

SAFETY DATA SHEET

According to Regulation (EC) No. 1907/2006 (REACH) Article 31, Annex II as amended.

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

1.1 Product identifier:

Product name: CO-PRIM-0,1
UFI: CFD0-205J-K00A-30C4

Product No.: PRCO90010583

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

Identified uses: Adhesion promoter for silicone elastomers.

Uses advised against: None known.

1.3 Details of the supplier of the safety data sheet:

Manufacturer:

Trinytec
ZA du Clavon 1 Rue Pierre et Marie Curie
26230, Valaurie
FRANCE

Telephone: 04-26-34-15-93

mail: orders@trinytec.com

1.4 Emergency telephone number: CHEMTREC UK (24h) : +(44)-870-8200418 / National Poison Centre : 111

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture:

The product has been classified according to the legislation in force.

Classification according to Regulation (EC) No 1272/2008 as amended.

Physical Hazards:

Flammable liquids	Category 2	H225: Highly flammable liquid and vapor.
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Health Hazards:

Skin irritation	Category 2	H315: Causes skin irritation.
Serious eye damage	Category 1	H318: Causes serious eye damage.
Specific Target Organ Toxicity - Single Exposure	Category 3	H336: May cause drowsiness or dizziness.
Aspiration Hazard	Category 1	H304: May be fatal if swallowed and enters airways.

Environmental Hazards:

Chronic hazards to the aquatic environment	Category 2	H411: Toxic to aquatic life with long lasting effects.
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2.2 Label Elements:

Contains: Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane
Titanium tetrabutanolate

Hazard pictograms:



Signal Word: Danger

Hazard statements:
H225: Highly flammable liquid and vapor.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H318: Causes serious eye damage.
H336: May cause drowsiness or dizziness.
H411: Toxic to aquatic life with long lasting effects.

Precautionary Statements:

Prevention:
P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261: Avoid breathing dust/fume/gas/mist/vapors/spray.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response:
P301+P310: IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Disposal:
P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

UFI: CFD0-205J-K00A-30C4

2.3 Other hazards:

Physical Hazards: Highly flammable.

Health Hazards:
Inhalation: Vapors may cause drowsiness and dizziness.

Eye contact: Causes serious eye damage.

Skin contact: Irritating to skin.

Ingestion: Harmful if swallowed - may enter lungs if swallowed or vomited.

Other Health Effects: No other information noted.

Environmental Hazards: Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Other hazards: No PBT/vPvB mixture level data, AND mixture DOES NOT contain substance(s) that meet PBT and/or vPvB criteria.

Substance(s) formed under the conditions of use:

Chemical name	Concentration*	CAS-No.	EC No.	Classification
Butan-1-ol	<6,5%	71-36-3	200-751-6	Flam. Liq. 3 H226; Acute Tox. 4 H302; STOT SE 3 H335; STOT SE 3 H336; Skin Irrit. 2 H315; Eye Dam. 1 H318;
Ethanol	<5%	64-17-5	200-578-6	Flam. Liq. 2 H225; Eye Dam. 2 H319;

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

The full text for all H-statements is displayed in section 16.

SECTION 3: Composition/information on ingredients

3.2 Mixtures:

General information:

Solution of organosiloxanes.

Chemical name	Concentration*	Type	CAS-No.	EC No.	REACH Registration No.	Notes
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	50 - <100%	Component	92128-66-0	-	01-2119475514-35-XXXX	
Titanium tetrabutanolat	5 - <10%	Component	5593-70-4	227-006-8	01-2119967423-33-XXXX	
Titanium tetraisopropanolat	1 - <5%	Impurities	546-68-9	208-909-6	Not relevant.	

* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

This substance has workplace exposure limit(s).

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

Classification:

Chemical name	Classification	M-Factor:	Notes
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	Flam. Liq. 2 H225; Skin Irrit. 2 H315; Asp. Tox. 1 H304; STOT SE 3 H336; Aquatic Chronic 2 H411;	None.	None.
Titanium tetrabutanolat	Flam. Liq. 3 H226; Skin Irrit. 2 H315; Eye Dam. 1 H318; STOT SE 3 H335; STOT SE 3 H336;	None.	None.
Titanium tetraisopropanolat	Flam. Liq. 3 H226; Eye Irrit. 2 H319; STOT SE 3 H336;	None.	None.

