1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Name
A-DINE PLUS

Other means of identification
Product Code 001
UN/ID No. UN1903
Synonyms None
Registration Number(s) 4959-15-150

Recommended use of the chemical and restrictions on use
Recommended Use Disinfectant, cleaner, sanitizer, deodorizer.
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)

<table>
<thead>
<tr>
<th>Hazard Statement</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Inhalation (Dusts/Mists)</td>
<td>Category 4</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2A</td>
</tr>
</tbody>
</table>

Label elements

Warning

Hazard statements
Harmful if inhaled
Causes skin irritation
Causes serious eye irritation

Appearance aqueous solution
Physical state liquid
Odor Mild, pleasant, clean, iodine-like

Precautionary Statements - Prevention
Avoid breathing dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection
Use only in well-ventilated areas
Precautionary Statements - Response
Specific treatment (see section 4 on this label)
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention
IF ON SKIN: Wash with plenty of soap and water
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell

Hazards not otherwise classified (HNOC)
Other Information
• Toxic to aquatic life with long lasting effects
• Toxic to aquatic life
Unknown Acute Toxicity
10.85% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>7664-38-2</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Iodine</td>
<td>7553-56-2</td>
<td>1.75</td>
<td></td>
</tr>
</tbody>
</table>

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

4. FIRST AID MEASURES

First aid measures

General advice
Immediate medical attention is required.

Eye contact
Flush immediately with water for 15 minutes. Lift upper and lower eyelids for complete rinsing. Get immediate medical attention.

Skin Contact
Flush with water for 15 minutes. If irritation persists after rinsing, get medical attention. Remove contaminated clothing and wash before reuse.

Inhalation
Remove victim to fresh air. If breathing difficulty occurs or persists, get medical attention.

Ingestion
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
Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure.

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.

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 personnel to safe areas. Use personal protective equipment as required.

Environmental precautions Do not allow into any sewer, on the ground or into any body of water. See Section 12 for additional ecological information.

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

Methods for cleaning up Evacuate nonessential personnel. Wear appropriate personal protection equipment. Completely contain spilled material with dikes or sandbags, etc., and prevent run-off into ground or surface waters or sewers. Recover as much material as possible into containers for disposal. Remaining material may be diluted with water and neutralized with lime or other base. 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. FROM EPA LABEL: Keep container closed when not in use. Do not store below 25ºF or above 100ºF for extended periods. PROHIBITIONS: Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited.

Incompatible materials Fluorine, strong oxidizing and reducing agents, bases, metals, sulfur tioxide, and phosphorus petoxide.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure Guidelines

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>STEL: 3 mg/m³ TWA: 1 mg/m³</td>
<td>TWA: 1 mg/m³ (vacated) STEL: 3 mg/m³</td>
<td>IDLH: 1000 mg/m³ TWA: 1 mg/m³</td>
</tr>
<tr>
<td>7664-38-2</td>
<td></td>
<td>(vacated) TWA: 1 mg/m³ STEL: 3 mg/m³</td>
<td>TWA: 1 mg/m³</td>
</tr>
<tr>
<td>Iodine</td>
<td>STEL: 0.1 ppm aerosol and vapor</td>
<td>(vacated) Ceiling: 0.1 ppm Ceiling: 1 mg/m³</td>
<td>Ceiling: 0.1 ppm Ceiling: 1 mg/m³</td>
</tr>
<tr>
<td>7553-56-2</td>
<td>TWA: 0.01 ppm inhalable fraction and vapor</td>
<td>Ceiling: 1 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

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**: 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

- Do not eat, drink or smoke when using this product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Values</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Physical state</strong></td>
<td>liquid</td>
<td></td>
</tr>
<tr>
<td><strong>Appearance</strong></td>
<td>aqueous solution</td>
<td></td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>dark amber</td>
<td></td>
</tr>
<tr>
<td><strong>Odor</strong></td>
<td>Mild, pleasant, clean, iodine-like</td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Odor threshold</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>&lt;1</td>
<td></td>
</tr>
<tr>
<td><strong>Melting point/freezing point</strong></td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Boiling point / boiling range</strong></td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Flash point</strong></td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Evaporation rate</strong></td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Flammability (solid, gas)</strong></td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Flammability Limit in Air</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit:</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td>Lower flammability limit:</td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Vapor pressure</strong></td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Vapor density</strong></td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Specific Gravity</strong></td>
<td>1.135</td>
<td></td>
</tr>
<tr>
<td><strong>Water solubility</strong></td>
<td>completely soluble</td>
<td></td>
</tr>
<tr>
<td><strong>Solubility in other solvents</strong></td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Partition coefficient</strong></td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Autoignition temperature</strong></td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Decomposition temperature</strong></td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Kinematic viscosity</strong></td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Dynamic viscosity</strong></td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Explosive properties</strong></td>
<td></td>
<td>No information available</td>
</tr>
<tr>
<td><strong>Oxidizing properties</strong></td>
<td></td>
<td>No information available</td>
</tr>
</tbody>
</table>
Other Information

- Softening point: No information available
- Molecular weight: No information available
- VOC Content (%): No information available
- Density: No information available
- Bulk density: 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 tioxide, and phosphorus petoxide.

