

## Paraformaldehyde

### SECTION 1. IDENTIFICATION

|                                      |  |
|--------------------------------------|--|
| <b>Product Identifier</b>            | Paraformaldehyde   |
| <b>Other Means of Identification</b> | Polyoxymethylene   |
| <b>Product Code(s)</b>               | PA6210   |
| <b>Product Family</b>                | Inorganic Solid  |
| <b>Recommended Use</b>               | Laboratory and industrial use.   |
| <b>Restrictions on Use</b>           | None known.  |
| <b>Supplier Identifier</b>           | Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995 |
| <b>Emergency Phone No.</b>           | Infotrac, 1-800-535-5053, 24 Hours   |
| <b>SDS No.</b>                       | 0579   |

### SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

#### Classification

Flammable solid - Category 2; Acute toxicity (Oral) - Category 4; Acute toxicity (Inhalation) - Category 4; Skin irritation - Category 2; Skin sensitization - Category 1; Germ cell mutagenicity - Category 2; Specific target organ toxicity (single exposure) - Category 1

#### Label Elements



Signal Word:  
Danger

#### Hazard Statement(s):

Causes skin and eye irritation.

Harmful if swallowed.

Flammable solid.

Harmful if inhaled.

Suspected of causing genetic defects.

May cause respiratory irritation.

#### Precautionary Statement(s):

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

Avoid breathing dust/fume/gas/mist/vapours/spray.

Use only outdoors or in a well-ventilated area.

Wash hands and skin thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.

Ground and bond container and receiving equipment.

Use explosion-proof electrical/ventilating/lighting/equipment.

Response:

IF SWALLOWED: Immediately call a POISON CENTRE or doctor.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN: Wash with plenty of water.

If skin irritation or rash occurs: Get medical advice or attention.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

If eye irritation persists: Get medical advice or attention.

Storage:

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

#### **Other Hazards**

None known.

### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance:

| Chemical Name    | CAS No.    | %   | Other Identifiers |
|------------------|------------|-----|-------------------|
| Paraformaldehyde | 30525-89-4 | >95 | Polyoxymethylene  |

### **SECTION 4. FIRST-AID MEASURES**

#### **First-aid Measures**

##### **Inhalation**

Remove source of exposure or move to fresh air. Keep at rest in a position comfortable for breathing. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor.

##### **Skin Contact**

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes.

##### **Eye Contact**

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. If eye irritation persists, get medical advice or attention.

##### **Ingestion**

Rinse mouth with water. Do not induce vomiting. If vomiting occurs, have person lie on side in the recovery position. Rinse mouth with water again.

##### **First-aid Comments**

Some of the first-aid procedures recommended here require advanced first-aid training. If exposed or concerned, get medical advice or attention.

#### **Most Important Symptoms and Effects, Acute and Delayed**

Skin sensitizer. May cause an allergic skin reaction in some people.

#### **Immediate Medical Attention and Special Treatment**

##### **Special Instructions**

General advice

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

## SECTION 5. FIRE-FIGHTING MEASURES

### Extinguishing Media

#### Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog. Special "alcohol resistant fire-fighting foams".

#### Unsuitable Extinguishing Media

Do not use a solid (straight) water stream as it may scatter and spread fire.

### Specific Hazards Arising from the Product

Closed containers may rupture violently when heated releasing contents.

In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide.

### Special Protective Equipment and Precautions for Fire-fighters

Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases. Use water spray to flush spills away from ignition sources. Knock down vapours or gases with water fog or fine water spray. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Dike and recover contaminated water for appropriate disposal.

Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment, and Emergency Procedures

Emergency responders: evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Use the personal protective equipment recommended in Section 8 of this safety data sheet. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Eliminate all ignition sources. Use grounded, explosion-proof equipment.

### Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway.

### Methods and Materials for Containment and Cleaning Up

Small spills or leaks: stop or reduce leak if safe to do so. Contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal.

Large spills or leaks: dike spilled product to prevent runoff. Use non-combustible absorbent materials such as vermiculite, earth or sand to contain spilled product.

## SECTION 7. HANDLING AND STORAGE

### Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Avoid generating vapours or mists. Only use where there is adequate ventilation. Do not breathe in this product. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent accidental contact with incompatible chemicals. Use non-sparking tools. Electrically bond and ground equipment. Ground clips must contact bare metal.

### Conditions for Safe Storage

Store in an area that is: cool, well-ventilated, out of direct sunlight and away from heat and ignition sources, separate from incompatible materials (see Section 10: Stability and Reactivity). Store in a closed container.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

Not available.

Consult local authorities for provincial or state exposure limits.

### Appropriate Engineering Controls

General ventilation is usually adequate. Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Provide eyewash in work area, if contact or splash hazard exists.

### Individual Protection Measures

#### Eye/Face Protection

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Wear chemical safety goggles and face shield when contact is possible.

#### **Skin Protection**

Wear chemical protective clothing e.g. gloves, aprons, boots.

