1 Identification

- Product identifier
  - Trade name: PANAVIA V5; Paste
  - Article number: US214-P
- Relevant identified uses of the substance or mixture and uses advised against
  - No further relevant information available.
- 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
    - Skin Irrit. 2 H315 Causes skin irritation.
    - Eye Irrit. 2A H319 Causes serious eye irritation.

- 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 statements
    - H315 Causes skin irritation.
    - H319 Causes serious eye irritation.

- Precautionary statements
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P302+P352 IF ON SKIN: Wash with plenty of water.
  - P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
  - P321 Specific treatment (see on this label).
  - P332+P313 If skin irritation occurs: Get medical advice/attention.
  - P337+P313 If eye irritation persists: Get medical advice/attention.
  - P362 Take off contaminated clothing.

- Other hazards
  - Results of PBT and vPvB assessment
    - PBT: Not applicable.

(Contd. on page 2)
Trade name: PANAVIA V5 ; Paste

· vPvB: Not applicable.

3 Composition/information on ingredients

· Chemical characterization: Mixtures
· Description: Mixture of substances listed below with nonhazardous additions.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1565-94-2 bisphenol A diglycidylmethacrylate</td>
<td>Skin Irrit. 2, H315; Eye Irrit. 2A, H319</td>
</tr>
<tr>
<td>5-15%</td>
<td></td>
</tr>
<tr>
<td>109-16-0 triethylene glycol dimethacrylate</td>
<td>Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335</td>
</tr>
<tr>
<td>&lt;5%</td>
<td></td>
</tr>
</tbody>
</table>

· Other ingredients:
  - Silanated barium glass filler
  - Silanated fluoroalminosilicate glass filler
  - Colloidal silica
  - Surface treated aluminum oxide filler
  - Hydrophobic aromatic dimethacrylate
  - Hydrophilic aliphatic dimethacrylate
  - dl-Camphorquinone
  - Initiators
  - Accelerators
  - Pigments

4 First-aid measures

· Description of first aid measures
· General information:
  - Avoid contact with eyes.
  - Avoid contact with skin.
· After inhalation: Supply fresh air; consult doctor in case of complaints.
· 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:
  - 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: No special measures required.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures See Section 8.
· Environmental precautions: Do not allow to enter sewers/ surface or ground water.
· Methods and material for containment and cleaning up: Pick up mechanically.
Trade name: PANAVIA V5 ; Paste

7 Handling and storage

- Handling:
- Precautions for safe handling: No special precautions are necessary if used correctly.
- 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: Not required.
- 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:
  - The product does not contain any relevant quantities of materials with critical values that have to be
    monitored at the workplace.
- Additional information: The lists that were valid during the creation were used as basis.
- Exposure controls
- Personal protective equipment:
  - General protective and hygienic measures: Wash hands before breaks and at the end of work.
  - Breathing equipment: Not required.
  - 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 breakthrough time has to be found out by the manufacturer of the protective gloves and has to be
  observed.
9 Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value/Not determined</th>
</tr>
</thead>
<tbody>
<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><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>Not determined</td>
</tr>
<tr>
<td>Boiling point/Boiling range</td>
<td>Not determined</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></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>Not determined</td>
</tr>
<tr>
<td>Auto igniting</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></td>
</tr>
<tr>
<td>1.8 g/cm³ (20 °C)</td>
<td></td>
</tr>
<tr>
<td><strong>Relative density</strong></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 Water:</strong></td>
<td>Insoluble.</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><strong>Other information</strong></td>
<td>No further relevant information available.</td>
</tr>
</tbody>
</table>
Trade name: PANAVIA V5 ; Paste

- 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:
  - Primary irritant effect:
    - on the skin: Irritating effect
    - on the eye: Irritating effect.
  - Sensitization: No sensitizing effects known.
- Additional toxicological information:
  - 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

(Contd. on page 6)
<table>
<thead>
<tr>
<th><strong>15 Regulatory information</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Safety, health and environmental regulations/legislation specific for the substance or mixture</strong></td>
</tr>
<tr>
<td>No further relevant information available.</td>
</tr>
<tr>
<td><strong>Sara</strong></td>
</tr>
<tr>
<td><strong>Section 355 (extremely hazardous substances):</strong></td>
</tr>
<tr>
<td>None of the ingredient is listed.</td>
</tr>
<tr>
<td><strong>Section 313 (Specific toxic chemical listings):</strong></td>
</tr>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td><strong>TSCA (Toxic Substances Control Act):</strong></td>
</tr>
<tr>
<td>All ingredients are listed.</td>
</tr>
<tr>
<td><strong>Proposition 65</strong></td>
</tr>
<tr>
<td><strong>Chemicals known to cause cancer:</strong></td>
</tr>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td><strong>Chemicals known to cause reproductive toxicity for females:</strong></td>
</tr>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td><strong>Chemicals known to cause reproductive toxicity for males:</strong></td>
</tr>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td><strong>Chemicals known to cause developmental toxicity:</strong></td>
</tr>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td><strong>Cancerogenity categories</strong></td>
</tr>
<tr>
<td><strong>EPA (Environmental Protection Agency)</strong></td>
</tr>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td><strong>TLV (Threshold Limit Value established by ACGIH)</strong></td>
</tr>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td><strong>NIOSH-Ca (National Institute for Occupational Safety and Health)</strong></td>
</tr>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td><strong>Chemical safety assessment:</strong> A Chemical Safety Assessment has not been carried out.</td>
</tr>
</tbody>
</table>
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
  H315 Causes skin irritation.
  H319 Causes serious eye irritation.
  H335 May cause respiratory irritation.

• NFPA ratings (scale 0 - 4)

  Health = 0
  Fire = 0
  Reactivity = 0

• HMIS-ratings (scale 0 - 4)

  HEALTH 0
  FIRE 0
  REACTIVITY 0

• Abbreviations and acronyms:
  Skin Irrit. 2: Skin corrosion/irritation – Category 2
  Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
  STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

* Data compared to the previous version altered.