

Safety Data Sheet

Issue Date: 06-Jan-2015 Revision Date: 13-Jan-2015 Version 1

1. IDENTIFICATION

Product Identifier

Product Name MetaSEAL® Liquid

Other means of identification

SDS # S161

Recommended use of the chemical and restrictions on use

Recommended Use Dual-Cure, Adhesive Cement System.

Details of the supplier of the safety data sheet

Supplier Address

Parkell, Inc. 300 Executive Drive Edgewood, NY 11717

Emergency Telephone Number

Company Phone Number (631) 249-1134

Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)

1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance Clear, colorless liquid Physical State Liquid Odor Acrylic

Classification

| Skin corrosion/irritation | Category 2 |
|--|------------|
| Serious eye damage/eye irritation | Category 2 |
| Skin sensitization | Category 1 |
| Specific target organ toxicity (single exposure) | Category 3 |

Hazards Not Otherwise Classified (HNOC)

May be harmful if swallowed

Signal Word Warning

Hazard Statements

Causes skin irritation
Causes serious eye irritation
May cause an allergic skin reaction
May cause respiratory irritation



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling

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

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing should not be allowed out of the workplace

Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Get medical attention

IF ON SKIN: Wash with plenty of soap and water

Take off contaminated clothing and wash it before reuse

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

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing

Get medical advice / attention

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed Store locked up

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No | Weight-% |
|-------------------|-------------|-------------|
| Monomers | Proprietary | Proprietary |
| Monomethacrylates | Proprietary | Proprietary |

^{**}If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and

easy to do. Continue rinsing. Get medical attention.

Skin Contact Wash skin with soap and water. Take off contaminated clothing and wash it before reuse. If

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

Inhalation Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not

breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical

attention.

Ingestion Do not induce vomiting without medical advice. Get medical attention.

Most important symptoms and effects

Symptoms May cause skin and eye irritation. May cause an allergic skin reaction. May cause

respiratory irritation. Ingestion may cause nausea and vomiting.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Foam. Dry chemical. Carbon dioxide (CO2). Dry sand.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Combustion products may be toxic.

Hazardous Combustion Products Carbon monoxide.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protection recommended in Section 8.

For Emergency Responders Remove all sources of ignition. Ventilate the area.

Environmental Precautions Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See

Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Contain and collect with an inert absorbent and place into an appropriate container for

disposal. Flush spill area with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Use personal

protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Wash face,

hands, and any exposed skin thoroughly after handling. Avoid breathing

dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area.

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

from physical damage.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep in a cool, dry, dark, and well-ventilated place, preferably in the refrigerator. Keep

away from ignition sources and direct sunlight. Do NOT store under pure nitrogen or

oxygen-free gas. Store locked up.

Incompatible Materials Polymerization initiators such as peroxides, persulfates, amines, light, strong acids, and

strong bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines No exposure limits noted for ingredient(s). The following information is given as general

guidance

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Chemical splash goggles or face shield.

Skin and Body Protection Impervious protective gloves.

Respiratory ProtectionNo protection is ordinarily required under normal conditions of use and with adequate

ventilation.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Liquid

Appearance Clear, colorless liquid Odor Acrylic

Color Clear, colorless Odor Threshold Not determined

Property Values Remarks • Method

pH Not applicable
Melting Point/Freezing Point Not determined

Boiling Point/Boiling Range 67 °C / 153 °F (HEMA) Flash Point 97 °C / 207 °F (HEMA)

Evaporation Rate Not determined

Flammability (Solid, Gas) Liquid-not applicable

Upper Flammability LimitsNot knownLower Flammability LimitNot knownVapor PressureNot determinedVapor DensityNot known

Specific Gravity 1.19 @ 20°C (68°F) (Water = 1)

Water Solubility Partially soluble

Solubility in other solvents Excellent solubility in ethanol

Partition Coefficient
Auto-ignition Temperature
Decomposition Temperature
Kinematic Viscosity
Dynamic Viscosity
Explosive Properties
Not determined

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Polymerization may be caused by elevated temperature, oxidizers, or sunlight.

Conditions to Avoid

Keep separated from incompatible substances. Avoid temperatures above 30°C (86°F), temperatures below 4°C (39°F), and direct sunlight. Keep out of reach of children.

Incompatible Materials

Polymerization initiators such as peroxides, persulfates, amines, light, strong acids, and strong bases.

Hazardous Decomposition Products

Carbon monoxide. Carbon dioxide (CO2).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Causes serious eye irritation.

Skin Contact Causes skin irritation. May cause an allergic skin reaction.

Inhalation May cause respiratory irritation.

Ingestion May be harmful if swallowed.

