SAFETY DATA SHEET

Flex+bond Presspack (grey-white-black)

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

1.1 Product identifier

Product name : Flex+bond Presspack (grey-white-black)

UFI : A4K0-Y0DT-E00M-DFXA

Product code : 133510

Color : Various

Product description : Adhesives-Sealants
Elasticizer

Product type : Aerosol.

Other means of identification : Not available.

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

Identified uses

Adhesives-Sealants
Elasticizer

Uses advised against

Not applicable.

1.3 Details of the supplier of the safety data sheet

WEICON GmbH & Co. KG
Königsberger Str. 255,
48157 Münster, Germany
phone:+49 251 93220,
email: info@weicon.de,
URL: www.weicon.de

e-mail address of person responsible for this SDS : msds@weicon.de

1.4 Emergency telephone number

National advisory body/Poison Center

Telephone number : EMERGENCY CONTACT – UK, UAE, South Africa (24h): Tel: ++44 1865 407333 (English)
TRANSPORT EMERGENCY CONTACT - UK, UAE, South Africa (24h): Tel: ++44 1865 407333 (English)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

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

Aerosol 3, H229

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Signal word : Warning

SECTION 2: Hazards identification

Hazard statements : H229 - Pressurized container: may burst if heated.

Precautionary statements

General : P101 - If medical advice is needed, have product container or label at hand.
P102 - Keep out of reach of children.

Prevention : P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P251 - Do not pierce or burn, even after use.

Response : Not applicable.

Storage : P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

Disposal : Not applicable.

Hazardous ingredients : Not applicable.

Supplemental label elements : Contains trimethoxyvinylsilane, N-(3-(trimethoxysilyl)propyl)ethylenediamine and decanedioic acid, 1,10-bis(1,2,2,6,6-pentamethyl-4-piperidinyl) ester, mixt. with 1-methyl 10-(1,2,2,6,6-pentamethyl-4-piperidinyl) decanedioate. May produce an allergic reaction.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

Aspiration hazard - Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
1,3,3,3-Tetrafluoropropylene	REACH #: 01-0000019758-54 EC: 471-480-0 CAS: 1645-83-6	≥3 - ≤5	Press. Gas (Liq.), H280	-	[1]
titanium dioxide	REACH #: 01-2119489379-17 EC: 236-675-5 CAS: 13463-67-7 Index: 022-006-00-2	≥1 - ≤3	Carc. 2, H351 (inhalation)	-	[1] [2] [*]
trimethoxyvinylsilane	REACH #: 01-2119513215-52	≥0.3 - <1	Flam. Liq. 3, H226 Acute Tox. 4, H332	ATE [Inhalation (vapours)] = 11 mg/	[1]

SECTION 3: Composition/information on ingredients

	EC: 220-449-8 CAS: 2768-02-7		Skin Sens. 1B, H317	I	
N-(3-(trimethoxysilyl)propyl) ethylenediamine	REACH #: 01-2119970215-39 EC: 217-164-6 CAS: 1760-24-3	≥0.2 - ≤0.3	Eye Dam. 1, H318 Skin Sens. 1B, H317 STOT SE 3, H335	-	[1]
decanedioic acid, 1,10-bis (1,2,2,6,6-pentamethyl-4-piperidinyl) ester, mixt. with 1-methyl 10-(1,2,2,6,6-pentamethyl-4-piperidinyl) decanedioate	REACH #: 01-2119491304-40 EC: 915-687-0 CAS: 1065336-91-5	<0.1	Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 **See Section 16 for the full text of the H statements declared above.**	M [Acute] = 1 M [Chronic] = 1	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a physical, health or environmental hazard
[2] Substance with a workplace exposure limit
[*] The classification as a carcinogen by inhalation applies only to mixtures placed on the market in powder form containing 1% or more of titanium dioxide particles with aerodynamic diameter ≤ 10 µm not bound within a matrix.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin contact : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No specific data.

Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
halogenated compounds
metal oxide/oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurized contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

SECTION 6: Accidental release measures

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

6.4 Reference to other sections : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing gas. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters

Occupational exposure limits

SECTION 8: Exposure controls/personal protection

Product/ingredient name	Exposure limit values
titanium dioxide	**DFG MAC-values list (Germany, 7/2024)** Carc 4, Develop C. PEAK 15 minutes: 2.4 mg/m³ 4 times per shift [Interval: 1 hour]. Form: respirable fraction. TWA 8 hours: 0.3 mg/m³. Form: respirable fraction. **TRGS 900 OEL (Germany, 3/2025) [Allgemeiner Staubgrenzwert]** TWA 8 hours: 1.25 mg/m³. Form: alveolar fraction. PEAK 15 minutes: 20 mg/m³. Form: inhalable fraction. TWA 8 hours: 10 mg/m³. Form: inhalable fraction. PEAK 15 minutes: 2.5 mg/m³. Form: alveolar fraction.
methanol	[***Air contaminant - Curing***] **DFG MAC-values list (Germany, 7/2024)** Develop C. Absorbed through skin. TWA 8 hours: 100 ppm. PEAK 15 minutes: 200 ppm 4 times per shift [Interval: 1 hour]. TWA 8 hours: 130 mg/m³. PEAK 15 minutes: 260 mg/m³ 4 times per shift [Interval: 1 hour]. **TRGS 900 OEL (Germany, 3/2025)** Absorbed through skin. TWA 8 hours: 130 mg/m³. PEAK 15 minutes: 260 mg/m³. TWA 8 hours: 100 ppm. PEAK 15 minutes: 200 ppm. **EU OEL (Europe, 1/2022)** Absorbed through skin. TWA 8 hours: 200 ppm. TWA 8 hours: 260 mg/m³.

Biological exposure indices

No exposure indices known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Result
1,3,3,3-Tetrafluoropropylene	**DNEL - General population - Long term - Inhalation** 208.1 mg/m³ Effects: Systemic **DNEL - Workers - Long term - Inhalation** 1170.8 mg/m³ Effects: Systemic
titanium dioxide	**DNEL - General population - Long term - Inhalation** 28 µg/m³ Effects: Local **DNEL - Workers - Long term - Inhalation** 170 µg/m³ Effects: Local
trimethoxyvinylsilane	**DNEL - General population - Long term - Oral** 0.63 mg/kg bw/day Effects: Systemic

SECTION 8: Exposure controls/personal protection

DNEL - General population - Long term - Dermal
0.63 mg/kg bw/day
Effects: Systemic

DNEL - Workers - Long term - Dermal
0.91 mg/kg bw/day
Effects: Systemic

DNEL - General population - Long term - Inhalation
6.8 mg/m³
Effects: Systemic

DNEL - Workers - Long term - Inhalation
27.6 mg/m³
Effects: Systemic

DNEL - General population - Short term - Inhalation
54.4 mg/m³
Effects: Systemic

DNEL - Workers - Short term - Inhalation
73.6 mg/m³
Effects: Systemic

N-(3-(trimethoxysilyl)propyl)ethylenediamine

DNEL - General population - Long term - Inhalation
0.1 mg/m³
Effects: Local

DNEL - Workers - Long term - Inhalation
0.6 mg/m³
Effects: Local

DNEL - General population - Long term - Oral
4 mg/kg bw/day
Effects: Systemic

DNEL - General population - Short term - Inhalation
4 mg/m³
Effects: Local

DNEL - Workers - Short term - Inhalation
5.36 mg/m³
Effects: Local

DNEL - General population - Long term - Inhalation
26 mg/m³
Effects: Systemic

DNEL - Workers - Long term - Inhalation
130 mg/m³
Effects: Systemic

DNEL - General population - Short term - Inhalation
26400 mg/m³
Effects: Systemic

decanedioic acid, 1,10-bis (1,2,2,6,6-pentamethyl-4-piperidinyl) ester, mixt. with 1-methyl 10-(1,2,2,6,6-pentamethyl-4-piperidinyl) decanedioate

DNEL - General population - Long term - Oral
0.18 mg/kg bw/day
Effects: Systemic

DNEL - General population - Long term - Inhalation

SECTION 8: Exposure controls/personal protection

0.31 mg/m³
Effects: Systemic

DNEL - General population - Long term - Dermal
0.9 mg/kg bw/day
Effects: Systemic

DNEL - Workers - Long term - Inhalation
1.27 mg/m³
Effects: Systemic

DNEL - Workers - Long term - Dermal
1.8 mg/kg bw/day
Effects: Systemic

PNECs

Not available.

