

safety data sheet according to 91/155/EEC

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review:

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Copran Group

1. identification of the substance/preparation and of the company/undertaking

- 1.1 identification of the substance: zirconium dioxide
- 1.2 application / preparation: zirconium for dental use
- 1.3 producer / supplier: Whitepeaks Dental Solutions GmbH & Co. KG
Langeheide 9
45239 Essen - Germany
phone: +49-281-206458-0 / fax: +49-281-206458-13
- 1.4 toxication helpdesk: Giftnotrufzentrale Berlin:
phone (24Std.) +49 30 19240

2. composition / information on ingredients

chem. characterisation : presintered, porous ZrO₂ -Block

	CAS-No.	EG-No.	Zr/ Zr-i	Zr/Zr-i Color	Zr-i Monolith HT	Zr-i Monolith Color
Zirconia ZrO ₂	1314-23-4	215-222-7	Balance	93,99 – 94,89 %	Balance	94,02 – 94,75 %
Yttrium Oxide Y ₂ O ₃	1314-36-9	215-233-5	4,95 – 5,35 %	4,95 – 5,35 %	5,15 – 5,55 %	4,88 – 5,55 %
Alumina Al ₂ O ₃	1344-28-1	215-691-6	0,15 – 0,35 %	0,15 – 0,35 %	0,03 – 0,07 %	0,03 – 0,07 %
Iron hydroxide	20344-49-4	243-746-4	0 – 0,01 %	0,02 – 0,25 %	0 – 0,01 %	0 – 0,06 %
ER ₃ O ₃	12061-16-4	235-045-7	0 %	0 %	0 %	0- 0,05 %
CO ₂ O ₄	1308-06-1	215-157-2	0 %	0 %	0 %	0 – 0,0016 %
Other Oxides:	---	---	0 – 0,06 %	0 – 0,06 %	0 – 0,02 %	0 – 0,02 %

	CAS-No.	EG-No.	CopraSmile	CopraPretty
Zirconia ZrO ₂	1314-23-4	215-222-7	Balance	Balance
Yttrium Oxide Y ₂ O ₃	1314-36-9	215-233-5	~ 9,32 %	0 %
Alumina Al ₂ O ₃	1344-28-1	215-691-6	~ 0,049 %	0 – 0,01 %
Iron hydroxide	20344-49-4	243-746-4	0 – 0,002 %	0 – 0,01 %
ER ₃ O ₃	12061-16-4	235-045-7	0 %	0 %
CO ₂ O ₄	1308-06-1	215-157-2	0 %	0 %
Other Oxides:	---	---	0 – 0,02 %	0 – 0,06 %

additional notes: the hazards in chapter 4-8 and 12 do not refer to the product itself but to the dust released by processing.

3. hazards identification

- 3.1 hazard designation for human an environment: n.a
 3.2 hazardous / non hazardous preparation: n.a.
 3.3 harmful effects to health and environment on abuse: do not inhale dust
 3.4 other hazards based on material: none

4. first aid measures

- 4.1 general information: no special measures are required
 4.2 after inhalation: supply fresh air. If irritations occur or persist, consult an physician
 4.3 after skin contact: rinse thoroughly with warm water and soap
 4.4 after eye contact: rinse open eye for several minutes under running water. If symptoms persist, consult a physician
 4.5 after swallowing: rinse mouth thoroughly with water. If symptoms persist consult a physician
 4.6 information for physician: n.a.

5. fire-fighting measures

- 5.1 suitable extinguishing media: n.a.
 5.2 not suitable extinguishing media: n.a.
 5.3 hazardous combustion products: n.a.
 5.4 special protection equipment: n.a.

6. accidental release measures

- 6.1 personal precautions: common use of protective clothing, dust mask and dust extractor device
 6.2 environmental precautions: do not empty into surface water, ground-water or drain
 6.3 methods of cleaning: absorb mechanically
 6.4 additional information: no special measures are required for material in compact shape

7. handling and storage

7.1 handling:	according to instruction sheet
7.2 storage:	store break-proof and in dry conditions
7.3 application:	n.a.

8. exposure controls/personal protection

8.1 exposure limits:	TRGS 900 peak limit (4 mg/cm ³), inhalable fraction (5 mg/cm ³)
8.2 limitation and monitoring to exposure	n.a.
8.2.1 limitation and monitoring to exposure at work station:	use suitable dust extractor device at workstation. Avoid contact with skin, mouth, eye and clothes. Do not eat, drink or smoke while you are working. Keep away from food and drinks.
8.2.1.1 respiratory protection:	use respirator if there is not sufficient extractor device. Do not inhale dust.
8.2.1.2. hand protection	wear protective gloves, wash your hands after finish work, use skin care products
8.2.1.3. eye protection:	wear protective glasses
8.2.1.4. skin protection:	use protective clothes
8.2.2. limitation and monitoring to environmental exposure:	n.a.

9. physical and chemical properties

9.1 appearance:	solid
9.1.1 aggregate state:	white
9.1.2 odour:	odourless
9.2 pH:	n.a.
9.2.1 boiling point:	about 5.500°C
9.2.2 flash point:	not flammable
9.2.3. autoflammability:	not self-igniting
9.2.4. explosive properties:	n.a.
9.2.5. oxidizing properties:	n.a.
9.2.6. vapor pressure:	n.a.
9.2.7. relative density:	about 3 gr/cm ²



9.2.8. solubility water / fat	insoluble in water
9.2.9. partition coefficient:	n.a.
9.2.10. viscosity :	n.a.
9.2.11.vapor density	n.a.
9.2.12. evaporation rate:	n.a.
9.3 other data:	melting point about 2680°C

10. stability and reactivity

10.1 conditions to avoid:	n.a.
10.2 materials to avoid:	n.a.
10.3 hazardous decomposition products:	n.a.

11. toxicological information

When used and handled according to the specifications, the product does not have any harmful effects to our experience and the information provided to us. Practical experience have shown that inhalation of dust can irritate respiratory system. Contact with skin can cause mechanical irritations.

12. ecological information

If use properly, there are not environmental problems expected. Do not empty into surface water, ground-water or drains.

12.1 ecotoxicity:	none
12.2 mobility:	n.a.
12.3 persistence / degradability:	n.a.
12.4. bioaccumulation potential:	n.a.
12.5. other adverse effects:	none

13. disposal considerations

Product and packaging should be disposed to official rules and directives

14. transport information

14.1. un-number:	n.a.
14.2. class:	n.a.
14.3. correct identification of goods:	Copran Group
14.4. packaging group:	n.a.
14.5. ocean harmful substances:	n.a.
14.6. other relevant information:	no hazardous good

15. regulatory information

subject to classification: This product is no subject to declaration according to EC rules.

16. other information

This safety data sheet is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

We can not a guarantee or give a warranty for the accuracy, dependability and completeness of this information, explicitly or implicitly. We call upon any person getting this information to urgently check and verify the adequacy and completeness for her or his special application.

n.a. = not applicable