

Safety Data Sheet dated 15/12/2022, version 5

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

1.1. Product identifier

Mixture identification

Trade name: RATIO BK-4

UFI: CG21-A0RC-R006-NY4P

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

Recommended use:

Detergent for hard surfaces in food area.

Professional use (SU22) - Washing and cleaning products (PC35)

Uses advised against:

Different uses than recommended. Do not use in combination with other products.

1.3. Details of the supplier of the safety data sheet

Manufacturer:

SUTTER INDUSTRIES s.p.a. - Società con Unico Socio

15060 Borghetto Borbera (AL) Italia

Tel. +39 0143 631.1

Competent person responsible for the safety data sheet:

regulatory.affairs@sutter.it

1.4. Emergency telephone number

+39 0143 631.1 mon-fri 9.00/17.00

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)



Danger, Eye Dam. 1, Causes serious eye damage.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Danger

Hazard statements:

H318 Causes serious eye damage.

Precautionary statements:

P280 Wear eye protection.

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

P310 Immediately call a POISON CENTER or doctor/physician.

Special Provisions:

EUH210 Only for professional use. Safety data sheet available on request.

EUH208 Contains METHYLCHLOROISOTHIAZOLINONE, METHYLISOTHIAZOLINONE.

May produce an allergic reaction.

Contains

MONOETHANOLAMINE DODECYLBENZENE SULFONATE

ISOTRIDECANOL ETHOXYLATED

Product contents:

soap, phosphates, anionic surfactants, non-ionic surfactants < 5 %

Preservatives: METHYLCHLOROISOTHIAZOLINONE,
METHYLISOTHIAZOLINONE

Special provisions according to Annex XVII of REACH and subsequent amendments:
None

2.3. Other hazards

No PBT, vPvB or endocrine disruptor substances present in concentration $\geq 0.1\%$

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Not Applicable, the product is a mixture.

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

$\geq 3\% - < 5\%$ MONOETHANOLAMINE DODECYLBENZENE SULFONATE

CAS: 26836-07-7, EC: 248-024-2



3.1/4/Oral Acute Tox. 4 H302



3.2/2 Skin Irrit. 2 H315



3.3/1 Eye Dam. 1 H318

$\geq 1\% - < 3\%$ POTASSIUM COCOATE

CAS: 61789-30-8, EC: 263-049-9



3.3/2 Eye Irrit. 2 H319



3.2/2 Skin Irrit. 2 H315

$\geq 1\% - < 3\%$ ISOTRIDECANOL ETHOXYLATED

CAS: 69011-36-5



3.3/1 Eye Dam. 1 H318



3.1/4/Oral Acute Tox. 4 H302

$\geq 1\% - < 3\%$ SODIUM P-CUMENESULFONATE

REACH No.: 01-2119489411-37, CAS: 15763-76-5, EC: 239-854-6



3.3/2 Eye Irrit. 2 H319

$\geq 0.5\% - < 1\%$ C12-14 ALKYLDIMETHYLAMINES, N-OXIDES

REACH No.: 01-2119490061-47, CAS: 308062-28-4, EC: 931-292-6



3.1/4/Oral Acute Tox. 4 H302




3.2/2 Skin Irrit. 2 H315



3.3/1 Eye Dam. 1 H318


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 4.1/A1 Aquatic Acute 1 H400 M=1.

 4.1/C2 Aquatic Chronic 2 H411

< 0.0015% METHYLCHLOROISOTHIAZOLINONE, METHYLISOTHIAZOLINONE
Index number: 613-167-00-5, CAS: 55965-84-9, EC: 611-341-5

 3.1/2/Inhal Acute Tox. 2 H330


 3.1/2/Dermal Acute Tox. 2 H310

 3.1/3/Oral Acute Tox. 3 H301

 3.2/1B Skin Corr. 1B H314

 3.3/1 Eye Dam. 1 H318

 3.4.2/1A Skin Sens. 1A H317

 4.1/A1 Aquatic Acute 1 H400 M=100.

