1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Clarifier 2, Fisher Pinnacle Portfolio
Cat No.: 22050117; 22050119; 22220108; 23005258; 7402L
Synonyms: No information available.
Recommended Use: Laboratory chemicals

Company: Avantik
36 Commerce St.
Springfield, NJ 07081-0619
Toll Free: 800.783.9424
www.avantik-us.com

2. HAZARDS IDENTIFICATION

CAUTION!

Emergenc Overview
May cause eye, skin, and respiratory tract irritation. The toxicological properties have not been fully investigated.

Appearance: Colorless
Physical State: Liquid
Odor: Odorless

Potential Health Effects

Target Organs: None known.

Acute Effects

Principle Routes of Exposure

- Eyes: May cause irritation
- Skin: May cause irritation
- Inhalation: May cause irritation of respiratory tract. May be harmful if inhaled.
- Ingestion: May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects: Tumorigenic effects have been reported in experimental animals. Experiments have shown reproductive toxicity effects on laboratory animals.

See Section 11 for additional toxicological information.

Aggravated Medical Conditions: No information available.
3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Haz/Non-haz</th>
<th>Component</th>
<th>CAS-No</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Acetic acid</td>
<td>64-19-7</td>
<td>3 - 6</td>
</tr>
<tr>
<td></td>
<td>Water</td>
<td>7732-18-5</td>
<td>94 - 97</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.

Skin Contact: Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention.

Inhalation: Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention.

Ingestion: Do not induce vomiting. Obtain medical attention.

Notes to Physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point: Not applicable

Autoignition Temperature: No information available.

Explosion Limits:
- Upper: No data available
- Lower: No data available

Suitable Extinguishing Media: Substance is nonflammable; use agent most appropriate to extinguish surrounding fire.

Unsuitable Extinguishing Media: No information available.

Hazardous Combustion Products: No information available.

- Sensitivity to mechanical impact: No information available.
- Sensitivity to static discharge: No information available.

Specific Hazards Arising from the Chemical: Thermal decomposition can lead to release of irritating gases and vapors.

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.

NFPA:
- Health: 1
- Flammability: 0
- Instability: 0
- Physical hazards: N/A

6. ACCIDENTAL RELEASE MEASURES
6. ACCIDENTAL RELEASE MEASURES

Personal Precautions
Use personal protective equipment. Ensure adequate ventilation. Avoid contact with skin, eyes and clothing.

Environmental Precautions
Should not be released into the environment.

Methods for Containment and Clean Up
Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling
Wear personal protective equipment. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing. Do not breathe vapors or spray mist.

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Measures
Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Exposure Guidelines

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>TWA: 10 ppm</td>
<td>(Vacated) TWA: 10 ppm</td>
<td>TWA: 50 ppm</td>
</tr>
<tr>
<td></td>
<td>STEL: 15 ppm</td>
<td>(Vacated) TWA: 25 mg/m³</td>
<td>TWA: 10 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 10 ppm</td>
<td>TWA: 25 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL: 15 ppm</td>
<td>STEL: 15 ppm</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA: 25 mg/m³</td>
<td>STEL: 37 mg/m³</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Quebec</th>
<th>Mexico OEL (TWA)</th>
<th>Ontario TWA EV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>TWA: 10 ppm</td>
<td>TWA: 10 ppm</td>
<td>TWA: 10 ppm</td>
</tr>
<tr>
<td></td>
<td>TWA: 25 mg/m³</td>
<td>TWA: 25 mg/m³</td>
<td>TWA: 10 ppm</td>
</tr>
<tr>
<td></td>
<td>STEL: 15 ppm</td>
<td>STEL: 15 ppm</td>
<td>STEL: 15 ppm</td>
</tr>
<tr>
<td></td>
<td>STEL: 37 mg/m³</td>
<td>STEL: 37 mg/m³</td>
<td>STEL: 15 ppm</td>
</tr>
</tbody>
</table>

NIOSH IDLH: Immediately Dangerous to Life or Health

Personal Protective Equipment

Eye/face Protection
Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

Skin and body protection
Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical State</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Colorless</td>
</tr>
<tr>
<td>odor</td>
<td>odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available.</td>
</tr>
<tr>
<td>pH</td>
<td>No information available.</td>
</tr>
</tbody>
</table>
9. PHYSICAL AND CHEMICAL PROPERTIES

- **Vapor Pressure**: No information available.
- **Vapor Density**: No information available.
- **Viscosity**: No information available.
- **Boiling Point/Range**: No information available.
- **Melting Point/Range**: No information available.
- **Decomposition temperature**: No information available.
- **Flash Point**: Not applicable
- **Evaporation Rate**: No information available.
- **Specific Gravity**: No information available.
- **Solubility**: No information available.
- **log Pow**: No data available

10. STABILITY AND REACTIVITY

- **Stability**: Stable under normal conditions.
- **Conditions to Avoid**: Incompatible products. Excess heat.
- **Incompatible Materials**: Metals, Oxidizing agents, Acids, Bases, Alcohols, Amines, Acid anhydrides
- **Hazardous Decomposition Products**: Carbon monoxide (CO), Carbon dioxide (CO₂), Thermal decomposition can lead to release of irritating gases and vapors
- **Hazardous Polymerization**: Hazardous polymerization does not occur.
- **Hazardous Reactions**: None under normal processing.

