

## TopEFEKT<sup>®</sup> SANIT NANO

### Safety Data Sheet

#### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier:** TopEFEKT<sup>®</sup> SANIT NANO
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
Product designed for everyday cleaning of the toilets. Effectively removes inorganic impurities, dripstone, limescale and rust.
- 1.3 Details of the supplier of the safety data sheet:**
- TENZI Sp. z o.o.  
Skarbimierzyce 20  
72-002 Dołuje  
tel. +48 91 3119777  
fax. +48 91 3119779  
E-mail address for a competent person responsible for SDS: [technolog@tenzi.pl](mailto:technolog@tenzi.pl)
- 1.4 Emergency telephone number:**  
+48 91 31 19 777 (mon. - fri. 8am - 4pm) or 112.

#### SECTION 2. HAZARDS IDENTIFICATION

**2.1. Classification of the substance or mixture:**

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

- Skin Irrit. 2 H315** – Causes skin irritation.  
**Eye Irrit. 2 H319** – Causes serious eye irritation.

**2.2. Label elements:**  
(According to 1272/2008/EC\*)

**Hazard symbols:**



**Signal words:**  
WARNING

**Hazard statements:**

- H315** – Causes skin irritation.  
**H319** – Causes serious eye irritation.

**Precautionary statements:**

- P280** – Wear protective gloves/protective clothing/eye protection/face 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.

**2.3. Other hazards:**

Substance does not meet criteria for PBT or vPvB in accordance with Annex XIII of REACH Regulation.

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#### SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

##### 3.1. Substances:

Not applicable.

##### 3.2. Mixtures:

**Composition (according to: 648/2004/EC):**

- 5-15% anionic surfactants
- aroma composition
- auxiliary substances not classified as dangerous
- citric acid

Identification	Hazardous ingredient/classification	Concentration
CAS: 5949-29-1 WE: 201-069-1 Index: No data available Registration: 01-2119457026-42-XXXX	<b>Citric acid</b>  Eye Irrit. 2 H319	< 5%
CAS: 68891-38-3 WE: 500-234-8 Index: No data available Registration: 01-2119488639-16-XXX	<b>Anionic surfactants</b>  Skin Irrit. 2 H315, Eye Dam. 1 H318, Aquatic Chronic 3 H412	
CAS: 85536-14-7 WE: 287-494-3 Index: No data available Registration: 01-2119490234-40-XXXX	<b>Anionic surfactants</b>  Skin Corr. 1C H314, Acute Tox. 4 H302	< 2.5%

The full texts of H symbols and phrases are in section 16.

#### SECTION 4. FIRST AID MEASURES

##### 4.1. Description of first aid measures:

###### Inhalation:

In case of inhalation poisoning symptoms (cough, dyspnea, dizziness) move the injured to fresh air. If symptoms persists, immediately call a doctor.

###### Skin contact:

If product comes in contact with the skin, immediately remove all contaminated clothing and flush exposed area with large amounts of water.

###### Eye contact:

Flush eyes with running water (at least 15 minutes) while keeping eyelids open. Get medical attention.

###### Ingestion:

DO NOT induce vomiting. Give lots of water to drink. DO NOT give any neutralizing agents. Immediately get medical attention and show this SDS or label.

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

**Inhalation:**

None.

**Skin:**

May cause skin irritation after long-term exposure.

**Eyes:**

May cause eye and conjunctiva irritation.

**Ingestion:**

May cause irritation of the mucous membranes.

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

Get medical attention.

Fresh water and eye-wash preparations must be available on the worksite.

### SECTION 5. FIREFIGHTING MEASURES

#### 5.1. Extinguishing media:

**Suitable extinguishing media:**

Use extinguishing measures that are appropriate to local circumstances and surrounding environment.

**Unsuitable extinguishing media:**

There are not any known extinguishing media that you shouldn't use.

#### 5.2. Special hazards arising from the substance or mixture:

Product is non-flammable.

