

**SECTION 1: IDENTIFICATION****1.1 Product Identifier**

Product Name: Lonseal #400 Contact Adhesive  
 Product Code(s): ZAD4001, ZAD40055

**1.2 Relevant Identified Uses and Uses Advised Against**

Product Use: Sheet vinyl flooring adhesive (see Technical Data Sheet for additional details)  
 Product Restrictions: For use with sheet vinyl flooring only (see Technical Data Sheet for additional details)

**1.3 Details of the Supplier of the Safety Data Sheet**

Manufactured for: Lonseal, Inc.  
 Address: 928 E. 238th Street  
 Carson, CA 90745  
 (310) 830-7111

**24 Hour Emergency Phone Number(s):** INFOTRAC – U.S. & Canada: 1-800-535-5053  
 International: 1-352-353-3500

**SECTION 2: HAZARD(S) IDENTIFICATION****2.1 Classification of the Substance or Mixture**

|   |       |  |
|---|-------|--|
| <b>Flammable Liquids</b> , Category 2:              | H225  | Highly flammable liquid and vapor.                 |
| <b>Serious Eye Damage/Irritation</b> , Category 2A: | H319  | Causes serious eye irritation.                     |
| <b>Reproductive Toxicity</b> , Category 2:          | H361D | Suspected of damaging the unborn child.            |
| <b>STOT SE</b> , Category 3:                        | H336  | May cause drowsiness or dizziness.                 |
| <b>Aquatic, Long-Term (Chronic)</b> , Category 3:   | H412  | Harmful to aquatic life with long lasting effects. |

**2.2 Label Elements**

**Signal Word:** DANGER

**Hazard Statement(s):**

|       |  |
|-------|--|
| H225  | Highly flammable liquid and vapor.                 |
| H319  | Causes serious eye irritation.                     |
| H336  | May cause drowsiness or dizziness.                 |
| H361D | Suspected of damaging the unborn child.            |
| H412  | Harmful to aquatic life with long lasting effects. |

**Precautionary Statement(s):**

|      |   |
|------|---|
| P201 | Obtain special instructions before use.   |
| P202 | Do not handle until all safety precautions have been read and understood.                       |
| P210 | Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No Smoking. |
| P233 | Keep container tightly closed.  |
| P240 | Ground and bond container and receiving equipment.  |
| P241 | Use explosion proof electrical, ventilating, light, and equipment.                              |
| P242 | Use only non-sparking tools.  |
| P243 | Take action to prevent static discharges.   |
| P261 | Avoid breathing dust/fumes/gas/mist/vapors/spray.   |
| P264 | Wash thoroughly after handling.   |
| P271 | Use only outdoors or in a well-ventilated area.   |
| P273 | Avoid release to the environment.   |
| P280 | Wear protective gloves, eye protection, and face protection.                                    |

**Response Statement(s):**

|                |   |
|----------------|---|
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected area with water, shower. |
| P304+P340      | IF INHALED: Remove person to fresh air and keep comfortable for breathing.                                    |

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P308+P313 IF exposed or concerned: Get medical advice/attention.  
 P312 Call a POISON CENTER or doctor/physician if you feel unwell.  
 P337+P313 If eye irritation persists: Get medical advice/attention.  
 P370+P378 In case of fire: Use alcohol resistant foam, CO<sub>2</sub>, powder, or water spray to extinguish.

**Storage Statement(s):**

P403+P233 Store in a well-ventilated space. Keep container tightly closed.  
 P403+P235 Store in a well-ventilated space. Keep cool.  
 P405 Store locked up.

**Disposal Statement(s):**

P501 Dispose of contents/container in accordance with local/national regulations.