Component Information

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|---------------|----------------------|-----------------------|-----------------|
| Trade Secret | = 3300 mg/kg (Rat) | - | • |
| Trade Secret | > 2 g/kg (Rat) | - | - |
| Trade Secret | = 5050 mg/kg (Rat) | > 3000 mg/kg (Rabbit) | - |

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization May cause an allergic skin reaction.

Carcinogenicity Based on the information provided, this product does not contain any carcinogens or

potential carcinogens as listed by OSHA, IARC or NTP.

STOT - single exposure May cause respiratory irritation.

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information

| Chemical Name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|---------------|----------------------|---|----------------------------|-----------|
| Trade Secret | | 213 - 242: 96 h Pimephales promelas mg/L LC50 flow- through 227: 96 h Pimephales promelas mg/L | | |
| | | LC50 | | |

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

| Chemical Name | Partition Coefficient |
|---------------|-----------------------|
| Trade Secret | 0.47 |
| | |

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of WastesDisposal should be in accordance with applicable regional, national and local laws and

regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and

regulations.

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including

exemptions and special circumstances.

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

| Chemical Name | TSCA | DSL | NDSL | EINECS | ELINCS | ENCS | IECSC | KECL | PICCS | AICS |
|-------------------|---------|-----|------|---------|--------|---------|-------|---------|-------|------|
| Monomers | Present | Х | | Present | | Present | Х | Present | Χ | Χ |
| Monomethacrylates | Present | Х | | Present | | Present | Х | Present | Х | Х |

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations



Safety Data Sheet

Issue Date: 06-Jan-2015 Revision Date: 13-Jan-2015 Version 1

1. IDENTIFICATION

Product Identifier

Product Name MetaSEAL® Powder

Other means of identification

SDS # S162

Recommended use of the chemical and restrictions on use

Recommended Use Dual-Cure, Adhesive Cement System.

Details of the supplier of the safety data sheet

Supplier Address

Parkell, Inc. 300 Executive Drive Edgewood, NY 11717

Emergency Telephone Number

Company Phone Number (631) 249-1134

Emergency Telephone (24 hr) INFOTRAC 1-352-323-3500 (International)

1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Appearance White powder Physical State Solid Odor Faint

Classification

This chemical does not meet the hazardous criteria set forth by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). However, this Safety Data Sheet (SDS) contains valuable information critical to the safe handling and proper use of this product. This SDS should be retained and available for employees and other users of this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No | Weight-% |
|--------------------------|-----------|-------------|
| Zirconium Oxide | 1314-23-4 | Proprietary |
| Amorphous silica (glass) | 7631-86-9 | Proprietary |

^{**}If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.**

4. FIRST-AID MEASURES

First Aid Measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get

medical attention.

Skin Contact Wash skin with soap and water. Get medical attention if irritation develops or persists.

Inhalation No specific treatment is necessary for inhalation of a small amount. If exposed to excessive

levels of dust, remove to fresh air and get medical attention if cough or other symptoms

develop. If breathing is difficult, give oxygen and get medical attention.

Ingestion Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects

Symptoms May be irritating to skin and eyes.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Foam. Dry chemical. Carbon dioxide (CO2). Water. Dry sand.

Unsuitable Extinguishing Media Not determined.

Specific Hazards Arising from the Chemical

Combustion products may be toxic.

Hazardous Combustion Products Carbon monoxide.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Use personal protection recommended in Section 8.

Environmental Precautions Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See

Section 12, Ecological Information. See Section 13: DISPOSAL CONSIDERATIONS.

Methods and material for containment and cleaning up

Methods for Containment Prevent further leakage or spillage if safe to do so.

Methods for Clean-Up Sweep up and shovel into suitable containers for disposal. Flush spill area with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Handle in accordance with good industrial hygiene and safety practice. Use personal

protection recommended in Section 8. Avoid contact with skin, eyes or clothing. Protect

container from physical damage.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed and store in a cool, dry and well-ventilated place.

Incompatible Materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|--------------------------|-------------------------------|---|-------------------------------|
| Zirconium Oxide | STEL: 10 mg/m ³ Zr | TWA: 5 mg/m ³ Zr | IDLH: 25 mg/m ³ Zr |
| 1314-23-4 | TWA: 5 mg/m ³ Zr | (vacated) TWA: 5 mg/m ³ Zr | TWA: 5 mg/m³ except Zirconium |
| | _ | (vacated) STEL: 10 mg/m ³ Zr | tetrachloride Zr |
| | | | STEL: 10 mg/m ³ Zr |
| Amorphous silica (glass) | - | (vacated) TWA: 6 mg/m ³ <1% | IDLH: 3000 mg/m ³ |
| 7631-86-9 | | Crystalline silica | TWA: 6 mg/m ³ |
| | | TWA: 20 mppcf | _ |
| | | : (80)/(% SiO2) mg/m ³ TWA | |

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas. Eyewash stations. Showers.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Chemical splash goggles or face shield.

