### 1 Identification

- **Product identifier**
  - **Trade name:** PANAVIA F 2.0 ; PASTE B (TC, White, Light, Opaque)
  - **Article number:** US089-PB

- **Application of the substance / the mixture**
  - Resin-based dental adhesive cement

- **Details of the supplier of the safety data sheet**
  - **Manufacturer:** Kuraray Noritake Dental Inc.
    1621 Sakazu, Kurashiki, Okayama 710-0801, 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**
  - GHS07

  Acute Tox. 4 H302 Harmful if swallowed.

- **Label elements**
  - **GHS label elements**
    The product is classified and labeled according to the Globally Harmonized System (GHS).

  - **Hazard pictograms** GHS07

  - **Signal word** Warning

  - **Hazard-determining components of labeling:**
    sodium fluoride

  - **Hazard statements**
    H302 Harmful if swallowed.

- **Precautionary statements**
  - P264 Wash thoroughly after handling.
  - P270 Do not eat, drink or smoke when using this product.
  - P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
  - P330 Rinse mouth.
  - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Other hazards** Not applicable

- **Results of PBT and vPvB assessment**
  - **PBT:** Not applicable.
  - **vPvB:** Not applicable.

(Contd. on page 2)
## 3 Composition/information on ingredients

- **Chemical characterization:** Substances None
- **Chemical characterization:** Mixtures
- **Description:** Mixture of substances listed below with nonhazardous additions.

### Dangerous components:

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Description</th>
<th>Acute</th>
<th>Skin</th>
<th>Eye</th>
</tr>
</thead>
<tbody>
<tr>
<td>7681-49-4 sodium fluoride</td>
<td>Mixture of substances listed below with nonhazardous additions.</td>
<td>Tox. 3; H301; Skin Irrit. 2; H315; Eye Irrit. 2A; H319</td>
<td>&lt; 10%</td>
<td></td>
</tr>
</tbody>
</table>

- **Other ingredients:**
  - Hydrophobic aromatic dimethacrylate
  - Hydrophobic aliphatic dimethacrylate
  - Hydrophilic aliphatic dimethacrylate
  - Silanated barium glass filler
  - Catalysts
  - Accelerators
  - Pigments
- **Additional information:** EUH032: Contact with acids liberates very toxic gas (sodium fluoride)

## 4 First-aid measures

- **Description of first aid measures**
- **General information:** Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** Generally the product does not irritate the skin.
- **After eye contact:** Rinse opened eye for several minutes under running water.
- **After swallowing:** Immediately call a 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:** CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.
- **Wear fully protective suit.**

## 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:** Dispose contaminated material as waste according to item 13.
- **Reference to other sections**
  - See Section 7 for information on safe handling.
  - See Section 8 for information on personal protection equipment.
### 7 Handling and storage

- **Handling:**
  - **Precautions for safe handling** Prevent formation of dust.
  - **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:** Store in a refrigerator (2-8 °C).
  - **Information about storage in one common storage facility:**
    - Do not store together with acids.
    - Store away from oxidizing agents.
    - Store away from reducing agents.
  - **Further information about storage conditions:**
    - Keep receptacle tightly sealed.
    - Store in cool, dry conditions in well sealed receptacles.
    - Protect from heat and direct sunlight.

- **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:**
    - **7681-49-4 sodium fluoride**
      - PEL 2.5 mg/m³ as F
      - REL 2.5 mg/m³ as F
      - TLV 2.5 mg/m³ as F, BEI

- **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.
    - Immediately remove all soiled and contaminated clothing.
    - Wash hands before breaks and at the end of work.
    - Avoid contact with the skin.
    - Avoid contact with the eyes.

