

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

1.1. Product identifier

Product form	: Mixture
Trade name	: Modesta BC-04 - Nano-Titanium Glass Coating
UFI	: 03H5-FPTH-S90Q-2616
Product code	: 00336
Product group	: Trade product

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

1.2.1. Relevant identified uses

Main use category	: Professional use
Industrial/Professional use spec	: For professional use only
Use of the substance/mixture	: Automotive and aerospace coatings

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Manufacturer

Modesta Japan Ltd
1580-1 Tahishimomachi
JP 761-8075 Takamatsushi, Kagawaken
Japan
www.modesta.co

Only Representative

Brands Alliance s.r.o. Ltd
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SK 81104 Bratislava
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msds@brandsalliance.eu, www.brandsalliance.eu

1.4. Emergency telephone number

No additional information available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 2	H225
Substances and Mixtures which, in contact with water, emit flammable gases, Category 3	H261
Acute toxicity (oral), Category 4	H302
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Skin sensitisation, Category 1	H317
Germ cell mutagenicity, Category 2	H341
Reproductive toxicity, Category 1B	H360
Specific target organ toxicity – Single exposure, Category 2	H371
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336
Specific target organ toxicity – Repeated exposure, Category 2	H373
Hazardous to the aquatic environment – Chronic Hazard, Category 3	H412

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Highly flammable liquid and vapour. In contact with water releases flammable gases. Suspected of causing genetic defects. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. May cause damage to organs. May cause drowsiness or dizziness. Harmful if swallowed. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Harmful to aquatic life with long lasting effects.

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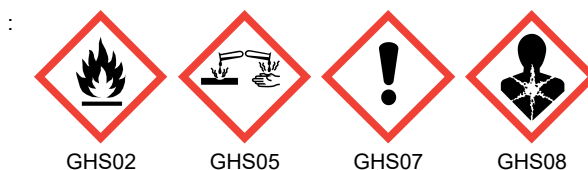
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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

Contains

Hazard statements (CLP)

Precautionary statements (CLP)

- : Danger
- : Isopropanol (Isopropyl alcohol); Methanol; Trimethoxysilane; Dibutyltin diacetate
- : H225 - Highly flammable liquid and vapour.
H261 - In contact with water releases flammable gases.
H302 - Harmful if swallowed.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H336 - May cause drowsiness or dizziness.
H341 - Suspected of causing genetic defects (oral).
H360 - May damage the unborn child. Suspected of damaging fertility. (oral).
H371 - May cause damage to organs (thymus) (oral).
H373 - May cause damage to organs (thymus) through prolonged or repeated exposure (oral).
H412 - Harmful to aquatic life with long lasting effects.
- : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P231+P232 - Handle and store contents under inert gas. Protect from moisture.
P233 - Keep container tightly closed.
P240 - Ground and bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting equipment.
P260 - Do not breathe vapours, mist.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves, eye protection.
P301+P312 - IF SWALLOWED: Call doctor if you feel unwell.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P311 - IF exposed or concerned: Call doctor.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P310 - Immediately call a doctor.
P312 - Call doctor if you feel unwell.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P330 - Rinse mouth.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use alcohol resistant foam to extinguish.
P402+P404 - Store in a dry place. Store in a closed container.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Labelling according to: exemption for packages of a capacity of 125ml or less

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Hazard pictograms (CLP)



GHS02

GHS05

GHS07

GHS08

Signal word (CLP)

: Danger

Hazardous ingredients

: Isopropanol (Isopropyl alcohol); Methanol; Trimethoxysilane; Dibutyltin diacetate

Hazard statements (CLP)

: H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H341 - Suspected of causing genetic defects (oral).
H360 - May damage the unborn child. Suspected of damaging fertility. (oral).
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements (CLP)

: P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves, eye protection.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - IF exposed or concerned: Get medical advice/attention.
P310 - Immediately call a doctor.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P405 - Store locked up.
P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Isopropanol (Isopropyl alcohol) substance with national workplace exposure limit(s) (DE, GB, PL, SI, SK)	CAS-No.: 67-63-0 EC-No.: 200-661-7 EC Index-No.: 603-117-00-0	50 – 75	Flam. Liq. 1, H224 Eye Irrit. 2, H319 STOT SE 3, H336
Methanol substance with national workplace exposure limit(s) (DE, GB, NL, PL, SI, SK)	CAS-No.: 67-56-1 EC-No.: 200-659-6 EC Index-No.: 603-001-00-X	5 – 10	Flam. Liq. 2, H225 Acute Tox. 3 (Inhalation), H331 Acute Tox. 3 (Dermal), H311 Acute Tox. 3 (Oral), H301 STOT SE 1, H370

