

SAFETY DATA SHEET

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

- 1.1. **Product identifier:**
Resysten® durable hygienic coating
- 1.2. **Relevant identified uses of the mixture and uses advised against:**
Hygienic coating for industrial use.
- 1.3. **Details of the supplier of the safety data sheet:**
Information about the distributor:
Resysten Hungary Kft.
2051 Biatorbágy, Fűzes u. 70.
Hungary
Tel: +36 30 634 3550
- 1.3.1. Responsible person: Lehoczky Péter
E-mail: info@resysten.com
- 1.4. **Emergency telephone number:** **Egészségügyi Toxikológiai Tájékoztató Szolgálat (ETTSZ)**
1096 Budapest, Nagyvárad tér 2.
Tel.: 06 1 476 6464, 06 80 201 199 (0-24 h)

SECTION 2: HAZARDS IDENTIFICATION

- 2.1. **Classification of the mixture:**
Classification according to Regulation (EC) No 1272/2008 (CLP):
Hazardous to the aquatic environment – Chronic Hazard, Category 3 – H412
Hazard statements:
H412 – Harmful to aquatic life with long lasting effects.
- 2.2. **Label elements:**
Hazard statements:
H412 – Harmful to aquatic life with long lasting effects.
Precautionary statements:
P273 – Avoid release to the environment.
P501 – Dispose of contents/container in accordance with local regulations.
- 2.3. **Other hazards:**
The product has no other known specific hazards for human or environment.
Results of PBT and vPvB assessment: No data available.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. **Substances:**
Not applicable.

3.2. **Mixtures:**
Description: Aqueous solution of substances listed below and substances not classified as hazardous (water content > 97 %).

Description	CAS number	EC number / ECHA list number	REACH registration number	Conc. (%)	Classification according to Regulation (EC) No 1272/2008 (CLP)		
					Pictogram, signal word code(s)	Hazard class and category code(s)	Hazard statement code(s)
Zinc oxide Index number: 030-013-00-7	1314-13-2	215-222-5	01- 2119463881-32	0.8	GHS09 Warning	Aquatic Acute 1 Aquatic Chronic 1	H400 H410
Surfactant / 2-[4-(2,4,4-trimethylpentan-2-yl)phenoxy]ethanol*	9002-93-1	618-344-0	-	< 0.5	GHS07 GHS09 Warning	Acute Tox. 4 Eye Irrit. 2 Aquatic Chronic 2	H302 H319 H411
Titanium dioxide	13463-67-7	236-6755	01- 2119489379-17	0.2	-	not classified	-

*: Classification specified by the manufacturer; the substance is not listed in Annex VI of the Regulation (EC) No 1272/2008.

It does not contain any other substance considered to be hazardous to health or to the environment, or which is PBT, vPvB or have workplace exposure limit value or its concentration does not reach the level specified in the relevant legislation and therefore it does not need to be included in the safety data sheet.

For the full text of hazard statements, see Section 16.

SECTION 4: FIRST AID MEASURES

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

INGESTION:

Measures:

- Rinse mouth with water.
- Give the victim plenty of water to drink.
- Obtain medical attention.

INHALATION:

Measures:

- Take the victim into fresh air.
- In case of complaints, obtain medical help.

SKIN CONTACT:

Measures:

- Remove the contaminated clothes and shoes.
- Wash the skin with plenty of running water and soap.
- In case of complaints, obtain medical help.

EYE CONTACT:

Measures:

- In case of contact with eyes flush with water holding eyelids apart and moving the eyeballs (for at least 15 minutes).
- In case of complaints, obtain medical help.

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

No acute and delayed symptoms and effects known.