The full text for all H-statements is displayed in section 16.

SECTION 4: First aid measures

General information:

Get medical attention if symptoms occur. Show this Safety Data Sheet to the attending physician. Contaminated clothing to be placed in closed container until disposal or decontamination.

4.1 Description of first aid measures:

Inhalation:

Move into fresh air and keep at rest. Get medical attention if any discomfort continues.

Skin contact:

Remove contaminated clothing and shoes.

Wash with soap and water. Get medical attention if irritation persists after washing.

Eye contact:

In the event of contact with the eyes, rinse thoroughly with clean water. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.

Ingestion:

Do not induce vomiting. Rinse mouth thoroughly. Get medical attention if symptoms occur.

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

None known.

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

No specific recommendations.

Treatment:

No specific recommendations.

SECTION 5: Firefighting measures**General Fire Hazards:**

No specific recommendations.

5.1 Extinguishing media:**Suitable extinguishing media:**

Extinguish with foam, carbon dioxide or dry powder.

Unsuitable extinguishing media:

Do not use water jet as an extinguisher, as this will spread the fire.

5.2 Special hazards arising from the substance or mixture:

Flammable.

5.3 Advice for firefighters:**Special fire fighting procedures:**

Water spray should be used to cool containers.

Special protective equipment for fire-fighters:

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures:**

Do not breathe vapor. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Use personal protective equipment. See Section 8 of the SDS for Personal Protective Equipment.

6.2 Environmental Precautions:

Collect spillage. Do not discharge into drains, water courses or onto the ground.

6.3 Methods and material for containment and cleaning up:

Containers with collected spillage must be properly labelled with correct contents and hazard symbol. Container must be kept tightly closed. Use explosion-proof [electrical/ventilating/lighting/...] equipment. Absorb with sand or other inert absorbent. To clean the floor and all objects contaminated by this material, use an appropriate solvent.(cf. : § 9) Flush area with plenty of water. Incinerate in suitable combustion chamber.

6.4 Reference to other sections:

Caution: Contaminated surfaces may be slippery. For waste disposal, see Section 13 of the SDS.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

Precautions:

Use explosion-proof [electrical/ventilating/lighting/...] equipment. Ground container and transfer equipment to eliminate static electric sparks. Open container carefully and only in a dry, oxygen-free or inert atmosphere. Avoid forming spray/aerosol mists. Adequate ventilation should be provided so that exposure limits are not exceeded.

Hygiene measures:

Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

7.2 Conditions for safe storage, including any incompatibilities:

Avoid discharge into drains, water courses or onto the ground. Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames, and high temperatures. Nitrogen blanketing of containers is recommended. Avoid contact with oxidizing agents. Suitable containers: Steel drums coated with epoxy-resin.

7.3 Specific end use(s):

No data available.

SECTION 8: Exposure controls/personal protection

8.1 Control Parameters:

Occupational Exposure Limits:

None of the components have assigned exposure limits.

Additional exposure limits under the conditions of use:

Chemical name	Type	Exposure Limit Values	Source
butan-1-ol	STEL	50 ppm 154 mg/m ³	UK. EH40 Workplace Exposure Limits (WELs), as amended (2007)
ethanol	TWA	1 000 ppm 1 920 mg/m ³	UK. EH40 Workplace Exposure Limits (WELs), as amended (2007)

Monitoring methods:

Ensure workers' exposure monitoring in accordance with national and European regulations in force, in particular Directives 98/24/EC and 2004/37/EC.

8.2 Exposure controls:

Appropriate Engineering Controls:

Use engineering controls to reduce air contamination to permissible exposure level. The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Engineering controls are always preferable to personal protective equipment. Control measures to consider: Provide adequate ventilation. In case of inadequate ventilation: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower. Use explosion-proof ventilation equipment.

Individual protection measures, such as personal protective equipment:

Avoid inhalation of vapors/aerosols/dusts and contact with skin and eyes. Personal protective equipment should be chosen according to applicable standards, adapted to the conditions of use of the product and in discussion with the supplier of the personal protective equipment.

Eyeface protection:

Safety goggles.
Use face shield in case of splash risk.

