

SECTION 1: Identification

1.1. Identification

Product form : Mixture
Trade name : ZR-P

1.2. Recommended use and restrictions on use

Use of the substance/mixture : Primer used for restorative dentistry

1.3. Supplier

Inter-Med, Inc. / Vista Dental Products
2200 South Street
Racine, WI 53404
T: (877)-418-4782

1.4. Emergency telephone number

Emergency number : 800-424-9300 (North America)
+1 (703) 527-3887 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS-US classification

| | |
|--|--|
| Flammable liquids Category 2 | Highly flammable liquid and vapor |
| Skin corrosion/irritation Category 2 | Causes skin irritation |
| Serious eye damage/eye irritation Category 2 | Causes serious eye irritation |
| Skin sensitization, Category 1 | May cause an allergic skin reaction |
| Reproductive toxicity Category 1B | May damage fertility or the unborn child |

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) : Danger

Hazard statements (GHS US) : Highly flammable liquid and vapor
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye irritation
May damage fertility or the unborn child

Precautionary statements (GHS US) :

- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
- Keep container tightly closed.
- Use explosion-proof electrical/ventilating/lighting equipment
- Use only non-sparking tools.
- Avoid breathing vapors, spray.
- Wash hands thoroughly after handling.
- Contaminated work clothing must not be allowed out of the workplace
- Wear protective gloves, eye protection.
- If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
- If exposed or concerned: Get medical advice/attention.
- If skin irritation or rash occurs: Get medical advice/attention.
- If eye irritation persists: Get medical advice/attention.
- Take off contaminated clothing and wash it before reuse.
- Wash contaminated clothing before reuse.
- In case of fire: Use Water spray, dry extinguishing powder, foam, carbon dioxide (CO2), sand

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to extinguish.
Store in a well-ventilated place. Keep cool.
Store locked up.
Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | GHS-US classification |
|--|----------------------|--------|---|
| Ethyl alcohol | (CAS-No.) 64-17-5 | 5 - 70 | Flam. Liq. 2, H225 Eye Irrit. 2A, H319 |
| 10- Methacryloyloxydecyl dihydrogen phosphate (10-MDP) | (CAS-No.) 85590-00-7 | 5 - 40 | Eye Irrit. 2, H319 Skin Sens. 1, H317 |

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Give artificial respiration if necessary. If you feel unwell, seek medical advice.

First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse immediately with plenty of water for 15 minutes. Get medical advice if skin irritation persists.

First-aid measures after eye contact : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse immediately with plenty of water for 15 minutes. If eye irritation persists: Get medical advice and attention.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects : May damage fertility or the unborn child.

Symptoms/effects after inhalation : Not expected to present a significant inhalation hazard under anticipated conditions of normal use.

Symptoms/effects after skin contact : Causes skin irritation. May cause an allergic skin reaction.

Symptoms/effects after eye contact : Causes serious eye irritation.

Symptoms/effects after ingestion : May cause irritation to the digestive tract.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard : On combustion, forms: carbon oxides (CO and CO₂).

Explosion hazard : May form flammable vapor-air mixture. Vapors may travel long distances along ground before igniting/flashing back to vapor source.

Reactivity in case of fire : Stable under normal conditions.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Keep away from open flames, hot surfaces and sources of ignition.

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6.1.1. For non-emergency personnel

- Protective equipment : Use personal protective equipment as required. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.
- Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of residues refer to section 13: "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapors are flammable.
- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with eyes. Wear personal protective equipment. Avoid breathing vapors, mist.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse. Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Use explosion-proof electrical/ventilating/lighting equipment. Keep away from open flames, hot surfaces and sources of ignition.
- Storage conditions : Store in a well-ventilated place. Keep cool.
- Incompatible materials : None known.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| 10- Methacryloyloxydecyl dihydrogen phosphate (10-MDP) (85590-00-7) | | |
|---|--------------------------------|---|
| Not applicable | | |
| Ethyl alcohol (64-17-5) | | |
| ACGIH | Local name | Ethanol |
| ACGIH | ACGIH STEL (ppm) | 1000 ppm |
| ACGIH | Remark (ACGIH) | TLV® Basis: URT irr. Notations: A3 (Confirmed Animal Carcinogen with Unknown Relevance to Humans) |
| ACGIH | Regulatory reference | ACGIH 2019 |
| OSHA | OSHA PEL (TWA) (mg/m³) | 1900 mg/m³ |
| OSHA | OSHA PEL (TWA) (ppm) | 1000 ppm |
| OSHA | Regulatory reference (US-OSHA) | OSHA Annotated Table Z-1 |
| IDLH | US IDLH (ppm) | 3300 ppm (10% LEL) |
| NIOSH | NIOSH REL (TWA) (mg/m³) | 1900 mg/m³ |
| NIOSH | NIOSH REL (TWA) (ppm) | 1000 ppm |

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
- Environmental exposure controls : Avoid release to the environment.

