity:

Non-toxic.

Skin corrosion / irritation:

For TREOX D not relevant for classification.

Data on sodium hypochlorite show that skin irritations can occur due to hypersensitivity.

Eye damage / irritation:

For TREOX D not relevant for classification.

Data on sodium hypochlorite show that conjunctival irritation can occur with hypersensitivity.

Respiratory or skin sensitization:

For TREOX D not relevant for classification.

Data on sodium hypochlorite show that mucosal irritations can occur in case of hypersensitivity.

Germ cell mutagenicity:

Non-toxic, not mutagenic.

Carcinogenicity:

Not toxic, not carcinogen.

Reproductive toxicity:

TREOX D is not classified.

The mixture contains no substances classified as toxic to reproduction.

Specific target organ toxicity on single exposure:

Is not classified as specific organ toxic (single exposure).

Specific target organ toxicity on repeated exposure:

Is not classified as specific organ toxic (repeated exposure).

Aspiration hazard:

Not rated.

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SECTION 12: Ecological information

12.1. Toxicity

Not toxic.

12.2 Persistence and degradability

Fully biodegradable, reduction to common salt dissolved in water.

12.3 Bioaccumulative potential

No bioaccumulation potential due to low persistence.

12.4 Mobility in the floor

Behaves like water.

12.5 Results of PBT and vPvB assessment

For TREOX D not relevant for classification.

According to the information available, the criteria for classification as PBT or vPvB are not met.

12.6 Other harmful effects

No further relevant information available.

SECTION 13: Disposal considerations

13.1 Method of waste treatment

When handling the product or container, observe section 7.1.

Dispose of product quantities of more than 1 liter only diluted with water.

If recovery is not possible, waste must be disposed of in compliance with local regulatory requirements. Agree exact waste code with the waste disposal company.

Waste code:

20 01 30 (detergents other than those mentioned in 20 01 29).

Uncleaned packaging:

Remaining emptied, not dried containers must be removed according to the instructions of the disposal company.

15 01 02 (plastic packaging)

Cleaned packaging:

Non-contaminated and cleaned packaging can be recycled.

Recommended cleaning agent:

Water.

Special precautions:

None.

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SECTION 14: Transport information

14.1 UN number

Not applicable.

Additional information:

UN 1791 for hypochlorite solutions (class 8, C9, III) can not be assigned as the corrosion result according to ADR 2.2.8.1.5.3 (UN Part II, section 37) has been negative.

14.2 UN proper shipping name

ADR / RID:

No dangerous goods.

IMDG Code / ICAO-TI / IATA-DGR:

No dangerous goods.

14.3 Transport hazard classifications

ADR / RID / IMDG code / ICAO-TI / IATA-DGR:

Not applicable.

14.4 Packaging group

Not applicable.

14.5 Danger to the environment

Identification of environmentally hazardous substances

ADR / RID / IMDG code: no

ICAO-TI / IATA-DGR: no

14.6 Special precautions for the user

See sections 6 - 8.

14.7 Transport in bulk according to Annex II of the MARPOL Convention and in accordance with the IBC Code

The delivery takes place exclusively in traffic law approved and suitable packaging.

Pollution category (X, Y or Z): None

Ship type (1, 2 or 3): None

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SECTION 15: Legislation

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

EU regulations

Regulation 1272/2008 / EC (CLP / GHS) and supplements.

Regulation 1907/2006 / EC (REACH) and supplements.

Regulation (EU) No 2019/157 and supplements.

Council Directive 98/24/EG of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work, with complement.

Directive 2000/39/EG establishing an initial list of indicative occupational exposure limits for the implementation of **Directive 98/24/EG**.

Directive 2008/98 / EG of the European Parliament and of the Council of 19 November 2008 on waste.

Directive 94/62/EG on packaging and packaging waste (Waste Directive).

National regulations

Water hazard class:

WGK 1 - slightly hazardous to water (classification according to AwSV).

Technical Instructions Air (TA-Luft):

The following values for chlorine must not be exceeded in the exhaust gas flow:

In mass flow: 15 g/h
Mass concentration: 3 mg/m³

15.2 Chemical Safety Assessment

Not applicable to mixtures.

15.3 Regulations for biocidal products containing new active substances

By adding Treox industry GmbH to the Article 95 (1) list (EU) No 528/2012 the active substance for the product TREOX D "active chlorine generated from hypochlorous acid" in the product category PT1 (human hygiene) falls into the classification as a new active substance.

