

## 1 Identification of substance

- **Product details**
- **Trade name:** SURFACE COAT
- **Article number:** US118
- **Application of the substance / the preparation** Dental material for glazing and hardening
- **Manufacturer:**  
Kuraray Medical Inc.  
1621 Sakazu, Kurashiki, Okayama 710-0801,  
Japan
- **Supplier:**  
Kuraray America, Inc.  
600 Lexington Avenue, 26th Floor, New York,  
NY 10022 U.S.A.  
Tel: 800-879-1676  
Fax: 888-700-5200  
Website: www.kuraraydental.com
- **Information department:** Supplier

## 2 Composition/Data on components

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

|         |                     |  |       |
|---------|---------------------|--|-------|
| 80-62-6 | methyl methacrylate | Danger:  2.6/2                  | < 10% |
|         |                     | Warning:  3.2/2, 3.4.S/1, 3.8/3 |       |

- **Other ingredients:**  
Aliphatic hexaacrylate  
Initiators

## 3 Hazards identification

- **Hazard description:**



Irritant  
Highly flammable

- **Information pertaining to particular dangers for man and environment:**  
The product has to be labelled due to the calculation procedure of international guidelines.  
Highly flammable.  
May cause sensitisation by skin contact.
- **Classification system:**  
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **NFPA ratings (scale 0 - 4)**  
Health = 0  
Fire = 3  
Reactivity = 0
- **HMIS-ratings (scale 0 - 4)**  
Health = 0  
Fire = 3  
Reactivity = 0

(Contd. on page 2)

Printing date 10/02/2008

Reviewed on 10/01/2008

Trade name: SURFACE COAT

(Contd. of page 1)

## · GHS label elements

**Danger**

2.6/2 - Highly flammable liquid and vapour.

**Warning**

3.4/1 - May cause an allergic skin reaction.

· **Prevention:**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Keep container tightly closed.

Ground/bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/ equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves/protective clothing/eye protection/face protection.

· **Response:**

IF ON SKIN: Wash with plenty of soap and water.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

Specific treatment (see label).

If skin irritation or rash occurs: Get medical advice/attention.

Wash contaminated clothing before reuse.

In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.· **Storage:**

Store in a well-ventilated place. Keep cool.

· **Disposal:**

Dispose of contents/container in accordance with local/regional/national/international regulations.

**4 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.

**5 Fire fighting measures**· **Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.· **For safety reasons unsuitable extinguishing agents:** Water with full jet· **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

**6 Accidental release measures**· **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.

(Contd. on page 3)

Printing date 10/02/2008

Reviewed on 10/01/2008

**Trade name: SURFACE COAT**

(Contd. of page 2)

- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents

## 7 Handling and storage

- **Handling:**
- **Information 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.
- **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.

## 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

### 80-62-6 methyl methacrylate

|     |  |
|-----|--|
| PEL | 410 mg/m <sup>3</sup> , 100 ppm  |
| REL | 410 mg/m <sup>3</sup> , 100 ppm  |
| TLV | Short-term value: 410 mg/m <sup>3</sup> , 100 ppm<br>Long-term value: 205 mg/m <sup>3</sup> , 50 ppm |
| SEN |  |

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

(Contd. on page 4)

Printing date 10/02/2008

Reviewed on 10/01/2008

**Trade name: SURFACE COAT**

(Contd. of page 3)

- **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

### · General Information

|               |                            |
|---------------|----------------------------|
| <b>Form:</b>  | Liquid                     |
| <b>Color:</b> | Colorless                  |
| <b>Odor:</b>  | Slightly methacrylate odor |

### · Change in condition

|                                     |                              |
|-------------------------------------|------------------------------|
| <b>Melting point/Melting range:</b> | -48 °C (methyl methacrylate) |
| <b>Boiling point/Boiling range:</b> | 101 °C (methyl methacrylate) |

· **Flash point:** 10 °C (methyl methacrylate)

· **Ignition temperature:** 430.0 °C (methyl methacrylate)

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.