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8.3. Individual protection measures/Personal protective equipment

Hand protection:

Impermeable protective gloves

Eye protection:

Safety glasses with side shields.

Skin and body protection:

Long sleeved protective clothing

Respiratory protection:

In case of inadequate ventilation wear respiratory protection.

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---------------------|
| Physical state | : Liquid |
| Appearance | : liquid. |
| Color | : Clear |
| Odor | : Ethanol |
| Odor threshold | : No data available |
| pH | : No data available |
| Melting point | : < 0 °C |
| Freezing point | : No data available |
| Boiling point | : > 50 °C |
| Flash point | : No data available |
| Relative evaporation rate (butyl acetate=1) | : No data available |
| Flammability (solid, gas) | : Not applicable. |
| Vapor pressure | : No data available |
| Relative vapor density at 20 °C | : No data available |
| Relative density | : No data available |
| Solubility | : No data available |
| Log Pow | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosion limits | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known under normal conditions of use.

10.2. Chemical stability

Stable at ambient temperature and under normal conditions of use.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

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10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

No hazardous decomposition products known at room temperature. On combustion, forms: carbon oxides (CO and CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

| Acetone (67-64-1) | |
|----------------------------|--|
| LD50 oral rat | 5800 mg/kg |
| LD50 dermal rabbit | > 15700 mg/kg |
| LC50 inhalation rat (mg/l) | 50100 mg/m ³ (Exposure time: 8 h) |

| Ethyl alcohol (64-17-5) | |
|----------------------------|---------------|
| LD50 oral rat | 7060 mg/kg |
| LC50 inhalation rat (mg/l) | 124.7 mg/l/4h |

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitization : May cause an allergic skin reaction.
Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity : May damage fertility or the unborn child. (Based on available data, the classification criteria are not met)
Specific target organ toxicity – single exposure : Not classified (Based on available data, the classification criteria are not met)

| Bis[2-[(2-methyl-1-oxoallyl)oxy]ethyl] dihydrogen benzene-1,2,4,5-tetracarboxylate (51156-91-3) | |
|---|-----------------------------------|
| Specific target organ toxicity – single exposure | May cause respiratory irritation. |

| Acetone (67-64-1) | |
|--|------------------------------------|
| Specific target organ toxicity – single exposure | May cause drowsiness or dizziness. |

Specific target organ toxicity – repeated exposure : Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)
Viscosity, kinematic : No data available
Symptoms/effects : May damage fertility or the unborn child.
Symptoms/effects after inhalation : Not expected to present a significant inhalation hazard under anticipated conditions of normal use.
Symptoms/effects after skin contact : Causes skin irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact : Causes serious eye irritation.
Symptoms/effects after ingestion : May cause irritation to the digestive tract.
Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : This material has not been tested for environmental effects.

| Acetone (67-64-1) | |
|-------------------|--|
| LC50 fish 1 | 4.74 - 6.33 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss) |
| EC50 Daphnia 1 | 10294 - 17704 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) |

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| Acetone (67-64-1) | |
|--------------------------|--|
| LC50 fish 2 | 6210 - 8120 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static]) |
| EC50 Daphnia 2 | 12600 - 12700 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| ErC50 (algae) | > 2800 mg/l 14days |

| Ethyl alcohol (64-17-5) | |
|--------------------------------|--|
| LC50 fish 1 | 12.0 - 16.0 ml/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static]) |
| LC50 other aquatic organisms 1 | 5012 mg/l 48 hours- daphnia |
| EC50 Daphnia 1 | 9268 - 14221 mg/l (Exposure time: 48 h - Species: Daphnia magna) |
| LC50 fish 2 | > 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static]) |
| EC50 Daphnia 2 | 2 mg/l (Exposure time: 48 h - Species: Daphnia magna [Static]) |
| ErC50 (algae) | 275 mg/l |
| ErC50 (other aquatic plants) | 4432 mg/l |
| NOEC (acute) | 9.6 mg/l Daphnia magna |

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

| Ethyl alcohol (64-17-5) | |
|--------------------------------|-------|
| Log Pow | -0.32 |

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description : UN1993 Flammable liquids, n.o.s. (Ethyl alcohol), 3, II
UN-No.(DOT) : UN1993
Proper Shipping Name (DOT) : Flammable liquids, n.o.s.
Ethyl alcohol
Class (DOT) : 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
Packing group (DOT) : II - Medium Danger
Hazard labels (DOT) : 3 - Flammable liquid



DOT Packaging Non Bulk (49 CFR 173.xxx) : 202
DOT Packaging Bulk (49 CFR 173.xxx) : 242

