Material Safety Data Sheet – Fluoro H₂O₂

CHEMICAL IDENTIFICATION:

Product Name: Fluoro H₂O₂ - Fluorescent Hydrogen Peroxide/Peroxidase Detection Kit
Catalog # FLOH100-3
Components:
Part # 3011. 5X Reaction Buffer: 20 ml of 0.25M sodium phosphate buffer, pH 7.4
Part # 4007. Detection reagent (ADHP): One Vial for 500 assays.
Part # 3012. Hydrogen Peroxide: 200µL of a stabilized 3% solution.
Part # 6004. Horseradish Peroxidase: 18.9 Units of enzyme

Part# 4007

Section 1
Synonyms: ADHP, 10-Acetyl-3,7-dihydroxyphenoxazine
CAS #: 119171-73-2
Chemical Formula: C₁₄H₁₁NO₄

Section 2 - Hazard Identification
Not known.

Section 3 – Characteristics
Red-brown powder
Boiling point °f: No data available.
Vapor pressure (mm Hg): No data available.
Vapor density: No data available.
Solubility in water: Very low.
Specific gravity: Not applicable.
% Volatile by volume: Not applicable.
Evaporation rate: No data available.
pH: Not applicable to a powder.

Section 4 - Storage, Handling, Stability
The material is air sensitive. Store dry material at 4°C

Section 5 - Safety Control Measures
Gloves and standard laboratory protective clothing and eyewear are recommended. Safe laboratory practices should be followed.
Section 6 - Health Hazard Data
May enter the body through inhalation, ingestion, eye, and skin contact. To our knowledge the hazards of this material have not been fully tested. Handle material with caution.

RTECS Number: None known
Toxicity: We are not aware of any toxicity data for this product.
Health Hazards: We are not aware of any reported health hazards for this product. We recommend treating all chemicals with caution.
Potential Hazards: To our knowledge, the health hazards have not been thoroughly investigated.
Carcinogenicity: Not listed by NTP, IARC or OSHA.

Section 7 - First Aid Measures
Avoid prolonged or repeated exposure. Remove contaminated clothing and shoes, and wash before reuse.
Skin: Wash skin thoroughly with soap and water.
Eyes: Flush with water for at least 15 minutes.
Ingestion: Seek medical attention.
Inhalation: Remove to fresh air. Seek medical attention.

Section 8 - Fire/Explosion Hazard Data
Use any means suitable for extinguishing surrounding fire. It is not necessary to use any special firefighting procedures. Water spray, carbon dioxide, dry chemical powder or appropriate foam can all be used.
Thermal Decomposition: No decomposition if used according to specifications.
Dangerous Reactions: None identified.
Dangerous Products of Decomposition: No dangerous decomposition products identified.

Section 9 - Accidental Release Measures
For release of large amounts of material, wear safety glasses and rubber gloves. Stop source of leak and isolate spill area. Collect material in an appropriate container and dispose all waste in accordance with applicable laws. Dispose of all waste in accordance with all national, state, and local regulations.

Part# 3012

Section 1
Synonyms: 3%; Hydrogen Peroxide
CAS No.: 7722-84-1
Molecular Weight: 34.01
Chemical Formula: H2O2 in aqueous solution (3%)

Section 2 - Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No.</th>
<th>Percent</th>
<th>Hazardous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen Peroxide</td>
<td>7722-84-1</td>
<td>2 - 4%</td>
<td>Yes</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>96 - 98%</td>
<td>No</td>
</tr>
</tbody>
</table>
Section 3 - Hazards Identification

Emergency Overview

WARNING! MAY BE HARMFUL IF SWALLOWED. CAUSES EYE IRRITATION.

SAF-T-DATA\textsuperscript{(tm)} Ratings (Provided here for your convenience)

Health Rating: 2 - Moderate
Flammability Rating: 0 - None
Reactivity Rating: 1 - Slight
Contact Rating: 2 - Moderate
Lab Protective Equip: GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES
Storage Color Code: Green (General Storage)

Potential Health Effects

\textbf{Inhalation}: Not expected to be a health hazard under normal conditions.
\textbf{Ingestion}: Large oral doses may cause irritation and blistering to the mouth, throat, and abdomen. May also cause abdominal pain, vomiting, and diarrhea.
\textbf{Skin Contact}: No adverse effects expected on intact skin. Contact on burn or open skin may cause stinging pain or irritation.
\textbf{Eye Contact}: Causes irritation, redness, and pain.
\textbf{Chronic Exposure}: No information found.
\textbf{Aggravation of Pre-existing Conditions}: No information found.

