* 1 Identification

- Product identifier
  - Trade name: SURFACE COAT
  - Article number: US118
- 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 glazing and hardening
- 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
  - GHS02 Flame
    Flam. Liq. 2 H225 Highly flammable liquid and vapor.
  - GHS07
    Skin Sens. 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
    GHS02, GHS07
  - Signal word
    Danger
- Hazard-determining components of labeling:
  - methyl methacrylate
- Hazard statements
  - H225 Highly flammable liquid and vapor.
  - H317 May cause an allergic skin reaction.
- Precautionary statements
  - P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
  - P240 Ground/bond container and receiving equipment.
  - P241 Use explosion-proof electrical/ventilating/lighting/equipment.
  - P261 Avoid breathing dust/fume/gas/mist/vapors/spray
  - P280 Wear protective gloves/protective clothing/eye protection/face protection.
  - P303+P361+P353 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

(Contd. on page 2)
Trade name: SURFACE COAT

45.1.3 Specific treatment (see on this label).
P363 Wash contaminated clothing before reuse.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· 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.

· Dangerous components:
  80-62-6 methyl methacrylate
  Flam. Liq. 2, H225; Skin Irrit. 2, H315; Skin Sens. 1, H317; STOT SE 3, H335
  < 10%

· Other ingredients:
  Aliphatic hexaacrylate
  Initiators

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:
  Do not induce vomiting; immediately call for medical help.
  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, sand, extinguishing powder. Do not use water.
  For safety reasons unsuitable extinguishing agents: Water with full jet
  Special hazards arising from the substance or mixture
  Advice for firefighters
  Protective equipment:
  Wear self-contained respiratory protective device.
  Wear fully protective suit.

6 Accidental release measures

· Personal precautions, protective equipment and emergency procedures
  Wear protective equipment. Keep unprotected persons away.
· Environmental precautions: Do not allow to enter sewers/ surface or ground water.
Trade name: SURFACE COAT

Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universalbinders, sawdust).
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents

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
  Ensure good ventilation/exhaustion at the workplace.
  Prevent formation of aerosols.
- Information about protection against explosions and fires:
  Keep ignition sources away - Do not smoke.
  Protect against electrostatic charges.
- Conditions for safe storage, including any incompatibilities
- Storage:
  - Requirements to be met by storerooms and receptacles: Store in a cool location (2-25 °C).
  - Information about storage in one common storage facility:
  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:
  80-62-6 methyl methacrylate

<table>
<thead>
<tr>
<th></th>
<th>PEL</th>
<th>REL</th>
<th>TLV Short-term value</th>
<th>TLV Long-term value</th>
<th>SEN</th>
</tr>
</thead>
<tbody>
<tr>
<td>410 mg/m³, 100 ppm</td>
<td>410 mg/m³, 100 ppm</td>
<td>410 mg/m³, 100 ppm</td>
<td>205 mg/m³, 50 ppm</td>
<td></td>
<td></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:
  Immediately remove all soiled and contaminated clothing.
  Wash hands before breaks and at the end of work.
- 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
    - Form: Liquid
    - Color: Colorless
    - Odor: Slightly methacrylate odor
  - pH-value: Not determined.
- Change in condition
  - Melting point/Melting range: -48 °C (methyl methacrylate)
  - Boiling point/Boiling range: 101 °C (methyl methacrylate)
- Flash point: 10 °C (methyl methacrylate)
- Ignition temperature: 430.0 °C (methyl methacrylate)
- Decomposition temperature: Not determined.
- Danger of explosion: Product is not explosive. However, formation of explosive air/ vapor mixtures are possible.
- Explosion limits:
  - Lower: 2.1 Vol % (methyl methacrylate)
  - Upper: 12.5 Vol % (methyl methacrylate)
- Oxidizing properties: Not determined
- Vapor pressure: 47.0 hPa (20 °C, methyl methacrylate)
- Density: 1.2 g/cm³
- Relative density: Not determined.
- Vapor density: Not determined.
Trade name: SURFACE COAT

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaporation rate</td>
<td>Not determined</td>
</tr>
<tr>
<td>Solubility in / Miscibility with Water</td>
<td>Not miscible or difficult to mix.</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not determined</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not determined</td>
</tr>
<tr>
<td>Other information</td>
<td>No further relevant information available.</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**:
      80-62-6 methyl methacrylate
      - Oral LD50: 3625 mg/kg (mouse)
      - Dermal LD50: 7872 mg/kg (rat)
      - Oral LD50: 5945 mg/kg (mouse)
  - **Primary irritant effect**:
    - **on the skin**: No irritant effect.
    - **on the eye**: No irritating effect.
    - **Sensitization**: Sensitization possible through skin contact.
  - **Additional toxicological information**:
    The product shows the following dangers according to internally approved calculation methods for preparations:
    - Irritant

- **Carcinogenic categories**
  - **IARC (International Agency for Research on Cancer)**
    - 80-62-6 methyl methacrylate: 3
  - **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.
### 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

<table>
<thead>
<tr>
<th>DOT</th>
<th>UN1247</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADR, IMDG, IATA</td>
<td>1247</td>
</tr>
</tbody>
</table>

- **UN proper shipping name**
  - **ADR** 1247 METHYL METHACRYLATE MONOMER, STABILIZED, solution
  - **IMDG, IATA** METHYL METHACRYLATE MONOMER, STABILIZED, solution

- **Transport hazard class(es)**
  - **DOT**
    - **Class** 3 Flammable liquids
    - **Label** 3

- **ADR, IMDG, IATA**
  - **Class** 3 Flammable liquids
  - **Label** 3

- **Packing group**
  - **DOT, ADR, IMDG, IATA** II

- **Environmental hazards**
  - **Marine pollutant:** No

- **Special precautions for user**
  - **Warning:** Flammable liquids
  - **Danger code (Kemler):** 339
Trade name: SURFACE COAT

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):
      All ingredients are 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)
      80-62-6 methyl methacrylate E;NL
    - TLV (Threshold Limit Value established by ACGIH)
      80-62-6 methyl methacrylate A4
    - 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
  H225 Highly flammable liquid and vapor.
  H315 Causes skin irritation.
  H317 May cause an allergic skin reaction.
  H335 May cause respiratory irritation.
Trade name: SURFACE COAT

· NFPA ratings (scale 0 - 4)
  
  Health = 0
  Fire = 3
  Reactivity = 0

· HMIS-ratings (scale 0 - 4)
  
  Health = 0
  Fire = 3
  Reactivity = 0

· Abbreviations and acronyms:
  Flam. Liq. 2: Flammable liquids – Category 2
  Skin Irrit. 2: Skin corrosion/irritation – Category 2
  Skin Sens. 1: Skin sensitisation – Category 1
  STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

* Data compared to the previous version altered.