**2.3 Other Hazards**

None noted by manufacturer.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations:

| Ingredient/Chemical Name                           | CAS Number | Weight %  | Classification*   |
|--|------------|-----------|---|
| Acetone  | 67-64-1    | 50 – 75   | Flam. Liq. 2: H225<br>Eye Irrit. 2: H319<br>STOT SE 3: H336                               |
| 2-Propenenitrile, polymer with 1,3-butadiene       | 9003-18-3  | 10 – 25   | Not classified  |
| Chlorinated paraffin                               | 63449-39-8 | 1.0 – 10  | Not classified  |
| Formaldehyde, polymer with 4-(1,1-dimethylethyl)ph | 25085-50-1 | 1.0 – 10  | Not classified  |
| Formaldehyde, polymer with ammonia                 | 55185-45-0 | 1.0 – 10  | Not classified  |
| Salicylic acid                                     | 69-72-7    | 1.0 – 10  | Acute Tox. 4: H302<br>Eye Dam. 1: H318<br>Repr. Tox. 2: H361D                             |
| Zinc oxide   | 1314-13-2  | 1.0 – 10  | Aquatic Acute 1: H400<br>Aquatic Chronic 1: H410  |
| p-tert-Butyl phenol                                | 98-54-4    | 0.10 – 10 | Skin Irrit. 2: H315<br>Eye Dam. 1: H318<br>Repr. Tox. 2: H361F<br>Aquatic Chronic 1: H410 |

\*The full text of the GHS Hazards Statement may be found in Section 16.

**SECTION 4: FIRST-AID MEASURES****4.1 Description of necessary first-aid measures**

**General:** In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

**Eyes:** Irrigate copiously with clean water for at least 15 minutes, holding the eyelids apart, and seek medical attention.

**Ingestion:** If swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting. If vomiting should occur spontaneously, keep victims head below their knees to prevent aspiration into the lungs.

**Inhalation:** Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious, place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

**Skin:** Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognized skin cleanser.

## 4.2 Most Important Symptoms/Effects, Acute and Delayed

### Overview:

No specific symptom data available. Treat symptomatically. See Section 2 for further details.

**Eyes:** Causes serious eye irritation.

**Ingestion:** Not noted by mfg.

**Inhalation:** May cause drowsiness or dizziness.

**Skin:** Not noted by mfg.

**Chronic Effects:** Moderate CNS depression may be shown by giddiness, headache, dizziness, and nausea. If vomiting occurs, keep head below hips to prevent aspiration of liquid into lungs, which can cause severe lung damage. Aspiration pneumonitis may be evidenced by coughing and cyanosis.

## 4.3 Indication of Immediate Medical Attention and Special Treatment Needed

No specific information provided by the manufacturer.

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## SECTION 5: FIRE-FIGHTING MEASURES

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### 5.1 Suitable Extinguishing Media

Alcohol resistant foam, carbon dioxide (CO<sub>2</sub>), powder, and water spray.

**Unsuitable extinguishing media:** Do not use: water jet.

### 5.2 Specific Hazards Arising from the Substance or Mixture

**Hazardous Decomposition:** Burning may produce fumes of carbon dioxide, carbon monoxide, hydrogen cyanide, phenols, and nitrous oxides.

See Section 2 Precautionary Statement(s).

### 5.3 Special Protective Actions for Fire-Fighters

Volatile solvent constituent can readily form explosive or flammable mixtures in air. Vapors can flow along surfaces to distant ignition sources and flash back.

Cool closed containers exposed to fire by spraying them with water. Do not allow run off water and contaminants from fire-fighting to enter drains or water ways.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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### 6.1 Personal Precautions, Protective Equipment, and Emergency Procedures

Put on appropriate personal protective equipment. See Section 8.

Remove sources of ignition. Do not turn lights or unprotected electrical equipment on or off. In case of major spill or spillage in a confined space, evacuate the area and check that solvent vapor levels are below the Lower Explosive Limit before re-entering.

### 6.2 Environmental Precautions

Do not allow spills to enter drains or waterways.

Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using the toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

### 6.3 Methods and Materials for Containment and Cleaning Up

Handle as a flammable liquid. Remove all ignition sources. Soak up wet material on a non-combustible absorbent and place in a closed metal container.

**SECTION 7: HANDLING AND STORAGE****7.1 Precautions for Safe Handling**

Ground and bond metal containers when dispensing. No smoking in areas of use or storage. Use only non-sparking tools near wet adhesive or solvent vapors. Solvent vapor is much heavier than air and can collect in dangerous concentrations in floor drains or low areas.

Store in cool, well-ventilated area away from any ignition sources and strong oxidizing agents. Keep containers tightly closed when not in use. Do not transfer to plastic containers.