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

No special treatment needed; treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES

- 5.1. **Extinguishing media:**
- 5.1.1. **Suitable extinguishing media:**
Choose extinguishing media depending on surrounding fire.
- 5.1.2. **Unsuitable extinguishing media:**
No unsuitable extinguishing media known.
- 5.2. **Special hazards arising from the substance or mixture:**
Aqueous solution, not flammable.
The formation of dangerous decomposition products greatly depends on the circumstances of the combustion. A complex mixture of airborne solid, liquid and gas substances may occur, such as carbon monoxide, carbon dioxide and unidentified compounds.
The inhalation of combustion products can have serious adverse effects on health.
- 5.3. **Advice for firefighters:**
Wear full protective clothing and self-contained breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

- 6.1. **Personal precautions, protective equipment and emergency procedures:**
- 6.1.1. **For non-emergency personnel:**
Allow only well-trained experts wearing suitable protective clothing to abide in the field of accident.
- 6.1.2. **For emergency responders:**
No special precautions required.
- 6.2. **Environmental precautions:**
Dispose of the spillage and the resulting waste according to the applicable environmental regulations. Do not allow the product and the resulting waste to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately.
- 6.3. **Methods and material for containment and cleaning up:**
Collect the spilled product with non-combustible absorbent, then place into a suitable, closed, properly labelled waste container for removal/disposal.
- 6.4. **Reference to other sections:**
For further and detailed information see Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

- 7.1. **Precautions for safe handling:**
Observe conventional hygiene precautions.
Avoid contact with skin, eyes and clothing.
Do not eat, drink, or smoke when using this product.
Wash hands before breaks and at the end of the work.
Observe the pertinent regulations on industrial safety and basic hygiene rules.
Technical measures:
No special measures required.
Precautions against fire and explosion:
No special measures required.
- 7.2. **Conditions for safe storage, including any incompatibilities:**
Technical measures and storage condition:
Keep in the original, closed and appropriately labelled container.
Opened containers should be carefully closed and stored in a vertical position to avoid any leakage.
Keep away from food, drink and animal feed.
Incompatible materials: See Section 10.5
Packaging material: No special prescriptions.
- 7.3. **Specific end use(s):**
No specific instructions available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Occupational exposure limit values (Commission Directive (EC) No 2000/39 of 8 June 2000):
 The components of the mixture are not regulated with exposure limit value.

DNEL values		Oral exposure		Dermal exposure		Inhalative exposure	
		Short term (acute)	Long term (chronic)	Short term (acute)	Long term (chronic)	Short term (acute)	Long term (chronic)
Consumer	Local	no data	no data	no data	no data	no data	no data
	Systemic	no data	no data	no data	no data	no data	no data
Worker	Local	no data	no data	no data	no data	no data	no data
	Systemic	no data	no data	no data	no data	no data	no data

PNEC values		
Compartment	Value	Note(s)
Freshwater	no data	no notes
Marine water	no data	no notes
Freshwater sediment	no data	no notes
Marine water sediment	no data	no notes
Sewage Treatment Plant (STP)	no data	no notes
Intermittent release	no data	no notes
Secondary poisoning	no data	no notes
Soil	no data	no notes

8.2. Exposure controls:

In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.

8.2.1. **Appropriate engineering controls:**

In pursuance of work is proper foresight needed to avoid spilling onto clothes and floors and to avoid contact with eyes and skin.

8.2.2. **Individual protection measures, such as personal protective equipment:**

Observe the general safety regulations when handling chemicals.

Contact with eyes, skin and clothing should be avoided.

Do not eat, drink, or smoke when using this product.

Wash hands before breaks and at the end of the work.

Observe the pertinent regulations on industrial safety and basic hygiene rules.

The information regarding personal protective equipment is only for informative purposes. A complete risk assessment is required before the use of the product for the determination of the appropriate personal protective equipment, taking local circumstances into account.

Personal protective equipment has to conform the applicable European standards.

1. **Eye/face protection:** Not required under normal conditions.

2. **Skin protection:**

a. **Hand protection:** Not required under normal conditions.

b. **Other:** Not required under normal conditions.

3. **Respiratory protection:** Not required under normal conditions. If the concentration of the hazardous substances exceeds the occupational exposure limit values, use appropriate respiratory protection. Choose appropriate respirator with respect to the actual conditions of work.

4. **Thermal hazards:** No thermal hazards known.

