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

Product Identifier
Product Name: Dyne

Other means of identification
Item#: 0108
Synonyms: None

Recommended use of the chemical and restrictions on use
Recommended use: Formulated acidic detergent with an iodophor sanitizer for removing milkstone, protein, and mineral deposits, Restricted to professional users
Uses advised against: No information available

Details of the supplier of the safety data sheet
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>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skin Corrosion/Irritation</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
</tr>
<tr>
<td>Carcinogenicity</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
</tr>
</tbody>
</table>

Sulfuric acid and other mineral acids mist statement
The International Agency for Research on Cancer (IARC) has classified "strong inorganic acid mists containing sulfuric or other strong mineral acids (such as Hydrochloric and Nitric acid) as a known human carcinogen, (IARC category 1). This classification applies only to mists containing such mineral acids and not to the specific acids or their solutions, unless otherwise noted.

Label Elements

DANGER

Hazard Statements
Causes severe skin burns and eye damage
May cause cancer
May cause drowsiness or dizziness
Flammable liquid and vapor
Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Do not breathe dust/fume/gas/mist/vapors/spray
Wash face, hands and any exposed skin thoroughly after handling
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use explosion-proof electrical/ventilating/lighting/.../equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Keep cool

Precautionary Statements - Response
Immediately call a POISON CENTER or doctor/physician
Specific treatment (see .? on this label)
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
Call a POISON CENTER or doctor/physician if you feel unwell
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
In case of fire: Use CO2, dry chemical, or foam for extinction

Precautionary Statements - Storage
Store locked up
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
• May be harmful if swallowed
• May be harmful in contact with skin
• Toxic to aquatic life with long lasting effects
• Toxic to aquatic life
Unknown Acute Toxicity 4.45% 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>Hydriodic acid</td>
<td>10034-85-2</td>
<td>0 - 10%</td>
<td>*</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>67-63-0</td>
<td>20 - 30%</td>
<td>*</td>
</tr>
<tr>
<td>Iodine</td>
<td>7553-56-2</td>
<td>0 - 10%</td>
<td>*</td>
</tr>
<tr>
<td>Phosphoric acid</td>
<td>7664-38-2</td>
<td>40 - 50%</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

Eye contact  Immediately flush with plenty of water. After initial flushing, remove any contact lenses and
continue flushing for at least 15 minutes. Call a physician immediately.

**Skin contact**
Wash off immediately with plenty of water for at least 15 minutes. Call a physician immediately.

**Inhalation**
Move to fresh air. If not breathing, give artificial respiration. Call a physician or Poison Control Centre immediately.

**Ingestion**
Do not induce vomiting. Drink 1 or 2 glasses of water. Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person.

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

**Most Important Symptoms and Effects**
According to our experience and to the information provided to us, the product does not have any harmful effects if it is used and handled as specified.

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

**Notes to Physician**
Treat symptomatically.

### 5. FIRE-FIGHTING MEASURES

**Suitable Extinguishing Media**
Water spray, Carbon dioxide (CO2), Foam

**Unsuitable Extinguishing Media**
No information available.

**Specific hazards arising from the chemical**
The product causes burns of eyes, skin and mucous membranes.

**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**
Remove all sources of ignition. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Use personal protective equipment.

**Environmental Precautions**
Prevent further leakage or spillage if safe to do so.

**Methods and material for containment and cleaning up**
Soak up with inert absorbent material. Take up mechanically and collect in suitable container for disposal. Take precautionary measures against static discharges. Do not use sparking tools.

### 7. HANDLING AND STORAGE

**Precautions for Safe Handling**

**Handling**
Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

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

**Storage**
Keep containers tightly closed in a dry, cool and well-ventilated place.

**Incompatible Materials**
bases, organic materials, light metals, bleach

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION
Control parameters

Keep out of the reach of children

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol 67-63-0</td>
<td>TWA: 200 ppm, STEL: 400 ppm</td>
<td>TWA: 400 ppm, TWA: 980 mg/m³, STEL: 500 ppm, STEL: 1225 mg/m³</td>
<td>2000 ppm</td>
</tr>
<tr>
<td>Iodine 7553-56-2</td>
<td>TWA: 0.01 ppm, STEL: 0.1 ppm</td>
<td>Ceiling: 0.1 ppm, Ceiling: 1 mg/m³</td>
<td>2 ppm</td>
</tr>
<tr>
<td>Phosphoric acid 7664-38-2</td>
<td>TWA: 1 mg/m³, STEL: 3 mg/m³</td>
<td>TWA: 1 mg/m³, STEL: 3 mg/m³</td>
<td>1000 mg/m³</td>
</tr>
</tbody>
</table>

Appropriate engineering controls

Engineering Controls
Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face Protection
Goggles.

Skin and body protection
Wear protective gloves and protective clothing.

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
Handle in accordance with good industrial hygiene and safety practice.