Hand Protection:

This recommendation is valid only for the product named in this safety data sheet supplied by us, and only for the indicated intended use purposes. In case this product will be mixed with other substances, you need to contact a supplier of CE approved protective gloves in order to determine the appropriate gloves.

Prolonged or repeated contact:

Material: Nitrile.

Glove thickness: 1,25 mm

Guideline: EN374-3

Additional Information: Gloves commonly used in Elkem's facilities.

Short contact:

Material: Nitrile / Neoprene

Glove thickness: 0,198 mm

Guideline: EN374-3

Additional Information: Gloves commonly used in Elkem's labs.

Skin and Body Protection:

Wear appropriate clothing to prevent any possibility of skin contact. Isolate contaminated clothing and wash before reuse. In case of splashes: Wear apron or special protective clothing.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use the following CE approved air-purifying respirator: Breathing apparatus with combined filter type ABEK. Wear respiratory protection with combination filter (dust and gas filter) during operations leading to the formation of dust/aerosols.

Environmental Controls:

See sections 7 and 13 of the Safety Data Sheet.

SECTION 9: Physical and chemical properties**9.1 Information on basic physical and chemical properties:****Appearance:****Physical state:**

Liquid

Form:

No data available.

Color:

Yellowish

Odor:

Characteristic

Odor Threshold:

No data available.

pH:

No data available.

Melting point/freezing point:

No data available.

Boiling Point:

80 - 110 °C

Flash Point:

-26 °C

Evaporation Rate:

No data available.

Flammability (solid, gas):

No data available.

Flammability Limit - Upper (%):	8 %(V)
Flammability Limit - Lower (%):	0,7 %(V)
Vapor pressure:	< 1 100 hPa (50 °C)
Vapor density (air=1):	No data available.
Density:	Approximate 0,75 kg/dm ³ (20 °C)
Solubility(ies):	
Solubility in Water:	Very slightly soluble
Solubility (other):	Common organic solvents.: Miscible (in all proportions).
Partition coefficient (n-octanol/water):	No data available.
Self Ignition Temperature:	> 200 °C Gasoline
Decomposition Temperature:	No data available.
Kinematic viscosity:	< 0,5 mm ² /s (25 °C)
Dynamic viscosity:	Approximate < 0,5 mPa.s (25 °C)
Explosive properties:	No data available.
Oxidizing properties:	According to the data on the components Not considered as oxidizing. (evaluation by structure-activity relationship)

9.2 Other information: No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity:

Not relevant.

10.2 Chemical Stability:

Stable

10.3 Possibility of hazardous reactions:

No data available.

10.4 Conditions to avoid:

No other information noted.

10.5 Incompatible Materials:

Strong oxidizing agents.
Water, steam, water mixtures.

10.6 Hazardous Decomposition Products:

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.
Amorphous silica. During use or in contact with water, may generate hazardous substances.

SECTION 11: Toxicological information

Information on likely routes of exposure:

Inhalation: No data available.

Ingestion: No data available.

Skin contact: No data available.

Eye contact: No data available.

11.1 Information on toxicological effects:

Acute toxicity:

Oral:

Not classified for acute toxicity based on available data.

Dermal:

Not classified for acute toxicity based on available data.

Inhalation:

Not classified for acute toxicity based on available data.

Repeated dose toxicity:

Based on our knowledge of the composition information:

HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, <5% N-HEXANE (92128-66-0):
NOAEL: 8,117 mg/l ; (Rat ; Female, Male ; Inhalation - vapour) ; Method: OECD 413 ; Results obtained on a similar product. Subchronic exposure

TITANIUM TETRABUTANOLATE (5593-70-4):

NOAEL: 125 mg/kg ; (Rat ; Female, Male ; Gavage (Oral)) ; Results obtained on a similar product.
Subchronic exposure

NOAEL: 2,35 mg/l ; (Rat ; Female, Male ; Inhalation - vapour) ; Results obtained on a similar product.
Subchronic exposure

TITANIUM TETRAISOPROPANOLATE (546-68-9):

NOAEL: 12,3 mg/l ; (Rat ; Female, Male ; Inhalation - vapour) ; Method: OECD 413 ; Results obtained on a similar product. Subchronic exposure

Skin Corrosion/Irritation:

Based on our knowledge of the composition information: Causes skin irritation.

HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, <5% N-HEXANE (92128-66-0):
Irritant (Rabbit) ; Method: OECD 404

TITANIUM TETRABUTANOLATE (5593-70-4):

Causes skin irritation.

TITANIUM TETRAISOPROPANOLATE (546-68-9):

Not irritating (Rabbit) ; Method: OECD 404

Serious Eye Damage/Eye Irritation:

Based on our knowledge of the composition information: Causes serious eye damage.

HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, <5% N-HEXANE (92128-66-0):
Not irritating (Rabbit) ; Method: According to a standardised method. ; Results obtained on a similar product.

TITANIUM TETRABUTANOLATE (5593-70-4):

Causes serious eye damage. (Rabbit) ; Method: Expert judgement

TITANIUM TETRAISOPROPANOLATE (546-68-9):

Causes serious eye irritation. (Rabbit) ; Method: OECD 405

Respiratory or Skin Sensitization:

Based on our knowledge of the composition information:

HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, <5% N-HEXANE (92128-66-0):

Skin sensitization: Not a skin sensitizer. (Guinea Pig) ; Method: OECD 406 ; Results obtained on a similar product.

TITANIUM TETRAISOPROPANOLATE (546-68-9):

Skin sensitization: Not a skin sensitizer. (Mouse) ; Method: According to a standardised method.

Germ Cell Mutagenicity:

In vitro: Based on our knowledge of the composition information:

HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, <5% N-HEXANE (92128-66-0):

Bacterial reverse mutation test: No mutagenic effect. (Salmonella typhimurium and Escherichia coli ; with and without metabolic activation) ; Method: OECD 471 ; Results obtained on a similar product.

In vitro gene mutations test on mammalian cells: No mutagenic effect. (Human lymphoblastoid cells ; with and without metabolic activation) ; Method: OECD 476 ; Results obtained on a similar product.

Chromosomal aberration: No clastogenic effect. (Other cell line ; with and without metabolic activation) ; Method: OECD 473 ; Results obtained on a similar product.

TITANIUM TETRABUTANOLATE (5593-70-4):

Bacteria: No mutagenic effect. (Salmonella typhimurium and Escherichia coli ; with and without metabolic activation) ; Method: OECD 471

Chromosomal aberration: No clastogenic effect. (Human lymphocytes ; with and without metabolic activation) ; Method: OECD 473

In vitro gene mutations test on mammalian cells: No mutagenic effect. (Mouse lymphoma cells ; with and without metabolic activation) ; Method: OECD 476

TITANIUM TETRAISOPROPANOLATE (546-68-9):

Bacteria: No mutagenic effect. (Salmonella typhimurium ; with and without metabolic activation) ; Method: OECD 471

In vivo: Based on our knowledge of the composition information:

HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, <5% N-HEXANE (92128-66-0):

Mammalian erythrocyte micronucleus test: negative (Mouse) ; Results obtained on a similar product.

Rodent dominant Lethal test: negative (Rat) ; Results obtained on a similar product.

TITANIUM TETRAISOPROPANOLATE (546-68-9):

Mammalian erythrocyte micronucleus test: No mutagenic effect. (Mouse ; Female, Male ; Intraperitoneal) ; Method: According to a standardised method. ; Results obtained on a similar product.

Carcinogenicity:

Based on our knowledge of the composition information:

TITANIUM TETRAISOPROPANOLATE (546-68-9):

Not classified

NOEL: 5 000 ppm (Rat ; Female, Male ; Inhalation - vapor) ; Method: Similar to OECD 451 ; Results obtained on a similar product.

NOEL: 500 ppm (Rat ; Female, Male ; Inhalation - vapor) ; Method: Similar to OECD 451 ; Systemic toxicity Results obtained on a similar product.

Reproductive toxicity:

Fertility: Based on our knowledge of the composition information:

HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, <5% N-HEXANE (92128-66-0):

Not classified

Fertility study 2 generations: NOAEL (parent): 31,68 mg/l ; NOAEL (F1): 31,68 mg/l ; NOAEL (F2): (Rat ; Female, Male ; Inhalation) ; Method: OECD 416 ; Results obtained on a similar product. The product is not considered to affect fertility.