 4.1/C1 Aquatic Chronic 1 H410 M=100.

EUH071

Specific Concentration Limits:

C >= 0,6%: Skin Corr. 1B H314

0,06% <= C < 0.6%: Skin Irrit. 2 H315

0,06% <= C < 0.6%: Eye Irrit. 2 H319

C >= 0,0015%: Skin Sens. 1A H317

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Immediately take off all contaminated clothing.

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap.

OBTAIN IMMEDIATE MEDICAL ATTENTION.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

In case of eyes contact:

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Protect uninjured eye.

In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

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

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

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Acute effects:

Skin and eye irritation for contact
Irritation interior system if swallowed.

Until revision date of this document, are unknown chronic effects from the mixture contact with skin, eyes, inhalation, ingestion.

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO₂).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

The mixture does not contain ingredients classified as explosive according to EC Regulation 1272/2008 (CLP).

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus .

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

The mixture does not contain ingredients classified as explosive according to EC Regulation 1272/2008 (CLP).

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non emergency personnel:

Wear personal protection equipment.

Remove persons to safety.

See protective measures under point 7 and 8.

For emergency responders:

Wear personal protection equipment.

6.2. Environmental precautions

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

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water. To converge the product in containment tanks.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhalation of vapours and mists.

Don't use empty container before they have been cleaned.
Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

Contaminated clothing should be changed before entering eating areas.

Do not eat or drink while working.

7.2. Conditions for safe storage, including any incompatibilities

Store away from sunlight.

Store in a cool and well ventilated place.

Do not store in open or unlabeled containers.

Store away from heat sources.

Keep away from food, drink and feed.

Incompatible materials:

Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability. see also 1.2 and 7.2.

None in particular.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

None in particular, see paragraph 1.2

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Until the revision date of this document, no experimental data are available for the mixture. Below, listed occupational exposure limits, if available, for the components listed in paragraph 3.2.

DNEL Exposure Limit Values

Until the revision date of this document, no experimental data are available for the mixture. Below, listed the DNEL exposure limits, if available, for the components listed in paragraph 3.2.

SODIUM P-CUMENESULFONATE - CAS: 15763-76-5

Worker Industry: 7.6 mg/kg - Consumer: 3.8 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 53.6 mg/m³ - Consumer: 13.2 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 3.8 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

C12-14 ALKYLDIMETHYLAMINES, N-OXIDES - CAS: 308062-28-4

Worker Industry: 11 mg/kg - Consumer: 5.5 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 6.2 mg/m³ - Consumer: 1.53 mg/m³ - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 0.44 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Worker Industry: 0.27 % - Consumer: 0.27 % - Exposure: Human Dermal - Frequency: Long Term, local effects - Notes: in mixture (by weight)

PNEC Exposure Limit Values

Until the revision date of this document, no experimental data are available for the mixture. Below, listed the PNEC exposure limits, if available, for the components listed in paragraph 3.2.

SODIUM P-CUMENESULFONATE - CAS: 15763-76-5

Target: Fresh Water - Value: 0.23 mg/l

Target: Microorganisms in sewage treatments - Value: 100 mg/l

Target: Air - Value: 2.3 mg/l

C12-14 ALKYLDIMETHYLAMINES, N-OXIDES - CAS: 308062-28-4

Target: Marine water - Value: 0.00335 mg/l
 Target: Marine water sediments - Value: 0.524 mg/kg
 Target: Soil (agricultural) - Value: 1.02 mg/kg
 Target: Microorganisms in sewage treatments - Value: 24 mg/kg
 Target: Food chain - Value: 11.1 mg/kg
 Target: Fresh Water - Value: 0.034 mg/l
 Target: Air - Value: 0.034 mg/l
 Target: Freshwater sediments - Value: 5.24 mg/kg

8.2. Exposure controls

Eye protection:

Use close fitting safety goggles, don't use eye lens.(EN 166)

Protection for skin:

Use clothing that provides comprehensive protection to the skin, e.g. cotton, rubber, PVC or viton (EN 14605 in case of splashes or EN 13982 in case of dust)

Protection for hands:

Use protective gloves that provides comprehensive protection, e.g. P.V.C., neoprene or rubber. (ex. EN 388 - EN 374 protection factor 6, corresponding to a breakthrough time >480 minutes).

