

Dual Clean

Safety Data Sheet

according to the Hazardous Products Regulation (February 11, 2015)

Date of issue: 12/23/2016 Revision date: 06/27/2017 Supersedes: 12/23/2016 Version: 1.1

SDS No: 11073-0009

SECTION 1: Identification

1.1. Product identifier

Product form : Mixture
Product name : Dual Clean

1.2. Recommended use and restrictions on use

Recommended use : Cleaning agent, Restricted to professional users
Restrictions on use : The product should not be used for purposes other than those shown above without first referring to the supplier and obtaining written handling instructions

1.3. Supplier

i-clean Technologies GmbH
Mallastr. 69
D-68219 Mannheim - Germany
T +49 (0) 621 92109040 - F +49 (0) 621 92109041
info@i-clean-technologies.com - www.i-clean-technologies.com

1.4. Emergency telephone number

Emergency number : Emergency CONTACT (24-Hour-Number)
GBK/Infotrac ID 101074a : (USA domestic) 1 800 535 5053

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification (GHS-CA)

Skin corrosion/irritation Category 1A Causes severe skin burns and eye damage
Serious eye damage/eye irritation Category 1 Causes serious eye damage
Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS-CA labeling

Hazard pictograms (GHS-CA) :



Signal word (GHS-CA) :

Danger

Hazard statements (GHS-CA) :

Causes severe skin burns and eye damage

Precautionary statements (GHS-CA) :

Do not breathe dust
Wash hands thoroughly after handling
Wear protective gloves, protective clothing, eye protection
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water /shower
IF INHALED: Remove person to fresh air and keep comfortable for breathing
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER, a doctor
Wash contaminated clothing before reuse
Store locked up
Dispose of contents/container to in accordance with local and national regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-CA)

No data available

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

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3.2. Mixtures

Comments : Mixture of the substances listed below with harmless additives

Name	Chemical name / Synonyms	Product identifier	%	Classification (GHS-CA)
citric acid		(CAS-No.) 77-92-9	20 - 25	Skin Irrit. 2, H315 Eye Dam. 1, H318
sodium hydroxide, caustic soda	sodium hydroxide, caustic soda	(CAS-No.) 1310-73-2	20 - 25	Met. Corr. 1, H290 Skin Corr. 1A, H314
Silicic acid, disodium salt, pentahydrate		(CAS-No.) 10213-79-3	15 - 20	Met. Corr. 1, H290 Skin Corr. 1B, H314 STOT SE 3, H335
Alcohols, C16-18, ethoxylated		(CAS-No.) 68439-49-6	1 - 5	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319
Alcohols, C16-18 and C18, unsaturated, ethoxylated		(CAS-No.) 68920-66-1	< 5	Eye Irrit. 2A, H319

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Ensure of fresh air. Make the affected person rest and keep at warm. In the event of persistent symptoms receive medical treatment.
First-aid measures after skin contact	: Wash off immediately with soap and plenty of water. Get medical advice if skin irritation persists.
First-aid measures after eye contact	: Rinse immediately with plenty of water, also under the eyelids. Remove contact lenses, if present and easy to do. Continue rinsing. Consult an eye specialist immediately.
First-aid measures after ingestion	: Rinse mouth. Drink plenty of water. Do not give an unconscious person anything to drink. Call a physician immediately. Do not induce vomiting.
First-aid measures general	: If you feel unwell, seek medical advice. Remove and wash contaminated clothing before re-use.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after skin contact	: Causes skin irritation. Burns.
Symptoms/effects after eye contact	: Causes serious eye damage. Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.
Potential Adverse human health effects and symptoms	: If appropriately handled and if in accordance with the general hygienic rules, no damages to health have become known.

