

## Safety Data Sheet RATIO BK-3

Safety Data Sheet dated 19/4/2017, version 1

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

1.1. Product identifier

Mixture identification

Trade name: RATIO BK-3

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

Recommended use:

Detergent for hard surfaces.

Professional use (SU22) - Products for washing and cleaning (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)

 Warning, Eye Irrit. 2, Causes serious eye irritation.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

Hazard pictograms:



Warning

Hazard statements:

H319 Causes serious eye irritation.

Precautionary statements:

P264 Wash hands thoroughly after handling.

P280 Wear eye protection.

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

Special Provisions:

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

Product contents:

non-ionic surfactants

5 - 15 %

## Safety Data Sheet

### RATIO BK-3

anionic surfactants < 5 %

The product also contains: Perfumes

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

#### 2.3. Other hazards

vPvB Substances: None - PBT Substances: None

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:


>= 15% - < 20% CITRIC ACID MONOHYDRATE

REACH No.: 01-2119457026-42, CAS: 5949-29-1, EC: 201-069-1

 3.3/2 Eye Irrit. 2 H319

>= 5% - < 7% ALKYL POLYGLYCOL ETHER C10-16

CAS: 69227-22-1

 3.1/4/Oral Acute Tox. 4 H302

 3.3/1 Eye Dam. 1 H318

>= 3% - < 5% 1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER


REACH No.: 01-2119457435-35, Index number: 603-064-00-3, CAS: 107-98-2, EC: 203-539-1

 2.6/3 Flam. Liq. 3 H226

 3.8/3 STOT SE 3 H336

>= 1% - < 3% ALKYL ETHER SULFATE C12-14, SODIUM SALT

REACH No.: 01-2119488639-16, CAS: 68891-38-3, EC: 500-234-8


 3.2/2 Skin Irrit. 2 H315

4.1/C3 Aquatic Chronic 3 H412

 3.3/1 Eye Dam. 1 H318

>= 1% - < 3% ETHANOL

REACH No.: 01-2119457610-43, Index number: 603-002-00-5, CAS: 64-17-5, EC: 200-578-6

 2.6/2 Flam. Liq. 2 H225




 3.3/2 Eye Irrit. 2 H319

>= 0.1% - < 0.25% PROPAN-2-OL

REACH No.: 01-2119457558-25, Index number: 603-117-00-0, CAS: 67-63-0, EC: 200-661-7

## Safety Data Sheet

### RATIO BK-3

-  2.6/2 Flam. Liq. 2 H225
-  3.3/2 Eye Irrit. 2 H319
-  3.8/3 STOT SE 3 H336

---

#### 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. Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediately and dispose off safely.

After contact with skin, wash immediately with soap and plenty of water.

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

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 (CO<sub>2</sub>).

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

## Safety Data Sheet

### RATIO BK-3

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
  - Wear personal protection equipment.
  - Remove persons to safety.
  - See protective measures under point 7 and 8.
- 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.
  - Contaminated clothing should be changed before entering eating areas.
  - Do not eat or drink while working.
  - See also section 8 for recommended protective equipment.
- 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.
    - See section 10.
  - 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. elow, listed occupational exposure limits, if available, for the components listed in paragraph 3.2.
  - 1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER - CAS: 107-98-2

**Safety Data Sheet**  
**RATIO BK-3**

EU - TWA(8h): 375 mg/m<sup>3</sup>, 100 ppm - STEL: 563 mg/m<sup>3</sup>, 150 ppm - Notes: Skin  
ACGIH - TWA(8h): 50 ppm - STEL: 100 ppm - Notes: A4 - Eye and URT irr  
ETHANOL - CAS: 64-17-5  
EU - TWA(8h): 1920 mg/m<sup>3</sup>, 1000 ppm - Notes: WEL  
ACGIH - STEL: 1000 ppm - Notes: A3 - URT irr  
PROPAN-2-OL - CAS: 67-63-0  
ACGIH - TWA(8h): 200 ppm - STEL: 400 ppm - Notes: A4, BEI - Eye and URT irr,  
CNS impair

**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.

1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER - CAS: 107-98-2

Worker Industry: 50.6 mg/kg - Consumer: 18.1 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 369 mg/m<sup>3</sup> - Consumer: 43.9 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 3.3 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

Worker Industry: 553.5 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, local effects

ALKYL ETHER SULFATE C12-14, SODIUM SALT - CAS: 68891-38-3

Worker Industry: 2750 mg/kg - Consumer: 1650 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 175 mg/m<sup>3</sup> - Consumer: 52 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 15 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

ETHANOL - CAS: 64-17-5

Worker Industry: 1900 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Short Term, local effects

Worker Industry: 950 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Industry: 343 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects - Notes: bw/day