TITANIUM TETRABUTANOLATE (5593-70-4):

Not classified

Fertility study 1 generation: NOAEL (parent): 18,5 mg/l ; NOAEL (F1): 18,5 mg/l ; NOAEL (F2): None. (Rat ; Female, Male ; Inhalation - vapor) ; The product is not considered to affect fertility. Results obtained on a similar product.

Teratogenicity: Based on our knowledge of the composition information:

HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, <5% N-HEXANE (92128-66-0):

Not classified

NOAEL (terato): 10,56 mg/l ; NOAEL (mater): 3,168 mg/l (Mouse ; Inhalation) ; Method: OECD 414 ;

Results obtained on a similar product. The product is not considered to be toxic for development.

NOAEL (terato): 31,68 mg/l ; NOAEL (mater): 10,56 mg/l (Rat ; Inhalation) ; Method: OECD 414 ; Results obtained on a similar product. The product is not considered to be toxic for development.

TITANIUM TETRABUTANOLATE (5593-70-4):

Not classified

NOAEL (terato): 10,8 mg/l ; NOAEL (mater): 10,8 mg/l (Rat ; Inhalation - vapor) ; The product is not considered to be toxic for development. Results obtained on a similar product.

TITANIUM TETRAISOPROPANOLATE (546-68-9):

Not classified

NOAEL (terato): 400 mg/kg ; NOAEL (mater): 400 mg/kg (Rat ; Gavage (Oral)) ; Method: According to a standardised method. ; The product is not considered to be toxic for development. Results obtained on a similar product.

Specific Target Organ Toxicity - Single Exposure:

Based on our knowledge of the composition information: May cause drowsiness or dizziness.

HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, <5% N-HEXANE (92128-66-0):

May cause drowsiness or dizziness. Inhalation: Target Organ(s): Central nervous system.

TITANIUM TETRABUTANOLATE (5593-70-4):

May cause drowsiness or dizziness. Oral: Target Organ(s): Central nervous system.

May cause respiratory irritation. Inhalation: Target Organ(s): Respiratory system

TITANIUM TETRAISOPROPANOLATE (546-68-9):

May cause drowsiness or dizziness. Oral Inhalation: Target Organ(s): Central nervous system.

Specific Target Organ Toxicity - Repeated Exposure:

Based on our knowledge of the composition information:

HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, <5% N-HEXANE (92128-66-0):

Not classified

TITANIUM TETRABUTANOLATE (5593-70-4):

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

TITANIUM TETRAISOPROPANOLATE (546-68-9):

Not classified

Aspiration Hazard:

Based on our knowledge of the composition information: May be fatal if swallowed and enters airways.

HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, <5% N-HEXANE (92128-66-0):

May be fatal if swallowed and enters airways.

TITANIUM TETRABUTANOLATE (5593-70-4):

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

TITANIUM TETRAISOPROPANOLATE (546-68-9):
Not classified

SECTION 12: Ecological information

12.1 Toxicity:

Acute toxicity:

Fish: Based on our knowledge of the composition information:

HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, <5% N-HEXANE (92128-66-0):

LC 50 (Oncorhynchus mykiss; 96 h) : 11,4 mg/l ; Method: OECD 203 ; Nominal loading rates (saturated solution or WAF/WSF).

TITANIUM TETRABUTANOLATE (5593-70-4):

LC 50 (Pimephales promelas; 96 h ; Static) : 1 910 mg/l ; Method: OECD 203 ; Results obtained on a similar product.

TITANIUM TETRAISOPROPANOLATE (546-68-9):

LC 50 (Pimephales promelas; 96 h) : 9 640 mg/l ; Method: According to a standardised method. ; Results obtained on a similar product.

Aquatic Invertebrates: Based on our knowledge of the composition information:

HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, <5% N-HEXANE (92128-66-0):

EL50 (Water flea (Daphnia magna); 96 h) : 3 mg/l ; Method: OECD 202 ; Nominal loading rates (saturated solution or WAF/WSF).

TITANIUM TETRABUTANOLATE (5593-70-4):

EC 50 (Water flea (Daphnia magna); 48 h ; Static) : 590 mg/l ; Method: OECD 202 ; Results obtained on a similar product.