4.3. Immediate medical attention and special treatment, if necessary

Treatment	: Treat symptomatically.
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SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media	: Foam. Carbon dioxide. Dry powder. Water spray. Product itself does not burn. Fire-extinguishing activities according to surrounding.
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5.2. Unsuitable extinguishing media

Unsuitable extinguishing media	: Strong water jet.
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5.3. Specific hazards arising from the hazardous product

No additional information available

5.4. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Cool containers at risk with water spray jet.
Protection during firefighting	: Complete protective clothing. Self-contained breathing apparatus. Do not attempt to take action without suitable protective equipment.
Precautionary measures fire	: No special protective measures against fire required.
Other information	: Fire residues and contaminated firefighting water must be disposed of in accordance with the local regulations.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Use personal protective clothing. Ensure adequate air ventilation. Respirator must be worn if exposed to dust. Avoid contact with eyes, skin or mucous membrane.
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6.2. Methods and materials for containment and cleaning up

- Methods for cleaning up : Mechanically recover the product. Take up mechanically (sweeping, shoveling) and collect in suitable container for disposal. Minimize generation of dust.
- Other information : Dispose of materials or solid residues at an authorized site.

6.3. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection"

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Avoid contact with eyes, skin or mucous membrane. Keep container tightly closed. Store in original container.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Wash hands before breaks and at the end of workday. Do not eat, drink or smoke when using this product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep container tightly closed in a dry, cool and well-ventilated place. Keep only in original container.
- Incompatible products : Acids and oxidizing agents. Bases.
- Incompatible materials : Acids.
- Information on mixed storage : Keep away from food, drink and animal feeding stuffs.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

- Additional information : Obey TLV for common dust, if applicable

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure adequate ventilation, especially in confined areas.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Chemically resistant protective gloves. EN 374. Requirements can vary as a function of the use. Therefore it is necessary to adhere additionally to the recommendations given by the manufacturer of protective gloves. Select the appropriate glove material adhering to the breakthrough time, permeation rate and the degradation.

Eye protection:

Safety goggles with side protection (EN 166). Eye wash bottle with pure water (EN 15154). Safety glasses

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Not required for normal conditions of use.
breathing apparatus needed only when dust is formed. Respiratory protective device with a particle filter

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Solid
- Appearance : Powder.
- Color : white
- Odor : characteristic
- Odor threshold : No data available
- pH : ≈ 13
- pH solution : 1 %
- Relative evaporation rate (butyl acetate=1) : No data available
- Relative evaporation rate (ether=1) : No data available
- Melting point : Not determined
- Freezing point : Not applicable

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Boiling point	: Not determined
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not applicable
Flammability (solid, gas)	: Not applicable
Vapor pressure	: Not applicable
Vapor pressure at 50 °C	: No data available
Relative vapor density at 20 °C	: Not applicable
Relative density	: No data available
Specific gravity / density	: Not determined
Solubility	: Soluble in water.
Log Pow	: Not determined
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Explosive properties	: Product is not explosive.
Explosion limits	: Not applicable LEL: Not applicable UEL: Not applicable

9.2. Other information

VOC content : 0 %

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	: No decomposition if stored and applied as directed.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Reactions with acids. Reaction with metals causes release of hydrogen.
Conditions to avoid	: To avoid thermal decomposition, do not overheat.
Incompatible materials	: metals. Acids.
Hazardous decomposition products	: Fire may produce: Carbon monoxide. Carbon dioxide. Sulphur oxides. Nitrous fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

citric acid (77-92-9)	
LD50 oral rat	11700 mg/kg (OECD 401 method)
LD50 dermal rat	> 2000 mg/kg

Skin corrosion/irritation	: Causes severe skin burns and eye damage. pH: ≈ 13
Serious eye damage/irritation	: Causes serious eye damage. pH: ≈ 13
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential Adverse human health effects and symptoms	: If appropriately handled and if in accordance with the general hygienic rules, no damages to health have become known.
Symptoms/effects after skin contact	: Causes skin irritation. Burns.

