



Material Safety Data Sheet Cover-Sheet – This page provides additional New Zealand specific information for this product and must be read in conjunction with the Safety Data Sheet (SDS) attached

Product Name: ORTHOPRINT

Manufacturer: Zhermack S.p.a

SDS Expiry: 4 August 2025

Supplier Details: Henry Schein New Zealand

23 William Pickering Drive, Albany

PO Box 101 140, North Shore, Auckland 0745

Ph. 0800 808 855

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Emergency Contacts: Poisons/Hazardous Chemical Info Centre –

0800POISON/0800764766 (24 Hours) Phone 111 for Fire, Ambulance or Police

HSNO Class/Category: 6 / 9

HSNO Group Standard: Dental Products Subsidiary Hazard Group Standard 2020

HSR002558

Statements/Pictograms: As per attached Safety Data Sheet (SDS)

Date Prepared: This coversheet was prepared – January 2022

This SDS coversheet has been produced by Henry Schein NZ and has been prepared in accordance with NZ EPA advice on making overseas SDS compliant to HSNO Act. The above information is based on the present state of our knowledge of the product at the time of publication. It is given in good faith, no warranty is implied with respect to the quality or the specifications of the product. Users must satisfy that the product is entirely suitable for their purpose. The SDS and this coversheet may be revised from time to time, please ensure you have a current copy.





Revision nr. 4 Dated 04/08/2020

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

1.1. Product identifier

Mixture identification:

Product Name: ORTHOPRINT

Code: C302145, C302145., C302161, C302171

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

For professional use only. Alginate for dental impression.

1.3. Details of the supplier of the safety data sheet

Name

Zhermack S.p.a

Via Bovazecchino 100

45021 Badia Polesine (RO)

Italy

tel. +39 0425-597611

fax +39 0425-597689

Competent person responsible for the safety data sheet:

msds@zhermack.com

1.4. Emergency telephone number

UK Emergency number: 999 (24 hours)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

EC regulation criteria 1272/2008 (CLP)

Warning, STOT RE 2, May cause damage to organs (lungs) through prolonged or repeated exposure if inhaled.

Aquatic Chronic 3, Harmful to aquatic life with long lasting effects.

Adverse physicochemical, human health and environmental effects:

No other hazards

2.2. Label elements

The Regulation EC 1272/2008, on classification, labelling and packaging of substances and mixtures (CLP), shall not apply to a medical device in the finished state used in direct physical contact with the human body according to art. 1.5, letter d). Therefore the product is exempted from the CLP labeling requirements.

Hazard pictograms:



Warning

Hazard statements:

H373 May cause damage to organs (lungs) through prolonged or repeated exposure if inhaled

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements:

P260 Do not breathe dust.

P273 Avoid release to the environment.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P314 Get medical advice/attention if you feel unwell.

Special Provisions:

None

Contains

Cristobalite

Special provisions according to Annex XVII of REACH and subsequent amendments:

None

2.3. Other hazards

Classification of the mixture is based on the results of an in vitro assay conducted in accordance with the guidelines provided by OCSE (OECD Test Guideline 437 resp. EU Method B.47 – Bovine Corneal Opacity and Permeability (BCOP) Test Method) and GLP certified - Good Laboratory Practices. For more information refer to section 11.

vPvB Substances: None - PBT Substances: None

Other Hazards:

No other hazards

SECTION 3: Composition/information on ingredients

3.1. Substances

Not Applicable

3.2. Mixtures

Hazardous components within the meaning of the CLP regulation and related classification:

Qty	Name	Ident. Numb	er	Classification
>= 5% - < 10%	Cristobalite	CAS: EC:	14464-46-1 238-455-4	3.9/1 STOT RE 1 H372
>= 1% - < 3%	Dipotassium exafluorotitanate	CAS: EC: REACH No.:	16919-27-0 240-969-9 01-21199782 68-20-XXXX	◆ 3.1/4/Oral Acute Tox. 4 H302◆ 3.3/1 Eye Dam. 1 H318
>= 0,5% - < 2,5%	zinc oxide	Index number: CAS: EC: REACH No.:	030-013-00-7 1314-13-2 215-222-5 01-21194638 81-32-XXXX	4.1/A1 Aquatic Acute 1 H400 M=1. 4.1/C1 Aquatic Chronic 1 H410 M=1.