PROPAN-2-OL - CAS: 67-63-0

Worker Industry: 888 mg/kg - Consumer: 319 mg/kg - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Industry: 500 mg/m<sup>3</sup> - Consumer: 89 mg/m<sup>3</sup> - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 26 mg/kg - Exposure: Human Oral - Frequency: Long Term, systemic effects

**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.

CITRIC ACID MONOHYDRATE - CAS: 5949-29-1

Target: Marine water - Value: 0.044 mg/l

Target: Fresh Water - Value: 0.44 mg/l

Target: Marine water sediments - Value: 34.6 mg/kg

Target: Freshwater sediments - Value: 3.46 mg/kg

Target: Soil (agricultural) - Value: 33.1 mg/kg

1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER - CAS: 107-98-2

## Safety Data Sheet

### RATIO BK-3

Target: Marine water - Value: 1 mg/l  
Target: Soil (agricultural) - Value: 4.59 mg/kg  
Target: Microorganisms in sewage treatments - Value: 100 mg/l  
Target: Marine water sediments - Value: 5.2 mg/kg  
Target: Freshwater sediments - Value: 52.3 mg/kg  
Target: Fresh Water - Value: 10 mg/l  
Target: Air - Value: 100 mg/l

ALKYL ETHER SULFATE C12-14, SODIUM SALT - CAS: 68891-38-3

Target: Marine water - Value: 0.024 mg/l  
Target: Microorganisms in sewage treatments - Value: 10000 mg/l  
Target: Marine water sediments - Value: 0.09168 mg/kg  
Target: Soil (agricultural) - Value: 7.5 mg/kg  
Target: Freshwater sediments - Value: 0.9168 mg/kg

ETHANOL - CAS: 64-17-5

Target: Marine water - Value: 0.79 mg/l  
Target: Fresh Water - Value: 0.96 mg/l  
Target: Marine water sediments - Value: 2.9 mg/kg  
Target: Soil (agricultural) - Value: 0.63 mg/kg  
Target: Freshwater sediments - Value: 3.6 mg/kg

PROPAN-2-OL - CAS: 67-63-0

Target: Microorganisms in sewage treatments - Value: 2251 mg/l  
Target: Marine water sediments - Value: 552 mg/kg  
Target: Soil (agricultural) - Value: 28 mg/kg  
Target: Marine water - Value: 140.9 mg/l

#### 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. (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:
Appearance and colour:	Clear liquid, red	Visual	--
Odour:	Apple vinegar	Olfactory	--
Odour threshold:	Evident	Olfactory	--
pH:	>2,1	Instrumental control	--
Melting point / freezing point:	Not Relevant	--	Parameter not relevant for the type of product
Initial boiling point and boiling range:	>=100°C	--	Estimated value on chemical / physical properties of components
Flash point:	>60 ° C	EN ISO 3679	--
Evaporation rate:	Not Relevant	--	Parameter not relevant for the type of product
Solid/gas flammability:	Not Relevant	--	Parameter not relevant for the type of product
Upper/lower flammability or explosive limits:	Not Relevant	--	Parameter not relevant for the type of product
Vapour pressure:	Not Relevant	--	Parameter not relevant for the type of product
Vapour density:	Not Relevant	--	Parameter not relevant for the type of product
Relative density:	1.082 g/ml	Instrumental control	--
Solubility in water:	Total	--	Internal tests
Solubility in oil:	Partial	--	Internal tests
Partition coefficient (n-octanol/water):	< 1000	--	Value estimated based on the solubility of the mixture.
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
Viscosity:	<10 cP	--	Estimated indicative value. Not viscous mixture.
Explosive properties:	Not Relevant	--	Parameter not relevant for product composition.
Oxidizing properties:	Not Relevant	--	Parameter not relevant for product composition.

## 9.2. Other information

Properties	Value	Method:	Notes:
Miscibility:	Not Relevant	--	Parameter not relevant for the type of product
Fat Solubility:	Not Relevant	--	Parameter not relevant for the type of product
Conductivity:	Not Relevant	--	Parameter not relevant for the type of product
Substance Groups relevant properties	Not Relevant	--	Parameter not relevant for the type of product

---

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

---

**SECTION 11: Toxicological information**

- 11.1. Information on toxicological effects  
Toxicological information of the product:  
RATIO BK-3
- 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 Irrit. 2 H319
  - 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



**Safety Data Sheet**  
**RATIO BK-3**

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.