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Trimethoxysilane	CAS-No.: 2487-90-3 EC-No.: 219-637-2	5 – 10	Flam. Liq. 2, H225 Water-react. 3, H261 Acute Tox. 1 (Inhalation), H330 Skin Corr. 1C, H314 STOT SE 3, H335
Dibutyltin diacetate	CAS-No.: 1067-33-0 EC-No.: 213-928-8 EC Index-No.: 050-033-00-X	1 – 5	Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 Repr. 1B, H360 Muta. 2, H341 STOT SE 1, H370 STOT RE 1, H372 Aquatic Chronic 1, H410
Titanium dioxide substance with national workplace exposure limit(s) (GB, PL, SK)	CAS-No.: 13463-67-7 EC-No.: 236-675-5 EC Index-No.: 022-006-00-2	0.1 – 0.5	Carc. 2, H351

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
Methanol	CAS-No.: 67-56-1 EC-No.: 200-659-6 EC Index-No.: 603-001-00-X	(3 ≤ C < 10) STOT SE 2, H371 (10 ≤ C ≤ 100) STOT SE 1, H370

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Rinse mouth. Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects	: May cause drowsiness or dizziness.
Symptoms/effects after inhalation	: Although no appropriate human or animal health effects data are known to exist, this material is expected to be an inhalation hazard.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.
Symptoms/effects after ingestion	: None under normal conditions.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Dry powder. Foam. Carbon dioxide.
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Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Highly flammable liquid and vapour.

Explosion hazard : No direct explosion hazard.

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Firefighting instructions : Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material damage.

6.1.1. For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.

Emergency procedures : No open flames, no sparks, and no smoking. Only qualified personnel equipped with suitable protective equipment may intervene. Do not breathe dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak without risks if possible.

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Handle under inert gas. Protect from moisture. Do not allow contact with water. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.

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Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.
Storage conditions : Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Store in a well-ventilated place. Store in a well-ventilated place. Keep cool. Keep container tightly closed. Protect from moisture. Store in a dry place. Store in a closed container. Store locked up.
Incompatible products : Strong bases. Strong acids. Oxidizing agent.
Storage temperature : 22 °C
Packaging materials : Store always product in container of same material as original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment:

Wear recommended personal protective equipment.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

Eye protection			
Type	Field of application	Characteristics	Standard
Safety glasses		With side shields	EN 166

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8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Skin and body protection	
Type	Standard
	EN ISO 6529, EN ISO 20345

Hand protection:

Protective gloves

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves	Nitrile rubber (NBR), Chloroprene rubber (CR)	6 (> 480 minutes)	0,4-0,7		EN 374-2, EN ISO 374-1, EN ISO 374

8.2.2.3. Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

Respiratory protection			
Device	Filter type	Condition	Standard
Air-Purifying Respirator (APR), disposable		Short term exposure	

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: 87 °C
Flammability	: Highly flammable liquid and vapour, In contact with water releases flammable gases.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 14 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Soluble in organic solvents. Not miscible.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available

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Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20°C	: 1.04
Particle characteristics	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapour. The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

In contact with water releases flammable gases. No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition. Water, humidity. None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Modesta BC-04 - Nano-Titanium Glass Coating	
ATE CLP (oral)	1388.889 mg/kg bodyweight
Isopropanol (Isopropyl alcohol) (67-63-0)	
LD50 oral rat	5840 mg/l Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 oral	4384 mg/kg
LD50 dermal rabbit	16400 mg/kg Source: ECHA
LD50 dermal	4000 mg/kg
Methanol (67-56-1)	
LD50 oral rat	1187 – 2769 mg/l Animal: rat
LD50 oral	1400 mg/kg