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. Recommended : 1 - 4 hours (breakthrough time): Protective gloves made of nitrile rubber (material thickness of 0,4 mm); EN 374-5 Cat. III 4 - 8 hours (breakthrough time): Protective gloves made of Viton®/ butyl rubber (material thickness of 0,7 mm); EN388 Cat.II / EN374 Cat.III / EN374-2

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

SECTION 8: Exposure controls/personal protection

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended : organic vapor (Type AX) and particulate filter

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Gas.

Color : Various

Odor : Characteristic.

Odor threshold : Not available.

Melting point/freezing point : Not applicable.

Boiling point or initial boiling point and boiling range : Not available.

Flammability : Flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.

Lower and upper explosion limit : Not available.

Flash point : Closed cup: >93.3°C (>199.9°F)

Auto-ignition temperature : Not applicable.

Decomposition temperature : Not available.

pH : Not applicable.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C): Not available.

Solubility :

Not available.

Solubility in water : Not available.

Partition coefficient n-octanol/water (log Pow) : Not applicable.

Vapor pressure : Not available.

Relative density : Not applicable.

Density : 1.44 g/cm³ [20°C (68°F)]

Relative vapor density : Not available.

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosive properties : Not available.

Oxidizing properties : Not available.

Aerosol product

Type of aerosol : Spray

SECTION 9: Physical and chemical properties

9.2.2 Other safety characteristics

Miscible with water : No.

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

10.5 Incompatible materials : No specific data.

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

Product/ingredient name	Result
N-(3-(trimethoxysilyl)propyl)ethylenediamine	**Rat - Oral - LD50** 2413 mg/kg Toxic effects: Behavioral - Tremor Gastrointestinal - Hypermotility, diarrhea Gastrointestinal - Other changes

Conclusion/Summary [Product] : Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
trimethoxyvinylsilane	N/A	N/A	N/A	11	N/A
N-(3-(trimethoxysilyl)propyl)ethylenediamine	2413	N/A	N/A	N/A	N/A

Skin corrosion/irritation

Product/ingredient name	Result
titanium dioxide	**Human - Skin - Mild irritant** Duration of treatment/exposure: 72 hours Amount/concentration applied: 300 ug I
N-(3-(trimethoxysilyl)propyl)ethylenediamine	**Rabbit - Skin - Mild irritant** Amount/concentration applied: 500 mg

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Product/ingredient name	Result
N-(3-(trimethoxysilyl)propyl)ethylenediamine	**Rabbit - Eyes - Severe irritant** Amount/concentration applied: 15 mg

SECTION 11: Toxicological information

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Not available.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
N-(3-(trimethoxysilyl)propyl)ethylenediamine	STOT SE 3, H335 (Respiratory tract irritation)

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : No known significant effects or critical hazards.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

SECTION 11: Toxicological information

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No specific data.

Ingestion : No specific data.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product] : Not available.

General : No known significant effects or critical hazards.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result
titanium dioxide	**Acute - LC50 - Marine water** Fish - Mummichog - *Fundulus heteroclitus* >1000 mg/l [96 hours] Effect: Mortality **Acute - LC50 - Fresh water** Crustaceans - Water flea - *Ceriodaphnia dubia* - Neonate Age: <24 hours 3 mg/l [48 hours] Effect: Mortality **Acute - LC50 - Fresh water** Crustaceans - Water flea - *Ceriodaphnia dubia* - Neonate Age: <24 hours 13.4 mg/l [48 hours] Effect: Mortality **Acute - LC50 - Fresh water**

SECTION 12: Ecological information

Crustaceans - Water flea - *Ceriodaphnia dubia* - Neonate
Age: <24 hours
11 mg/l [48 hours]
Effect: Mortality

Acute - LC50 - Fresh water
Crustaceans - Water flea - *Ceriodaphnia dubia* - Neonate
Age: <24 hours
3.6 mg/l [48 hours]
Effect: Mortality