#### 5.3. Advice for firefighters:

Firefighters should wear self-contained breathing apparatus and full protective clothing. In case of fire, warn the people nearby and evacuate unprotected and untrained personnel from hazard area. Notify relevant emergency services. If possible, remove the containers away from the influence of fire and high temperature. Water may be used to keep fire-exposed containers cool until fire is out. The after burning residues should be removed

### SECTION 6. ACCIDENTAL RELEASE MEASURES

#### 6.1. Personal precautions, protective equipment and emergency procedures:

**For non-emergency personnel:**

Protective chemical-proof gloves (0.11 mm thick), safety glasses.

**For emergency responders:**

Protective clothes, protective chemical-proof gloves (0.11 mm thick), self-contained breathing apparatus, safety glasses.

#### 6.2. Environmental precautions:

Avoid discharge into drains, watercourses or onto the ground.

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#### 6.3. Methods and material for containment and cleaning up:

In case of unexpected release of the substance into the environment, inform appropriate services about the emergency and remove any source of ignition. Prevent spills from entering sewers, surface water or groundwater. If it is possible, confine and contain the spill by closing the flow of the liquid, plug the damaged container and put it into leakproof wrapping. For a larger spill, make a dike around the outside edges of the spill and use absorbent materials (sand, sawdust, minced limestone). Store clean-up materials for disposal as hazardous waste. Decontaminate polluted area with water.

#### 6.4. Reference to other sections:

See section 8 and 13.

### SECTION 7. HANDLING AND STORAGE

#### 7.1. Precautions for safe handling:

Be careful when working with this product.  
Use personal protection recommended in section 8  
Mix only with water. DO NOT mix with any other chemical substances.  
People with skin allergy or respiratory system problems should not have contact with this product.  
Avoid risk – read this instruction sheet carefully before using the product.  
After usage, keep container tightly closed and keep it away from unauthorized people.  
Use only adequate ventilation to avoid inhalation poisoning.

#### 7.2. Conditions for safe storage, including any incompatibilities:

Store in a tightly closed, original plastic container. Store this product in a dry environment that will be maintained at 5°C - 35°C temperature with a good ventilation system and an easy washable, nonabsorbable alkaline resistant floor.  
DO NOT expose the product to sunlight and keep away from heat, sparks, flame and source of ignition.

#### 7.3. Specific end use(s):

No data available.

### SECTION 8. EXPOSURE CONTROLS/ PERSONAL PROTECTION

#### 8.1. Control parameters:

Please check any national occupational exposure limit values in your country.

**NDS/NDSCh/NDSP values for individual chemical substances (according to SDS or Chemical Safety Report):**

**Citric acid (data for highly concentrated substance):**

NDS, NDSCh, NDSP: not identified

**Anionic surfactants (data for highly concentrated substance):**

NDS, NDSCh, NDSP: not identified.

**Anionic surfactants (data for highly concentrated substance):**

NDS, NDSCh, NDSP: not identified.

**DNEL /PNEC values for individual chemical substances (according to SDS or Chemical Safety Report):**

**Citric acid (data for highly concentrated substance):**

No data available.

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#### Anionic surfactants (data for highly concentrated substance):

##### DNEL:

Group: workers, Exposure time: long-term, Exposure route: dermal, Type of effect: systemic effect,	Value: 2750 mg/kg
Group: workers, Exposure time: long-term, Exposure route: inhalation, Type of effect: local effect,	Value: 175 mg/m <sup>3</sup>
Group: consumers, Exposure time: long-term, Exposure route: dermal, Type of effect: systemic effect,	Value: 1650 mg/kg
Group: consumers, Exposure time: long-term, Exposure route: inhalation, Type of effect: systemic effect,	Value: 52 mg/m <sup>3</sup>
Group: consumers, Exposure time: long-term, Exposure route: ingestion, Type of effect: systemic effect,	Value: 15 mg/m <sup>3</sup>

##### PNEC:

Aqua (fresh water):	0.24 mg/l
Aqua (marine water):	0.024 mg/l
Sediment (fresh water):	5.45 mg/kg
Sediment (marine water):	0.545 mg/kg
Sewage treatment plant:	10 mg/l
Soil:	0.946 mg/kg