8.2.3. **Environmental exposure controls:**

No specific prescription.

The requirements detailed in Section 8 assume skilled work under normal conditions and usage of the product for appropriate aims. If conditions differ from normal or work is carried out under extreme conditions, an expert's advice is necessary before deciding upon further protective measures.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties:

Parameter	Value / Test method / Remarks
1. Appearance:	colourless, water-based liquid
2. Odour:	odourless
3. Odour threshold:	no data*
4. pH:	no data*
5. Melting point/freezing point:	no data*
6. Initial boiling point and boiling range:	ca. 100 °C
7. Flash point:	no data*
8. Evaporation rate:	no data*
9. Flammability (solid, gas):	no data*
10. Upper/lower flammability or explosive limits:	no data*
11. Vapour pressure:	no data*
12. Vapour density:	no data*
13. Relative density:	no data*
14. Solubility(ies):	no data*
15. Partition coefficient: n-octanol/water:	no data*
16. Auto-ignition temperature:	not self-igniting
17. Decomposition temperature:	no data*
18. Viscosity:	no data*
19. Explosive properties:	not explosive
20. Oxidizing properties:	not oxidizing

9.2. Other information:

No data available.

*: The manufacturer did not carry out any tests on this parameter for the product or the results of the tests are not available at the time of publication of the data sheet.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

No reactivity known.

10.2. Chemical stability:

Stable at normal temperature and under general work conditions.

10.3. Possibility of hazardous reactions:

No hazardous reactions known.

10.4. Conditions to avoid:

No conditions to avoid known.

10.5. Incompatible materials:

No incompatible materials known.

10.6. Hazardous decomposition products:

No hazardous decomposition products known.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects:

Acute toxicity: Based on available data, the classification criteria are not met.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/irritation: Based on available data, the classification criteria are not met.

Respiratory or skin sensitisation: Based on available data, the classification criteria are not met.

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure: Based on available data, the classification criteria are not met.

STOT-repeated exposure: Based on available data, the classification criteria are not met.

Aspiration hazard: Based on available data, the classification criteria are not met.

11.1.1. Summaries of the information derived from the test conducted:

No data available.

11.1.2. Relevant toxicological properties:

Acute toxicity:

Data about the ingredients:

Zinc oxide (CAS: 1314-13-2):

LD₅₀ (oral, rat): > 5000 mg/kg

LD₅₀ (dermal, rabbit): > 5000 mg/kg

LC₅₀ (inhalation, vapour, rat): 6.82 mg/l/4h

Titanium dioxide (CAS: 13463-67-7):

LD₅₀ (oral, rat): > 5000 mg/kg

LC₀ (inhalation): ≥ 5 mg/m³/3h

Surfactant / 2-[4-(2,4,4-trimethyl pentan-2-yl)phenoxy]ethanol (CAS: 9002-93-1):

LD₅₀ (oral, rat): 1800 mg/kg

11.1.3. Information on likely routes of exposure:

Ingestion, inhalation, skin contact, eye contact.

11.1.4. Symptoms related to the physical, chemical and toxicological characteristics:

No data available.

11.1.5. Delayed and immediate effects as well as chronic effects from short and long-term exposure:

There are no important acute and delayed symptoms and effects known.

11.1.6. Interactive effects:

No data available.

11.1.7. Absence of specific data:

No information.

11.1.8. Other information:

There are no toxicological tests available for this product. Classification is based on the properties of relevant components.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity:

Harmful to aquatic life with long lasting effects.