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Methanol (67-56-1)	
LD50 dermal rabbit	300 mg/kg Source: ECHA
Trimethoxysilane (2487-90-3)	
LD50 oral	5000 mg/kg bodyweight Animal: mouse, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
Dibutyltin diacetate (1067-33-0)	
LD50 oral	32 mg/kg
LD50 dermal rabbit	2320 mg/kg Source: GESTIS
Titanium dioxide (13463-67-7)	
LD50 oral rat	≥ 5000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure), Guideline: EPA OPPTS 870.1100 (Acute Oral Toxicity)
LC50 Inhalation - Rat (Dust/Mist)	> 3.43 mg/l Source: ECHA
Skin corrosion/irritation	: Causes skin irritation.
Titanium dioxide (13463-67-7)	
pH	7
Serious eye damage/irritation	: Causes serious eye damage.
Titanium dioxide (13463-67-7)	
pH	7
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Suspected of causing genetic defects (oral).
Carcinogenicity	: Not classified
Isopropanol (Isopropyl alcohol) (67-63-0)	
IARC group	3 - Not classifiable
Titanium dioxide (13463-67-7)	
IARC group	2B - Possibly carcinogenic to humans
Reproductive toxicity	: May damage the unborn child. Suspected of damaging fertility. (oral).
Methanol (67-56-1)	
NOAEL (animal/male, F0/P)	< 1000 mg/kg bodyweight Animal: mouse, Animal sex: male
Dibutyltin diacetate (1067-33-0)	
NOAEL (animal/male, F0/P)	1.9 – 2.3 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)
NOAEL (animal/female, F0/P)	1.7 – 2.4 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 421 (Reproduction / Developmental Toxicity Screening Test)
STOT-single exposure	: May cause damage to organs (thymus) (oral). May cause drowsiness or dizziness.
Isopropanol (Isopropyl alcohol) (67-63-0)	
STOT-single exposure	May cause drowsiness or dizziness.
Methanol (67-56-1)	
STOT-single exposure	Causes damage to organs.
Trimethoxysilane (2487-90-3)	
STOT-single exposure	May cause respiratory irritation.

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Dibutyltin diacetate (1067-33-0)	
STOT-single exposure	Causes damage to organs.
STOT-repeated exposure	: May cause damage to organs (thymus) through prolonged or repeated exposure (oral).

Trimethoxysilane (2487-90-3)	
NOAEL (oral, rat, 90 days)	50 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test), Guideline: other:USEPA OPPTS 870.3650

Dibutyltin diacetate (1067-33-0)	
STOT-repeated exposure	Causes damage to organs (immune system) through prolonged or repeated exposure.
Aspiration hazard	: Not classified

Trimethoxysilane (2487-90-3)	
Viscosity, kinematic	0.58 mm ² /s Temp.: 'other:25.0°C' Parameter: 'kinematic viscosity (in mm ² /s)'

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Harmful to aquatic life with long lasting effects.

Isopropanol (Isopropyl alcohol) (67-63-0)	
LC50 - Fish [1]	10000 mg/l Test organisms (species): Pimephales promelas
LC50 - Fish [2]	9640 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	3025 mg/l

Methanol (67-56-1)	
LC50 - Fish [1]	15400 mg/l Test organisms (species): Lepomis macrochirus
EC50 - Crustacea [1]	1340 mg/l
EC50 96h - Algae [1]	≈ 22000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC (chronic)	208 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	446.7 mg/l Test organisms (species): Pimephales promelas Duration: '28 d'

Trimethoxysilane (2487-90-3)	
LC50 - Fish [1]	> 100 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	< 1 mg/l Source: ECOSAR

Dibutyltin diacetate (1067-33-0)	
LC50 - Fish [1]	3.1 mg/l Source: ECHA

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Dibutyltin diacetate (1067-33-0)	
EC50 - Crustacea [1]	1.4 mg/l Test organisms (species): Daphnia magna
ErC50 algae	0.1 mg/l
Titanium dioxide (13463-67-7)	
LC50 - Fish [1]	155 mg/l Test organisms (species): other:Japanese Medaka
EC50 - Crustacea [1]	19.3 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	27.8 mg/l Test organisms (species): Daphnia magna
EC50 - Other aquatic organisms [1]	> 100 mg/l Test organisms (species):
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
LOEC (chronic)	5 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	≥ 2.92 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

12.2. Persistence and degradability

Modesta BC-04 - Nano-Titanium Glass Coating	
Persistence and degradability	Not rapidly degradable
Isopropanol (Isopropyl alcohol) (67-63-0)	
Persistence and degradability	Rapidly degradable
Methanol (67-56-1)	
Persistence and degradability	Not rapidly degradable
Trimethoxysilane (2487-90-3)	
Persistence and degradability	Not rapidly degradable
Dibutyltin diacetate (1067-33-0)	
Persistence and degradability	Not rapidly degradable
Titanium dioxide (13463-67-7)	
Persistence and degradability	Not rapidly degradable