#### **Respiratory Protection**

Wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

### **Basic Physical and Chemical Properties**

|   |   |
|---|---|
| <b>Appearance</b>                                       | White crystalline powder.                                     |
| <b>Odour</b>  | Pungent   |
| <b>Odour Threshold</b>                                  | 0.83 ppm  |
| <b>pH</b>   | Not available   |
| <b>Melting Point/Freezing Point</b>                     | Not available (melting); Not available (freezing)             |
| <b>Initial Boiling Point/Range</b>                      | Not available   |
| <b>Flash Point</b>                                      | 78 °C (172 °F)  |
| <b>Evaporation Rate</b>                                 | Not available   |
| <b>Flammability (solid, gas)</b>                        | Not available   |
| <b>Upper/Lower Flammability or Explosive Limit</b>      | Not available (upper); Not available (lower)                  |
| <b>Vapour Pressure</b>                                  | 1.4 kPa (10.5 mm Hg) at 25 °C                                 |
| <b>Vapour Density (air = 1)</b>                         | Not available   |
| <b>Relative Density (water = 1)</b>                     | Not available   |
| <b>Solubility</b>                                       | Not available in water; Insoluble in common organic solvents. |
| <b>Partition Coefficient, n-Octanol/Water (Log Kow)</b> | Not available   |
| <b>Auto-ignition Temperature</b>                        | Not available   |
| <b>Decomposition Temperature</b>                        | Not available   |
| <b>Viscosity</b>  | Not available (kinematic); Not available (dynamic)            |
| <b>Other Information</b>                                |   |
| <b>Physical State</b>                                   | Solid   |

## **SECTION 10. STABILITY AND REACTIVITY**

### **Reactivity**

None known.

### **Chemical Stability**

Normally stable. Unstable under certain conditions - see Conditions to Avoid.

### **Possibility of Hazardous Reactions**

None known.

### **Conditions to Avoid**

Water, moisture or humidity.

### **Incompatible Materials**

Oxidizing agents (e.g. peroxides).

### **Hazardous Decomposition Products**

None known.

## **SECTION 11. TOXICOLOGICAL INFORMATION**

### **Likely Routes of Exposure**

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Inhalation; skin contact; eye contact; ingestion.

#### Acute Toxicity

| Chemical Name    | LC50                               | LD50 (oral)     | LD50 (dermal)      |
|------------------|------------------------------------|-----------------|--------------------|
| Paraformaldehyde | 1070 mg/m3 (rat) (4-hour exposure) | 800 mg/kg (rat) | 500 mg/kg (rabbit) |

#### Skin Corrosion/Irritation

May cause very mild irritation based on information for closely related chemicals.

#### Serious Eye Damage/Irritation

May cause serious eye irritation based on information for closely related materials.

#### STOT (Specific Target Organ Toxicity) - Single Exposure

##### Inhalation

Causes nose and throat irritation.

##### Ingestion

No information was located.

#### Aspiration Hazard

No information was located.

#### STOT (Specific Target Organ Toxicity) - Repeated Exposure

Following skin contact: may cause dermatitis. Symptoms may include dry, red, cracked skin (dermatitis). Irritation of the respiratory system. May cause respiratory tract injury.

#### Respiratory and/or Skin Sensitization

May cause an allergic reaction (skin sensitization) based on limited evidence.

#### Carcinogenicity

| Chemical Name    | IARC       | ACGIH® | NTP        | OSHA       |
|------------------|------------|--------|------------|------------|
| Paraformaldehyde | Not Listed |        | Not Listed | Not Listed |

#### Reproductive Toxicity

##### Development of Offspring

No information was located.

##### Sexual Function and Fertility

No information was located.

##### Effects on or via Lactation

No information was located.

#### Germ Cell Mutagenicity

May be mutagenic based on limited evidence.

#### Interactive Effects

No information was located.

## SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

## SECTION 13. DISPOSAL CONSIDERATIONS

#### Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations.

## SECTION 14. TRANSPORT INFORMATION

| Regulation   | UN No. | Proper Shipping Name | Transport Hazard Class(es) | Packing Group |
|--------------|--------|----------------------|----------------------------|---------------|
| US DOT       | UN2213 | Paraformaldehyde     | 4.1 Flammable solid        | III           |
| IATA (Air)   | UN2213 | Paraformaldehyde     | 4.1 Flammable solid        | III           |
| IMO (Marine) | UN2213 | Paraformaldehyde     | 4.1 Flammable solid        | III           |

**Special Precautions** Not applicable

**Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable

## SECTION 15. REGULATORY INFORMATION

**Safety, Health and Environmental Regulations**

**Canada**

**Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)**

Listed on the DSL.

**USA**

**Toxic Substances Control Act (TSCA) Section 8(b)**

Listed on the TSCA Inventory.

## SECTION 16. OTHER INFORMATION

**NFPA Rating** Health - 2 Flammability - 2 Instability - 2

**SDS Prepared By** Alphachem Limited

**Phone No.** (905)-821-2995

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**Date of Last Revision** June 21, 2016

**References** CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

**Disclaimer** This document is offered only as a guide in the safe handling of the above product, and has been prepared from the best information currently available. It is not intended to be all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or reliance on any information herein.