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Version 2

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING****Product Name** DELIMER**Other means of identification****Product Code** 091  
**UN/ID No.** See section 14  
**Synonyms** None**Recommended use of the chemical and restrictions on use****Recommended Use** Heavy Duty Liquid Lime Scale Remover.  
**Uses advised against** No information available**Manufacturer Address**

Anderson Chemical Company, 325 South Davis Avenue, Litchfield, MN 55355 (320-693-2477)

**Emergency telephone number**

Chemtrec 1-800-424-9300

**2. HAZARDS IDENTIFICATION****Classification****OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

|   |                           |
|---|---------------------------|
| Acute toxicity - Inhalation (Dusts/Mists) | Category 3                |
| Skin corrosion/irritation                 | Category 1 Sub-category B |
| Serious eye damage/eye irritation         | Category 1                |
| Corrosive to metals                       | Category 1                |

**Label elements****Emergency Overview****Danger****Hazard statements**Causes severe skin burns and eye damage  
Toxic if inhaled  
May be corrosive to metals**Appearance** aqueous solution**Physical state** liquid**Odor** Odorless

**Precautionary Statements - Prevention**

Do not breathe dust/fume/gas/mist/vapors/spray  
 Wash face, hands and any exposed skin thoroughly after handling  
 Keep only in original container  
 Use only in a well-ventilated area  
 Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

Specific treatment (see Section 4 on this label)  
 Immediately call a POISON CENTER or doctor/physician  
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
 Immediately call a POISON CENTER or doctor/physician  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 Wash contaminated clothing before reuse  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Immediately call a POISON CENTER or doctor/physician  
 IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.  
 Absorb spillage to prevent material damage

**Precautionary Statements - Storage**

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

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)****Other Information**

- Harmful to aquatic life with long lasting effects
- Harmful to aquatic life

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

| Chemical Name   | CAS No.   | Weight-% | Trade Secret |
|-----------------|-----------|----------|--------------|
| Phosphoric acid | 7664-38-2 | 27.5     |              |
| Nitric acid     | 7697-37-2 | 4        |              |

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### 4. FIRST AID MEASURES

**First aid measures**

|                     |   |
|---------------------|---|
| <b>Eye contact</b>  | Flush immediately with water for 15 minutes. Lift upper and lower eyelids for complete rinsing. Get immediate medical attention.  |
| <b>Skin Contact</b> | Flush with water for 15 minutes. Get medical attention. Remove contaminated clothing and wash before reuse.   |
| <b>Inhalation</b>   | Remove victim to fresh air. If breathing difficulty occurs or persists, get medical attention.  |
| <b>Ingestion</b>    | Rinse mouth with water. Give water to dilute. Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to a semi-comatose, comatose, convulsing or unconscious person. |

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Corrosive. Causes tissue destruction, permanent damage to the cornea, blindness. Causes irritation (possibly severe), burns to the skin. Mists may cause lung irritation, shortness of breath, fluid in lungs. Ingestion causes nausea, vomiting, diarrhea, corrosion, burns to mouth and esophagus, abdominal pain, chest pain, shortness of breath, seizures, death.

**Indication of any immediate medical attention and special treatment needed**

**Note to physicians** Treat symptomatically.

## 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** None known.

**Specific hazards arising from the chemical**

If the stock solution container breaks, the solution should be handled with care as it is corrosive.

**Hazardous combustion products** At flame temperatures, toxic phosphoric oxide fumes may be emitted. Nitrogen oxides (NO<sub>x</sub>).

**Explosion data**

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

**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. Use water spray to cool fire exposed containers.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Evacuate nonessential personnel. Ventilate area. Wear appropriate personal protection equipment.

**Environmental precautions** See Section 12 for additional ecological information.

**Methods for containment** Completely contain spilled material with dikes or sand bags, etc.

**Methods for cleaning up** Recover as much material as possible into containers for disposal or reuse. Remaining material may be diluted with water and neutralized. Flush spill area with water. Neutralization products, both solid and liquid, must be recovered for disposal.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Do not get in eyes, on skin, or clothing. Do not breathe vapors or mists. Do not ingest. Wash thoroughly after handling. Wear protective clothing/equipment. Use with adequate ventilation.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** . Keep containers tightly closed and properly labeled. This product reacts violently with bases liberating heat and causes spattering. Store in a cool, dry, well-ventilated area. Wash hands before eating, drinking, using tobacco, applying make-up or using the toilet. Do not store, use, and/or consume foods, beverages, tobacco in areas where this product is stored.