SECTION 4: First aid measures

4.1. Description of first aid measures

In case of skin contact:

Areas of the body that have - or are only even suspected of having - come into contact with the product must be rinsed immediately with plenty of running water and possibly with soap. Wash with plenty of water and soap.

Wash thoroughly the body (shower or bath).

Remove contaminated clothing immediatley and dispose off safely.

In case of eyes contact:

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of Ingestion:

Do not under any circumstances induce vomiting. OBTAIN A MEDICAL EXAMINATION IMMEDIATELY.

In case of Inhalation:

If breathing is irregular or stopped, administer artificial respiration.

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In case of inhalation, consult a doctor immediately and show him packing or label.

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

None

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

Treatment:

None

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Water.

Carbon dioxide (CO2).

Extinguishing media which must not be used for safety reasons:

None in particular.

5.2. Special hazards arising from the substance or mixture

Do not inhale explosion and combustion gases.

Burning produces heavy smoke.

5.3. Advice for firefighters

Use suitable breathing apparatus.

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

Move undamaged containers from immediate hazard area if it can be done safely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non emergency personnel:

Wear personal protection equipment.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Provide adequate ventilation.

Use appropriate respiratory protection.

See protective measures under point 7 and 8.

For emergency responders:

Wear personal protection equipment.

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains.

Retain contaminated washing water and dispose it.

In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

Suitable material for taking up: absorbing material, organic, sand

6.3. Methods and material for containment and cleaning up

Wash with plenty of water.

6.4. Reference to other sections

See also section 8 and 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Avoid contact with skin and eyes, inhaltion of vapours and mists.

Use localized ventilation system.

Don't use empty container before they have been cleaned.

Before making transfer operations, assure that there aren't any incompatible material residuals in the containers.

See also section 8 for recommended protective equipment.

Advice on general occupational hygiene:

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Contamined clothing should be changed before entering eating areas.

Do not eat or drink while working.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from food, drink and feed.

Incompatible materials:

See section 10.5.

Instructions as regards storage premises:

Adequately ventilated premises.

7.3. Specific end use(s)

See section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

ORTHOPRINT

Cristobalite - CAS: 14464-46-1

OEL Type	TWA	Duratio n	STEL	Duratio n	Notes	Country
VEL	0.15 mg/m3	8h			Respirable (aerosol)	SWITZERLA ND
AK	0.15 mg/m3	8h			Respirable (aerosol)	HUNGARY
OELV	0.1 mg/m3	8h			Respirable	IRELAND
NGV/KGV	0.05 mg/m3	8h			Respirable	SWEDEN
VLEP	0.05 mg/m3	8h			Respirable (aerosol)	FRANCE
VLEP	0.05 mg/m3	8h				BELGIUM
TLV	0.15 mg/m3	8h	0.3 mg/m3	15min		DENMARK
VLA	0.05 mg/m3	8h			Respirable	SPAIN
TLV-ACGIH	0.025 mg/m3	8h				
TLV	0.075 mg/m3	8h			Respirable	NETHERLAN DS
NIOSH	0.05 mg/m3					UNITED STATES
ACGIH	0.025 mg/m3	8h			(R), A2 - Pulm fibrosis, lung cancer	