TITANIUM TETRAISOPROPANOLATE (546-68-9):

EC 50 (Water flea (Daphnia magna); 48 h ; Static) : 700 mg/l ; Method: OECD 202

Aquatic plants: Based on our knowledge of the composition information:

HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, <5% N-HEXANE (92128-66-0):

ErL50 (Algae (Pseudokirchneriella subcapitata); 72 h) : 30 mg/l ; Method: OECD 201 ; Nominal loading rates (saturated solution or WAF/WSF).

NOELR (Algae (Pseudokirchneriella subcapitata); 72 h) : 3 mg/l ; Method: OECD 201 ; Nominal loading rates (saturated solution or WAF/WSF).

TITANIUM TETRABUTANOLATE (5593-70-4):

EC 50 (Green algae (Scenedesmus subspicatus); 72 h ; Static) : > 820 mg/l ; Method: OECD 201 ; Results obtained on a similar product.

NOEC (growth rate) (Green algae (Scenedesmus subspicatus); 72 h ; Static) : 201 mg/l ; Method: OECD 201 ; Results obtained on a similar product.

TITANIUM TETRAISOPROPANOLATE (546-68-9):

EC 50 (Green algae (Scenedesmus subspicatus); 72 h ; Static) : > 960 mg/l ; Method: OECD 201

NOEC (growth rate) (Green algae (Scenedesmus subspicatus); 72 h ; Static) : 237 mg/l ; Method: OECD 201

Toxicity to microorganisms: No data available.

Chronic Toxicity:

Fish: Based on our knowledge of the composition information:

HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, <5% N-HEXANE (92128-66-0):

NOELR (Oncorhynchus mykiss; 28 d) : 2,045 mg/l ; Structure-activity relationship (SAR)

Aquatic Invertebrates: Based on our knowledge of the composition information:

HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, <5% N-HEXANE (92128-66-0):
NOELR (Water flea (*Daphnia magna*); 21 d) : 1 mg/l ; Method: OECD 211 ; Nominal loading rates (saturated solution or WAF/WSF). Results obtained on a similar product.

TITANIUM TETRABUTANOLATE (5593-70-4):

NOEC (Water flea (*Daphnia magna*); 21 d ; semi-static) : 4 mg/l ; Results obtained on a similar product.

12.2 Persistence and Degradability:**Biodegradation: Based on our knowledge of the composition information:**

HYDROCARBONS, C6-C7, N-ALKANES, ISOALKANES, CYCLICS, <5% N-HEXANE (92128-66-0):
The 10-day time window does not apply to complex, multi-constituent substances with structurally similar constituents. 98 % (activated sludge, domestic (adaptation not specified) ; 28 d) ; Method: OECD 301 F ; Readily biodegradable

TITANIUM TETRABUTANOLATE (5593-70-4):

92 % (sewage, domestic, non-adapted ; 20 d ; Oxygen depletion) ; Method: According to a standardised method. ; Readily biodegradable Results obtained on a similar product.

TITANIUM TETRAISOPROPANOLATE (546-68-9):

80 % (sewage, domestic, non-adapted ; 15 d ; Oxygen depletion) ; Method: According to a standardised method. ; Readily biodegradable Results obtained on a similar product.

BOD/COD Ratio: No data available.

12.3 Bioaccumulative potential:

Bioconcentration Factor (BCF): No data available.

Partition coefficient (n-octanol/water): Based on our knowledge of the composition information:

TITANIUM TETRABUTANOLATE (5593-70-4):

Log Kow: 0,88 (20 °C) ; Results obtained on a similar product.

TITANIUM TETRAISOPROPANOLATE (546-68-9):

Log Kow: 0,05 ; Results obtained on a similar product.

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:**

The user's attention is drawn to the possible existence of local regulations regarding disposal.

Disposal methods:

Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Incinerate.

Contaminated Packaging:

Contaminated packages should be as empty as possible. Dispose of waste at an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal. Recycle following cleaning or dispose of at an authorised site.

SECTION 14: Transport information**ADR**

14.1 UN number or ID number:	UN 1866
14.2 UN Proper Shipping Name:	RESIN SOLUTION
14.3 Transport Hazard Class(es):	
Class:	3
Label(s):	3
Hazard No. (ADR):	33
Tunnel restriction code:	(D/E)
14.4 Packing Group:	II
14.5 Environmental hazards:	Dangerous for the environment.
14.6 Special precautions for user:	None.

