Material Safety Data Sheet

SR Ivocap Plus Monomer

Date of issue / Reference
01.10.2007 | Iss / Version 4
Replaces version of
07.06.2005 | hot
Date of printing
01.10.2007 | Sheet No. 1084

Company
Ivoclar Vivadent AG, Bendererstrasse 2, FL - 9494 Schaan
Principality of Liechtenstein

1 Commercial product name and supplier

1.1 Commercial product name / Designation
SR Ivocap Plus Monomer

1.2 Application / Use
Denture base material

1.3 Producer
Ivoclar Vivadent AG, Bendererstrasse 2, 9494 Schaan
Principality of Liechtenstein (FL)

1.4 Supplier
Ivoclar Vivadent, Inc.
175 Pineview Drive, Amherst NY 14228, USA
2785 Skymark Ave., Unit 1 Mississauga, ON L4W4Y3, Canada
MSDS prepared by Andjelo Culan. Tel. No. 716 691-0010

1.5 24 Hour Emergency Assistance
Emergency-Call USA - Infotrac: 1-800-533-5053
Emergency-Call Canada - Canutec: 1-613-996-6666
General MSDS Assistance
US: 1-800-533-6825
Canada: 1-800-263-8182

2 Composition

2.1 Chemical characterization
Mixture of Methyl methacrylate stub., Dimethacrylate and Co-polymer

2.2 Hazardous components
CAS No. 80-62-6
88 - 90 % Methylmethacrylate

CAS No. 97-90-5
5 - 6 % Dimethacrylate
Xi: Irritant. R37: Irritating to respiratory system. R43: May cause sensitisation by skin contact.

2.3 Further information

3 Hazards identification
Highly flammable. Do not inhale vapours. Irritating to eyes, respiratory system and skin. May cause sensitisation by skin contact.
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<table>
<thead>
<tr>
<th>Section</th>
<th>Description</th>
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<tr>
<td><strong>4.1</strong></td>
<td><strong>Eye contact</strong></td>
</tr>
<tr>
<td><strong>4.2</strong></td>
<td><strong>Skin contact</strong></td>
</tr>
<tr>
<td><strong>4.3</strong></td>
<td><strong>Ingestion</strong></td>
</tr>
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<td><strong>4.4</strong></td>
<td><strong>Inhalation</strong></td>
</tr>
<tr>
<td><strong>4.5</strong></td>
<td><strong>Further information</strong></td>
</tr>
</tbody>
</table>

| **5.1** | **Suitable extinguishing media** | Water fog, carbon dioxide, foam, dry chemicals. |
| **5.2** | **Extinguishing media to avoid** | Do not use direct water stream. |
| **5.3** | **Flash point** | 50 °F |
| **5.4** | **Ignition temperature** | 806 °F |
| **5.5** | **Explosion limits** | Lower: 2.1 Vol% Upper: 12.5 Vol% |
| **5.6** | **Further information** | Cool containers in the vicinity of the blaze using a water spray. Highly flammable liquid. Keep possible ignition sources away from vapours. |

| **6** | **Accidental release measures** | Clean up with absorbent material such as sawdust, diatomaceous earth or universal absorbents. Dispose of according to local and national regulations. Do not allow to flow off into the drains or waters. |

| **7** | **Handling and storage** |
| **7.1** | **Handling** | Only adequately trained personnel should handle this product. Keep out of reach of children. |
| **7.2** | **Industrial hygiene** | Usual hygienic measures for dental practice. When using, do not eat, drink or smoke. |
| **7.3** | **Storage** | Keep containers tightly closed. Store in dry well ventilated area away from sources of ignition and heat. Store at 12-28 °C / 54-82 °F. |
| **7.4** | **Place of storage** | |
| **7.5** | **Fire- and explosion-protection** | Take precautions to avoid accumulation of static charge. |
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8 Exposure controls / Personal protection

8.1 Technical measures
Control airborne concentration below the exposure guideline.

8.2 Control of threshold limits
MAK (Maximale Arbeitsplatzkonzentration, Germany) is 50 ppm.
ACGIH (American Conference of Governmental Industrial Hygienists, USA) Threshold Limit Value (TLV) is 100 ppm (Ceiling).