CITRIC ACID MONOHYDRATE - CAS: 5949-29-1

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Mouse = 5400 mg/kg

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

Test: NOAEL - Route: Oral - Species: Rat = 4 mg/kg bw/d

b) skin corrosion/irritation:

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

c) serious eye damage/irritation:

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

e) germ cell mutagenicity:

Test: Mutagenesis Negative - Source: Ames Test

g) reproductive toxicity:

Test: NOAEL - Species: Rat > 295 mg/kg bw/d

ALKYL POLYGLYCOL ETHER C10-16 - CAS: 69227-22-1

a) acute toxicity:

Test: LD50 - Route: Oral = 1800 mg/kg

1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER - CAS: 107-98-2

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat = 4016 mg/kg

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

Test: LC50 - Route: Inhalation - Species: Rat > 25.8 mg/l - Duration: 6h

b) skin corrosion/irritation:

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

d) respiratory or skin sensitisation:

Test: NOAEC - Route: Skin - Species: Rabbit > 1000 mg/kg - Source: OECD 410 -

Notes: bw/day

Test: NOAEC - Route: Inhalation - Species: Rabbit = 1000 ppm - Source: OECD 413 -

Notes: bw/day

f) carcinogenicity:

Test: NOAEC - Species: Mouse = 3000 ppm

g) reproductive toxicity:

Test: NOAEC - Species: Rat = 1500 ppm - Source: OECD 414

ALKYL ETHER SULFATE C12-14, SODIUM SALT - CAS: 68891-38-3

a) acute toxicity:

Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg - Source: OECD 402

Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg - Source: OECD 401

b) skin corrosion/irritation:

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

c) serious eye damage/irritation:

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

d) respiratory or skin sensitisation:

Test: Skin or Resp. Sensitization Negative - Source: OECD 406

e) germ cell mutagenicity:

Test: Mutagenesis Negative - Source: Ames Test

ETHANOL - CAS: 64-17-5

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat > 6200 mg/kg - Source: OECD401

Test: LC50 - Route: Inhalation - Species: Rat > 50 mg/m3 - Source: OECD403

## Safety Data Sheet

### RATIO BK-3

- Test: LD50 - Route: Skin - Species: Rabbit = 20 g/kg
- c) serious eye damage/irritation:  
Test: Eye Irritant Positive - Source: OECD405 - Notes: Conc.  $\geq$ 50%  
PROPAN-2-OL - CAS: 67-63-0
- a) acute toxicity:  
Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg  
Test: LC50 - Route: Inhalation - Species: Rat > 10000 ppm - Duration: 6h  
Test: LD50 - Route: Skin - Species: Rabbit > 5000 mg/kg
- b) skin corrosion/irritation:  
Test: Skin Irritant - Route: Skin - Species: Rabbit No - Source: OECD 404
- c) serious eye damage/irritation:  
Test: Eye Corrosive - Species: Rabbit Yes - Source: OECD 405
- d) respiratory or skin sensitisation:  
Test: Skin or Resp. Sensitization Negative
- e) germ cell mutagenicity:  
Test: Mutagenesis Negative
- g) reproductive toxicity:  
Test: NOAEL - Route: Oral - Species: Rabbit = 480 mg/kg

---

## 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-3

Not classified for environmental hazards  
Based on available data, the classification criteria are not met

#### CITRIC ACID MONOHYDRATE - CAS: 5949-29-1

- a) Aquatic acute toxicity:  
Endpoint: LC50 - Species: Fish = 440 mg/l - Duration h: 48 - Notes: Leuciscus idus melanotus  
Endpoint: EC50 - Species: Daphnia = 1535 mg/l - Duration h: 24 - Notes: Daphnia magna  
Endpoint: EC50 - Species: Algae = 990 mg/l - Duration h: 72 - Notes: Alga
- c) Bacteria toxicity:  
Endpoint: EC50 - Species: Microorganisms / Effect on activated sludge: > 10000 mg/l - Duration h: 16 - Notes: Pseudomonas putida

#### ALKYL POLYGLYCOL ETHER C10-16 - CAS: 69227-22-1

- a) Aquatic acute toxicity:  
Endpoint: LC50 - Species: Fish > 1 mg/l - Notes: Brachydanio rerio

#### 1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER - CAS: 107-98-2

- a) Aquatic acute toxicity:  
Endpoint: LC50 - Species: Fish > 1000 mg/l - Duration h: 96 - Notes: Onchorynchus mykiss  
Endpoint: EC50 - Species: Daphnia > 21100 mg/l - Duration h: 48 - Notes: Daphnia magna  
Endpoint: EC50 - Species: Algae > 1000 mg/l - Duration h: 168 - Notes: Selenastrum capricornutum

#### ALKYL ETHER SULFATE C12-14, SODIUM SALT - CAS: 68891-38-3

- a) Aquatic acute toxicity:  
Endpoint: LC50 - Species: Fish > 10 mg/l - Notes: Leuciscus idus  
Endpoint: EC50 - Species: Daphnia > 10 mg/l - Notes: Daphnia magna  
Endpoint: EC50 - Species: Algae > 100 mg/l - Notes: Scenedesmus subspicatus