Store in accordance with National Fire Prevention Association's publication NFPA 30, Flammable and Combustible Liquids. Code 29 CFR 1910.106 applies to the handling, storage, and use of flammable and combustible liquids.

See Section 2 Precautionary Statement(s).

**7.2 Conditions for Safe Storage, Including Any Incompatibilities**

**Incompatible materials:** Strong oxidizing agents can cause spontaneous combustion.

See Section 2 Storage Statement(s).

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control Parameters**

**Exposure (Only components with established OEL are shown)**

| Component  | Source | STEL                   | TWA  |
|------------|--------|------------------------|--|
| Acetone    | ACGIH  | 750 ppm                | 500 ppm  |
|            | NIOSH  | -                      | 250 ppm (590 mg/m <sup>3</sup> )   |
|            | OSHA   | 2400 mg/m <sup>3</sup> | 1000 ppm (2400 mg/m <sup>3</sup> )   |
| Zinc oxide | ACGIH  | 10 mg/m <sup>3</sup>   | 2 mg/m <sup>3</sup>  |
|            | OSHA   | -                      | 5 mg/m <sup>3</sup> (fume); 15 mg/m <sup>3</sup> (total dust);<br>5 mg/m <sup>3</sup> (resp. dust) |

**8.2 Appropriate Engineering Controls**

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits, suitable respiratory protection must be worn.

**8.3 Appropriate Protection Measures, Including Personal Protective Equipment**

**Eye Protection:** Wear safety with side shields to protect the eyes. An eye wash station is suggested as good workplace practice.

**Respiratory Protection:** Atmospheric levels should be maintained below the exposure guidelines. Use an approved, full-face, supplied air respirator or a NIOSH approved positive pressure, self-contained breathing apparatus if these levels are exceeded.

**Skin Protection:** Overalls which cover the body, arms, and legs should be worn. Skin should not be exposed. All parts of the body should be washed after contact. Use neoprene, vinyl, or natural rubber gloves.

**Other Work Practices:** Eye wash fountain or bottles. Solvent insoluble barrier hand cream. Use good personal hygiene practices. Wash hands before eating, drinking, smoking, or using the toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See Section 2 Precautionary Statement(s).

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

|  |                  |
|--|------------------|
| <b>Physical State:</b>                                     | Liquid           |
| <b>Color:</b>  | Tan              |
| <b>Odor:</b>   | Acetone          |
| <b>Melting Point/Freezing Point:</b>                       | Not measured     |
| <b>Boiling Point [or Initial Boiling Point and Range]:</b> | 56.1 °C (133 °F) |

|   |                      |
|---|----------------------|
| <b>Flammability:</b>                            | Not applicable       |
| <b>Lower Explosion Limit:</b>                   | 2.2%                 |
| <b>Upper Explosion Limit:</b>                   | 13.0%                |
| <b>Flash Point:</b>                             | -20 °C (-4 °F) [TCC] |
| <b>Auto-Ignition Temperature:</b>               | Not measured         |
| <b>Decomposition Temperature:</b>               | Not measured         |
| <b>pH:</b>                                      | Not measured         |
| <b>Kinematic Viscosity:</b>                     | Not measured         |
| <b>Solubility (in water):</b>                   | Nil                  |
| <b>Partition Coefficient (n-octanol/water):</b> | Not measured         |
| <b>Vapor Pressure:</b>                          | Not measured         |
| <b>Density [or Relative Density]:</b>           | Not noted by mfg.    |
| <b>Relative Vapor Density:</b>                  | Heavier than air     |
| <b>Particle Characteristics:</b>                | Not noted by mfg.    |
| <b>Odor Threshold:</b>                          | Not measured         |
| <b>Evaporation Rate (Ether = 1):</b>            | Slower than ether    |
| <b>Specific Gravity (H<sub>2</sub>O = 1):</b>   | 0.9                  |
| <b>VOC %:</b>                                   | Not applicable       |

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**SECTION IO: STABILITY AND REACTIVITY**


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**10.1 Reactivity**

Hazardous polymerization will not occur.

**10.2 Chemical Stability**

Stable under normal circumstances.

**10.3 Possibility of Hazardous Reactions**

No data available.

**10.4 Conditions to Avoid**

Keep away from all sources of ignition or heat.