8.3 Personal protective equipment

8.3.1 Respiratory protection
In poorly ventilated areas, use air-purifying respiratory protection apparatus (type A).

8.3.2 Hand protection
Solvent resistant gloves.

8.3.3 Eye protection
Safety goggles.

8.3.4 Other
Eye wash fountain should be located in immediate work area.

9 Physical and chemical properties

9.1 Appearance clear liquid
9.2 Colour colourless
9.3 Odour characteristic

9.4 Change of physical state
Melting point: -55 °F
Boiling point: 217 °F

9.5 Density 0.943 g/cm³ (20°C)

9.6 Vapour pressure 40 mbar (20°C)

9.7 Viscosity 0.6 mPa·s (20°C)

9.8 Solubility
Solubility in water: 1.6 g/l

9.9 pH not determined
Material Safety Data Sheet

10 Stability and reactivity
10.1 Thermal decomposition
None, if used in accordance to instructions.
10.2 Hazardous decomposition products
None under normal conditions of storage and use.
10.3 Hazardous reactions
Polymerisation with heat build-up may occur.
In the presence of radical initiators (e.g. peroxides).
10.4 Further information
The product is highly flammable. Avoid ignition sources such as flames or spark producing equipment.

11 Toxicological information
11.1 Acute toxicity
Oral LD50 for rats: 7900 mg/kg
LC50/Rat: 3750 ppm
11.2 Subacute / Chronic toxicity
Prolonged or frequently repeated skin contact may cause allergic skin reactions in some individuals.
11.3 Further information
Excessive exposure may cause eye and respiratory irritation.

12 Ecological Information
German "Wassergefahrdrungs Klasse (WGK): I
The product must not enter effluent, ground water, surface water or the soil.

13 Disposal considerations
Take to a special waste incineration plant, in line with local regulations.

14 Transport Information
14.1 Transport at land
ADR 3 RUD 3
UN Number 1247 Kemler Number 339
Packing Group II Proper shipping name Methyl methacrylate monomer, stabilized
14.2 Transport at sea
ADNR 3 IMDG 31-02
UN Number 1247 EMS F-E, S-D MFAG 330
Packing Group II Proper shipping name Methylmethacrylat Monomer, stabilisiert
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#### 14.3 Air transport

- **ICAO / IATA-DGR**: Class 3
- **UN Number**: 1247
- **Proper shipping name**: Methyl methacrylate monomer, stabilized
- **Subsidiary Risk Labels**: Flamm., Liqu.
- **Packing Group**: II
- **Passenger airplane Packing Instructions**: 305
- **max.**: 5 L
- **Cargo Airplane Packing Instructions**: 307
- **max.**: 60 L

#### 14.4 Further information

Sample shipment not allowed by mail.

#### 15 Regulatory information

The product is a medical device according to the EC-directive 93/42/EEC.

This product is classified as a medical device under US and Canadian regulations and has been reviewed by the US Food and Drug Administration and Health Canada. This product requires classification according to the criteria of the "Gefahrstoffverordnung".

#### 15.1 National regulations

#### 15.2 NFPA Storage

#### 15.3 Further information

None.

#### 16 Other information

- **Version**: 4
- **Changes**: 1.5

The above mentioned data correspond to our present state of knowledge and experience. The safety data sheet serves as description of the products in regard to necessary safety measures. The indications do not have the meaning of guarantees or properties.

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This safety data sheet has been generated with the safety database "ChemPlusSafe".

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Dynasty Acrylic Powder

Material Safety Data Sheet

Section I - Personal Information

Manufacturer:
P.O. Box 1268
Heber Springs, AR 72543

Emergency Telephone Number: CHEMTRAC 800-421-0020
Telephone Number for Information: 501-352-0261
Data Prepared: 10/15/07

Section II - Hazardous Ingredients/Identity Information

Hazardous Components

- Distilled Phthalic (CAS# 84-66-2)
- Titanium Dioxide (CAS# 13463-67-7)
- Pigment Dyes (CAS# 57243-37-8)

OSHA PEL: 5 mg/m³
ACGIHTLV: 5 mg/m³
Other Limits Recommended: 5 mg/m³ 10 mg/m³

Section III - Physical/Chemical Characteristics

- Boiling Point: N/A
- Vapors Pressure (mm Hg): N/A
- Melting Point: N/A
- Evaporation Ratio (Butyl Acetate): N/A
- Solubility in Water: Insoluble

Section IV - Fire and Explosion Hazard Data

- Flash Point: 50°C
- Flammable Limits: LEL: N/A
- UEL: N/A

Extinguishing Media: Water, carbon dioxide, dry chemical.

Section V - Reactivity Data

- Inflammability: Strong oxidizing agent
- Stability: Stable

Section VI - Health Hazard Data

Route(s) of Entry: Inhalation, Skin, Ingestion

Health Hazards: Acute or Chronic: N/A

Cardiovascular: NTP? N/A
IARC Monographs? N/A
OSHA Regulated? N/A

Section VII - Precautions for Safe Handling and Use

Steps to be Taken in Case Material is Released or Spilled: Sweep up to avoid slipping hazards. Keep container tightly closed at a minimum when cleaning up spills.

Ventilation Method: May be disposed of in a landfill or incinerated. Follow Federal, State, and Local regulations.

