

**1 Identification**

- **Product identifier**
- **Trade name:** CERABIEN ZR
- **Article number:** CA824
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Dental porcelain
- **Details of the supplier of the safety data sheet**
- **Manufacturer:**  
Kuraray Noritake Dental Inc.  
300 Higashiyama, Miyoshi-cho,  
Miyoshi, Aichi, 470-0293  
Japan
- **Contact information:**  
Kuraray America, Inc.  
33 Maiden Lane, 6th Floor, New York,  
NY 10038 U.S.A.  
Tel: 800-879-1676  
Fax: 888-700-5200  
Website: www.kuraraydental.com
- **Emergency telephone number:**  
For chemical emergency spill, leak, fire, exposure or accident  
Call CHEMTREC day and night  
Within USA and Canada: 1-800-424-9300 CCN706984 or  
+1 703-527-3887 (collect calls accepted)

**2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS08 Health hazard

- |   |  |
|---|--|
| Germ Cell Mutagenicity - Category 2                             | H341 Suspected of causing genetic defects.                           |
| Carcinogenicity - Category 1A                                   | H350 May cause cancer.   |
| Reproductive Toxicity - Category 2                              | H361 Suspected of damaging fertility or the unborn child.            |
| Specific Target Organ Toxicity - Repeated Exposure - Category 1 | H372 Causes damage to organs through prolonged or repeated exposure. |



GHS07

- |                                    |   |
|------------------------------------|---|
| Acute Toxicity (Oral) - Category 4 | H302 Harmful if swallowed.                |
| Skin Sensitizer - Category 1       | H317 May cause an allergic skin reaction. |

- **Label elements**
- **GHS label elements**  
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms** GHS07, GHS08
- **Signal word** Danger
- **Hazard-determining components of labeling:**  
vanadium pentoxide  
nickel oxide  
titanium dioxide

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**Hazard statements**

- H302 Harmful if swallowed.
- H317 May cause an allergic skin reaction.
- H341 Suspected of causing genetic defects.
- H350 May cause cancer.
- H361 Suspected of damaging fertility or the unborn child.
- H372 Causes damage to organs through prolonged or repeated exposure.

**Precautionary statements**

- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P264 Wash thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P301+P312 If swallowed: Call a poison center/doctor if you feel unwell.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P363 Wash contaminated clothing before reuse.
- P405 Store locked up.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Other hazards**

- Avoid breathing sanding dust / swarf.
- Dust generation.

**Results of PBT and vPvB assessment**

- PBT:** Not applicable.
- vPvB:** Not applicable.

**3 Composition/information on ingredients**

**Chemical characterization: Mixtures**

- Description:** Mixture of substances listed below with nonhazardous additions.

**Dangerous components:**

1313-99-1	nickel oxide ⚠ Carcinogenicity - Category 1A, H350; Specific Target Organ Toxicity - Repeated Exposure - Category 1, H372; ⚠ Eye Irritation - Category 2A, H319; Skin Sensitizer - Category 1, H317; Aquatic Chronic 4, H413	≤1%
13463-67-7	titanium dioxide ⚠ Carcinogenicity – Category 2, H351	≤1%
1314-62-1	vanadium pentoxide ⚠ Germ Cell Mutagenicity - Category 2, H341; Carcinogenicity – Category 2, H351; Reproductive Toxicity - Category 2, H361; Specific Target Organ Toxicity - Repeated Exposure - Category 1, H372; ⚠ Aquatic Chronic 2, H411; ⚠ Acute Toxicity (Oral) - Category 4, H302; Acute Toxicity (Inhalation) - Category 4, H332; Specific Target Organ Toxicity - Single Exposure - Category 3, H335	≤1%

**Other ingredients:**

- Potassium alumino silicate glass
- Pigments

**4 First-aid measures**

**Description of first aid measures**

- After inhalation:** Supply fresh air and to be sure call for a doctor.
- After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- After eye contact:** Rinse opened eye for several minutes under running water.
- After swallowing:** Immediately call a doctor.