IMDG / IMO

14.1 UN Number:	UN 1866
14.2 UN Proper Shipping Name:	RESIN SOLUTION
14.3 Transport Hazard Class(es):	
Class:	3
Label(s):	3
EmS No.:	F-E, S-E
14.4 Packing Group:	II
14.5 Environmental hazards:	Marine pollutant
14.6 Special precautions for user:	None.
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code:	Not applicable.

IATA

14.1 UN number or ID number:	UN 1866
14.2 Proper Shipping Name:	RESIN SOLUTION
14.3 Transport Hazard Class(es):	
Class:	3
Label(s):	3
14.4 Packing Group:	II
14.5 Environmental hazards:	Dangerous for the environment.
14.6 Special precautions for user:	None.
Other information	
Passenger and cargo aircraft:	Allowed.
Cargo aircraft only:	Allowed.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture:****EU Regulations:**

Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex I, Controlled Substances: None present or none present in regulated quantities.

Regulation 1005/2009/EC on substances that deplete the ozone layer, Annex II, New Substances: None present or none present in regulated quantities.

EU. Regulation 2019/1021/EU on persistent organic pollutants (POPs) (recast), as amended: None present or none present in regulated quantities.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended: None present or none present in regulated quantities.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended: None present or none present in regulated quantities.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended: None present or none present in regulated quantities.

Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended: None present or none present in regulated quantities.

EU. Directive 2010/75/EU on Industrial Emissions (IPPC), Annex II, L 334/17: None present or none present in regulated quantities.

Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorisation, as amended: None present or none present in regulated quantities.

EU. REACH Candidate List of Substances of Very High Concern for Authorization (SVHC): None present or none present in regulated quantities.

Regulation (EC) No. 1907/2006 Annex XVII Substances subject to restriction on marketing and use: None present or none present in regulated quantities.

Directive 98/24/EC on the protection of workers from the risks related to chemical agents at work: None present or none present in regulated quantities.

EU. Regulation No. 166/2006 PRTR (Pollutant Release and Transfer Registry), Annex II: Pollutants: None present or none present in regulated quantities.

15.2 Chemical safety assessment:

No Chemical Safety Assessment has been carried out.

Inventory Status:

Australia AICS:	On or in compliance with the inventory.
Canada DSL Inventory List:	On or in compliance with the inventory.
China Inv. Existing Chemical Substances:	On or in compliance with the inventory.
Japan (ENCS) List:	On or in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory.
New Zealand Inventory of Chemicals:	On or in compliance with the inventory.
Philippines PICCS:	On or in compliance with the inventory.
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory.
US TSCA Inventory:	On or in compliance with the inventory.
EINECS, ELINCS or NLP:	On or in compliance with the inventory.

SECTION 16: Other information

Revision Information:

SECTION 3: Modification: Composition/information on ingredients

Abbreviations and acronyms:

CLP: Regulation No. 1272/2008.
PBT: persistent, bioaccumulative and toxic substance.
vPvB: very persistent and very bioaccumulative substance.
NOAEL - No Observable Adverse Effect Level
LOAEL - Lowest Observable Adverse Effect Level

Classification and procedure used to derive the classification for mixtures according to Regulation (EC)

1272/2008 [CLP]:

Classification according to Regulation (EC) No 1272/2008 as amended.	Classification procedure
Flammable liquids ; Category 2 ; H225	On basis of test data
Skin irritation ; Category 2 ; H315	Calculation method
Serious eye damage ; Category 1 ; H318	On basis of test data
Specific Target Organ Toxicity - Single Exposure ; Category 3 ; H336	Calculation method
Aspiration Hazard ; Category 1 ; H304	On basis of test data
Chronic hazards to the aquatic environment ; Category 2 ; H411	On basis of test data

Wording of the H-statements in section 2 and 3:

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.

Issue Date: 03.12.2020

Disclaimer:

The information given is based on data available for the material, the components of the material, and similar materials. The information is believed to be correct. It is given in good faith. This information should be used to make an independent determination of the methods to safeguard workers and the environment.