Due to great diversity of types, observe the operating instructions of the manufacturer with respect to substances listed in paragraph 3.2.

Respiratory protection:

Not needed for normal use.

Thermal Hazards:

The product is not flammable or explosive - see paragraph 2.1. The product contains no explosive components.

Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.

Environmental exposure controls:

The product is not dangerous for the environment - see section 2.1.

Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.

Appropriate engineering controls:

No further technical checks suitable for your product under normal conditions.

See also section 1.2, section 7 and Exposure Scenario - Annex I of this document.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes:
Physical state:	Liquid	Visual	--
Colour:	white/yellow	Visual	--
Odour:	Technical	Olfactory	Absence of fragrances
Odour threshold:	Evident	Olfactory	--
Melting point/freezing point:	Not Relevant	--	Parameter not relevant for the type of product
Boiling point or initial boiling point and boiling range:	>= 100 °C	--	Estimated value on chemical / physical properties of components
Flammability:	non-flammable	--	Estimated parameter on chemical / physical properties of components.
Lower and upper explosion limit:	Not Relevant	--	Parameter not relevant for the type of product
Flash point:	> 60 ° C	--	Estimated value on chemical / physical properties of

			components
Auto-ignition temperature:	Not Relevant	--	Parameter not relevant for the type of product
Decomposition temperature:	Not Relevant	--	Parameter not relevant for the type of product
pH:	9,3 +/- 0,5	Instrumental control	--
Kinematic viscosity:	Not Relevant	--	Parameter not relevant. Not viscous mixture.
Solubility in water:	Total	--	Internal tests
Solubility in oil:	Partial	--	Internal tests
Partition coefficient n-octanol/water (log value):	< 1000	--	Value estimated based on the solubility of the mixture.
Vapour pressure:	Not Relevant	--	Parameter not relevant for the type of product
Density and/or relative density:	1.050 g/ml	Instrumental control	--
Relative vapour density:	Not Relevant	--	Parameter not relevant for the type of product
Particle characteristics:			
Particle size (average and range)	Not Relevant	--	Parameter not relevant for the type of product

9.2. Other information
No other relevant information

SECTION 10: Stability and reactivity

10.1. Reactivity

Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.
Do not use in combination with other products.

10.2. Chemical stability

Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.

10.3. Possibility of hazardous reactions

Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.
See also section 7.2.

10.4. Conditions to avoid

Different uses than recommended. Do not use in combination with other products. See also 1.2 and 7.2
Avoid direct sunlight and exposure to heat sources.

10.5. Incompatible materials

Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability. see also 1.2 and 7.2.

10.6. Hazardous decomposition products

Until the revision date of this document, no adverse effects and symptoms to exposure of the product are known, including chemical reactivity and instability.
Do not use in combination with other products.

SECTION 11: Toxicological information

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

Toxicological information of the product:

RATIO BK-4

- a) acute toxicity
Not classified
Based on available data, the classification criteria are not met
- b) skin corrosion/irritation
Not classified
Based on available data, the classification criteria are not met
- c) serious eye damage/irritation
The product is classified: Eye Dam. 1 H318
- d) respiratory or skin sensitisation
Not classified
Based on available data, the classification criteria are not met
- e) germ cell mutagenicity
Not classified
Based on available data, the classification criteria are not met
- f) carcinogenicity
Not classified
Based on available data, the classification criteria are not met
- g) reproductive toxicity
Not classified
Based on available data, the classification criteria are not met
- h) STOT-single exposure
Not classified
Based on available data, the classification criteria are not met
- i) STOT-repeated exposure
Not classified
Based on available data, the classification criteria are not met
- j) aspiration hazard
Not classified
Based on available data, the classification criteria are not met

Toxicological information of the main substances found in the product:

Below are reported, if available, the toxicological information of the components listed in paragraph 3.2.