PT1 was approved by the ingredient sodium hypochlorite.

Decision number: ACC-D-1432836-52-00 / F

<https://echa.europa.eu/guidance-documents/guidance-on-biocides-legislation>

https://curia.europa.eu/jcms/jcms/Jo1_6308/

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SECTION 16: Other information

16.1 Changes to the last version

No data available.

16.2 Hints for biocidal applications:

Based on the information you provided, you were assigned an registration number beginning with N-. All in the biocidal product "TREOX D"
The active substances contained are for the selected product type (s) in Annex II of the delegates
Regulation (EU) No. 1062/2014 listed. Without prior approval, this biocidal Product according to § 28 paragraph 8 of the Chemicals Act, provided that the other Requirements are also met until the decision of the approval of the Active ingredient (s) will be made available on the market, but no later than December 31 2024. The current status of your maximum marketability (ChemBiozidmeldeV)
The biocidal product will be displayed under "Reported biocidal product".

The product TREOX D contains several biocidal ingredients.
The classification of the marketable product types is based on the approval of Baua.

Hypochlorous acid: DECISION ON INCLUSION IN THE LIST OF ACTIVE SUBSTANCES AND SUPPLIERS (Article 95 list) UNDER ARTICLE 95 (1) REGULATION (EU) No 528/2012
Decision number: ACC-D-1432836-52-00 / F
Case number: BC-DB056019-60
Asset number: EU-0022136-0000

Sanitizer: bactericidal, yeasticidal, limited sporicidal, limited virucidal and fungicidal.

Hygienic hand disinfection: rub the previously washed, injury-free, dry hands with at least 3 ml of solution according to EN 1500 standard rub-in procedure for 60 s without rinsing.

Hand disinfection: Treox GmbH recommends an application solution of 20% (1/5 TREOX D with water, 1000ppm)

Surface disinfectant:

PA 2, PA 4, bactericidal, levurocidal, limited sporicidal, limited virucidal and fungicidal.
Before use, check product compatibility with the surface to be treated and clean the surface to be treated.
Leave on for 15 minutes after application (surface must be completely wetted, application amount 40 to 50 ml / m2).
Treox GmbH recommends an application solution of 10% (1/10 TREOX D in water 500ppm).

Do not use for instrument disinfection (medical devices).

16.3 Abbreviations

AGW:	Workplace Exposure Limit
BGW:	Biological limit
ADR	European Convention on the International Carriage of Dangerous Goods by Road
CAS	Chemical Abstracts Service
DIN	Standard of the German Institute for Standardization
EG	European Community
EN	European Standard
ICAO-TI	International Civil Aviation Organization-Technical Instructions

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IMDG Code	International Maritime Code for Dangerous Goods
ISO	Standard of the International Standards Organization
MARPOL	Maritime Pollution Convention
PBT	Persistent, biocumulative, toxic
vPvB	Very persistent and very bioaccumulative
RID	Order for the International Carriage of Dangerous Goods by Rail
TRGS	Technical rules for hazardous substances
UN	United Nations
VwVwS	Administrative regulations for substances hazardous to water
WGK	Water hazard class
No.	Number
DNEL	Derived No Effect Level
PNEC	Predicted No Effect Concentration

16.4 Literature and data sources

REACH Regulation (EG) No. 1907/2006, as last amended by Regulation (EU) 2018/2005.

CLP Regulation (EG) No. 1272/2008, as last amended by Regulation (EU) 2017/776.

Internet:

<http://www.baua.de>
<http://gestis.itrust.de>
<http://www.gischem.de>
<https://www.reach-clp-biozid-helpdesk.de>

16.5 H and EUH phrases, dangers, safety phrases and / or safety instructions referred to in sections 2 to 15

Avoid the release of P273 into the environment.

P501 - Dispose of contents / container for disposal in accordance with local / regional / national / international regulations.

16.6 Additional information

The information provided in this safety data sheet is correct to the best of our knowledge at the time of going to press. This information is intended to provide guidance on the handling, processing, transport and disposal of the product mentioned in this safety data sheet. The information are not transferable to other products. If the product is mixed with other materials, mixed or processed, or subjected to processing, the data contained in this safety data sheet may not be transferred to the new material thus produced unless otherwise expressly stated otherwise.

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