1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Parafomaldehyde
Product Number: 158127
Brand: Sigma-Aldrich
Company: Sigma-Aldrich
3052 Souris Street
SAINT LOUIS MO 63103
USA
Telephone: +18003255632
Fax: +18003255052
Emergency Phone #: (314) 775-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms: p-Formaldehyde, Polyoxyethylene
Formula: (CH2O)n
Molecular Weight: 30.03 g/mol

CAS-No.: EC-No.: Index-No.: Concentration
Parafomaldehyde: 3052-89-4

3. HAZARDS IDENTIFICATION

Emergency Overview:
OSHA Hazards:
- Flammable Solid
- Target Organ Effect
- Toxic by inhalation
- Harmful by ingestion
- Skin sensitizer
- Imitant

Target Organs:
- Eyes, Kidney, Liver, Heart

HMIS Classification:
- Health Hazard: 3
- Flammability: 1
- Physical hazards: 2

NFPA Rating:
- Health Hazard: 3

4. FIRST AID MEASURES

General Advice:
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If Inhaled:
If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact:
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact:
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed:
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Flammable properties:
- Flash point: 70°C (158°F) - closed cup
- Ignition temperature: 370°C (698°F)

Suitable extinguishing media:
- Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters:
- Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:
- Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

Environmental precautions:
- Do not let product enter drains.

Methods for cleaning up:
- Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling:
- Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
- Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage:
- Keep container tightly closed in a dry and well-ventilated place.
- Handle and store under inert gas. Moisture sensitive.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handles with gloves.

Eye protection
Safety glasses

Skin and body protection
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance
Form solid
Odour pungent

Safety data
pH 4.0 - 5.5
Melding point 163 - 165 °C (325 - 329 °F)
Boiling point no data available
Flash point 70 °C (158 °F) - closed cup
Ignition temperature 370 °C (698 °F)
Lower explosion limit no data available
Upper explosion limit no data available
Density 0.880 g/cm3
Water solubility insoluble

10. STABILITY AND REACTIVITY

Storage stability
Stable under recommended storage conditions.

Conditions to avoid
Exposure to moisture.

Materials to avoid
Brass, Steel (all types and surface treatments), Copper, Acid anhydrides, Strong oxidizing agents, Strong reducing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, formaldehyde

11. TOXICOLOGICAL INFORMATION

Acute toxicity
LD50 Oral - rat - 592 mg/kg
LC50 Inhalation - rat - 4 h - 1,070 mg/m3
Remarks: Sense Organs and Special Senses (Nose, Eye, Ear, and Taste); Eye: Lacrimation. Lungs, Thorax, or Respiratory Dyspnea.
LDLO Dermal - rat - 10,000 mg/kg
Irritation and corrosion
Eyes - rabbit - Severe eye irritation
Sensitisation
May cause allergic skin reaction.

Chronic exposure
Formaldehyde, the decomposition product of paraformaldehyde, has been listed as a carcinogen by NTP and IARC.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogenic by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogenic by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogenic by OSHA.

Signs and Symptoms of Exposure
May cause irreversible eye damage.

Potential Health Effects
Inhalation Toxic if inhaled. May cause respiratory tract irritation.
Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Ingestion Harmful if swallowed.
Target Organs Eyes, Kidney, Liver, Heart.

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)
no data available

Ecotoxicity effects
Toxicity to daphnia EC50 - Daphnia magna (Water flea) - 42 mg/l - 24 h and other aquatic invertebrates.

Further information on ecology
no data available
13. DISPOSAL CONSIDERATIONS

Product
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. Contact a
licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN-Number: 2213 Class: 4.1 Packing group: III
Proper shipping name: Paraformaldehyde

IMDG
UN-Number: 2213 Class: 4.1 Packing group: III EMS-No: F-A, S-G
Proper shipping name: PARAFORMALDEHYDE
Marine pollutant: No

IATA
UN-Number: 2213 Class: 4.1 Packing group: III
Proper shipping name: Paraformaldehyde

15. REGULATORY INFORMATION

OSHA Hazards
Flammable Solid, Target Organ Effect, Toxic by inhalation., Harmful by ingestion., Skin sensitizer, Irritant

TSCA Status
On TSCA Inventory

DSL Status
All components of this product are on the Canadian DSL list.

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section
302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed
the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

CAS-No. 33525-89-4
Revision Date 1989-12-01
Paraformaldehyde

Pennsylvania Right To Know Components
CAS-No. 33525-89-4
Revision Date 1989-12-01
Paraformaldehyde

New Jersey Right To Know Components
CAS-No. 33525-89-4
Revision Date 1989-12-01
Paraformaldehyde

California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth, or any
other reproductive defects.

16. OTHER INFORMATION

Further information
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The above information is believed to be correct but does not purport to be all inclusive and shall be used
only as a guide. The information in this document is based on the present state of our knowledge and is
applicable to the product with regard to appropriate safety precautions. It does not represent any
guarantee of the properties of the product. Sigma-Aldrich Co., shall not be held liable for any damage
resulting from handling or from contact with the above product. See reverse side of invoice or packing
slip for additional terms and conditions of sale.