

## **SAFETY DATA SHEETS**

**This SDS packet was issued with item:**

071398460

**The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).**

071398189 071398197 071398205 071398213 071398221 071398239 071398247 071398254 071398262 071398270

071398288 071398296 071398312 071398320 071398346 071398361 071398379 071398387 071398395 071398403

071398411 071398429 071398437 071398445 071398452 071398478 071398486 071398494

## 1 Identification

- **Product identifier**
- **Trade name:** KATANA Zirconia ONE
- **Article number:** US902
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** Dental ceramic block
- **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.  
32 Old Slip, 7th Floor, New York,  
NY 10005 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**  
The product is not classified, according to the Globally Harmonized System (GHS).
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **Other hazards**  
Dust generation.  
Avoid breathing sanding dust / swarf.
- **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:**

|           |   |         |
|-----------|---|---------|
| 1314-23-4 | zirconium dioxide   | 50-100% |
| 1314-36-9 | yttrium oxide   | 2.5-10% |
| 1313-99-1 | nickel oxide  | <0.1%   |
|           | <span style="color: red;">☠</span> Carcinogenicity 1A, H350; Specific Target Organ Toxicity - Repeated Exposure 1, H372; <span style="color: red;">⚠</span> Sensitization - Skin 1, H317; Aquatic Chronic 4, H413 |         |

- **Other ingredients:** Pigment

**Trade name: KATANA Zirconia ONE**

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**4 First-aid measures**

- **Description of first aid measures**
- **After inhalation:**  
Supply fresh air and to be sure call for a doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **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:** If symptoms persist consult doctor.
- **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  
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.  
Use fire fighting measures that suit the environment.
- **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.  
Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotective personnel.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
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.

· **PAC-1:**

|           |                   |                        |
|-----------|-------------------|------------------------|
| 1314-23-4 | zirconium dioxide | 14 mg/m <sup>3</sup>   |
| 1314-36-9 | yttrium oxide     | 3.8 mg/m <sup>3</sup>  |
| 1313-99-1 | nickel oxide      | 0.76 mg/m <sup>3</sup> |

· **PAC-2:**

|           |                   |                       |
|-----------|-------------------|-----------------------|
| 1314-23-4 | zirconium dioxide | 110 mg/m <sup>3</sup> |
| 1314-36-9 | yttrium oxide     | 43 mg/m <sup>3</sup>  |
| 1313-99-1 | nickel oxide      | 220 mg/m <sup>3</sup> |

· **PAC-3:**

|           |                   |                       |
|-----------|-------------------|-----------------------|
| 1314-23-4 | zirconium dioxide | 680 mg/m <sup>3</sup> |
| 1314-36-9 | yttrium oxide     | 260 mg/m <sup>3</sup> |

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1313-99-1 nickel oxide

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1,300 mg/m<sup>3</sup>

**7 Handling and storage**

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Avoid contact with skin and eyes, Do not swallow. Avoid generating dust. Do not breathe dust/fume/gas/mist/vapors /spray.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **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:**

**1314-23-4 zirconium dioxide**

|           |   |
|-----------|---|
| PEL (USA) | Long-term value: 5 mg/m <sup>3</sup><br>as Zr   |
| REL (USA) | Short-term value: 10 mg/m <sup>3</sup><br>Long-term value: 5 mg/m <sup>3</sup><br>as Zr     |
| TLV (USA) | Short-term value: 10 mg/m <sup>3</sup><br>Long-term value: 5 mg/m <sup>3</sup><br>as Zr; A4 |

**1314-36-9 yttrium oxide**

|           |  |
|-----------|--|
| PEL (USA) | Long-term value: 1 mg/m <sup>3</sup><br>as Y |
| REL (USA) | Long-term value: 1 mg/m <sup>3</sup><br>as Y |
| TLV (USA) | Long-term value: 1 mg/m <sup>3</sup><br>as Y |

**1313-99-1 nickel oxide**

|           |  |
|-----------|--|
| PEL (USA) | Long-term value: 1 mg/m <sup>3</sup><br>as Ni                              |
| REL (USA) | Long-term value: 0.015 mg/m <sup>3</sup><br>as Ni; See Pocket Guide App. A |
| TLV (USA) | Long-term value: 0.2 mg/m <sup>3</sup><br>as Ni; inhalable fraction        |

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.

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Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.

· **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:**

|                          |                |
|--------------------------|----------------|
| · <b>Form:</b>           | Solid          |
| · <b>Color:</b>          | Colored        |
| · <b>Odor:</b>           | Odorless       |
| · <b>Odor threshold:</b> | Not determined |

· **pH-value:** Not determined

· **Change in condition**

|                                       |                |
|---------------------------------------|----------------|
| · <b>Melting point/Melting range:</b> | Not determined |
| · <b>Boiling point/Boiling range:</b> | Not determined |

· **Flash point:** Not determined

· **Flammability (solid, gaseous):** Not determined.

· **Decomposition temperature:** Not determined

· **Auto igniting:** Not determined

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

|                 |                |
|-----------------|----------------|
| · <b>Lower:</b> | Not determined |
|-----------------|----------------|

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|   |  |
|---|--|
| · <b>Upper:</b>                                   | Not determined                             |
| · <b>Oxidizing properties</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 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**
- **Primary irritant effect:**
- **on the skin:** Based on available data, the classification criteria are not met.
- **on the eye:** Based on available data, the classification criteria are not met.
- **Sensitization:** Based on available data, the classification criteria are not met.
- **Subacute to chronic toxicity:**

|   |              |   |
|---|--------------|---|
| · <b>IARC (International Agency for Research on Cancer)</b> |              |   |
| 1313-99-1   | nickel oxide | 1 |
| · <b>NTP (National Toxicology Program)</b>                  |              |   |
| 1313-99-1   | nickel oxide | K |

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

**12 Ecological information**

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.

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- **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 1 (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

**13 Disposal considerations**

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

**14 Transport information**

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

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredient is listed.

· **Section 313 (Specific toxic chemical listings):**

1313-99-1 nickel oxide

· **SARA 311/312:** See Section 2 for the information on physical and health hazards.

· **Proposition 65**

· **Chemicals known to cause cancer:**

1313-99-1 nickel oxide

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**· Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

**· Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

**· Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

**· Cancerogenity categories :**

**· EPA (Environmental Protection Agency)**

None of the ingredients is listed.

**· TLV (Threshold Limit Value)**

|           |                   |    |
|-----------|-------------------|----|
| 1314-23-4 | zirconium dioxide | A4 |
| 1313-99-1 | nickel oxide      | A1 |

**· Signal word** Void

**· Hazard statements** Void

**· Precautionary statements**



**WARNING:** This product can expose you to chemicals including nickel oxide which are known to the State of California to cause cancer. For more information go to <https://www.p65warnings.ca.gov/>.

**· Chemical safety assessment**

**· Named dangerous substances - ANNEX I** None of the ingredient 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.

**· NFPA ratings (scale 0 - 4)**



**· HMIS-ratings (scale 0 - 4)**

|            |   |                |
|------------|---|----------------|
| HEALTH     | 0 | Health = 0     |
| FIRE       | 0 | Fire = 0       |
| REACTIVITY | 0 | Reactivity = 0 |

**· Abbreviations and acronyms:**

- DOT: US Department of Transportation
- ELINCS: European List of Notified Chemical Substances
- Sensitization - Skin 1: Skin sensitisation – Category 1
- Carcinogenicity 1A: Carcinogenicity – Category 1A
- Specific Target Organ Toxicity - Repeated Exposure 1: Specific target organ toxicity (repeated exposure) – Category 1
- Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4