### · Explosion limits:

|               |                                  |
|---------------|----------------------------------|
| <b>Lower:</b> | 2.1 Vol % (methyl methacrylate)  |
| <b>Upper:</b> | 12.5 Vol % (methyl methacrylate) |

· **Vapor pressure:** 47.0 hPa (20°C, methyl methacrylate)

· **Density:** 1.2 g/cm<sup>3</sup>  
· **Vapour density:** Not applicable

· **Solubility in / Miscibility with Water:** Not miscible or difficult to mix.

· **pH-value:** Not applicable

· **Segregation coefficient (n-octanol/water):** Not applicable

## 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used and stored according to specifications.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous products of decomposition:** Carbon monoxide and carbon dioxide

## 11 Toxicological information

### · Acute toxicity:

#### · LD/LC50 values that are relevant for classification:

**80-62-6 methyl methacrylate**

|      |      |                    |
|------|------|--------------------|
| Oral | LD50 | 3625 mg/kg (mouse) |
|------|------|--------------------|

(Contd. on page 5)

Printing date 10/02/2008

Reviewed on 10/01/2008

**Trade name: SURFACE COAT**

(Contd. of page 4)

|        |      |                    |
|--------|------|--------------------|
|        |      | 7872 mg/kg (rat)   |
| Dermal | 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

## 12 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.

## 13 Disposal considerations

- **Product:**
- **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

- **DOT regulations:**
- **Hazard class:** 3
- **Identification number:** UN1247
- **Packing group:** II
- **Proper shipping name (technical name):** METHYL METHACRYLATE MONOMER, STABILIZED, solution
- **Label:** 3
- **Land transport ADR/RID (cross-border):**
- **ADR/RID class:** 3 Flammable liquids
- **Danger code (Kemler):** 339
- **UN-Number:** 1247
- **Packaging group:** II
- **Label:** 3
- **Description of goods:** 1247 METHYL METHACRYLATE MONOMER, STABILIZED, solution
- **Maritime transport IMDG:**
- **IMDG Class:** 3
- **UN Number:** 1247
- **Label:** 3
- **Packaging group:** II
- **EMS Number:** F-E,S-D
- **Marine pollutant:** No
- **Propper shipping name:** METHYL METHACRYLATE MONOMER, STABILIZED, solution

(Contd. on page 6)

Printing date 10/02/2008

Reviewed on 10/01/2008

**Trade name: SURFACE COAT**

(Contd. of page 5)

- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1247
- **Label:** 3
- **Packaging group:** II
- **Propper shipping name:** METHYL METHACRYLATE MONOMER, STABILIZED, solution

- **UN "Model Regulation":**  
UN1247; METHYL METHACRYLATE MONOMER, STABILIZED, solution; 3; II

## 15 Regulations

· **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 |
|---------|---------------------|------|

· **IARC (International Agency for Research on Cancer)**

|         |                     |   |
|---------|---------------------|---|
| 80-62-6 | methyl methacrylate | 3 |
|---------|---------------------|---|

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **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.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Product related hazard informations:**

The product has been classified and marked in accordance with directives on hazardous materials.

(Contd. on page 7)

Printing date 10/02/2008

Reviewed on 10/01/2008

**Trade name: SURFACE COAT**

(Contd. of page 6)

**· Hazard symbols:**Irritant  
Highly flammable**· Hazard-determining components of labelling:**

methyl methacrylate

**· Risk phrases:**Highly flammable.  
May cause sensitisation by skin contact.**· Safety phrases:**Keep container in a well-ventilated place.  
Keep away from sources of ignition - No smoking.  
Avoid contact with skin.  
Take precautionary measures against static discharges.  
Wear suitable gloves.  
This material and its container must be disposed of as hazardous waste.**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.

**· Version: 2****· Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
RID: Reglement internationale concernent le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
ACGIH: American Conference of Governmental Industrial Hygienists  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent

USA