MONOETHANOLAMINE DODECYLBENZENE SULFONATE - CAS: 26836-07-7

a) acute toxicity:

Test: LC50 - Route: Oral - Species: Rat > 2000 mg/kg

ISOTRIDECANOL ETHOXYLATED - CAS: 69011-36-5

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 555.556 mg/kg

Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg - Source: OECD 402

b) skin corrosion/irritation:

Test: Skin Irritant - Route: Skin - Species: Rabbit Negative - Source: OECD 404

c) serious eye damage/irritation:

Test: Eye Corrosive - Species: Rabbit Positive - Source: OECD 405

SODIUM P-CUMENESULFONATE - CAS: 15763-76-5

a) acute toxicity:

Test: LC50 - Route: Oral - Species: Rat > 7000 mg/kg

Test: LD50 - Route: Skin - Species: Rabbit > 2000 mg/kg

Test: LC50 - Route: Inhalation - Species: Rat > 6.41 mg/l - Duration: 4h

b) skin corrosion/irritation:

Test: Skin Irritant Negative

c) serious eye damage/irritation:

Test: Eye Irritant Positive

d) respiratory or skin sensitisation:

Test: Skin Sensitization Negative

e) germ cell mutagenicity:

Test: Mutagenesis Negative

- f) carcinogenicity:
 - Test: NOAEL = 240 mg/kg bw/d
 - i) STOT-repeated exposure:
 - Test: NOAEL - Route: Oral > 763 mg/kg bw/d
 - Test: NOAEL - Route: Skin > 440 mg/kg bw/d
- C12-14 ALKYLDIMETHYLAMINES, N-OXIDES - CAS: 308062-28-4
- a) acute toxicity:
 - Test: LD50 - Route: Oral - Species: Rat = 1064 mg/kg
 - Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg
 - b) skin corrosion/irritation:
 - Test: Skin Irritant - Route: Skin - Species: Rabbit Positive
 - c) serious eye damage/irritation:
 - Test: Eye Corrosive - Species: Rabbit Positive
 - d) respiratory or skin sensitisation:
 - Test: Skin or Resp. Sensitization Negative - Source: OECD 406
 - Test: NOAEL - Route: Oral - Species: Rat = 88 mg/kg - Source: OECD 408
- METHYLCHLOROISOTHIAZOLINONE, METHYLISOTHIAZOLINONE - CAS: 55965-84-9
- a) acute toxicity:
 - Test: LC50 - Route: Inhalation Dust - Species: Rat = 0.31 mg/l - Duration: 4h
 - b) skin corrosion/irritation:
 - Test: Skin Corrosive - Route: Skin Positive
 - c) serious eye damage/irritation:
 - Test: Eye Corrosive Positive
 - d) respiratory or skin sensitisation:
 - Test: Skin Sensitization - Route: Skin Positive

11.2. Information on other hazards

Endocrine disrupting properties:

No endocrine disruptor substances present in concentration \geq 0.1%

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment.

Until the revision date of this document, are not available experimental data on the mixture.

Below are reported, if available, the eco-toxicological information of the components listed in paragraph 3.2.

RATIO BK-4

Not classified for environmental hazards

Based on available data, the classification criteria are not met

ISOTRIDECANOL ETHOXYLATED - CAS: 69011-36-5

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish > 1 mg/l - Duration h: 96 - Notes: Cyprinus carpio

Endpoint: EC50 - Species: Daphnia > 1 mg/l - Duration h: 48 - Notes: Daphnia magna

Endpoint: EC50 - Species: Algae > 1 mg/l - Duration h: 72 - Notes: Desmodesmus subspicatus

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Daphnia > 1 mg/l - Duration h: 504 - Notes: Daphnia magna

c) Bacteria toxicity:

Endpoint: EC10 - Species: Microorganisms / Effect on activated sludge: > 10000 mg/l - Duration h: 17

SODIUM P-CUMENESULFONATE - CAS: 15763-76-5

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 1000 mg/l - Duration h: 96 - Notes: Oncorhynchus mykiss