**10.5 Incompatible Materials**

Strong oxidizing agents can cause spontaneous combustion.

**10.6 Hazardous Decomposition Products**

Burning may produce fumes of carbon dioxide, carbon monoxide, hydrogen cyanide, phenols, and nitrous oxides.

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**SECTION II: TOXICOLOGICAL INFORMATION**


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**Acute Toxicity:**

**Note:** When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Only components with mfg. provided data are shown.

|         |                   |  |
|---------|-------------------|--|
| Acetone | a) acute toxicity | LC50 Inhalation (Dust/Mist), Rat = 50.10 mg/L/4h |
|         |                   | LC50 Inhalation (Vapor), Rat = 76.00 mg/L/4h     |
|         |                   | LD50 Oral, Rat, Category: n/a = 5800.00 mg/kg    |
|         |                   | LD50 Skin, Rabbit, Category: n/a = 7426.00 mg/kg |

|                             |                   |   |
|-----------------------------|-------------------|---|
| Chlorinated paraffin c22-30 | a) acute toxicity | LD50 Oral, Rat = 11700.00 mg/kg   |
| Salicylic acid              | a) acute toxicity | LD50 Oral, Rat, Category: 4 = 891.00 mg/kg<br>LD50 Skin, Rabbit, Category: n/a = 10000.00 mg/kg   |
| Zinc oxide                  | a) acute toxicity | LC50 Inhalation (Dust/Mist), Rat, Category: 5 = 5.70 mg/kg<br>LD50 Oral, Rat, Category: n/a > 5000.00 mg/kg   |
| p-tert-Butyl phenol         | a) acute toxicity | LC50 Inhalation (Dust/Mist), Rat, Category: n/a = 5.60 mg/L/4h<br>LD50 Oral, Rat, Category: 5 = 4000.00 mg/kg<br>LD50 Skin, Mammal, Category: 4 = 1580.00 mg/kg |

**Carcinogen Data:**

| Component  | Source | Value  |
|--|--------|--|
| Acetone  | ACGIH  | A4   |
|  | IARC   | Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No  |
|  | NTP    | Known: No; Suspected: No   |
|  | OSHA   | Regulated Carcinogen: No   |
| 2-Propenenitrile, polymer with 1,3-butadiene       | ACGIH  | No established limit   |
|  | IARC   | Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No  |
|  | NTP    | Known: No; Suspected: No   |
|  | OSHA   | Regulated Carcinogen: No   |
| Chlorinated paraffin                               | ACGIH  | No established limit   |
|  | IARC   | Group 1: No; Group 2a: No; Group 2b: Yes; Group 3: No; Group 4: No |
|  | NTP    | Known: No; Suspected: Yes  |
|  | OSHA   | Regulated Carcinogen: No   |
| Formaldehyde, polymer with 4-(1,1-dimethylethyl)ph | ACGIH  | No established limit   |
|  | IARC   | Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No  |
|  | NTP    | Known: No; Suspected: No   |
|  | OSHA   | Regulated Carcinogen: No   |
| Formaldehyde, polymer with ammonia                 | ACGIH  | No established limit   |
|  | IARC   | Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No  |
|  | NTP    | Known: No; Suspected: No   |
|  | OSHA   | Regulated Carcinogen: No   |
| Salicylic acid                                     | ACGIH  | No established limit   |
|  | IARC   | Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No  |
|  | NTP    | Known: No; Suspected: No   |
|  | OSHA   | Regulated Carcinogen: No   |
| Zinc oxide   | ACGIH  | No established limit   |
|  | IARC   | Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No  |

|                     |       |   |
|---------------------|-------|---|
|                     | NTP   | Known: No; Suspected: No  |
|                     | OSHA  | Regulated Carcinogen: No  |
| p-tert-Butyl phenol | ACGIH | No established limit  |
|                     | IARC  | Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No |
|                     | NTP   | Known: No; Suspected: No  |
|                     | OSHA  | Regulated Carcinogen: No  |