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Symptoms/effects after eye contact	: Causes serious eye damage. Serious damage to eyes.
Symptoms/effects after ingestion	: Burns.
Other information	: The product has not been tested. The information is derived from the properties of the individual components.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Before neutralisation, the product may represent a danger to aquatic organisms.

citric acid (77-92-9)

LC50 fish 1	440 mg/l
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sodium hydroxide, caustic soda (1310-73-2)

EC50 Daphnia 1	40 mg/l
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12.2. Persistence and degradability

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Persistence and degradability	The surfactant(s) contained in this preparation complies (comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.
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12.3. Bioaccumulative potential

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Log Pow	Not determined
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citric acid (77-92-9)

Log Pow	-1.72
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Bioaccumulative potential	Low bio-accumulation can be estimated because of low log Po/w.
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12.4. Mobility in soil

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Log Pow	Not determined
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citric acid (77-92-9)

Log Pow	-1.72
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12.5. Other adverse effects

Other adverse effects	: hazardous to water. May cause pH changes in aqueous ecological systems.
GWPmix comment	: No known effects from this product.
Other information	: Do not release undiluted or in higher quantities into the groundwater, sewerage or waters. Neutralization is necessary before draining of to the purification plant.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations	: Can be incinerated according to local regulations. Empty containers should be taken for local recycling, recovery or waste disposal. Contaminated packaging should be emptied as far as possible and after appropriate cleansing may be taken for reuse. Packaging that cannot be cleaned should be disposed of like the product.
Additional information	: Hazardous waste.

SECTION 14: Transport information

14.1. Basic shipping description

In accordance with TDG

Transportation of Dangerous Goods

UN-No. (TDG)	: UN1823
Packing group	: II - Medium Danger
TDG Primary Hazard Classes	: 8 - Class 8 - Corrosives
Transport document description	: UN1823 SODIUM HYDROXIDE, SOLID (MIXTURE), 8, II
Proper Shipping Name (Transportation of Dangerous Goods)	: SODIUM HYDROXIDE, SOLID MIXTURE

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Hazard labels (TDG) : 8 - Corrosive substances



Explosive Limit and Limited Quantity Index : 1 kg
Excepted quantities (TDG) : E2
Passenger Carrying Road Vehicle or Passenger : 15 kg
Carrying Railway Vehicle Index

14.2. Transport information/DOT

No additional information available

14.3. Air and sea transport

IMDG

UN-No. (IMDG) : 1823
Proper Shipping Name (IMDG) : SODIUM HYDROXIDE, SOLID
Transport document description (IMDG) : UN 1823 SODIUM HYDROXIDE, SOLID (MIXTURE), 8, II
Class (IMDG) : 8 - Corrosive substances
Packing group (IMDG) : II - substances presenting medium danger
MFAG-No : 154

IATA

UN-No. (IATA) : 1823
Proper Shipping Name (IATA) : Sodium hydroxide, solid
Transport document description (IATA) : UN 1823 Sodium hydroxide, solid (MIXTURE), 8, II
Class (IATA) : 8 - Corrosives
Packing group (IATA) : II - Medium Danger

SECTION 15: Regulatory information

15.1. National regulations

citric acid (77-92-9)

Listed on the Canadian DSL (Domestic Substances List)

Alcohols, C16-18, ethoxylated (68439-49-6)

Listed on the Canadian DSL (Domestic Substances List)

Alcohols, C16-18 and C18, unsaturated, ethoxylated (68920-66-1)

Listed on the Canadian DSL (Domestic Substances List)

sodium hydroxide, caustic soda (1310-73-2)

Listed on the Canadian DSL (Domestic Substances List)

Silicic acid, disodium salt, pentahydrate (10213-79-3)

Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

15.2. International regulations

citric acid (77-92-9)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Alcohols, C16-18, ethoxylated (68439-49-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Alcohols, C16-18 and C18, unsaturated, ethoxylated (68920-66-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

sodium hydroxide, caustic soda (1310-73-2)

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Silicic acid, disodium salt, pentahydrate (10213-79-3)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

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SECTION 16: Other information

SDS Major/Minor : None
Date of issue : 12/23/2016
Revision date : 06/27/2017
Supersedes : 12/23/2016

Full text of H-phrases:

H290	May be corrosive to metals
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H319	Causes serious eye irritation
H335	May cause respiratory irritation

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