Endpoint: EC50 - Species: Algae > 230 mg/l - Duration h: 96 - Notes: Selenastrum capricornutum

Endpoint: EC50 - Species: Daphnia = 1000 mg/l - Duration h: 48 - Notes: Daphnia Magna

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Algae = 31 mg/l - Duration h: 96

c) Bacteria toxicity:

Endpoint: NOEC - Species: Microorganisms / Effect on activated sludge: = 1000 mg/l - Duration h: 3

C12-14 ALKYLDIMETHYLAMINES, N-OXIDES - CAS: 308062-28-4

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 2.67 mg/l - Duration h: 96 - Notes: Pimephales promelas

Endpoint: EC50 - Species: Daphnia = 3.1 mg/l - Duration h: 48 - Notes: Daphnia magna

Endpoint: EC50 - Species: Algae = 0.143 mg/l - Duration h: 72 - Notes: Pseudokirchneriella subcapitata

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Algae = 0.067 mg/l

Endpoint: NOEC - Species: Fish = 0.42 mg/l - Duration h: 7248 - Notes: Pimephales promelas

Endpoint: NOEC - Species: Daphnia = 0.7 mg/l - Duration h: 504 - Notes: Daphnia magna

c) Bacteria toxicity:

Endpoint: EC10 - Species: Microorganisms / Effect on activated sludge: = 24 mg/l - Duration h: 18 - Notes: Pseudomonas putida

METHYLCHLOROISOTHIAZOLINONE, METHYLISOTHIAZOLINONE - CAS: 55965-84-9

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 0.19 mg/l - Duration h: 96 - Notes: Oncorhynchus mykiss

Endpoint: EC50 - Species: Daphnia = 0.16 mg/l - Duration h: 48

Endpoint: EC50 - Species: Algae = 0.018 mg/l - Duration h: 72 - Notes: Selenastrum capricornutum

12.2. Persistence and degradability

Until the revision date of this document, are not available experimental data on the mixture. Below are reported, if available, the eco-toxicological information of the components listed in paragraph 3.2.

ISOTRIDECANOL ETHOXYLATED - CAS: 69011-36-5

Biodegradability: Readily biodegradable - Test: CO₂ production - Duration: 28 days - %: >60

Test: OECD 301E - %: 90

SODIUM P-CUMENESULFONATE - CAS: 15763-76-5

Biodegradability: Readily biodegradable

C12-14 ALKYLDIMETHYLAMINES, N-OXIDES - CAS: 308062-28-4

Biodegradability: Readily biodegradable - Test: OECD 301B - Duration: 28 days - %: 90

The surfactant(s) contained in this preparation complies with the biodegradability criteria laid down in Regulation (EC) No 648/2004 on detergents. All supporting data are kept available to the competent authorities of the Member States and will be provided to those authorities if they so request or at the request of a detergent manufacturer.

12.3. Bioaccumulative potential

Until the revision date of this document, are not available experimental data on the mixture. Below are reported, if available, the eco-toxicological information of the components listed in paragraph 3.2.

ISOTRIDECANOL ETHOXYLATED - CAS: 69011-36-5

Bioaccumulation: Not bioaccumulative

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Bioaccumulation: Slightly bioaccumulative - Test: Log Pow - Partition coefficient 2.7

- 12.4. Mobility in soil
Until the revision date of this document, are not available experimental data on the mixture.
Below are reported, if available, the eco-toxicological information of the components listed in paragraph 3.2.
Not applicable
- 12.5. Results of PBT and vPvB assessment
vPvB Substances: None - PBT Substances: None
- 12.6. Endocrine disrupting properties
No endocrine disruptor substances present in concentration $\geq 0.1\%$
- 12.7. Other adverse effects
Until the revision date of this document, unknown adverse effects and symptoms towards the environment.