Section 4 - First Aid Measures

\textbf{Inhalation}: Not expected to require first aid measures.
\textbf{Ingestion}: Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.
\textbf{Skin Contact}: Not expected to require first aid measures. Wash exposed area with soap and water. Get medical advice if irritation develops.
\textbf{Eye Contact}: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

Section 5 - Fire Fighting Measures

\textbf{Fire}: Not considered to be a fire hazard. Concentrated hydrogen peroxide (30\%) is a strong oxidizer, but this dilute product does not present that hazard.
\textbf{Explosion}: Not considered to be an explosion hazard. Drying of concentrated hydrogen peroxide on clothing or other combustible materials may cause fire or explosion.
\textbf{Fire Extinguishing Media}: Use any means suitable for extinguishing surrounding fire.
\textbf{Special Information}: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.
**Section 6 - Accidental Release Measures**
Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Contain and recover liquid when possible. Collect liquid in an appropriate container or absorb with an inert material (e.g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Small amounts of residue may be flushed to sewer with plenty of water.

**Section 7 - Handling and Storage**
Store in a cool, well-ventilated dark area. Protect from freezing. Isolate from incompatible substances. Protect container from physical damage. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

**Section 8 - Exposure Controls/Personal Protection**

**Airborne Exposure Limits:**
- OSHA Permissible Exposure Limit (PEL): 1 ppm (TWA).
- ACGIH Threshold Limit Value (TLV): 1 ppm (TWA), A3: Animal carcinogen.

**Ventilation System:**
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

**Personal Respirators (NIOSH Approved):**
Not expected to require personal respirator usage. If the exposure limit is exceeded, wear a supplied air, full-face piece respirator, airlined hood, or full-face piece self-contained breathing apparatus. This substance has unknown warning properties.

**Skin Protection:**
Wear protective gloves and clean body-covering clothing.

**Eye Protection:**
Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

**Section 9 - Physical and Chemical Properties**

**Appearance:** Clear, colorless solution.
**Odor:** Odorless.
**Solubility:** Infinitely soluble.
**Specific Gravity:** ca. 1.0
**pH:** No information found.
**% Volatiles by volume @ 21C (70F):** 100
**Boiling Point:** ca. 100C (ca. 212F)
**Melting Point:** ca. 0C (ca. 32F)
**Vapor Density (Air=1):** No information found.
**Vapor Pressure (mm Hg):** No information found.
**Evaporation Rate (BuAc=1):** No information found.
Section 10 - Stability and Reactivity
Stability: Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products: Decomposes to water and oxygen.
Hazardous Polymerization: Will not occur.
Incompatibilities: Heat, reducing agents, organic materials, dirt, alkalis, rust, and many metals.
Conditions to Avoid: Light, heat, incompatibles.

Section 11 - Disposal Considerations
Dilute with water and flush to sewer if local ordinances allow, otherwise, whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 12 - Transport Information
Not regulated.

Section 13 - Other Information
NFPA Ratings: Health: 1 Flammability: 0 Reactivity: 1
Label Hazard Warning:
WARNING! MAY BE HARMFUL IF SWALLOWED. CAUSES EYE IRRITATION.
Label Precautions:
Avoid contact with eyes.
Keep container closed.
Wash thoroughly after handling.
Label First Aid:
In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention. If swallowed, give large amounts of water to drink. Never give anything by mouth to an unconscious person. If large amounts were swallowed, get medical advice.
Product Use:
Laboratory Reagent.

Part # 3011 and 6004

Section 1 - Identification
CAS No.: NA
Molecular Weight: NA
Chemical Formula: NA

Section 2 - Hazard Identification
Harmful if swallowed. May cause irritation, avoid breathing vapors or dusts. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed.
Section 3 - First Aid Measures
Harmful if swallowed. May cause irritation, avoid breathing vapors or dusts. Use with adequate ventilation. Avoid contact with eyes, skin, and clothes. Wash thoroughly after handling. Keep container closed
FIRST AID: SKIN: Wash exposed area with soap and water. If irritation persists, seek medical attention.

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen
INGESTION: If swallowed, induce vomiting immediately after giving two glasses of water. Never give anything by mouth to an unconscious person.

Section 4 - Fire Fighting Measures
Fire Extinguisher Type: Any means suitable for extinguishing surrounding fire
Fire/Explosion Hazards: Thermal decomposition produces highly toxic fumes.
Fire Fighting Procedure: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and clothing.

Section 5 - Accidental Release Measures
Absorb spill with inert material, then place in a chemical waste container. Dispose of in a manner consistent with federal, local law.

Section 6 - Handling and Storage
Store in a cool dry place. Do not get in eyes, on skin, on clothing. Wash thoroughly after handling

Section 7 - Exposure Controls & Personal Protection
Ventilation: Local Exhaust
Use Gloves, Safety Glasses with side shield.
Other Protective Equipment: Use safe laboratory handling procedures.

Section 8 - Stability and Reactivity Information
Stability: Stable
Conditions to Avoid: Avoid contact with incompatible materials.
Materials to Avoid: Strong acids, aluminum and steel
Hazardous Decomposition Products: Thermal decomposition may produce toxic gases.
Hazardous Polymerization: Will Not Occur
Condition to Avoid: None known

Section 9 - Additional Information
Conditions aggravated/target organs: Persons with pre-existing eye and skin conditions will be more susceptible. Acute: Skin irritation, mild eye irritation, ingestion of large quantities may cause potassium poisoning. Chronic: Dermatitis, eye damage.
DOT Classification: Not Regulated
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