Dipotassium exafluorotitanate - CAS: 16919-27-0

OEL Type	TWA	Duratio	STEL	Duratio	Notes	Country
		n		n		
No data available						

zinc oxide - CAS: 1314-13-2

OEL Type	TWA	Durati	o STEL	Duratio	Notes	Country	



		n		n		
VLA	2	8h	10	15min		SPAIN
VLA	mg/m3	011	mg/m3	10111111		OI AIIV
MV	5	8h	20	15min	Respirable	SLOVENIA
	mg/m3	0	mg/m3	10111111	T toopii a zio	
VME/VLE	3	8h	3	15min	Respirable	SWITZERLA
,	mg/m3		mg/m3	1.0	100	ND
MAK	2	8h	4	15min	Inhalable	GERMANY
	mg/m3		mg/m3			
MAK	0.1	8h	0.4	15min	Respirable	GERMANY
	mg/m3		mg/m3		1 '	
MAK	3	8h	3	15min	Respirable	SWITZERLA
	mg/m3		mg/m3		1	ND
AK	5	8h	20	15min	Respirable	HUNGARY
	mg/m3		mg/m3			
GVI/KGVI	2	8h	10	15min	Respirable	CROATIA
	mg/m3		mg/m3			
HTP	2	8h	10	15min		FINLAND
	mg/m3		mg/m3			
MAK	5	8h			Respirable	AUSTRIA
	mg/m3					
NDS/NDSCh	5	8h	10	15min	Inhalable	POLAND
	mg/m3		mg/m3			
NGV/KGV	5	8h				SWEDEN
	mg/m3					
NPEL	1	8h	1	15min	Respirable	SLOVAKIA
	mg/m3		mg/m3			(Slovak
					<u> </u>	Republic)
OELV	2	8h			Respirable	IRELAND
DD	mg/m3				-	LITIULANUA
RD	5	8h				LITHUANIA
D) /	mg/m3	Ol-			1	
RV	0.5	8h				LATVIA
TLV	mg/m3 5	8h			-	ESTONIA
ILV		OII				ESTONIA
TLV	mg/m3 5	8h			1	NORWAY
ILV	mg/m3	OII				INORWAI
TLV	5	8h	10	15min		ROMANIA
ILV	mg/m3	011	mg/m3	13111111		INDIVIANIA
TLV	2	8h	5	15min		CZECH
160	mg/m3	011	mg/m3	10111111		REPUBLIC
TLV	4	8h	Ing/mo		+	DENMARK
124	mg/m3	0.11				
TLV	5	8h	10	15min	1	BULGARIA
· - •	mg/m3	0	mg/m3	10111111		
TLV	5	8h	10	15min		GREECE
	mg/m3	"	mg/m3			
VLEP	5	8h				FRANCE
	mg/m3					
VLEP	2	8h	10	15min	Respirable	BELGIUM
	mg/m3		mg/m3		' '	
TLV-ACGIH	2	8h	10	15min	(R) - Metal	
	mg/m3		mg/m3		fume fever	
	1			l .	1	I.



ACGIH	2	8h	10		(R) - Metal	
	mg/m3		mg/m3		fume fever	

DNEL Exposure Limit Values

Dipotassium exafluorotitanate - CAS: 16919-27-0

Worker Professional: 5.2 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, local effects

Worker Professional: 5.2 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 5.2 mg/m3 - Exposure: Human Inhalation - Frequency: Short Term, systemic effects

Worker Professional: 75 mg/kg bw/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Professional: 75 mg/kg bw/d - Exposure: Human Dermal - Frequency: Short Term, systemic effects

Consumer: 37.5 mg/kg bw/d - Exposure: Human Dermal - Frequency: Short Term, systemic effects

Consumer: 37.5 mg/kg bw/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

zinc oxide - CAS: 1314-13-2

Consumer: 0.83 mg/kg/d - Exposure: Human Oral - Frequency: Long Term, systemic effects

Consumer: 2.5 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Worker Professional: 5 mg/m3 - Exposure: Human Inhalation - Frequency: Long Term, systemic effects

Consumer: 87 mg/kg/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

Worker Professional: 87 mg/kg/d - Exposure: Human Dermal - Frequency: Long Term, systemic effects

PNEC Exposure Limit Values

Dipotassium exafluorotitanate - CAS: 16919-27-0

Target: Fresh Water - Value: 0.131 mg/l Target: Marine water - Value: 0.131 mg/l

Target: Freshwater sediments - Value: 24.45 03 Target: Marine water sediments - Value: 4.89 03

Target: Microorganisms in sewage treatments - Value: 1.5 mg/l

Target: Soil (agricultural) - Value: 19.1 mg/kg Target: intermittent release - Value: 0.108 mg/l

zinc oxide - CAS: 1314-13-2

Target: Fresh Water - Value: 117 mg/l Target: Marine water - Value: 0.0061 mg/l

Target: Freshwater sediments - Value: 117 mg/kg Target: Marine water sediments - Value: 56.5 mg/kg

Target: Microorganisms in sewage treatments - Value: 0.052 mg/l

Target: Soil (agricultural) - Value: 35.6 mg/kg

8.2. Exposure controls

Precautionary measures:

Give adequate ventilation to the premises where the product is stored and/or handled.