#### Anionic surfactants (data for highly concentrated substance):

##### DNEL:

Group: workers, Exposure time: long-term, Exposure route: dermal, Type of effect: systemic effect,	Value: 170 mg/kg
Group: workers, Exposure time: long-term, Exposure route: inhalation, Type of effect: systemic effect,	Value: 12 mg/m <sup>3</sup>
Group: workers, Exposure time: long-term, Exposure route: inhalation, Type of effect: local effect,	Value: 12 mg/m <sup>3</sup>
Group: consumers, Exposure time: long-term, Exposure route: dermal, Type of effect: systemic effect,	Value: 85 mg/kg
Group: consumers, Exposure time: long-term, Exposure route: inhalation, Type of effect: systemic effect,	Value: 3 mg/m <sup>3</sup>
Group: consumers, Exposure time: long-term, Exposure route: ingestion, Type of effect: systemic effect,	Value: 0.85 mg/kg
Group: consumers, Exposure time: long-term, Exposure route: inhalation, Type of effect: local effect,	Value: 3 mg/m <sup>3</sup>

##### PNEC:

Aqua (fresh water):	0.287 mg/l
Aqua (marine water):	0.0287 mg/l
Sediment (fresh water):	0.287 mg/kg
Sediment (marine water):	0.0287 mg/kg
Sewage treatment plant:	3.43 mg/l
Intermittent release:	0.0167 mg/l
Soil:	35 mg/kg

**NOTE:** When the concentration of substance is known, personal protective equipment should be chosen based on substance concentration in a workplace, exposure time and operations performed by the employee. In emergency situations, if substance concentration in the workplace is unknown, personal protection of highest class level should be used.

#### 8.2. Exposure controls:

##### RESPIRATORY PROTECTION:

Not needed.

##### HAND PROTECTION:

It is recommended to wear protective acidic-proof gloves when working with this product (0.11 mm thick).

##### EYE/FACE PROTECTION:

It is recommended to wear safety glasses when working with this product.

##### SKIN PROTECTION:

Not needed.

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#### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

##### 9.1. Information on basic physical and chemical properties:

<b>Appearance:</b>	Pink coloured gel
<b>Odour:</b>	Characteristic for aroma composition used in production
<b>Odour threshold:</b>	No data available
<b>pH:</b>	1 ± 1
<b>Melting point:</b>	No data available
<b>Freezing point:</b>	No data available
<b>Initial boiling point:</b>	No data available
<b>Boiling range:</b>	No data available
<b>Flash point:</b>	No data available
<b>Evaporation rate:</b>	No data available
<b>Flammability (solid, gas):</b>	No data available
<b>Upper flammability limit:</b>	No data available
<b>Lower flammability limit:</b>	No data available
<b>Upper explosive limit:</b>	No data available
<b>Lower explosive limit:</b>	No data available
<b>Vapour pressure:</b>	No data available
<b>Vapour density:</b>	No data available
<b>Relative density:</b>	1.055 ± 0.020 g/cm <sup>3</sup>
<b>Solubility:</b>	
<b>A) Water:</b>	soluble
<b>B) Organic solvent:</b>	No data available
<b>Partition coefficient N-Octan:</b>	No data available
<b>Partition coefficient Water:</b>	No data available
<b>Auto-ignition temperature:</b>	No data available
<b>Decomposition temperature:</b>	No data available
<b>Viscosity:</b>	min. 90 sec. (Ford's cup with the diameter of 4 ± 0,015 mm)
<b>Explosive properties:</b>	No data available
<b>Oxidising properties:</b>	No data available

##### 9.2. Other information:

**Refractive index:** 15% Brix\* ± 5%

\* - Degrees Brix is the content of an aqueous solution. One degree Brix is 1 gram of sucrose in 100 grams of solution and represents the strength of the solution as percentage by weight (%w/w).

#### SECTION 10. STABILITY AND REACTIVITY

##### 10.1 Reactivity:

No data available.

##### 10.2 Chemical stability:

Stable under recommended storage conditions (see section 7).

