1 Identification

- Product identifier
  - Trade name: PANAVIA 21; OXYGUARD II
  - Article number: US050-O
  - Relevant identified uses of the substance or mixture and uses advised against
    - No further relevant information available.
  - Application of the substance / the mixture
    - Dental material for curing promotion and surface protection

- 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
  - The product is not classified according to the Globally Harmonized System (GHS).

- Label elements
  - GHS label elements: Void
  - Hazard pictograms: Void
  - Signal word: Void
  - Hazard statements: Void

- Other hazards
  - 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.

<table>
<thead>
<tr>
<th>Dangerous components:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>56-81-5 glycerol</td>
<td>50-70%</td>
</tr>
</tbody>
</table>

- Other ingredients:
  - Polyethylene glycol
  - Catalysts
  - Accelerators
  - Dyes

(Contd. on page 2)
**4 First-aid measures**

- **Description of first aid measures**
  - **General information:** No special measures required.
  - **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:** 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:** 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.
  - **Environmental precautions:**
    - Dilute with plenty of water.
    - Do not allow to enter sewers/surface or ground water.

- **Methods and material for containment and cleaning up:**
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

- **Reference to other sections**
  - No dangerous substances are released.
  - 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:** No special measures required.
  - **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:**
  - Store in cool, dry conditions in well sealed receptacles.
  - Keep receptacle tightly sealed.
  - 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

<table>
<thead>
<tr>
<th>Components with limit values that require monitoring at the workplace:</th>
</tr>
</thead>
<tbody>
<tr>
<td>56-81-5 glycerol</td>
</tr>
<tr>
<td>PEL* 15** mg/m³</td>
</tr>
<tr>
<td>TLV 10 ppm</td>
</tr>
</tbody>
</table>

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

- Exposure controls
- Personal protective equipment:
- General protective and hygienic measures:
The usual precautionary measures for handling chemicals should be followed.
- Breathing equipment: Not required.
- Protection of hands:
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: Goggles recommended during refilling.

9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information
- Appearance:
  - Form: Gel
  - Color: Green
  - Odor: Odorless

- pH-value: Not determined

- Change in condition
  - Melting point/Melting range: 18.2 °C (glycerol)
  - Boiling point/Boiling range: 290 °C (glycerol)

- Flash point: 160 °C (glycerol)

- Ignition temperature: 400.0 °C (glycerol)

- Decomposition temperature: Not determined

- Danger of explosion: Product does not present an explosion hazard.

- Explosion limits:
  - Lower: 0.9 Vol % (glycerol)
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**
- **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 is not subject to classification according to internally approved calculation methods for preparations: When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
- **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.
Trade name: PANAVIA 21 ; OXYGUARD II

- 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: Smaller quantities can be disposed of with household waste.

- Uncleaned packagings:
  - Recommendation: Disposal must be made according to official regulations.

- Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

- UN-Number: Void

- UN proper shipping name: 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: Not applicable.

- 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.
Trade name: PANAVIA 21 ; OXYGUARD II

<table>
<thead>
<tr>
<th>Section</th>
</tr>
</thead>
<tbody>
<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>None of the ingredients is listed.</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><em>EPA (Environmental Protection Agency)</em></td>
</tr>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td><em>TLV (Threshold Limit Value established by ACGIH)</em></td>
</tr>
<tr>
<td>None of the ingredients is listed.</td>
</tr>
<tr>
<td><em>NIOSH-Ca (National Institute for Occupational Safety and Health)</em></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.

- **NFPA ratings (scale 0 - 4)**
  - Health = 0
  - Fire = 1
  - Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**
  - HEALTH Health = 0
  - FIRE Fire = 1
  - REACTIVITY Reactivity = 0

* Data compared to the previous version altered.