**Incompatible materials** Fluorine, strong oxidizing and reducing agents, bases, metals, sulfur tioxide, and phosphorus petoxide. Contact with metals may evolve flammable hydrogen gas.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### **Exposure Guidelines**

| Chemical Name                | ACGIH TLV   | OSHA PEL  | NIOSH IDLH  |
|------------------------------|---|---|---|
| Phosphoric acid<br>7664-38-2 | STEL: 3 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup> | TWA: 1 mg/m <sup>3</sup><br>(vacated) TWA: 1 mg/m <sup>3</sup><br>(vacated) STEL: 3 mg/m <sup>3</sup>   | IDLH: 1000 mg/m <sup>3</sup><br>TWA: 1 mg/m <sup>3</sup><br>STEL: 3 mg/m <sup>3</sup>               |
| Nitric acid<br>7697-37-2     | STEL: 4 ppm<br>TWA: 2 ppm                             | TWA: 2 ppm<br>TWA: 5 mg/m <sup>3</sup><br>(vacated) TWA: 2 ppm<br>(vacated) TWA: 5 mg/m <sup>3</sup><br>(vacated) STEL: 4 ppm<br>(vacated) STEL: 10 mg/m <sup>3</sup> | IDLH: 25 ppm<br>TWA: 2 ppm<br>TWA: 5 mg/m <sup>3</sup><br>STEL: 4 ppm<br>STEL: 10 mg/m <sup>3</sup> |

#### **Appropriate engineering controls**

Showers  
Eyewash stations  
Ventilation systems.

#### **Individual protection measures, such as personal protective equipment**

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin and body protection** Natural rubber, neoprene or nitrile gloves should be worn. If contact is anticipated, wear protective clothing appropriate to use conditions.

**Respiratory protection** If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

**General Hygiene Considerations** Wash contaminated clothing before reuse.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### **Information on basic physical and chemical properties**

|                                      |                          |                         |                          |
|--------------------------------------|--------------------------|-------------------------|--------------------------|
| <b>Physical state</b>                | liquid                   | <b>Odor</b>             | Odorless                 |
| <b>Appearance</b>                    | aqueous solution         | <b>Odor threshold</b>   | No information available |
| <b>Color</b>                         | clear colorless          |                         |                          |
| <b>Property</b>                      | <b>Values</b>            | <b>Remarks • Method</b> |                          |
| <b>pH</b>                            | 1.9, 1% solution         |                         |                          |
| <b>Melting point/freezing point</b>  | No information available |                         |                          |
| <b>Boiling point / boiling range</b> | No information available |                         |                          |
| <b>Flash point</b>                   | No information available |                         |                          |
| <b>Evaporation rate</b>              | No information available |                         |                          |
| <b>Flammability (solid, gas)</b>     | No information available |                         |                          |
| <b>Flammability Limit in Air</b>     |                          |                         |                          |
| <b>Upper flammability limit:</b>     | No information available |                         |                          |

|                                     |                          |
|-------------------------------------|--------------------------|
| <b>Lower flammability limit:</b>    | No information available |
| <b>Vapor pressure</b>               | No information available |
| <b>Vapor density</b>                | No information available |
| <b>Specific Gravity</b>             | 1.188                    |
| <b>Water solubility</b>             | Soluble in water         |
| <b>Solubility in other solvents</b> | No information available |
| <b>Partition coefficient</b>        | No information available |
| <b>Autoignition temperature</b>     | No information available |
| <b>Decomposition temperature</b>    | No information available |
| <b>Kinematic viscosity</b>          | No information available |
| <b>Dynamic viscosity</b>            | No information available |
| <b>Explosive properties</b>         | No information available |
| <b>Oxidizing properties</b>         | No information available |

**Other Information**

|                         |                          |
|-------------------------|--------------------------|
| <b>Softening point</b>  | No information available |
| <b>Molecular weight</b> | No information available |
| <b>VOC Content (%)</b>  | No information available |
| <b>Density</b>          | No information available |
| <b>Bulk density</b>     | No information available |

## 10. STABILITY AND REACTIVITY

**Reactivity**

No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Conditions to avoid**

None known.

**Incompatible materials**

Fluorine, strong oxidizing and reducing agents, bases, metals, sulfur trioxide, and phosphorus pentoxide. Contact with metals may evolve flammable hydrogen gas.

**Hazardous Decomposition Products**At flame temperatures, toxic phosphoric oxide fumes may be emitted. Nitrogen oxides (NO<sub>x</sub>).

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

|                            |  |
|----------------------------|--|
| <b>Product Information</b> | No data available  |
| <b>Inhalation</b>          | Inhalation of vapors in high concentration may cause irritation of respiratory system. |
| <b>Eye contact</b>         | Risk of serious damage to eyes.  |
| <b>Skin Contact</b>        | Contact causes severe skin irritation and possible burns.                              |
| <b>Ingestion</b>           | Toxic if swallowed.  |

| Chemical Name                | Oral LD50            | Dermal LD50             | Inhalation LC50                     |
|------------------------------|----------------------|-------------------------|-------------------------------------|
| Phosphoric acid<br>7664-38-2 | = 1530 mg/kg ( Rat ) | = 2730 mg/kg ( Rabbit ) | > 850 mg/m <sup>3</sup> ( Rat ) 1 h |
| Nitric acid<br>7697-37-2     | -                    | -                       | = 67 ppm ( Rat ) 4 h                |

**Information on toxicological effects**

**Symptoms** No information available.

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

**Sensitization** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

| Chemical Name            | ACGIH | IARC     | NTP | OSHA |
|--------------------------|-------|----------|-----|------|
| Nitric acid<br>7697-37-2 | -     | Group 2A | -   | X    |

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

**Aspiration hazard** No information available.

**Numerical measures of toxicity - Product Information**

The following values are calculated based on chapter 3.1 of the GHS document .

