

Material Safety Data Sheet

TT multi-layer

1. identification of the substance

identification of the substance: Zirconium dioxide
application / preparation: **Dental Zirconia Blank for Aesthetic Restoration**
producer / supplier: Shenzhen Upcera Dental Technology Co., Ltd.
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2. composition / information on ingredients

chem. characterization :	pre-sintered, porous ZrO ₂ -Block				
	composition:	CAS-Nr.	Symbol	R-infos	EG-Nr.
zirconium dioxide (ZrO ₂)	86.3-94.2%	1314-23-4			215-222-7
yttrium oxide	5.8-9.7 %	1314-36-9			215-233-5
erbium oxide	0-2.0%	12061-16-4			235-045-7
iron oxide	0-0.5%	1332-37-2			215-275-4
aluminium oxide	0-0.5%	1344-28-1			215-691-6

3. hazards identification

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

4. first aid measures

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

5. fire-fighting measures

suitable extinguishing media:	n.a.
not suitable extinguishing media:	n.a.
hazardous combustion products:	n.a.
special protection equipment:	n.a.

6. accidental release measures

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

7. handling and storage

handling:	according to instruction sheet
Industrial hygiene:	usual hygiene measures are necessary. When using, do not eat or drink or smoke.
storage:	store break-proof and in dry conditions
fire and explosion protection:	n.a.
application:	n.a.

8. exposure controls/personal protection

exposure limits:	TRGS 900 peak limit (4 mg/cm ³), inhalable fraction (5 mg/cm ³)
limitation and monitoring to exposure	n.a.
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.
respiratory protection:	use respirator if there is not sufficient extractor device. Do not inhale dust.
hand protection	wear protective gloves, wash your hands after finish work, use skin care products
eye protection:	wear protective glasses
skin protection:	use protective clothes
limitation and monitoring to environmental exposure:	n.a.

9. physical and chemical properties

appearance:	solid
aggregate state:	white
odour:	odourless
pH:	n.a.
boiling point:	about 5.500 °C
flash point:	not flammable
auto-flammability:	not self-igniting
explosive properties:	n.a.
oxidizing properties:	n.a.
vapor pressure:	n.a.
relative density:	about 3 gr/cm ²
solubility water / fat:	insoluble in water
partition coefficient:	n.a.
viscosity :	n.a.
vapor density:	n.a.
evaporation rate:	n.a.
other data:	melting point about 2680 °C

10. stability and reactivity

conditions to avoid:	n.a.
materials to avoid:	n.a.
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.

ecotoxicity:	None
mobility:	n.a.
persistence / degradability:	n.a.
bioaccumulation potential:	n.a.
other adverse effects:	n.a.

13. disposal considerations

Product and packaging should be disposed to official rules and directives

14. transport information

un-number:	n.a.
class:	n.a.
correct identification of goods:	Upcera TT multi-layer
packaging group:	n.a.
ocean harmful substances:	n.a.
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.

n.a. = not applicable