Eye protection:

Wear airtight protective goggles.

Protection for skin:

Wear professional overalls and safety footwear.

Protection for hands:

Protect hands with work gloves.



The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

Respiratory protection:

Particle filter device (DIN EN 143).

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered (e.g. TLV-TWA).

Thermal Hazards:

None

Environmental exposure controls:

None

Appropriate engineering controls:

None

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Properties	Value	Method:	Notes
Appearance and colour:	Powder,yellow		
Odour:	vanilla		
Odour threshold:	Not available		
pH:	Not Relevant		
Melting point / freezing point:	Not Relevant		-
Initial boiling point and boiling range:	Not Relevant		
Flash point:	Not Relevant		
Evaporation rate:	Not Relevant		
Solid/gas flammability:	Not available		
Upper/lower flammability or explosive limits:	Not available		-
Vapour pressure:	Not Relevant		
Vapour density:	Not available		
Relative density:	0.2-0.5 g/cm3		
Solubility in water:	Partially soluble		
Solubility in oil:	Not available		
Partition coefficient (n-octanol/water):	Not available		-
Auto-ignition temperature:	Not available		
Decomposition	Not available		
temperature:			
Viscosity:	Not available		
Explosive properties:	Not available		
Oxidizing properties:	Not available		

9.2. Other information

Properties	Value	Method:	Notes
Miscibility:	Not available		
Fat Solubility:	Not available		
Conductivity:	Not available		
Substance Groups	Not available		



1 (()		
relevant properties		
relevant properties		

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

None

10.4. Conditions to avoid

Avoid moisture and high temperature.

10.5. Incompatible materials

None in particular.

10.6. Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological information of the product:

ORTHOPRINT

a) acute toxicity

Not classified

b) skin corrosion/irritation

Not classified

c) serious eye damage/irritation

Not classified

Test: In vitro - Based on available data, the classification criteria are not met - Source: (Bridging principle, OECD 437 resp. EU Method B.47, GLP, study report 2019).

d) respiratory or skin sensitisation

Not classified

e) germ cell mutagenicity

Not classified

f) carcinogenicity

Not classified

g) reproductive toxicity

Not classified

h) STOT-single exposure

Not classified

i) STOT-repeated exposure

The product is classified: STOT RE 2 H373

j) aspiration hazard

Not classified

Toxicological information of the main substances found in the product:

Cristobalite - CAS: 14464-46-1

i) STOT-repeated exposure:

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Route: Inhalation - Notes: Target organ: lungs - Positive - Source: (MSDS supplier). Dipotassium exafluorotitanate - CAS: 16919-27-0

a) acute toxicity:

Test: LD50 - Route: Oral - Species: Rat 324 mg/kg - Source: (OECD 401, ECHA dossier).

b) skin corrosion/irritation:

Species: Rabbit - Based on available data, the classification criteria are not met - Source: (OECD 404, MSDS supplier).

c) serious eye damage/irritation:

Species: Rabbit - Eye Corrosive - Source: (OECD 405, MSDS supplier).

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Species: Guinea pig - Based on available data, the classification criteria are not met - Source: (OECD 406, MSDS supplier).

e) germ cell mutagenicity:

Test: In vitro - Species: Salmonella Typhimurium - Negative - Source: (OECD 471, MSDS supplier).

Test: In vitro - Positive - Source: (OECD 487, MSDS supplier).

Test: In vitro - Negative - Source: (OECD 476, MSDS supplier).

Test: In vivo - Species: Rat - Negative - Source: (OECD 474, MSDS supplier).

zinc oxide - CAS: 1314-13-2

a) acute toxicity:

Test: LD50 - Route: Skin - Species: Rat > 2000 mg/kg - Source: (OECD 402, GLP, ECHA dossier).

Test: LC50 - Route: Inhalation - Species: Rat > 5.7 mg/l - Source: (OECD 403, ECHA dossier).