**ATEmix (oral)** 5564 mg/kg

**ATEmix (dermal)** 9927 mg/kg

**ATEmix (inhalation-dust/mist)** 0.8 mg/l

**ATEmix (inhalation-vapor)** 1675 mg/l

**12. ECOLOGICAL INFORMATION****Ecotoxicity**

Harmful to aquatic life with long lasting effects

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment

| Chemical Name                | Algae/aquatic plants | Fish   | Crustacea                                   |
|------------------------------|----------------------|--|---|
| Phosphoric acid<br>7664-38-2 | -                    | 3 - 3.5: 96 h <i>Gambusia affinis</i> mg/L<br>LC50 | 4.6: 12 h <i>Daphnia magna</i> mg/L<br>EC50 |
| Nitric acid<br>7697-37-2     | -                    | 72: 96 h <i>Gambusia affinis</i> mg/L<br>LC50      | -   |

**Persistence and degradability**

No information available.

**Bioaccumulation**

No information available.

| Chemical Name            | Partition coefficient |
|--------------------------|-----------------------|
| Nitric acid<br>7697-37-2 | -2.3                  |

**Other adverse effects**

No information available

**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** Do not reuse container.

| Chemical Name                | California Hazardous Waste Status |
|------------------------------|-----------------------------------|
| Phosphoric acid<br>7664-38-2 | Corrosive                         |
| Nitric acid<br>7697-37-2     | Toxic<br>Corrosive<br>Ignitable   |

#### 14. TRANSPORT INFORMATION

|                              |   |
|------------------------------|---|
| <b>DOT</b>                   | LTD QTY - if packaged in <1.3 gallon containers (Non Hazardous) |
| <b>UN/ID No.</b>             | UN3264  |
| <b>Proper shipping name</b>  | Corrosive liquid, acidic, inorganic, n.o.s.                     |
| <b>Hazardous ingredients</b> | (phosphoric acid/nitric acid)                                   |
| <b>Hazard Class</b>          | 8   |
| <b>Packing Group</b>         | III   |

#### 15. REGULATORY INFORMATION

##### International Inventories

|                      |                 |
|----------------------|-----------------|
| <b>TSCA</b>          | Complies        |
| <b>DSL/NDSL</b>      | Complies        |
| <b>EINECS/ELINCS</b> | Complies        |
| <b>ENCS</b>          | Does not comply |
| <b>IECSC</b>         | Complies        |
| <b>KECL</b>          | Complies        |
| <b>PICCS</b>         | Complies        |
| <b>AICS</b>          | Complies        |

##### 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

##### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

| Chemical Name           | SARA 313 - Threshold Values % |
|-------------------------|-------------------------------|
| Nitric acid - 7697-37-2 | 1.0                           |

##### SARA 311/312 Hazard Categories

|  |     |
|--|-----|
| <b>Acute health hazard</b>               | Yes |
| <b>Chronic Health Hazard</b>             | No  |
| <b>Fire hazard</b>                       | No  |
| <b>Sudden release of pressure hazard</b> | No  |
| <b>Reactive Hazard</b>                   | No  |

**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)

| Chemical Name                | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Phosphoric acid<br>7664-38-2 | 5000 lb                     | -                      | -                         | X                          |
| Nitric acid<br>7697-37-2     | 1000 lb                     | -                      | -                         | X                          |

**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). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

| Chemical Name                | Hazardous Substances RQs | CERCLA/SARA RQ | Reportable Quantity (RQ)                   |
|------------------------------|--------------------------|----------------|--|
| Phosphoric acid<br>7664-38-2 | 5000 lb                  | -              | RQ 5000 lb final RQ<br>RQ 2270 kg final RQ |
| Nitric acid<br>7697-37-2     | 1000 lb                  | 1000 lb        | RQ 1000 lb final RQ<br>RQ 454 kg final RQ  |

**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 |
|------------------------------|------------|---------------|--------------|
| Phosphoric acid<br>7664-38-2 | X          | X             | X            |
| Nitric acid<br>7697-37-2     | X          | X             | X            |

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** Not Applicable

**16. OTHER INFORMATION**

|             |                  |                |                    |                                    |
|-------------|------------------|----------------|--------------------|------------------------------------|
| <b>NFPA</b> | Health hazards 3 | Flammability 0 | Instability 0      | Physical and Chemical Properties - |
| <b>HMIS</b> | Health hazards 3 | Flammability 0 | Physical hazards 0 | Personal protection X              |

Prepared By lmt  
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Revision Note

15-Sept-2017 Updated/Standardized DoT wording in Sections 1 and 14

**Disclaimer**

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**