SECTION 13: Disposal considerations

- 13.1. Waste treatment methods
Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force. Do not discharge into the ground or into drains.
See also section 6

SECTION 14: Transport information

- 14.1. UN number or ID number
Not classified as dangerous in the meaning of transport regulations.
- 14.2. UN proper shipping name
Not applicable
- 14.3. Transport hazard class(es)
Not applicable
- 14.4. Packing group
Not applicable
- 14.5. Environmental hazards
ADR-Environmental Pollutant: No
IMDG-Marine pollutant: No
- 14.6. Special precautions for user
Not applicable
- 14.7. Maritime transport in bulk according to IMO instruments
Not applicable

SECTION 15: Regulatory information

- 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Dir. 98/24/EC (Risks related to chemical agents at work)
Dir. 2000/39/EC (Occupational exposure limit values)
Regulation (EC) n. 1907/2006 (REACH)
Regulation (EC) n. 1272/2008 (CLP)
Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013
Regulation (EU) n. 2020/878
Regulation (EU) n. 286/2011 (ATP 2 CLP)
Regulation (EU) n. 618/2012 (ATP 3 CLP)
Regulation (EU) n. 487/2013 (ATP 4 CLP)
Regulation (EU) n. 944/2013 (ATP 5 CLP)
Regulation (EU) n. 605/2014 (ATP 6 CLP)

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Regulation (EU) n. 2015/1221 (ATP 7 CLP)
 Regulation (EU) n. 2016/918 (ATP 8 CLP)
 Regulation (EU) n. 2016/1179 (ATP 9 CLP)
 Regulation (EU) n. 2017/776 (ATP 10 CLP)
 Regulation (EU) n. 2018/669 (ATP 11 CLP)
 Regulation (EU) n. 2018/1480 (ATP 13 CLP)
 Regulation (EU) n. 2019/521 (ATP 12 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:
 None

Where applicable, refer to the following regulatory provisions :

Directive 2012/18/EU (Seveso III)
 Regulation (EC) nr 648/2004 (detergents).
 Dir. 2004/42/EC (VOC directive)

Provisions related to directive EU 2012/18 (Seveso III):
 Seveso III category according to Annex 1, part 1
 None

15.2. Chemical safety assessment

No, for instructions on safe mangling you see Sections 7 and 8 and the exposure scenario - Annex I of this document.

A Chemical Safety Assessment has been carried out for the mixture.

No Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out:

None

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H302 Harmful if swallowed.
 H315 Causes skin irritation.
 H318 Causes serious eye damage.
 H319 Causes serious eye irritation.
 H400 Very toxic to aquatic life.
 H411 Toxic to aquatic life with long lasting effects.
 H314 Causes severe skin burns and eye damage.
 H332 Harmful if inhaled.
 H312 Harmful in contact with skin.
 H330 Fatal if inhaled.
 H310 Fatal in contact with skin.
 H301 Toxic if swallowed.
 H317 May cause an allergic skin reaction.
 H410 Very toxic to aquatic life with long lasting effects.
 EUH071 Corrosive to the respiratory tract.

Hazard class and hazard category	Code	Description
Acute Tox. 2	3.1/2/Dermal	Acute toxicity (dermal), Category 2
Acute Tox. 2	3.1/2/Inhal	Acute toxicity (inhalation), Category 2
Acute Tox. 3	3.1/3/Oral	Acute toxicity (oral), Category 3
Acute Tox. 4	3.1/4/Dermal	Acute toxicity (dermal), Category 4
Acute Tox. 4	3.1/4/Inhal	Acute toxicity (inhalation), Category 4
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
Skin Corr. 1A	3.2/1A	Skin corrosion, Category 1A

Skin Corr. 1B	3.2/1B	Skin corrosion, Category 1B
Skin Irrit. 2	3.2/2	Skin irritation, Category 2
Eye Dam. 1	3.3/1	Serious eye damage, Category 1
Eye Irrit. 2	3.3/2	Eye irritation, Category 2
Skin Sens. 1A	3.4.2/1A	Skin Sensitisation, Category 1A
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1
Aquatic Chronic 2	4.1/C2	Chronic (long term) aquatic hazard, category 2

This safety data sheet has been completely updated in compliance to Regulation 2020/878. Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
Eye Dam. 1, H318	Calculation method

This document was prepared by a competent person who has received appropriate training.