Data about the ingredients:

Titanium dioxide (CAS: 13463-67-7):

LC₅₀ (Oncorhynchus mykiss): > 100 mg/l/96h (OECD 203)

LC₅₀ (Pimephales promelas): > 1000 mg/l/96h

LC₅₀ (Cyprinodon variegatus): > 10000 mg/l (OECD 203)

EC₅₀ (Pseudokirchneriella subcapitata): 16 mg/l/72h

EC₅₀ (Skeletonema costatum): > 10000 mg/l/72h (ISO 10253)

EC₅₀ (Pseudokirchneriella subcapitata): 61 mg/l/72h

NOEC (microorganisms): ≥ 100000 mg/l/28d

NOEC (microorganisms): ≥ 14989 mg/l/10d

NOEC (aquatic plants): 1 mg/l/72h

Zinc oxide (CAS: 1314-13-2):

LC₅₀ (Oncorhynchus mykiss): 1.1 mg/l/96h

EC₅₀ (Daphnia magna): > 1000 mg/l/48h

IC₅₀ (Pseudokirchneriella subcapitata): 0.17 mg/l/72h

Surfactant / 2-[4-(2,4,4-trimethyl pentan-2-yl)phenoxy]ethanol (CAS: 9002-93-1):

LC₅₀ (Pimephales promelas): 8.9 mg/l/96h

EC₅₀ (Daphnia magna): 26 mg/l/48h

12.2. Persistence and degradability:

No data available about the product.

Data about the ingredients:

Surfactant / 2-[4-(2,4,4-trimethyl pentan-2-yl)phenoxy]ethanol (CAS: 9002-93-1):

Not easily biodegradable.

12.3. Bioaccumulation potential:

No data available.

12.4. Mobility in soil:

No data available.

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

No data available.

12.6. **Other adverse effects:**

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. **Waste treatment methods:**

Disposal according to the local regulations.

13.1.1. **Information regarding the disposal of the product:**

No special recommendation from the manufacturer.

Dispose of in accordance with applicable regulations.

List of Waste Code:

No waste disposal key according to the List of Waste Code (LoW code) can be determined for this product, as only the purpose of application defined by the user enables an allocation. The LoW code number has to be determined after a discussion with a waste disposal specialist.

13.1.2. **Information regarding the disposal of the packaging:**

Dispose of in accordance with applicable regulations.

13.1.3. **Physical/chemical properties that may affect waste treatment options shall be specified:**

No data available.

13.1.4. **Sewage disposal:**

No data available.

13.1.5. **Special precautions for any recommended waste treatment:**

No data available.

SECTION 14: TRANSPORT INFORMATION

Not dangerous good in sense of the transport regulations.

14.1. **UN Number:**

No UN Number.

14.2. **UN proper shipping name:**

No proper shipping name.

14.3. **Transport hazard class(es):**

No transport hazard classes.

14.4. **Packing group:**

No packing group.

14.5. **Environmental hazards:**

No relevant information available.

14.6. **Special precautions for user:**

No relevant information available.

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:**

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive (EC) No 1999/45 and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive (EEC) No 76/769 and Commission Directives (EEC) No 91/155, (EEC) No 93/67, (EC) No 93/105 and (EC) No 2000/21

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 (EEC) No 67/548 and (EC) No 1999/45, and amending Regulation (EC) No 1907/2006

COMMISSION REGULATION (EU) No 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)

The product contains an ingredient which is contained on the candidate list of authorisation for Substances of Very High Concern (SVHC), in accordance with paragraph (10), article 59 of **Regulation (EC) No 1907/2006** (REACH):

Surfactant / 2-[4-(2,4,4-trimethyl pentan-2-yl)phenoxy]ethanol (CAS: 9002-93-1)
Endocrine disrupting properties (article 59, point f – environment)

15.2. Chemical safety assessment:

Surfactant / 2-[4-(2,4,4-trimethyl pentan-2-yl)phenoxy]ethanol (CAS: 9002-93-1): No chemical safety assessment has been carried out for the substance.

Acrylate copolymer (CAS: 9010-88-2): No chemical safety assessment has been carried out for the substance.

Zinc oxide (CAS: 1314-13-2): No chemical safety assessment has been carried out for the substance.

SECTION 16: OTHER INFORMATION

Information regarding the revision of the safety data sheet: No information.

Literature references / data sources:

Hungarian version of the safety data sheet, issued by the distributor (13. 03. 2020, version 1).