12.3. Bioaccumulative potential

Isopropanol (Isopropyl alcohol) (67-63-0)	
Partition coefficient n-octanol/water (Log Pow)	0.05 Source: ICSC
Methanol (67-56-1)	
Partition coefficient n-octanol/water (Log Pow)	-0.77 Source: HSDB,ChemIDplus
Trimethoxysilane (2487-90-3)	
Partition coefficient n-octanol/water (Log Pow)	-1.22
Dibutyltin diacetate (1067-33-0)	
Partition coefficient n-octanol/water (Log Pow)	3.39 Source: ECHA

12.4. Mobility in soil

Methanol (67-56-1)	
Mobility in soil	2.75 Source: HSDB

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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available






SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Flammable vapours may accumulate in the container. Do not re-use empty containers.
European List of Waste (LoW, EC 2000/532)	: 18 02 05* - chemicals consisting of or containing dangerous substances 20 01 39 - plastics 20 01 02 - glass

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1263	UN 1263	UN 1263	UN 1263	UN 1263
14.2. UN proper shipping name				
PAINT	PAINT	Paint	PAINT	PAINT
Transport document description				
UN 1263 PAINT, 3, II, (D/E)	UN 1263 PAINT, 3, II	UN 1263 Paint, 3, II	UN 1263 PAINT, 3, II	UN 1263 PAINT, 3, II
14.3. Transport hazard class(es)				
3	3	3	3	3
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

Limited quantities (ADR) : 5l

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Excepted quantities (ADR) : E2
Transport category (ADR) : 2
Hazard identification number (Kemler No.) : 33
Orange plates :



Tunnel restriction code (ADR) : D/E

Transport by sea

Special provisions (IMDG) : 163, 367
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
Special packing provisions (IMDG) : PP1
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1, TP8, TP28
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-E
Stowage category (IMDG) : B
Properties and observations (IMDG) : Miscibility with water depends upon the composition.
MFAG-No : 127

Air transport

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 353
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 364
CAO max net quantity (IATA) : 60L
Special provisions (IATA) : A3, A72, A192
ERG code (IATA) : 3L

Inland waterway transport

Classification code (ADN) : F1
Special provisions (ADN) : 163, 367, 640D, 650
Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E2
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1

Rail transport

Classification code (RID) : F1
Special provisions (RID) : 163, 367, 640D, 650
Limited quantities (RID) : 5L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02, R001
Special packing provisions (RID) : PP1
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4
Portable tank and bulk container special provisions (RID) : TP1, TP8, TP28
Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE7
Hazard identification number (RID) : 33

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(a)	Modesta BC-04 - Nano-Titanium Glass Coating ; Isopropanol (Isopropyl alcohol) ; Methanol ; Trimethoxysilane	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F
3(b)	Modesta BC-04 - Nano-Titanium Glass Coating ; Isopropanol (Isopropyl alcohol) ; Methanol ; Trimethoxysilane ; Dibutyltin diacetate ; Titanium dioxide	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	Modesta BC-04 - Nano-Titanium Glass Coating ; Dibutyltin diacetate	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
40.	Modesta BC-04 - Nano-Titanium Glass Coating ; Isopropanol (Isopropyl alcohol) ; Methanol ; Trimethoxysilane	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.
69.	Methanol	Methanol

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals): dibutyltin di(acetate) (1067-33-0)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

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15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

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Full text of H- and EUH-statements:	
Acute Tox. 1 (Inhalation)	Acute toxicity (inhal.), Category 1
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 3 (Inhalation)	Acute toxicity (inhal.), Category 3
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 1	Flammable liquids, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
H224	Extremely flammable liquid and vapour.
H225	Highly flammable liquid and vapour.
H261	In contact with water releases flammable gases.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H311	Toxic in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H370	Causes damage to organs.
H371	May cause damage to organs.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Muta. 2	Germ cell mutagenicity, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C

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Full text of H- and EUH-statements:

Skin Sens. 1B	Skin sensitisation, category 1B
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1
STOT SE 1	Specific target organ toxicity – single exposure, Category 1
STOT SE 2	Specific target organ toxicity – Single exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis
Water-react. 3	Substances and Mixtures which, in contact with water, emit flammable gases, Category 3

Safety Data Sheet (SDS), EU

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