

1/28/10

SIGMA-ALDRICH**Material Safety Data Sheet**Version 3.3
Revision Date 01/11/2008
Print Date 12/10/2009**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Paraformaldehyde

Product Number : 158127
Brand : Sigma-Aldrich

Company : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA

Telephone : +18003255832
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Emergency Phone # : (314) 776-6555

2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : p-Formaldehyde
Polyoxymethylene

Formula : (C1H2O)n
Molecular Weight : 30.03 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Paraformaldehyde 30525-89-4	-	-	-

3. HAZARDS IDENTIFICATION**Emergency Overview****OSHA Hazards**

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

Target Organs

Eyes, Kidney, Liver, Heart

HMS Classification

Health Hazard: 3
Flammability: 1
Physical hazards: 2

NFPA Rating

Health Hazard: 3

Fire : 1
Reactivity Hazard: 2

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.

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

Handle 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
Melting 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 Respiration: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 carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen 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 carcinogen 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 and other aquatic invertebrates. EC50 - Daphnia magna (Water flea) - 42 mg/l - 24 h

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

Paraformaldehyde	CAS-No. 30525-89-4	Revision Date 1989-12-01
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Pennsylvania Right To Know Components

Paraformaldehyde	CAS-No. 30525-89-4	Revision Date 1989-12-01
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New Jersey Right To Know Components

Paraformaldehyde	CAS-No. 30525-89-4	Revision Date 1989-12-01
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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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