- **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:**
  - Neoprene 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:** Safety glasses

### 9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Information on basic physical and chemical properties</strong></td>
<td></td>
</tr>
<tr>
<td><strong>General Information</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Appearance:</strong></td>
<td></td>
</tr>
<tr>
<td>Form</td>
<td>Pasty</td>
</tr>
<tr>
<td>Color</td>
<td>Colored</td>
</tr>
<tr>
<td>Odor</td>
<td>Odorless</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Important information on protection of health and environment, and on safety.</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>pH-value:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Change in condition:</strong></td>
<td></td>
</tr>
<tr>
<td>Melting point/Melting range</td>
<td>1012 °C (sodium fluoride)</td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
<td>1704 °C (sodium fluoride)</td>
</tr>
<tr>
<td><strong>Flash point:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Flammability (solid, gaseous):</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Ignition temperature:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Decomposition temperature:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Auto igniting:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Danger of explosion:</strong></td>
<td>Product does not present an explosion hazard.</td>
</tr>
<tr>
<td><strong>Explosion limits:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td>Lower</td>
<td>Not determined</td>
</tr>
<tr>
<td>Upper</td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Oxidizing properties</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Vapor pressure:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Density:</strong></td>
<td>2.0 g/cm³</td>
</tr>
<tr>
<td>Relative density</td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Solubility in / Miscibility with</strong></td>
<td>Insoluble</td>
</tr>
<tr>
<td>Water</td>
<td></td>
</tr>
<tr>
<td><strong>Partition coefficient (n-octanol/water):</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Viscosity:</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td>Dynamic</td>
<td>Not determined</td>
</tr>
<tr>
<td>Kinematic</td>
<td>Not determined</td>
</tr>
<tr>
<td><strong>Solvent separation test</strong></td>
<td>Not determined</td>
</tr>
<tr>
<td>Water</td>
<td>Not determined</td>
</tr>
</tbody>
</table>
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: Carbon monoxide and carbon dioxide

11 Toxicological information

- Information on toxicological effects
  - Acute toxicity:
    - LD/LC50 values that are relevant for classification:
      - 7681-49-4 sodium fluoride
        - Oral LD50: 44 mg/kg (mouse) 52 mg/kg (rat)
- Primary irritant effect:
  - on the skin: No irritant effect.
  - on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
  The product shows the following dangers according to internally approved calculation methods for preparations:
  Harmful

- Carcinogenic categories

  - IARC (International Agency for Research on Cancer)
    None of the ingredients is listed.

  - NTP (National Toxicology Program)
    None of the ingredients is listed.

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 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

· 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

· UN-Number
  · DOT, ADR, ADN, IMDG, IATA Void

· UN proper shipping name
  · DOT, ADR, ADN, IMDG, IATA Void

· Transport hazard class(es)
  · DOT, ADR, ADN, IMDG, IATA Void

· Packing group
  · DOT, ADR, IMDG, IATA Void

· Environmental hazards:
  · Marine pollutant: No

· Special precautions for user
  · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

· UN "Model Regulation": Void

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
  · Sara

  · Section 355 (extremely hazardous substances):
    None of the ingredient is listed.

  · Section 313 (Specific toxic chemical listings):
    None of the ingredients is listed.

  · TSCA (Toxic Substances Control Act):
    All ingredients are listed.

  · Proposition 65

  · Chemicals known to cause cancer:
    None of the ingredients is listed.

  · 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 established by ACGIH)**
  None of the ingredients is listed.
- **NIOSH-Ca (National Institute for Occupational Safety and Health)**
  None of the ingredients is listed.

### Chemical safety assessment:
A Chemical Safety Assessment has not been carried out.

### 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.

### Relevant phrases
- H301 Toxic if swallowed.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.

### NFPA ratings (scale 0 - 4)
- Health = 2
- Fire = 0
- Reactivity = 0

### HMIS-ratings (scale 0 - 4)
- **HEALTH**
  - Health = 2
- **FIRE**
  - Fire = 0
- **REACTIVITY**
  - Reactivity = 0

### Abbreviations and acronyms:
- **CLP:** Classification, Labelling and Packaging
- **Acute Tox. 3:** Acute toxicity – Category 3
- **Acute Tox. 4:** Acute toxicity – Category 4
- **Skin Irrit. 2:** Skin corrosion/irritation – Category 2
- **Eye Irrit. 2A:** Serious eye damage/eye irritation – Category 2A

* Data compared to the previous version altered.