Skin and Body Protection Impervious protective gloves.

Respiratory Protection No protection is ordinarily required under normal conditions of use and with adequate

ventilation.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State Solid

Appearance White powder Odor Faint

Color White Odor Threshold Not determined

Property Values Remarks • Method

Not applicable pН Not determined **Melting Point/Freezing Point Boiling Point/Boiling Range** Not applicable Not applicable **Flash Point Evaporation Rate** Not applicable Flammability (Solid, Gas) Not determined **Upper Flammability Limits** Not applicable **Lower Flammability Limit** Not applicable Vapor Pressure Not applicable **Vapor Density** Not applicable **Specific Gravity** Not determined **Water Solubility** Solubility in other solvents Not determined **Partition Coefficient** Not determined **Auto-ignition Temperature** Not determined **Decomposition Temperature** Not determined **Kinematic Viscosity** Not determined **Dynamic Viscosity** Not determined **Explosive Properties** Not determined **Oxidizing Properties** Not determined

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical Stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Hazardous Polymerization Hazardous polymerization does not occur.

Conditions to Avoid

Avoid high temperatures above 30°C (86DEGF), high humidity, and direct sunlight.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition Products

Carbon monoxide. Carbon dioxide (CO2).

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Eye Contact Avoid contact with eyes.

Skin Contact Avoid contact with skin.

Inhalation Avoid inhalation of dust.

Ingestion Do not ingest.

Component Information

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--------------------------|--------------------|-------------------------|---------------------|
| Amorphous silica (glass) | > 5000 mg/kg (Rat) | > 2000 mg/kg (Rabbit) | > 2.2 mg/L (Rat)1 h |
| 7631-86-9 | | | |

Information on physical, chemical and toxicological effects

Symptoms Please see section 4 of this SDS for symptoms.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Carcinogenicity Group 3 IARC components are "not classifiable as human carcinogens".

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|---------------------------------------|-------|---------|-----|------|
| Amorphous silica (glass) 7631-86-9 | | Group 3 | | |

Legend

IARC (International Agency for Research on Cancer)

Group 3 IARC components are "not classifiable as human carcinogens"

Numerical measures of toxicity

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Component Information

| Chemical Name | Algae/aquatic plants | Fish | Toxicity to microorganisms | Crustacea |
|--------------------------|-----------------------|------------------------------|----------------------------|-------------------------|
| Amorphous silica (glass) | 440: 72 h | 5000: 96 h Brachydanio rerio | | 7600: 48 h Ceriodaphnia |
| 7631-86-9 | Pseudokirchneriella | mg/L LC50 static | | dubia mg/L EC50 |
| | subcapitata mg/L EC50 | | | |

Persistence/Degradability

Not determined.

Bioaccumulation

Not determined.

Mobility

Not determined

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS

Waste Treatment Methods

Disposal of Wastes Disposal should be in accordance with applicable regional, national and local laws and

regulations.

Contaminated Packaging Disposal should be in accordance with applicable regional, national and local laws and

regulations.

14. TRANSPORT INFORMATION

Note Please see current shipping paper for most up to date shipping information, including

exemptions and special circumstances.

DOT Not regulated

IATA Not regulated

IMDG Not regulated

15. REGULATORY INFORMATION

International Inventories

| Chemical Name | TSCA | DSL | NDSL | EINECS | ELINCS | ENCS | IECSC | KECL | PICCS | AICS |
|--------------------------|---------|-----|------|---------|--------|---------|-------|---------|-------|------|
| Zirconium Oxide | Present | Х | | Present | | Present | Х | Present | Х | Х |
| Amorphous silica (glass) | Present | Х | | Present | | Present | Х | Present | Х | Х |

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355).

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|---------------------------------------|------------|---------------|--------------|
| Zirconium Oxide 1314-23-4 | | X | |
| Amorphous silica (glass) 7631-86-9 | X | X | X |

16. OTHER INFORMATION

NFPA Health Hazards

Not determined

Health Hazards

Not determined

Flammability
Not determined
Flammability
Not determined

Instability
Not determined
Physical Hazards
Not determined

Special Hazards
Not determined
Personal Protection
Not determined

Issue Date:06-Jan-2015Revision Date:13-Jan-2015Revision Note:New format

Disclaimer

HMIS

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End of Safety Data Sheet

16. OTHER INFORMATION

NFPA Health Hazards

Not determined

Health Hazards

Not determined

Flammability
Not determined
Flammability
Not determined

Instability
Not determined
Physical Hazards
Not determined

Special Hazards
Not determined
Personal Protection
Not determined

Issue Date:06-Jan-2015Revision Date:13-Jan-2015Revision Note:New format

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End of Safety Data Sheet