| Classification                | Category | Hazard Description                      |
|-------------------------------|----------|---|
| Acute toxicity (oral)         | -        | Not applicable                          |
| Acute toxicity (dermal)       | -        | Not applicable                          |
| Acute toxicity (inhalation)   | -        | Not applicable                          |
| Skin corrosion/irritation     | -        | Not applicable                          |
| Serious eye damage/irritation | 2A       | Causes serious eye damage.              |
| Respiratory sensitization     | -        | Not applicable                          |
| Skin sensitization            | -        | Not applicable                          |
| Germ cell mutagenicity        | -        | Not applicable                          |
| Carcinogenicity               | -        | Not applicable                          |
| Reproductive toxicity         | 2        | Suspected of damaging the unborn child. |
| STOT-single exposure          | 3        | May cause drowsiness or dizziness.      |
| STOT-repeated exposure        | -        | Not applicable                          |
| Aspiration hazard             | -        | Not applicable                          |

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

Harmful to aquatic life with long lasting effects.

**Aquatic Ecotoxicity** (only components with mfg. provided data are shown)

| Component            | EC50<br>crustacea<br>(48h) | ErC50<br>algae<br>(96h)        | LC50<br>fish<br>(96h)         |
|----------------------|----------------------------|--------------------------------|-------------------------------|
| Acetone              | D. pulex<br>8800.00 mg/L   | P. subcapitata<br>7000.00 mg/L | P. promelas<br>8120.00 mg/L   |
| Chlorinated paraffin | D. magna<br>102.00 mg/L    | Not available                  | L. macrochirus<br>300.00 mg/L |
| Salicylic acid       | D. magna<br>105.00 mg/L    | Not available                  | L. idus<br>90.00 mg/L         |
| Zinc oxide           | D. magna<br>101.00 mg/L    | Not available                  | Not available                 |
| p-tert-Butyl phenol  | D. magna<br>3.90 mg/L      | Not available                  | P. promelas<br>5.14 mg/L      |

### 12.2 Persistence and Degradability

There is no data available on the preparation itself.

### 12.3 Bioaccumulative Potential

Not measured.

**12.4 Mobility in Soil**

No data available.

**12.5 Other Adverse Effects**

No data available

**Results of PBT and vPvB Assessment:** This product contains no PBT/vPvB chemicals.

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1 Disposal Methods**

Dispose of in accordance with all applicable federal, state, and local regulations. Consult authorities before disposal.

**SECTION 14: TRANSPORT INFORMATION**

|                                      | <b>DOT/ADR</b>                                  | <b>IMO/IMDG</b>                                 | <b>ICAO/IATA</b>                                |
|--------------------------------------|---|---|---|
| <b>UN Number:</b>                    | UN1133  | UN1133  | UN1133  |
| <b>UN Proper Shipping Name:</b>      | Adhesives, containing a flammable liquid, 3, II | Adhesives, containing a flammable liquid, 3, II | Adhesives, containing a flammable liquid, 3, II |
| <b>Transport Hazard Class(es):</b>   | DOT Hazard Class: 3                             | IMDG: 3 (sub-class: n/a)                        | Air Class: 3                                    |
| <b>Packing Group:</b>                | II  | II  | II  |
| <b>Environmental Hazards:</b>        | Marine Pollutant: No                            |   |   |
| <b>Special Precautions for User:</b> | Not applicable                                  |   |   |

**SECTION 15: REGULATORY INFORMATION**

**Regulatory Overview:** The regulatory data in Section 15 is not intended to be all-inclusive. Only selected regulations are represented.

**Toxic Substance Control Act (TSCA):** All components of this material are either listed or exempt from listing in the TSCA Inventory.

|                                |                             |     |
|--------------------------------|-----------------------------|-----|
| <b>US EPA Tier II Hazards:</b> | Fire:                       | Yes |
|                                | Sudden Release of Pressure: | No  |
|                                | Reactive:                   | No  |
|                                | Immediate (Acute):          | Yes |
|                                | Delayed (Chronic):          | Yes |

|                                       |                |
|---------------------------------------|----------------|
| <b>EPCRA 302 Extremely Hazardous:</b> | Cresol, Phenol |
| <b>EPCRA 313 Toxic Chemicals:</b>     | Zinc oxide     |

|  |   |
|--|---|
| <b>Proposition 65 – Carcinogens (&gt;0.0%):</b>                | 1,3 Butadiene; 4-Vinylcyclohexene; Benzene; Cadmium; Formaldehyde; Lead; Propenenitrile |
| <b>Proposition 65 – Developmental Toxins (&gt;0.0%):</b>       | 1,3 Butadiene; Benzene; Lead  |
| <b>Proposition 65 – Female Reproductive Toxins (&gt;0.0%):</b> | 1,3 Butadiene; 4-Vinylcyclohexene; Lead   |
| <b>Proposition 65 – Male Reproductive Toxins (&gt;0.0%):</b>   | 1,3 Butadiene; Benzene; Cadmium; Lead   |