Hazardous Decomposition Products
At flame temperatures, toxic phosphoric oxide fumes may be emitted.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information
No data available

- Inhalation
  May cause irritation of respiratory tract.
- Eye contact
  Corrosive to the eyes and may cause severe damage including blindness.
- Skin Contact
  Contact causes severe skin irritation and possible burns.
- Ingestion
  May be harmful if swallowed.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>= 1530 mg/kg (Rat)</td>
<td>= 2730 mg/kg (Rabbit)</td>
<td>&gt; 850 mg/m³ (Rat) 1 h</td>
</tr>
</tbody>
</table>

<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
</table>

Information on toxicological effects

- Symptoms
  No information available.

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

<table>
<thead>
<tr>
<th>Sensitization</th>
<th>Germ cell mutagenicity</th>
<th>Carcinogenicity</th>
<th>Reproductive toxicity</th>
<th>STOT - single exposure</th>
<th>STOT - repeated exposure</th>
<th>Aspiration hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>No information available.</td>
<td>No information available.</td>
<td>No information available.</td>
<td>No information available.</td>
<td>No information available.</td>
<td>No information available.</td>
<td>No information available.</td>
</tr>
</tbody>
</table>

Numerical measures of toxicity - Product Information
Unknown Acute Toxicity

10.85% of the mixture consists of ingredient(s) of unknown toxicity. The following values are calculated based on chapter 3.1 of the GHS document.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Toxic to aquatic life with long lasting effects

10.85% of the mixture consists of component(s) of unknown hazards to the aquatic environment.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>-</td>
<td>3 - 3.5: 96 h Gambusia affinis mg/L</td>
<td>4.6: 12 h Daphnia magna mg/L</td>
</tr>
<tr>
<td>7664-38-2</td>
<td></td>
<td>LCS0</td>
<td>EC50</td>
</tr>
</tbody>
</table>

### Persistence and degradability

No information available.

### Bioaccumulation

No information available.

### Other adverse effects

No information available.

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

**Disposal of wastes**

PROHIBITIONS: Do not contaminate water, food or feed by storage or disposal. Open dumping is prohibited. PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. CONTAINER DISPOSAL: Nonrefillable container. Do not reuse or refill this container. Triple rinse (or equivalent) promptly after emptying. 5 gallon or less containers. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure for two more times. Capacity greater than 5 gallon containers-. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incinerate, or, if allowed by State and local authorities, burn container. If burned, stay out of smoke.

**Contaminated packaging**

Do not reuse container.

### California Hazardous Waste Status

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>Corrosive</td>
</tr>
<tr>
<td>7664-38-2</td>
<td></td>
</tr>
</tbody>
</table>

## 14. TRANSPORT INFORMATION

**DOT**

-
**15. REGULATORY INFORMATION**

<table>
<thead>
<tr>
<th>International Inventories</th>
<th>Does not comply</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>Does not comply</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>Does not comply</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>ENCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>IECSC</td>
<td>Does not comply</td>
</tr>
<tr>
<td>KECL</td>
<td>Does not comply</td>
</tr>
<tr>
<td>PICCS</td>
<td>Does not comply</td>
</tr>
<tr>
<td>AICS</td>
<td>Does not comply</td>
</tr>
</tbody>
</table>

**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 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

**SARA 311/312 Hazard Categories**

<table>
<thead>
<tr>
<th>Acute health hazard</th>
<th>Yes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chronic Health Hazard</td>
<td>No</td>
</tr>
<tr>
<td>Fire hazard</td>
<td>No</td>
</tr>
<tr>
<td>Sudden release of pressure hazard</td>
<td>No</td>
</tr>
<tr>
<td>Reactive Hazard</td>
<td>No</td>
</tr>
</tbody>
</table>

**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)

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
<th>CWA - Hazardous Substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid</td>
<td>5000 lb</td>
<td></td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA/SARA RQ</th>
<th>Reportable Quantity (RQ)</th>
</tr>
</thead>
</table>

---

Page 7 / 8
Phosphoric acid  
7664-38-2  
5000 lb  
-  
RQ 5000 lb final RQ  
RQ 2270 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

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phosphoric acid 7664-38-2</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Iodine 7553-56-2</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

U.S. EPA Label Information

EPA Pesticide Registration Number 4959-15-150
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

PRECAUTIONARY STATEMENTS: Hazard to humans and domestic animals. KEEP OUT OF REACH OF CHILDREN DANGER CORROSIVE. Causes irreversible eye damage. Harmful if swallowed. Do not get in eyes or on clothing. Avoid contact with skin. Wear goggles or face shield. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

ENVIRONMENTAL HAZARDS: This product is toxic to fish and aquatic organisms. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other water unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health hazards 3</th>
<th>Flammability 0</th>
<th>Instability 0</th>
<th>Physical and Chemical Properties -</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS</td>
<td>Health hazards 3</td>
<td>Flammability 0</td>
<td>Physical hazards 0</td>
<td>Personal protection X</td>
</tr>
</tbody>
</table>

Prepared By lmt  
Issue Date 20-Mar-2015  
Revision Date 20-Mar-2015  
Revision Note No information available  
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