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>Physical state</td>
<td>Liquid</td>
<td>Odor</td>
</tr>
<tr>
<td>Appearance</td>
<td>Dark brown</td>
<td>Odor Threshold</td>
</tr>
<tr>
<td>Color</td>
<td>No information available</td>
<td>No information available</td>
</tr>
<tr>
<td>pH</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Boiling Point/Range</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flash Point</td>
<td>35 °C / 95 °F</td>
<td></td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Flammability Limit in Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.27</td>
<td></td>
</tr>
<tr>
<td>Water Solubility</td>
<td>soluble</td>
<td></td>
</tr>
<tr>
<td>Solubility in other solvents</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Viscosity of Product</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Dynamic viscosity</td>
<td>No information available</td>
<td></td>
</tr>
<tr>
<td>Explosive Properties</td>
<td>No information available</td>
<td></td>
</tr>
</tbody>
</table>
Oxidizing Properties
No information available

Other information

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Softening Point</td>
<td>No information available</td>
</tr>
<tr>
<td>Molecular Weight</td>
<td>No information available</td>
</tr>
<tr>
<td>VOC Content</td>
<td>No information available</td>
</tr>
<tr>
<td>Density</td>
<td>10.6 lb/gal</td>
</tr>
<tr>
<td>Bulk Density</td>
<td>No information available</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity
No data available

Chemical Stability
Stable under normal conditions.

Possibility of hazardous reactions
Gives off hydrogen by reaction with some metals (e.g. aluminum).

Conditions to Avoid
Heat, flames and sparks.

Incompatible Materials
bases, organic materials, light metals, bleach

Hazardous decomposition products
None known.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

<table>
<thead>
<tr>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>No data available.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>No data available.</td>
</tr>
<tr>
<td>Skin contact</td>
<td>No data available.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>No data available.</td>
</tr>
</tbody>
</table>

Chemical Name | LD50 Oral | LD50 Dermal | LC50 Inhalation |
---------------|-----------|-------------|-----------------|
Isopropyl alcohol 67-63-0 | = 1870 mg/kg (Rat) | = 4059 mg/kg (Rabbit) | 72.6 mg/L (Rat) 4 h |
Iodine 7553-56-2 | 14000 mg/Kg | - | 137 ppm |
Phosphoric acid 7664-38-2 | = 1530 mg/kg (Rat) | 2730 mg/kg (Rabbit) | 850 mg/m³ (Rat) 1 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.

Mutagenic effects
No information available.

Carcinogenicity

Sulfuric acid and other mineral acids mist statement
The International Agency for Research on Cancer (IARC) has classified “strong inorganic acid mists containing sulfuric or other strong mineral acids (such as Hydrochloric and Nitric acid) as a known human carcinogen, (IARC category 1). This classification applies only to mists containing such mineral acids.”
acids and not to the specific acids or their solutions, unless otherwise noted.

Reproductive Effects
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

Unknown Acute Toxicity
4.45% 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
5.12% of the mixture consists of components(s) of unknown hazards to the aquatic environment

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Microtox</th>
<th>Waterflea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol</td>
<td>1000: 96 h Desmodesmus subspicatus mg/L EC50</td>
<td>9640: 96 h Pimephales promelas mg/L LC50</td>
<td>EC50 = 35390 mg/L 5 min</td>
<td>13299: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td></td>
<td>1000: 72 h Desmodesmus subspicatus mg/L LC50</td>
<td>flow-through 11130: 96 h Pimephales promelas mg/L LC50 static 1400000: 96 h Lepomis macrochirrus µg/L LC50</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Iodine</td>
<td>-</td>
<td>LC50 (96 h) 0.53 mg/L</td>
<td>-</td>
<td>LC50 (48 h) 0.16 mg/L</td>
</tr>
<tr>
<td>Phosphoric acid</td>
<td>-</td>
<td>3 - 3.5: 96 h Gambusia affinis mg/L LC50</td>
<td>-</td>
<td>4.6: 12 h Daphnia magna mg/L EC50</td>
</tr>
</tbody>
</table>

Persistence and degradability
No information available.

Bioaccumulation/Accumulation
No information available.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Partition coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl alcohol</td>
<td>0.05</td>
</tr>
</tbody>
</table>

Other adverse effects
No information available.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Dispose of in accordance with local regulations. Should not be released into the environment.

Contaminated Packaging
Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

DOT

<table>
<thead>
<tr>
<th>UN-No</th>
<th>Proper Shipping Name</th>
<th>Hazard Class</th>
<th>Subsidiary Class</th>
<th>Packing Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>2924</td>
<td>Flammable liquid, corrosive, n.o.s (Isopropanol, Phosphoric acid)</td>
<td>3</td>
<td>8</td>
<td>III</td>
</tr>
</tbody>
</table>
15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Complies/Does not Comply</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>TSCA</td>
</tr>
<tr>
<td>DSL/NDSL</td>
<td>DSL/NDSL</td>
</tr>
<tr>
<td>EINECS/ELINCS</td>
<td>Complies</td>
</tr>
<tr>
<td>ENCS</td>
<td>Does not Comply</td>
</tr>
<tr>
<td>CHINA</td>
<td>Complies</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>

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- ENCS - Japan Existing and New Chemical Substances
- IECS - 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

<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>7664-38-2</td>
<td>5000 lb</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

State Regulations

California Proposition 65
This product does not contain any Proposition 65 chemicals.

U.S. EPA Label information
EPA Pesticide registration number
Not applicable

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>NFPA</th>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
<th>Physical Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3</td>
<td>2</td>
<td>0</td>
<td></td>
</tr>
</tbody>
</table>

Preparation Date: 26-Nov-2007
Revision Date: 29-May-2015
Revision Note
No information available

Disclaimer
The information provided on this MSDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of SDS