Acute - LC50 - Fresh water
Crustaceans - Water flea - *Ceriodaphnia dubia* - Neonate
Age: <24 hours
15.9 mg/l [48 hours]
Effect: Mortality

Acute - LC50 - Fresh water
Daphnia - Water flea - *Daphnia pulex* - Neonate
Age: <24 hours
6.5 mg/l [48 hours]
Effect: Mortality

Acute - LC50 - Fresh water
Daphnia - Water flea - *Daphnia pulex* - Neonate
Age: <24 hours
13 mg/l [48 hours]
Effect: Mortality

Acute - LC50 - Fresh water
Fish - Fathead minnow - *Pimephales promelas*
Age: 1 to 14 days
>1000 mg/l [96 hours]
Effect: Mortality

Acute - EC50 - Fresh water
OECD
Daphnia - Water flea - *Daphnia magna*
19.3 mg/l [48 hours]
Effect: Intoxication

Acute - EC50 - Fresh water
OECD
Daphnia - Water flea - *Daphnia magna*
27.8 mg/l [48 hours]
Effect: Intoxication

Acute - EC50 - Fresh water
OECD
Daphnia - Water flea - *Daphnia magna* - Neonate
Age: <24 hours
35.306 mg/l [48 hours]
Effect: Intoxication

Conclusion/Summary [Product] : Not available.

12.2 Persistence and degradability

Not available.

Conclusion/Summary [Product] : Not available.

SECTION 12: Ecological information

12.3 Bioaccumulative potential

Not available.

12.4 Mobility in soil

Soil/Water partition coefficient

Product/ingredient name	logKoc	Koc
1,3,3,3-Tetrafluoropropylene	1.7	52.3516
trimethoxyvinylsilane	1.5	33.362
N-(3-(trimethoxysilyl)propyl) ethylenediamine	1.5	34.5002

Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
1,3,3,3-Tetrafluoropropylene	No	No	No	No	No	No	No
titanium dioxide	No	No	No	No	No	No	No
trimethoxyvinylsilane	No	N/A	Yes	No	N/A	N/A	Yes
N-(3-(trimethoxysilyl)propyl) ethylenediamine	No	No	No	No	No	No	No
decanedioic acid, 1,10-bis (1,2,2,6,6-pentamethyl-4-piperidinyl) ester, mixt. with 1-methyl 10-(1,2,2,6,6-pentamethyl-4-piperidinyl) decanedioate	No	No	No	No	No	No	No

Mobility : Not available.

Conclusion/Summary : The product does not meet the criteria to be considered as a PMT or vPvM.

12.5 Results of PBT and vPvB assessment

Regulation (EC) No. 1907/2006 [REACH]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
1,3,3,3-Tetrafluoropropylene	No	N/A	N/A	No	N/A	N/A	N/A
titanium dioxide	No	No	No	No	No	No	No
trimethoxyvinylsilane	No	N/A	N/A	No	N/A	N/A	N/A
N-(3-(trimethoxysilyl)propyl) ethylenediamine	No	N/A	N/A	No	N/A	N/A	N/A
decanedioic acid, 1,10-bis (1,2,2,6,6-pentamethyl-4-piperidinyl) ester, mixt. with 1-methyl 10-(1,2,2,6,6-pentamethyl-4-piperidinyl) decanedioate	No	N/A	N/A	No	N/A	N/A	N/A

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

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
1,3,3,3-Tetrafluoropropylene	No	No	No	No	No	No	No
titanium dioxide	No	No	No	No	No	No	No
trimethoxyvinylsilane	No	N/A	N/A	No	N/A	N/A	N/A
N-(3-(trimethoxysilyl)propyl) ethylenediamine	No	No	No	No	No	No	No
decanedioic acid, 1,10-bis (1,2,2,6,6-pentamethyl-4-piperidinyl) ester, mixt. with 1-methyl 10-(1,2,2,6,6-pentamethyl-4-piperidinyl) decanedioate	No	No	No	No	No	No	No

SECTION 12: Ecological information

Conclusion/Summary Regulation (EC) No. 1272/2008 [CLP] : The product does not meet the criteria to be considered as a PBT or vPvB.