##### 10.3 Possibility of hazardous reactions:

No data available.

##### 10.4 Conditions to avoid:

Avoid heavily warmed rooms without ventilation and long-term exposure to sunlight.

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#### 10.5 Incompatible materials:

Alkali, chlorine preparations.

#### 10.6 Hazardous decomposition products:

No data available.

### SECTION 11. TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects:

##### ACUTE TOXICITY:

**Inhalation:** not applicable.

**Skin contact:** causes skin irritation.

**Eye contact:** causes eye irritation.

**Digestive system:** may cause irritation of the mucous membranes.

ATEmix = 11 700 (acute toxicity, orally)

##### DETAILS OF PARTICULAR COMPONENTS (according to substances SDS):

###### Citric acid (data for highly concentrated substance):

<b>LD50:</b>	11700 mg/kg	(rat, orally)
<b>LD50:</b>	5040 mg/kg	(mouse, orally)
<b>LD50:</b>	885 mg/kg	(rat, dermal)
<b>LD50:</b>	961 mg/kg	(mouse, dermal)

May cause skin irritation.  
Irritant to eyes.

###### Anionic surfactants (data for highly concentrated substance):

<b>LD50:</b>	>2000 mg/kg	(rat, orally)
<b>LD50:</b>	>2000 mg/kg	(rat, dermal)

Skin irritation and serious eye irritation detected.  
No allergic effect.

###### Anionic surfactants (data for highly concentrated substance):

<b>LD50:</b>	1470 mg/kg	(rat, orally)
<b>LD50:</b>	2000 mg/kg	(rat, dermal)

Slightly irritates skin.  
Severe eye irritation.

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#### SECTION 12. ECOLOGICAL INFORMATION

##### 12.1. Toxicity:

###### Data for the mixture ingredients:

###### Citric acids (data for highly concentrated substance):

LC50: 440-706 mg/l/96h (golden fish)

###### Anionic surfactants (data for highly concentrated substance):

LC50:	> 1-10 mg/l	(fish)	(OECD 203)
NOEC:	1.2 mg/l	(fish)	(literature data)
EC50:	> 1-10 mg/l/48h	(daphnia)	(OECD 202)
NOEC:	> 0.1-1 mg/l/21 days	(daphnia)	(OECD 211)
EC50:	> 10-100 mg/l/72h	(algae)	(OECD 201)
EC10:	10000 mg/l	(bacteria)	

###### Anionic surfactants (data for highly concentrated substance):

EC50:	1-10 mg/l/96h	(fish, Lepomis macrochirus)
EC50:	1-10 mg/l/48h	(daphnia, Daphnia magna)
IC50:	1-10 mg/l	(algae)

##### 12.2. Persistence and degradability:

The surfactants contained within the product comply with the biodegradability criteria as laid down in Regulation (EC) No 648/2004 on detergents.

###### Data for the mixture ingredients:

Substance	Method	Length	Degraded percentage
Citric acid	OECD 302 B	2 days	> 98%
Anionic surfactants	OECD 301 A	28 days	> 70%
Anionic surfactants	OECD 301 B, ISO 9439	28 days	> 60%

###### Citric acid:

COD = 728 mgO<sub>2</sub>/g

BOD<sub>5</sub> = 526 mgO<sub>2</sub>/g

##### 12.3. Bioaccumulative potential:

Bioaccumulation is incredible.  
Data based on mixture ingredients.

##### 12.4. Mobility in soil

The product is water soluble and may sink into groundwater systems.

##### 12.5. Results of PBT and vPvB assessment:

This substance/mixture does not meet the PBT and vPvB criteria of REACH, annex XIII..

##### 12.6. Other adverse effects:

No data available.



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#### SECTION 13. DISPOSAL CONSIDERATIONS

**RESIDUES AND WASTES:**

DO NOT mix with other liquid wastes.

DO NOT empty into sewage system. Product should be totally used up according to its description.

If it's impossible to do so, dispose of this material and its container at hazardous or special waste collection point.