## SECTION 16: OTHER INFORMATION

## Additional Classification Information:

## NFPA:



## Full Text of GHS Hazard Statements from Section 3:

|       |   |
|-------|---|
| H225  | Highly flammable liquid and vapor.                    |
| H302  | Harmful if swallowed.                                 |
| H315  | Causes skin irritation.                               |
| H318  | Causes serious eye damage.                            |
| H319  | Causes serious eye irritation.                        |
| H336  | May cause drowsiness or dizziness.                    |
| H361D | Suspected of damaging the unborn child.               |
| H361F | Suspected of damaging fertility.                      |
| H400  | Very toxic to aquatic life.                           |
| H410  | Very toxic to aquatic life with long lasting effects. |

**Disclaimer:** Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. This information relates only to the product designated herein, and does not relate to its use in combination with other materials or in any other process. The manufacturer makes no representations and assumes no liability for any direct, incidental, or consequential damages resulting from its use. The information herein is presented in good faith and based upon data from manufacturers or technical sources, and is believed to be accurate as of the revision date given. It is the buyer's responsibility to ensure that its activities comply with Federal, State, or local laws. Conditions of use are beyond Lonseal's control and therefore users are responsible to verify this data under their own conditions to determine suitability for their purpose. Users of this product must comply with all applicable health and safety laws, regulations, and orders. Users of this product assume all risks of use, handling, and disposal, or from use of the information contained within this document.

**General Statements:**

Keep out of the reach of children.

For professional or industrial use only.

If you cannot read, or do not understand all directions, cautions, and warnings for this product, DO NOT use.

**Abbreviations** (may not actually appear within document):

|       |   |
|-------|---|
| ACGIH | American Conference of Governmental Industrial Hygienists   |
| ADR   | Accord européen relatif au transport international de marchandises Dangereuses par Route (European agreement for the international carriage of Dangerous goods by Road) |
| Asp.  | Aspiration  |
| ATE   | Acute Toxicity Estimate   |
| bw    | Body Weight   |
| Carc. | Carcinogenicity   |
| CAS   | Chemical Abstracts Service  |
| CFR   | Code of Federal Regulations   |
| CLP   | Classification, Labeling, and Packaging   |
| CMR   | Carcinogenicity, Mutagenicity, and Toxicity for Reproduction  |
| CNS   | Central Nervous System  |
| cSt   | Centistokes   |
| d     | Day(s)  |
| Dam.  | Damage  |
| DIN   | Deutsches Institut für Normung (German Institute for Standardization)   |
| DNEL  | Derived No Effect Level   |
| DOT   | Department of Transportation  |