Section VIII - Control Measures

Respiratory Protection: None unless dust is present
Ventilation: Local Exhaust: Recommended
Protective Gloves: If hot plastic is handled

Eye Protection: N/A
Other: N/A

Work/Hygienic Practices: N/A
### Axent Self Cure Liquid Monomer

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<table>
<thead>
<tr>
<th>Section</th>
<th>Garacco, Inc.</th>
<th>Emergency Telephone Number: CHEMTREC: 800-424-9300</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturer</td>
<td>P. O. Box 1266</td>
<td>Telephone Number for Information: 601-352-9261</td>
</tr>
<tr>
<td>Address</td>
<td>Heber Springs, AR 72643</td>
<td>Date Prepared: 10/15/07</td>
</tr>
</tbody>
</table>

#### Section II - Hazardous Ingredients/Identity Information

<table>
<thead>
<tr>
<th>Hazardous Component</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other Limit/Recommendation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl Methacrylate (CAS# 90-06-2)</td>
<td>100 ppm</td>
<td>100 ppm</td>
<td></td>
</tr>
<tr>
<td>Substituted Toluene (CAS# 98-87-0)</td>
<td>NE</td>
<td>NE</td>
<td></td>
</tr>
<tr>
<td>Benzocyclobutene (CAS# 33-87-7)</td>
<td>NE</td>
<td>NE</td>
<td></td>
</tr>
<tr>
<td>Hydroquinone (CAS# 123-31-9)</td>
<td>2 mg/m³</td>
<td>2 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

#### Section III - Physical/Chemical Characteristics

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boiling Point</td>
<td>101°C, 231°F</td>
</tr>
<tr>
<td>Specific Gravity (H₂O=1)</td>
<td>0.84</td>
</tr>
<tr>
<td>Vapour Pressure (mm Hg) @ 25°C</td>
<td>128 mm</td>
</tr>
<tr>
<td>Flash Point</td>
<td>68°F</td>
</tr>
<tr>
<td>Melting Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>3.0 g/100g @ 20°C</td>
</tr>
<tr>
<td>Air Solubility</td>
<td>1.8 g/100g @ 25°C</td>
</tr>
<tr>
<td>Appearance and Odor</td>
<td>Clear, pale liquid with an acrid fruity odor</td>
</tr>
</tbody>
</table>

#### Section IV - Fire and Explosion Hazard Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash Point</td>
<td>10°C, 51°F</td>
</tr>
<tr>
<td>Flammable Limits</td>
<td>LFL: 2.12 (\text{LEL}: 12.5)</td>
</tr>
</tbody>
</table>

#### Section V - Reactivity Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>Instable</td>
</tr>
<tr>
<td>Oxidizing Agent</td>
<td>No</td>
</tr>
<tr>
<td>Reducing Agent</td>
<td>No</td>
</tr>
<tr>
<td>Explosive</td>
<td>No</td>
</tr>
<tr>
<td>Reactivity</td>
<td>No</td>
</tr>
<tr>
<td>Virtually Non-Flammable</td>
<td>No</td>
</tr>
<tr>
<td>Virtually Non-Lightable</td>
<td>No</td>
</tr>
<tr>
<td>Reactivity with Water</td>
<td>No</td>
</tr>
<tr>
<td>Reactivity with Air</td>
<td>No</td>
</tr>
<tr>
<td>Reaction Conditions</td>
<td>N/A</td>
</tr>
</tbody>
</table>

#### Section VI - Health Hazard Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Hazard</td>
<td>Acute or Chronic, N/A</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>NTP, IARC Monograph, OSHA Regulated</td>
</tr>
<tr>
<td>Toxicity</td>
<td>N/A</td>
</tr>
<tr>
<td>Sign and Symptoms of Exposure</td>
<td>Headache, nausea, vomiting, headache, dizziness, and unconsciousness</td>
</tr>
<tr>
<td>Medical Conditions Generally Aggravated by Exposure</td>
<td>No</td>
</tr>
</tbody>
</table>

#### Section VII - Precautions for Safe Handling and Use

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Storage</td>
<td>Keep in cool, dry place away from heat and closures</td>
</tr>
<tr>
<td>Transportation</td>
<td>Class 8, Specialized Handling</td>
</tr>
</tbody>
</table>
| Precautionary Statements | D00%

#### Section VIII - Control Measures

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respiratory Protection</td>
<td>Use self-contained breathing apparatus when necessary</td>
</tr>
<tr>
<td>Ventilation</td>
<td>Local Exhaust, Recommended</td>
</tr>
<tr>
<td>Protective Gloves</td>
<td>Impervious gloves recommended</td>
</tr>
<tr>
<td>Protective Clothing or Equipment</td>
<td>Protective clothing for clean-up only</td>
</tr>
<tr>
<td>Special:</td>
<td>N/A</td>
</tr>
<tr>
<td>Other:</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Eye Protection:** Safety glasses or chemical splash goggles