Methods used for the classification according to Regulation (EC) No 1272/2008:

Classification	Method
Hazardous to the aquatic environment – Chronic Hazard, Category 3 – H412	Based on calculation method

Relevant hazard statements (code and full text) of Sections 2 and 3:

H302 – Harmful if swallowed.

H319 – Causes serious eye irritation.

H400 – Very toxic to aquatic life.

H410 – Very toxic to aquatic life with long lasting effects.

H411 – Toxic to aquatic life with long lasting effects.

H412 – Harmful to aquatic life with long lasting effects.

Training advice: No data available.

Full text of the abbreviations in the safety data sheet:

ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road.

ATE: Acute Toxicity Estimate.

AOX: Adsorbable organic halides.

BCF: Bioconcentration factor.

BOD: Biological Oxygen Demand.

CAS number: Chemical Abstract Service number.

CLP: Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures.

CMR effects: Carcinogenic, mutagenic, reprotoxic effects.

COD: Chemical Oxygen Demand.

CSA: Chemical Safety Assessment.

CSR: Chemical Safety Report.

DNEL: Derived-No-Effect-Level.

ECHA: European Chemical Agency.

EC: European Community.

EC number: EINECS and ELINCS numbers (see also EINECS and ELINCS).

EEC: European Economic Community.

EEA: European Economic Area (EU + Iceland, Liechtenstein and Norway).

EINECS: European Inventory of Existing Commercial Chemical Substances.

ELINCS: European List of Notified Chemical Substances.

EN: European Norm.

EU: European Union.

EWC: European Waste Catalogue (replaced by LoW – see below).

GHS: Globally Harmonized System of Classification and Labelling of Chemicals.

IATA: International Air Transport Association.

ICAO-TI: Technical Instructions for the Safe Transport of Dangerous Goods by Air.

IMDG: International Maritime Dangerous Goods.

IMSBC: International Maritime Solid Bulk Cargoes.
IUCLID: International Uniform Chemical Information Database.
IUPAC: International Union of Pure and Applied Chemistry.
Kow: n-Octanol - Water Partition Coefficient.
LC50: Lethal concentration resulting in 50 % mortality.
LD50: Lethal dose resulting in 50 % mortality (median lethal dose).

LoW: List of Waste.
LOEC: Lowest Observed Effect Concentration.
LOEL: Lowest Observed Effect Level.
NOEC: No Observed Effect Concentration.
NOEL: No Observed Effect Level.
NOAEC: No Observed Adverse Effect Concentration.
NOAEL: No Observed Adverse Effect Level.
OECD: Organization for Economic Cooperation and Development.
OSHA: Occupational Safety and Health Administration.
PBT: Persistent, Bioaccumulative and Toxic.
PNEC: Predicted No Effect Concentration.
QSAR: Quantitative Structure Activity Relationship.
REACH: Regulation 1907/2006/EC concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals.
RID: Regulations Concerning the International Transport of Dangerous Goods by Rail.
SCBA: Self Contained Breathing Apparatus.
SDS: Safety Data Sheet.
STOT: Specific Target Organ Toxicity.
SVHC: Substances of Very High Concern.
UN: United Nations.
UVCB: Chemical Substances of Unknown or Variable Composition, Complex Reaction Products and Biological Materials.
VOC: Volatile Organic Compound.
vPvB: very Persistent and very Bioaccumulative.

This safety data sheet had been prepared on the basis of information provided by the manufacturer/supplier and conform to the relevant regulations.

The information, data and recommendations contained herein are provided in good faith, obtained from reliable sources and believed to be true and accurate as of the date issued; however, no representation is made as to the comprehensiveness of the information.

The SDS shall be used only as a guide for handling the product; in the course of handling and using the product other considerations may arise or be required.

Users are cautioned to determine the appropriateness and applicability of the above information to their particular circumstances and purposes and assume all risk associated with the use of this product.

It is the responsibility of the user to fully comply with local, national and international regulations concerning the use of this product.

Safety data sheet was prepared by:
MSDS-Europe
International branch of ToxInfo Kft.

Professional help regarding the explanation of
the safety data sheet:
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www.msds-europe.com



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