Section 1 - Product and Company Information

Product Name: PARAFORMALDEHYDE
Product Number: 76240
Brand: Fluka Chemical
Company: Sigma-Aldrich
Street Address: 3505 Spruce Street
City, State, Zip, Country: SAINT LOUIS, MO 63103 US
Technical Phone: 314 771 5766
Fax: 800 326 5952
Emergency Phone: 414 273 3650 Ext. 5996

Section 2 - Composition/Information on Ingredients

Substance Name: PARAFORMALDEHYDE
CAS #: 30525-89-4
SARA 313: Yes
EC No: 200-001-8
Annex I Index Number: 8

Formula: (CH2O)n
Synonyms: Aldeldehyde, Flo-Mor, Formagene, Paraform Polyformaldehyde

Section 3 - Hazards Identification

Emergency Overview

HMIS Rating
Health: 3
Flammability: 1
Reactivity: 0

NFPA Rating
Health: 3
Flammability: 1
Reactivity: 0

Additional chronic hazards present.
For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure
If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

Inhalation Exposure
If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Section 5 - Fire Fighting Measures

Flammable Hazards: Yes

Explosion Data
Dust Potential
This material, like most materials in powder form, is capable of creating a dust explosion.

Flash Point: 158 °F
70 °C

Autoignition Temp: 370 °C
Flammability: Yes

Extinguishing Media
Suitable
Water spray, carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting Protective Equipment
Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s)
Flammable solid. Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill
Evacuate area. Shut off all sources of ignition. Use nonsparking tools.

Procedure(s) of Personal Protection(s)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up
Avoid raising dust. Sweep up, place in a bag and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling
User Exposure
Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.
Storage
Suitable
Keep container closed. Keep away from heat, sparks, and open flame.

Special Requirements
Handle and store under inert gas. Moisture sensitive.

Section 8 - Exposure Controls / PPE

Engineering Controls
Safety shower and eye bath. Use nonsparking tools. Use only in a chemical fume hood.

Personal Protective Equipment
Respiratory
Government approved respirator.

Hand
Compatible chemical-resistant gloves.

Eye
Chemical safety goggles.

General Hygiene Measures
Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Pungent</td>
</tr>
<tr>
<td>Molecular Weight:</td>
<td>N/A</td>
</tr>
<tr>
<td>pH</td>
<td>4 - 5.5</td>
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<tr>
<td>BP/VP Range</td>
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<tr>
<td>MIP/MP Range</td>
<td>163 - 165 °C</td>
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<tr>
<td>Freezing Point</td>
<td>N/A</td>
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<tr>
<td>Vapour Pressure</td>
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<tr>
<td>Vapor Density</td>
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<tr>
<td>Saturated Vapor Conc.</td>
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<tr>
<td>SD/Density</td>
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<tr>
<td>Bulk Density</td>
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<tr>
<td>Odor Threshold</td>
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<tr>
<td>Volatile%</td>
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<tr>
<td>Solvent Content</td>
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<tr>
<td>Evaporation Rate</td>
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<tr>
<td>Viscosity</td>
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<td>Partition Coefficient</td>
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<td>Decomposition Temp.</td>
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<td>Flash Point °F</td>
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<tr>
<td>Flash Point °C</td>
<td>70 °C</td>
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<tr>
<td>Explosion Limits</td>
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<tr>
<td>Flammability</td>
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</tr>
<tr>
<td>Autoignition Temp</td>
<td>370 °C</td>
</tr>
</tbody>
</table>

Section 10 - Stability and Reactivity

Stability
Stable

Conditions to Avoid
Moisture.

Materials to Avoid
Brass, Steel, Copper, Copper alloys, Acid anhydrides, Strong oxidizing agents, Strong reducing agents, Paraldehyde is incompatible with isocyanates, oxides, and bronze.

Hazardous Decomposition Products
Carbon monoxide, Carbon dioxide, Formaldehyde.

Hazardous Decomposition Products Formed Upon Contact with Water
Decomposition by acids, alkalis, and hot water with liberation of formaldehyde.

Hazardous Polymerization
Hazardous Polymerization
Will not occur.

Section 11 - Toxicological Information

Route of Exposure
Skin Contact
Causes skin irritation.

Skin Absorption
May be harmful if absorbed through the skin.

Eye Contact
Causes severe eye irritation.

Inhalation
Harmful if inhaled. Material is irritating to mucous membranes and upper respiratory tract.

Ingestion
Harmful if swallowed. Ingestion can cause immediate burning pain in the mouth, throat, abdomen; severe swelling of the larynx and skeletal paralysis affecting the ability to breathe, circulatory shock and convulsions.

Sensation
Skin
May cause allergic skin reaction.

Target Organ(s) or System(s)
Eyes, Kidneys, Liver, Heart.

Signs and Symptoms of Exposure
Effects of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. Exposure can cause: Drying, cracking, or irritation of the skin. Pulmonary edema. Effects may be delayed. Pronounced irreversible ocular damage, eye burns.

RTECS Number: RV6400000

Toxicity Data
Oral - Rat: 562 mg/kg (LD50)

Oral - Rat: 800 mg/kg (LD50)

Inhalation - Rat: 1.070 mg/m³ (LC50)

Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste); Eye Irritation; Lungs, Thorax, or Respiratory Dyspnea.
Gastrointestinal: Changes in structure or function of salivary glands.

Skin - Rat: 10000 mg/kg (LD50)

Irritation Data

Eyes - Rabbit: Remarks: Severe irritation effect
Skin - Rabbit: Remarks: No irritation effect
Skin - Rabbit: 500 mg 24H Remarks: Severe irritation effect
Eyes - Rabbit: 100 mg Remarks: Severe irritation effect

Chronic Exposure - Carcinogen
Result: This product is or contains a component that has been reported to be probably carcinogenic based on IARC, OSHA, ACGIH, NTP, or EPA classification. Formaldehyde, the decomposition product of paraformaldehyde, has been listed as a carcinogen by NTP and IARC.

OSHA Carcinogen List
Rating: Potential cancer hazard.

Chronic Exposure - Mutagen

Section 12 - Ecological Information

Physical Properties Affecting Ecotoxicity
BOD: BOD after 5 Days: 37 %

Acute Ecotoxicity Tests

Test Type: LC50 Fish
Time: 96.0 h Value: > 10 mg/l

Test Type: EC50 Daphnia
Species: Daphnia magna
Time: 24.0 h Value: 42 mg/l

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation
Contact a licensed professional waste disposal service to dispose of this material. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT
Proper Shipping Name: Paraformaldehyde
UN No.: 2213
Class: 4.1
Packing Group: Packing Group III

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Section 15 - Regulatory Information

Hazard Label: Flammable solid
PHS: Not P100

IATA
Proper Shipping Name: Paraformaldehyde
IATA UN Number: 2213
Hazard Class: 4.1
Packing Group: III

Section 16 - Other Information

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Warranty
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