**13.1. Waste treatment methods:**

Contaminated containers should be completely emptied. Several times rinse the container promptly after emptying. Empty container can be stored in containers for collection of plastic packaging, or can be delivered to specialized company for recycling.

Disposal should be in accordance with the national/international regulations.

#### SECTION 14. TRANSPORT INFORMATION

**TRADE NAME: TopEFEKT® SANIT NANO**

- 14.1. **UN Number:** Not applicable.  
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:** No.  
14.6. **Special precautions for user:** For more details see Sections 6 and 8.  
14.7. **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** No data available.

**WARNING LABELS**

not applicable

#### SECTION 15. REGULATORY INFORMATION

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

- 1) COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).
- 2) REGULATION (EC) No 648/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 on detergents.
- 3) COMMISSION REGULATION (EC) No 907/2006 of 20 June 2006 amending Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents, in order to adapt Annexes III and VII thereto.
- 4) REGULATION (EC) No 1336/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 amending Regulation (EC) No 648/2004 in order to adapt it to Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.
- 5) COMMISSION REGULATION (EC) No 551/2009 of 25 June 2009 amending Regulation (EC) No 648/2004 of the European Parliament and of the Council on detergents, in order to adapt Annexes V and VI thereto (surfactant derogation).
- 6) REGULATION (EU) No 259/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 14 March 2012 amending Regulation (EC) No 648/2004 as regards the use of phosphates and other phosphorus compounds in consumer laundry detergents and consumer automatic dishwasher detergents.
- 7) REGULATION (EC) No 273/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 11 February 2004 on drug precursors).
- 8) REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

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#### 15.2. Chemical safety assessment

**For mixture:**

A Chemical Safety Assessment has not been carried out.

**For following mixture substances:**

**Citric acid:** A Chemical Safety Assessment has been carried out.

**Anionic surfactants:** A Chemical Safety Assessment has been carried out.

**Anionic surfactants:** A Chemical Safety Assessment has not been carried out.

### SECTION 16. OTHER INFORMATION

Information above is based on current knowledge of product in its current form.

All data are presented in order to take into account safety requirements priority and not to guarantee special properties of the product. If product usage conditions are not under manufacturer control, responsibility for safe use lies with the person that uses them. The employer is obliged to inform all employees, who have contact with the product, about the risk and safety measures specified in the data sheet. Safety data presented above were prepared based on safety characteristics of substances used by the producer to compose the product and based on regulations for handling dangerous substances and their preparation. Classification of chemical mixture was done with calculation methods, based on the content of hazardous ingredients.

**The full list of symbols and H phrases from Section 2 and 3:**

<b>Acute Tox. 4</b>	– Acute toxicity, category 4.
<b>Aquatic Chronic 3</b>	– Hazardous to the aquatic environment - Chronic Hazard, category 3.
<b>Eye Irrit. 2</b>	– Causes serious eye irritation, category 2.
<b>Eye Dam. 1</b>	– Serious eye damage, category 1.
<b>Skin Corr. 1C</b>	– Corrosive to skin, category 1C.
<b>Skin Irrit. 2</b>	– Causes skin irritation, category 2.
<b>H302</b>	– Harmful if swallowed.
<b>H314</b>	– Causes severe skin burns and eye damage.
<b>H315</b>	– Causes skin irritation.
<b>H318</b>	– Causes serious eye damage.
<b>H319</b>	– Causes serious eye irritation.
<b>H412</b>	– Harmful to aquatic life with long lasting effects.

More information on the product can be found on the specific technical data sheet which is available on [www.tenzi.pl](http://www.tenzi.pl)

**Training:**

Course participants should be trained about how to handle this hazardous substance, about safety and work hygiene. Drivers should also be trained and obtain proper certification in accordance with the ADR requirements.

**Expiry date:**

36 months from the production date (if product is stored according to the producent recommendations)

**Changes compared to the previous version:**

- section 6 and 8 (gloves thickness)

Updated cards versions are now available on [www.tenzi.pl](http://www.tenzi.pl)

This Safety Data Sheet contains 11 pages. Changes in the content by unauthorized people is prohibited.