Main bibliographic sources:

ECDIN - Environmental Chemicals Data and Information Network - Joint Research Centre, Commission of the European Communities
SAX's DANGEROUS PROPERTIES OF INDUSTRIAL MATERIALS - Eight Edition - Van Nostrand Reinold

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality.

It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.
- ATE: Acute Toxicity Estimate
- ATEmix: Acute toxicity Estimate (Mixtures)
- CAS: Chemical Abstracts Service (division of the American Chemical Society).
- CLP: Classification, Labeling, Packaging.
- DNEL: Derived No Effect Level.
- EC0/10/20/50/100: Effective concentration, for 0/10/20/50/100 percent of test population.
- EINECS: European Inventory of Existing Commercial Chemical Substances.
- GefStoffVO: Ordinance on Hazardous Substances, Germany.
- GHS: Globally Harmonized System of Classification and Labeling of Chemicals.
- IATA: International Air Transport Association.
- IATA-DGR: Dangerous Goods Regulation by the "International Air Transport Association" (IATA).
- ICAO: International Civil Aviation Organization.
- ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO).
- IMDG: International Maritime Code for Dangerous Goods.
- INCI: International Nomenclature of Cosmetic Ingredients.
- KSt: Explosion coefficient.
- LC0/10/20/50/100: Lethal concentration, for 0/10/20/50/100 percent of test population.
- LD0/10/20/50/100: Lethal dose, for 0/10/20/50/100 percent of test population.



Safety Data Sheet
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100:	
NOEC:	No Observed Effect Concentration
NOAEL(R)/N	No Observed Adverse Effect Level(Repeated)/Concentration
OAEC:	
OECD:	Organisation for Economic Co-operation and Development
PNEC:	Predicted No Effect Concentration.
RID:	Regulation Concerning the International Transport of Dangerous Goods by Rail.
STEL:	Short Term Exposure limit.
STOT:	Specific Target Organ Toxicity.
TLV:	Threshold Limiting Value.
TWA:	Time-weighted average
WGK:	German Water Hazard Class.

Safety Data Sheet
RATIO BK-4



ANNEX I

PROFESSIONAL PRODUCT – DETERGENT FOR HARD SURFACES

Title of exposure scenario	
Detergent for general cleaning: Manual process.	
Use description	
Sector Use	SU22 – Professional use
Product Category	PC35 – Washing and cleaning products (including solvent based products)
Description of activities/process considered on exposure scenario.	
Dilute with water as specified on the label, if necessary.	
Use following the use instruction as specified on the label.	
Leave on.	
Rinse, if necessary.	
Frequency and duration	
Use phase	- 1 time a day for daily - cleaning detergents - Periodical for specific detergents
Relevant limit values of ingredients, if available, are stated in section 8 of the SDS.	
Physical appearance and concentration	
Liquid. To dilute or ready to use.	
In section 2 of the SDS of product and on the label, the classification of mixture is provided.	
Mixture classification is based on ingredients classification and on chemical/physical properties stated in section 9 of the SDS of product.	
Use conditions	
Room temperature	
Good general ventilation at workplace is sufficient.	
Protection	
See section 8 of the SDS of product to more information on PPE.	Training of worker to use and maintenance of PPE is supposed.
Don't eat or drink, don't smoke.	Avoid contact with damaged skin.
No open flame.	Do not use in combination with other products
Wash hand after use.	
In case of accidental release: dilute with water and dry.	
See section 6 of the SDS in case of accidental release	
Follow use instruction as specified on the label or on technical sheet. Use good occupational hygiene practices as specified in section 7 on the SDS.	
Environmental measures	
See section 6 of the SDS in case of accidental release	
See section 12 of the SDS for ecotoxicological information of mixture and dangerous ingredients.	
See section 13 of the SDS for disposal considerations.	

Note:

SDS: Safety Data Sheet

PPE: Personal Protection Equipment