11. TOXICOLOGICAL INFORMATION

**Acute Toxicity**

<table>
<thead>
<tr>
<th>Component</th>
<th>LD50 Oral (Rat)</th>
<th>LD50 Dermal (Rabbit)</th>
<th>LC50 Inhalation (Rat) 4 h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>3310 mg/kg</td>
<td>1060 mg/kg</td>
<td>11.4 mg/L</td>
</tr>
</tbody>
</table>

- **Irritation**: No information available.
- **Toxicologically Synergistic Products**: No information available.

**Chronic Toxicity**

- **Carcinogenicity**: There are no known carcinogenic chemicals in this product
- **Sensitization**: No information available.
12. ECOLOGICAL INFORMATION

Ecotoxicity
Do not empty into drains.

<table>
<thead>
<tr>
<th>Component</th>
<th>Freshwater Algae</th>
<th>Freshwater Fish</th>
<th>Microtox</th>
<th>Water Flea</th>
</tr>
</thead>
</table>
| Acetic acid | Not listed       | Pimephales promelas: LC50 = 88 mg/L/96h  
 |             |                  | Lepomis macrochirus: LC50 = 75 mg/L/96h | Photobacterium phosphoreum: EC50 = 8.8 mg/L/15 min  
 |             |                  |                      | Photobacterium phosphoreum: EC50 = 8.8 mg/L/25 min  
 |             |                  |                      | Photobacterium phosphoreum: EC50 = 8.8 mg/L/6 min  
 |             |                  |                      | EC50 = 95 mg/L/24h |

Persistence and Degradability
No information available

Bioaccumulation / Accumulation
No information available

Mobility

<table>
<thead>
<tr>
<th>Component</th>
<th>log Pow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>-0.2</td>
</tr>
</tbody>
</table>

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. TRANSPORT INFORMATION

DOT
Not regulated

TDG
Not regulated
14. TRANSPORT INFORMATION

IATA
Not regulated

IMDG/IMO
Not regulated

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>Component</th>
<th>TSCA</th>
<th>DSL</th>
<th>NDSL</th>
<th>EINECS</th>
<th>ELINCS</th>
<th>NLP</th>
<th>PICCS</th>
<th>ENCS</th>
<th>AI08S</th>
<th>CHINA</th>
<th>KECL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>200-580-7</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Water</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>231-791-2</td>
<td>-</td>
<td>X</td>
<td>-</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
</tbody>
</table>

Legend:

X - Listed
E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.
F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.
N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.
P - Indicates a commenced PMN substance
R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.
S - Indicates a substance that is identified in a proposed or final Significant New Use Rule
T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.
XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B).
Y1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.
Y2 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313
Not applicable

SARA 311/312 Hazardous Categorization

Acute Health Hazard No
Chronic Health Hazard No
Fire Hazard No
Sudden Release of Pressure Hazard No
Reactive Hazard No

Clean Water Act
Not applicable
<table>
<thead>
<tr>
<th>Component</th>
<th>CWA - Hazardous Substances</th>
<th>CWA - Reportable Quantities</th>
<th>CWA - Toxic Pollutants</th>
<th>CWA - Priority Pollutants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>X</td>
<td>5000 lb</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**Clean Air Act**
Not applicable

**OSHA**
Not applicable

**CERCLA**
Not Applicable

<table>
<thead>
<tr>
<th>Component</th>
<th>Hazardous Substances RQs</th>
<th>CERCLA EHS RQs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>5000 lb</td>
<td>-</td>
</tr>
</tbody>
</table>

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

**State Right-to-Know**
Not applicable

<table>
<thead>
<tr>
<th>Component</th>
<th>Massachusetts</th>
<th>New Jersey</th>
<th>Pennsylvania</th>
<th>Illinois</th>
<th>Rhode Island</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetic acid</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

**U.S. Department of Transportation**
Reportable Quantity (RQ): N
DOT Marine Pollutant: N
DOT Severe Marine Pollutant: N

**U.S. Department of Homeland Security**
This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade**
No information available

**Canada**
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

**WHMIS Hazard Class**
Non-controlled
16. OTHER INFORMATION

Prepared By Regulatory Affairs
Richard Allan Scientific
A Subsidiary of Thermo Fisher Scientific
Tel: (800) 522-7270

Creation Date 14-Feb-2012
Print Date 14-Feb-2012

Revision Summary "***", and red text indicates revision

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End of SDS