## Safety Data Sheet

### RATIO BK-3

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Fish > 1 mg/l - Notes: Leuciscus idus

Endpoint: NOEC - Species: Daphnia > 0.1 mg/l - Notes: Daphnia magna

c) Bacteria toxicity:

Endpoint: EC0 - Species: Microorganisms / Effect on activated sludge: > 100 mg/l -

Notes: Pseudomonas putida

ETHANOL - CAS: 64-17-5

a) Aquatic acute toxicity:

Endpoint: EC50 - Species: Algae = 275 mg/l - Duration h: 72 - Notes: Chlorella vulgaris

Endpoint: LC50 - Species: Fish = 13000 mg/l - Duration h: 96 - Notes: Salmo gairdneri

Endpoint: EC50 - Species: Daphnia = 12340 mg/l - Duration h: 48 - Notes: Daphnia magna

PROPAN-2-OL - CAS: 67-63-0

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish = 9640 mg/l - Duration h: 48 - Notes: Pimephales promelas

Endpoint: EC50 - Species: Daphnia > 1000 mg/l - Duration h: 24 - Notes: Daphnia magna

Endpoint: EC50 - Species: Algae = 1800 mg/l - Duration h: 168 - Notes: Scenedesmus quadricauda

#### 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.

CITRIC ACID MONOHYDRATE - CAS: 5949-29-1

Biodegradability: Readily biodegradable - Test: OECD 302B - Duration: 14 d - %: 85

1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER - CAS: 107-98-2

Biodegradability: Readily biodegradable - Duration: 28 days - %: 96 - Notes: Test OECD 301

ALKYL ETHER SULFATE C12-14, SODIUM SALT - CAS: 68891-38-3

Biodegradability: Readily biodegradable

ETHANOL - CAS: 64-17-5

Biodegradability: Readily biodegradable

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.

1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER - CAS: 107-98-2

Bioaccumulation: Slightly bioaccumulative - Test: BCF - Bioconcentration factor - Notes: <100

ETHANOL - CAS: 64-17-5

Bioaccumulation: Slightly bioaccumulative - Test: Kow - Partition coefficient -0.31

#### 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.

1-METHOXY-2-PROPANOL; MONOPROPYLENE GLYCOL METHYL ETHER - CAS: 107-98-2

## Safety Data Sheet

### RATIO BK-3

Mobility in soil: Mobile

12.5. Results of PBT and vPvB assessment  
vPvB Substances: None - PBT Substances: None

12.6. 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. 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

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. Transport in bulk according to Annex II of Marpol and the IBC Code

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) 2015/830

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)

Regulation (EU) n. 2015/1221 (ATP 7 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):

## Safety Data Sheet

### RATIO BK-3

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.

### SECTION 16: Other information

Full text of phrases referred to in Section 3:

- H319 Causes serious eye irritation.
- H302 Harmful if swallowed.
- H318 Causes serious eye damage.
- H226 Flammable liquid and vapour.
- H336 May cause drowsiness or dizziness.
- H315 Causes skin irritation.
- H412 Harmful to aquatic life with long lasting effects.
- H225 Highly flammable liquid and vapour.

Hazard class and hazard category	Code	Description
Flam. Liq. 2	2.6/2	Flammable liquid, Category 2
Flam. Liq. 3	2.6/3	Flammable liquid, Category 3
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4
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
STOT SE 3	3.8/3	Specific target organ toxicity - single exposure, Category 3
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

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 Irrit. 2, H319	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.

CAS: Chemical Abstracts Service (division of the American Chemical



**Safety Data Sheet**  
**RATIO BK-3**

	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.
NOEC:	No Observed Effect Concentration
NOAEL(R)/NOAEC:	No Observed Adverse Effect Level(Repeated)/Concentration
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-3**



ANNEX I  
PROFESSIONAL TRIGGER PRODUCT – DETERGENT FOR HARD SURFACES

<b>Title of exposure scenario</b>	
Detergent for general cleaning: Manual process.	
<b>Use description</b>	
Sector Use	SU22 – Professional use
Product Category	PC35 – Cleaning and washing product (including solvent based products)
<b>Description of activities/process considered on exposure scenario.</b>	
If required, transfer product from canister to trigger bottle.	
Use following the use instruction as specified on the label.	
Leave on.	
Rinse, if necessary.	
<b>Frequency and duration</b>	
Use phase	Daily, depending on room size and room dirty conditions.
Relevant limit values of ingredients, if available, are stated in section 8 of the SDS.	
<b>Physical appearance and concentration</b>	
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.	
<b>Use conditions</b>	
Room temperature	
Good general ventilation at workplace is sufficient.	
<b>Protection</b>	
Avoid spray inhalation.	
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.	
<b>Misure ambientali</b>	
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

56067ACLP/1

Page n. 15 of 15