|        |   |
|--------|---|
| EC     | European Commission   |
| EC0    | Effective Concentration for 0% of Test Population                     |
| EC10   | Effective Concentration for 10% of Test Population                    |
| EC50   | Effective Concentration for 50% of Test Population                    |
| EC90   | Effective Concentration for 90% of Test Population                    |
| EC100  | Effective Concentration for 100% of Test Population                   |
| EPA    | Environmental Protection Agency                                       |
| EPCRA  | Emergency Planning and Community Right-to-Know Act                    |
| ErC50  | Effective Concentration for 50% of Test Population                    |
| ERG    | Emergency Response Guidebook  |
| EU     | European Union  |
| Flam.  | Flammable   |
| g      | Gram(s)   |
| GHS    | Globally Harmonized System  |
| h      | Hour(s)   |
| Haz.   | Hazard  |
| HMIS   | Hazardous Materials Identification System                             |
| hPa    | Hectopascal(s)  |
| hr.    | Hour(s)   |
| IARC   | International Agency for Research on Cancer                           |
| IATA   | International Air Transport Association                               |
| IBC    | Intermediate Bulk Container   |
| ICAO   | International Civil Aviation Organization                             |
| IMDG   | International Maritime Dangerous Goods                                |
| IMO    | International Maritime Organization                                   |
| IOELV  | Indicative Occupational Exposure Limit Values                         |
| Irrit. | Irritation  |
| IUCLID | International Uniform Chemical Information Database                   |
| kg     | Kilogram(s)   |
| KOW    | n-Octanol/Water Partition Coefficient                                 |
| L      | Liter(s)  |
| lbs.   | pounds  |
| LC50   | Lethal Concentration for 50% of Test Population                       |
| LC100  | Lethal Concentration for 100% of Test Population                      |
| LD50   | Lethal Dose for 50% of Test Population                                |
| Liq.   | Liquid  |
| LOEC   | Lowest Observed Effect Concentration                                  |
| LTEL   | Long-Term Exposure Limit  |
| m      | Meter(s)  |
| MAK    | Maximale Arbeitsplatz-Konzentration (Maximum Workplace Concentration) |
| MARPOL | Maritime Pollution  |
| mfg.   | Manufacturer  |
| mg     | Milligram(s)  |
| min    | Minute(s)   |
| mL     | Milliliter(s)   |
| mPa    | Millipascal(s)  |
| Muta.  | Germ Cell Mutagenicity  |
| n/a    | Not Applicable or Not Available                                       |
| NFPA   | National Fire Protection Association                                  |
| NIOSH  | National Institute for Occupational Safety and Health                 |
| NOEC   | No Observed Effect Concentration                                      |
| NTP    | National Toxicology Program   |
| n.o.s. | Not Otherwise Specified   |
| OEL    | Occupational Exposure Limits  |
| OSHA   | Occupational Safety and Health Administration                         |
| Pa     | Pascal(s)   |
| Pa-s   | Pascal second(s)  |
| PBT    | Persistent Bioaccumulative and Toxic                                  |

|         |  |
|---------|--|
| PEL     | Permissible Exposure Limit                       |
| PNEC    | Predicted No Effect Concentration                |
| PPE     | Personal Protective Equipment                    |
| ppm     | Parts Per Million                                |
| PVC     | Polyvinyl Chloride                               |
| Repr.   | Reproductive                                     |
| Respir. | Respiratory                                      |
| RQ      | Reportable Quantities                            |
| RTK     | Right-to-Know                                    |
| SDS     | Safety Data Sheet                                |
| Sens.   | Sensitization                                    |
| STEL    | Short-Term Exposure Limit                        |
| STOT    | Specific Target Organ Toxicity                   |
| STOT RE | Specific Target Organ Toxicity, Repeat Exposure  |
| STOT SE | Specific Target Organ Toxicity, Single Exposure  |
| TCC     | Tagliabue Closed Cup                             |
| THF     | Tetrahydrofuran                                  |
| TLV     | Threshold Limit Value                            |
| Tox.    | Toxicity   |
| TWA     | Time Weighted Average                            |
| UN      | United Nations                                   |
| US      | United States                                    |
| vPvB    | Very Persistent and very Bioaccumulative         |
| WEL     | Workplace Exposure Limit                         |
| WHMIS   | Workplace Hazardous Materials Information System |

**Revision History:**

|           |   |
|-----------|---|
| 6.1.2015  | Initial SDS Release. SDS provided by mfg. was incorporated into Lonseal's letterhead/layout. Items contained within Section 16, from "DISCLAIMER" and below, are exclusive to Lonseal's version of the SDS.   |
| 7.8.2015  | Added missing precautionary statements P262 and P270.   |
| 8.5.2019  | SDS formatting updated. Minor grammar and typo corrections. Tables in Sections 3, 8.1, 11, and 12.1 revised to match the most recent SDS provided by the manufacturer. NFPA symbol added under Section 16. Removed unnecessary paragraph from Section 16. |
| 2.18.2020 | Minor typo corrections.   |
| 3.13.2020 | Minor formatting change and typo correction to table in Section 12. Updated abbreviations list under Section 16.  |
| 7.14.2021 | Added new product code ZAD40055 in Section 1.1.   |
| 2.23.2023 | Information updated to match the most current SDS from the manufacturer.  |