Test: LD50 - Route: Oral - Species: Rat > 5000 mg/kg - Source: (OECD 401, ECHA dossier).

b) skin corrosion/irritation:

Species: Rabbit - Based on available data, the classification criteria are not met - Source: (ECHA dossier).

c) serious eye damage/irritation:

Species: Rabbit - Based on available data, the classification criteria are not met - Source: (ECHA dossier).

d) respiratory or skin sensitisation:

Test: Skin Sensitization - Species: Guinea pig - Based on available data, the classification criteria are not met - Source: (ECHA dossier).

e) germ cell mutagenicity:

Test: In vitro - Negative - Source: (OCDE 471, ECHA dossier).

Test: In vivo - Species: Mouse - Negative - Source: (OCDE 474, GLP, ECHA dossier).

SECTION 12: Ecological information

12.1. Toxicity

Adopt good working practices, so that the product is not released into the environment. ORTHOPRINT

The product is classified: Aquatic Chronic 3 - H412

Dipotassium exafluorotitanate - CAS: 16919-27-0

a) Aquatic acute toxicity:

Endpoint: LC50 - Species: Fish 172 mg/l - Duration h: 96h (OECD 203, Danio rerio, ECHA dossier).

Endpoint: EC50 - Species: Daphnia 48.2 mg/l - Duration h: 48h (OECD 203, Daphnia magna, ECHA dossier).

Endpoint: IC50 - Species: Algae 10.81 mg/l - Duration h: 72h (OECD 201,

Pseudokirchneriella subcapitata, ECHA dossier).

Endpoint: NOEC - Species: Algae 1.31 mg/l (OECD 201, Pseudokirchneriella subcapitata, ECHA dossier).

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zinc oxide - CAS: 1314-13-2

a) Aquatic acute toxicity:

Endpoint: IC50 - Species: Algae 0.17 mg/l - Duration h: 72h (Pseudokirchnerella

subcapitata, MSDS supplier).

Endpoint: LC50 - Species: Fish 320 mg/l - Duration h: 96h (Lepomis macrochirus,

MSDS supplier).

b) Aquatic chronic toxicity:

Endpoint: NOEC - Species: Algae 0.017 mg/l (Pseudokirchnerella subcapitata, MSDS

supplier).

12.2. Persistence and degradability

Cristobalite - CAS: 14464-46-1

Biodegradability: Non-readily biodegradable

Dipotassium exafluorotitanate - CAS: 16919-27-0

Biodegradability: Non-readily biodegradable

zinc oxide - CAS: 1314-13-2

Biodegradability: Non-readily biodegradable

12.3. Bioaccumulative potential

Cristobalite - CAS: 14464-46-1

Not bioaccumulative

12.4. Mobility in soil

Not available

12.5. Results of PBT and vPvB assessment

vPvB Substances: None - PBT Substances: None

12.6. Other adverse effects

None

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Recover, if possible. Send to authorised disposal plants or for incineration under controlled conditions. In so doing, comply with the local and national regulations currently in force.

SECTION 14: Transport information

14.1. UN number

Not classified as dangerous in the meaning of transport regulations.

14.2. UN proper shipping name

Not available

14.3. Transport hazard class(es)

Not available

14.4. Packing group

Not available

14.5. Environmental hazards

ADR-Enviromental Pollutant: No IMDG-Marine pollutant: No

14.6. Special precautions for user

Not available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not Applicable

SECTION 15: Regulatory information

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

Dir. 98/24/EC (Risks related to chemical agents at work) Dir. 2000/39/EC (Occupational exposure limit values)

Regulation (EC) n. 1907/2006 (REACH)

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Regulation (EC) n. 1272/2008 (CLP)

Regulation (EC) n. 790/2009 (ATP 1 CLP) and (EU) n. 758/2013

Regulation (EU) 2015/830

Regulation (EU) n. 286/2011 (ATP 2 CLP)

Regulation (EU) n. 618/2012 (ATP 3 CLP)

Regulation (EU) n. 487/2013 (ATP 4 CLP)

Regulation (EU) n. 944/2013 (ATP 5 CLP)

Regulation (EU) n. 605/2014 (ATP 6 CLP)

Regulation (EU) n. 2015/1221 (ATP 7 CLP)

Regulation (EU) n. 2016/918 (ATP 8 CLP)

Regulation (EU) n. 2016/1179 (ATP 9 CLP)

Regulation (EU) n. 2017/776 (ATP 10 CLP)

Regulation (EU) n. 2018/669 (ATP 11 CLP)

Regulation (EU) n. 2018/1480 (ATP 13 CLP)

Restrictions related to the product or the substances contained according to Annex XVII Regulation (EC) 1907/2006 (REACH) and subsequent modifications:

Restrictions related to the product:

No restriction.