12.6 Endocrine disrupting properties

Not available.

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

European waste catalogue (EWC)

Waste code	Waste designation
16 05 04*	gases in pressure containers (including halons) containing hazardous substances

Packaging

Methods of disposal : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Type of packaging	European waste catalogue (EWC)	
Can	15 01 10*	packaging containing residues of or contaminated by hazardous substances

Special precautions : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	UN1950	UN1950	UN1950	UN1950
14.2 UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	Aerosols, non-flammable
14.3 Transport hazard class(es)	2 	2 	2.2 	2.2 

SECTION 14: Transport information

14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.

Additional information

ADR/RID : **Limited quantity** 1 L
Special provisions 190, 327, 625, 344
Tunnel code (E)
ADR Classification Code: 5A

ADN : **Special provisions** 190, 327, 625, 344

IMDG : **Emergency schedules** F-D, S-U
Special provisions 63, 190, 277, 327, 344, 381, 959

IATA : **Quantity limitation** Passenger and Cargo Aircraft: 75 kg. Packaging instructions: 203. Cargo Aircraft Only: 150 kg. Packaging instructions: 203. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y203.
Special provisions A98, A145, A167, A802

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorization

Annex XIV

None of the components are listed above the relevant limit.

Substances of very high concern

None of the components are listed above the relevant limit.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

No listed substance

Synthetic polymer microparticles - Designation 78

Generic identity of polymer(s) : Not applicable.

Total percentage of synthetic polymer microparticles : Not applicable.

Other EU regulations

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

SECTION 15: Regulatory information

Explosive precursors : Not applicable.

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Aerosol dispensers :

3

0.99% by mass of the contents are flammable.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

Product/ingredient name	List name	Name on list	Classification	Notes
titanium dioxide	DFG MAC-values list	-	Carc 4, Develop C	-
methanol	DFG MAC-values list	-	Develop C	-

Storage class (TRGS 510) : 2B

Hazardous incident ordinance

This product is not controlled under the Germany Hazardous Incident Ordinance.

Hazard class for water : 1

Technical instruction on air quality control (TA Luft)

Number [Class]	Description	%
5.2.1	Total dust	1.3
5.2.5	Organic substances	4.3

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : Not determined.

Canada : Not determined.

China : Not determined.

Eurasian Economic Union : **Russian Federation inventory**: All components are listed or exempted.

Japan : **Japan inventory (CSCL)**: Not determined.
Japan inventory (ISHL): Not determined.

New Zealand : Not determined.

SECTION 15: Regulatory information

Philippines : Not determined.

Republic of Korea : Not determined.

Taiwan : Not determined.

Thailand : Not determined.

Turkey : Not determined.

United States : Not determined.

Viet Nam : All components are listed or exempted.

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE = Acute Toxicity Estimate
B = Bioaccumulative
BCF = Bioconcentration Factor
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
IATA = International Air Transport Association
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organization
M = Mobile
N/A = Not available
P = Persistent
PBT = Persistent, Bioaccumulative and Toxic
PMT = Persistent, Mobile and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SGG = Segregation Group
T = Toxic
vB = Very Bioaccumulative
vM = Very Mobile
vP = Very Persistent
vPvB = Very Persistent and Very Bioaccumulative
vPvM = Very Persistent and Very Mobile

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Aerosol 3, H229	On basis of test data

Full text of abbreviated H statements

SECTION 16: Other information

H226	Flammable liquid and vapor.
H229	Pressurized container: may burst if heated.
H280	Contains gas under pressure; may explode if heated.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aerosol 3	AEROSOLS - Category 3
Aquatic Acute 1	AQUATIC HAZARD (ACUTE) - Category 1
Aquatic Chronic 1	AQUATIC HAZARD (LONG-TERM) - Category 1
Carc. 2	CARCINOGENICITY - Category 2
Eye Dam. 1	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Press. Gas (Liq.)	GASES UNDER PRESSURE - Liquefied gas
Skin Sens. 1A	SKIN SENSITIZATION - Category 1A
Skin Sens. 1B	SKIN SENSITIZATION - Category 1B
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) - Category 3

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