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| | |
|--|--|
| DOT Special Provisions (49 CFR 172.102) | : IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3) TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = $97 / 1 + a (tr - tf)$ Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP8 - A portable tank having a minimum test pressure of 1.5 bar (150 kPa) may be used when the flash point of the hazardous material transported is greater than 0 C (32 F). TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP. |
| DOT Packaging Exceptions (49 CFR 173.xxx) | : 150 |
| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | : 5 L |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75) | : 60 L |
| DOT Vessel Stowage Location | : B - (i) The material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded. |
| Emergency Response Guide (ERG) Number | : 128 |
| Other information | : No supplementary information available. |

Transportation of Dangerous Goods

| | |
|---|--|
| Transport document description | : UN1993 FLAMMABLE LIQUID, N.O.S. (Ethyl alcohol), 3, II |
| UN-No. (TDG) | : UN1993 |
| Proper Shipping Name (Transportation of Dangerous Goods) | : FLAMMABLE LIQUID, N.O.S. |
| TDG Primary Hazard Classes | : 3 - Class 3 - Flammable Liquids |
| Packing group | : II - Medium Danger |
| TDG Special Provisions | : 16 - (1) The technical name of at least one of the most dangerous substances that predominantly contributes to the hazard or hazards posed by the dangerous goods must be shown, in parentheses, on the shipping document following the shipping name in accordance with clause 3.5(1)(c)(ii)(A) of Part 3 (Documentation). The technical name must also be shown, in parentheses, on a small means of containment or on a tag following the shipping name in accordance with subsections 4.11(2) and (3) of Part 4 (Dangerous Goods Safety Marks). (2) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a shipping document or on a small means of containment when Canadian law for domestic transport or an international convention for international transport prohibits the disclosure of the technical name: (a)UN1544, ALKALOID SALTS, SOLID, N.O.S. or ALKALOIDS, SOLID, N.O.S.; (b)UN1851, MEDICINE, LIQUID, TOXIC, N.O.S.; (c)UN3140, ALKALOID SALTS, LIQUID, N.O.S. or ALKALOIDS, LIQUID, N.O.S.; (d)UN3248, MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S.; or (e)UN3249, MEDICINE, SOLID, TOXIC, N.O.S. An example in Canada is the "Food and Drugs Act". (3) Despite subsection (1), the technical name for the following dangerous goods is not required to be shown on a small means of containment: (a)UN2814, INFECTIOUS SUBSTANCE, AFFECTING HUMANS; or (b)UN2900, INFECTIOUS SUBSTANCE, AFFECTING ANIMALS. SOR/2014-306,150 - An emergency response assistance plan (ERAP) is required for these dangerous goods under subsection 7.1(6) of Part 7 (Emergency Response Assistance Plan). |
| Explosive Limit and Limited Quantity Index | : 1 L |
| Passenger Carrying Road Vehicle or Passenger Carrying Railway Vehicle Index | : 5 L |

Transport by sea

| | |
|---------------------------------------|---|
| Transport document description (IMDG) | : UN 1993 FLAMMABLE LIQUID, N.O.S. (Ethyl alcohol), 3, II |
| UN-No. (IMDG) | : 1993 |
| Proper Shipping Name (IMDG) | : FLAMMABLE LIQUID, N.O.S. |
| Class (IMDG) | : 3 - Flammable liquids |
| Packing group (IMDG) | : II - substances presenting medium danger |
| Limited quantities (IMDG) | : 1 L |

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Air transport

| | |
|---------------------------------------|---|
| Transport document description (IATA) | : UN 1993 Flammable liquid, n.o.s. (Ethyl alcohol), 3, II |
| UN-No. (IATA) | : 1993 |
| Proper Shipping Name (IATA) | : Flammable liquid, n.o.s. |
| Class (IATA) | : 3 - Flammable Liquids |
| Packing group (IATA) | : II - Medium Danger |

SECTION 15: Regulatory information

15.1. US Federal regulations

Ethyl alcohol (64-17-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

Ethyl alcohol (64-17-5)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Ethyl alcohol (64-17-5)

Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

Ethyl alcohol (64-17-5)

Listed on IARC (International Agency for Research on Cancer)
Listed on the AICS (Australian Inventory of Chemical Substances)
Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China)
Listed on the Japanese ENCS (Existing & New Chemical Substances) inventory
Listed on the Japanese ISHL (Industrial Safety and Health Law)
Listed on the Korean ECL (Existing Chemicals List)
Listed on NZIoC (New Zealand Inventory of Chemicals)
Listed on PICCS (Philippines Inventory of Chemicals and Chemical Substances)
Listed on INSQ (Mexican National Inventory of Chemical Substances)
Listed on the TCSI (Taiwan Chemical Substance Inventory)

15.3. US State regulations

No additional information available

SECTION 16: Other information

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Full text of H-phrases:

| | |
|------|--|
| H225 | Highly flammable liquid and vapor |
| H315 | Causes skin irritation |
| H317 | May cause an allergic skin reaction |
| H319 | Causes serious eye irritation |
| H335 | May cause respiratory irritation |
| H336 | May cause drowsiness or dizziness |
| H360 | May damage fertility or the unborn child |

SDS US (GHS HazCom 2012)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.