Restrictions related to the substances contained:

No restriction.

Provisions related to directive EU 2012/18 (Seveso III):

Seveso III category according to Annex 1, part 1

None

WGK Classification (Water hazard class - Verwaltungsvorschrift wassergefährdende Stoffe)

WGK1 - Slightly hazardous for water

Lagerklasse according to TRGS 510:

LGK11: Combustible solids

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None.

California Proposition 65

Substance(s) listed under California Proposition 65:

Cristobalite - Listed as carcinogen.

15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out for the mixture.

Substances for which a Chemical Safety Assessment has been carried out:

Dipotassium exafluorotitanate

zinc oxide

SECTION 16: Other information

Full text of phrases referred to in Section 3:

H372 Causes damage to organs (lungs) through prolonged or repeated exposure if inhaled.

H302 Harmful if swallowed.

H318 Causes serious eye damage.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

Hazard class and hazard category	Code	Description	
Acute Tox. 4	3.1/4/Oral	Acute toxicity (oral), Category 4	
Eye Dam. 1	3.3/1	Serious eye damage, Category 1	

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STOT RE 1	3.9/1	Specific target organ toxicity - repeated
		exposure, Category 1
STOT RE 2	3.9/2	Specific target organ toxicity - repeated
		exposure, Category 2
Aquatic Acute 1	4.1/A1	Acute aquatic hazard, category 1
Aquatic Chronic 1	4.1/C1	Chronic (long term) aquatic hazard, category 1
Aquatic Chronic 3	4.1/C3	Chronic (long term) aquatic hazard, category 3

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008	Classification procedure
STOT RE 2, H373	Calculation method
Aquatic Chronic 3, H412	Calculation method

This document was prepared by a competent person who has received appropriate training. Main bibliographic sources:

ECHA - European Chemical Agency

GESTIS - Information system on hazardous substances of the German Social Accident Insurance

IARC – International Agency for Research on Cancer

IPCS INCHEM - International Programme on Chemical Safety

ISS - Istituto Superiore di Sanità

PubChem - open chemistry database at the National Institutes of Health (NIH)

A safety data sheet is not required for this product under article 31 of Regulation 1907/2006/EC. This safety data sheet has been created on a voluntary basis.

The information contained herein is based on our state of knowledge at the above-specified date. It refers solely to the product indicated and constitutes no guarantee of particular quality. It is the duty of the user to ensure that this information is appropriate and complete with respect to the specific use intended.

This MSDS cancels and replaces any preceding release.

ADR: European Agreement concerning the International Carriage of

Dangerous Goods by Road.

ATE: Acute Toxicity Estimate

ATEmix: Acute toxicity Estimate (Mixtures)

CAS: Chemical Abstracts Service (division of the American Chemical

Society).

CLP: Classification, Labeling, Packaging.

DNEL: Derived No Effect Level.

EINECS: European Inventory of Existing Commercial Chemical Substances.

GefStoffVO: Ordinance on Hazardous Substances, Germany.

GHS: Globally Harmonized System of Classification and Labeling of

Chemicals.

IATA: International Air Transport Association.

IATA-DGR: Dangerous Goods Regulation by the "International Air Transport

Association" (IATA).

ICAO: International Civil Aviation Organization.

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization"

(ICAO).

IMDG: International Maritime Code for Dangerous Goods.
INCI: International Nomenclature of Cosmetic Ingredients.

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KSt: Explosion coefficient.

LC50: Lethal concentration, for 50 percent of test population.

LD50: Lethal dose, for 50 percent of test population.

PNEC: Predicted No Effect Concentration.

RID: Regulation Concerning the International Transport of Dangerous Goods

by Rail.

STEL: Short Term Exposure limit.
STOT: Specific Target Organ Toxicity.
TLV: Threshold Limiting Value.
TWA: Time-weighted average
WGK: German Water Hazard Class.