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- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**5 Fire-fighting measures**

- **Extinguishing media**
- **Suitable extinguishing agents:** Product is not flammable
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** See Section 8.
- **Environmental precautions:** No special measures required.
- **Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Ensure adequate ventilation.  
Use appropriate Personal Protective Equipment (PPE).
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

**7 Handling and storage**

- **Handling:**
- **Precautions for safe handling**  
Avoid contact with skin and eyes. Do not swallow. Avoid generating dust. Do not breathe dust/fume/gas/mist/vapors/spray.  
Prevent formation of dust.  
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Store at room temperature.
- **Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**

· **Components with limit values that require monitoring at the workplace:**

**1313-99-1 nickel oxide**

EL (Canada)	Long-term value: 0.05 mg/m <sup>3</sup> as Ni; ACGIH A1, IARC 1
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EV (Canada)	Long-term value: 0.2 mg/m <sup>3</sup> Inhalable fraction, as Ni
<b>13463-67-7 titanium dioxide</b>	
EL (Canada)	Long-term value: 10* 3** mg/m <sup>3</sup> *total dust;**respirable fraction; IARC 2B
EV (Canada)	Long-term value: 10 mg/m <sup>3</sup> total dust
<b>1314-62-1 vanadium pentoxide</b>	
EL (Canada)	Long-term value: 0.05 mg/m <sup>3</sup> inhalable, IARC 2B
EV (Canada)	Long-term value: 0.05 mg/m <sup>3</sup> respirable dust and fume

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:** Do not inhale dust / smoke / mist.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

**9 Physical and chemical properties**

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· **Form:** Powder

· **Color:** Colored

· **Odor:** Odorless

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· <b>Odor threshold:</b>	Not determined.
· <b>pH-value:</b>	Not determined
· <b>Change in condition</b>	
<b>Melting point/Melting range:</b>	Not determined
<b>Boiling point/Boiling range:</b>	Not determined
· <b>Flash point:</b>	Not determined
· <b>Flammability (solid, gaseous):</b>	Not determined.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto igniting:</b>	Not determined.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Explosion limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Vapor pressure:</b>	Not determined
· <b>Density:</b>	Not determined
· <b>Relative density</b>	Not determined
· <b>Vapor density</b>	Not determined
· <b>Evaporation rate</b>	Not determined
· <b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Insoluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined
· <b>Viscosity:</b>	Not determined
· <b>Dynamic:</b>	Not determined
· <b>Kinematic:</b>	Not determined
· <b>Other information</b>	No further relevant information available.

**10 Stability and reactivity**

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** None

**11 Toxicological information**

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

**1314-62-1 vanadium pentoxide**

Oral	LD50	10 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.

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- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful

· **IARC (International Agency for Research on Cancer)**

1313-99-1	nickel oxide	1
13463-67-7	titanium dioxide	2B
1314-62-1	vanadium pentoxide	2B

· **NTP (National Toxicology Program)**

1313-99-1	nickel oxide	K
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**12 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
Water hazard class 2 (Self-assessment): hazardous for water  
Do not allow product to reach ground water, water course or sewage system.  
Danger to drinking water if even extremely small quantities leak into the ground.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

**13 Disposal considerations**

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

· <b>UN-Number</b> · <b>DOT, TDG, ADN, IMDG, IATA</b>	Void
· <b>UN proper shipping name</b> · <b>DOT, TDG, ADN, IMDG, IATA</b>	Void
· <b>Transport hazard class(es)</b> · <b>DOT, TDG, ADN, IMDG, IATA</b> · <b>Class</b>	Void
· <b>Packing group</b> · <b>DOT, TDG, IMDG, IATA</b>	Void

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· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>UN "Model Regulation":</b>	Void

**15 Regulatory information**

· <b>Section 355 (extremely hazardous substances):</b>	
1314-62-1	vanadium pentoxide
· <b>Section 313 (Specific toxic chemical listings):</b>	
1313-99-1	nickel oxide
1314-62-1	vanadium pentoxide
· <b>SARA 311/312:</b> See Section 2 for the information on physical and health hazards.	
· <b>Canadian substance listings:</b>	
· <b>Canadian Domestic Substances List (DSL)</b>	
1313-99-1	nickel oxide
13463-67-7	titanium dioxide
· <b>Canadian Ingredient Disclosure list (limit 0.1%)</b>	
1313-99-1	nickel oxide
1314-62-1	vanadium pentoxide
· <b>Canadian Ingredient Disclosure list (limit 1%)</b>	
None of the ingredients is listed.	

- **National regulations:**
- **Additional classification according to Decree on Hazardous Materials:**  
Carcinogenic hazardous material group III (dangerous).
- **Information about limitation of use:**  
Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation. Exceptions can be made by the authorities in certain cases.

**16 Other information**

This information 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.

- **\* Data compared to the previous version altered.**