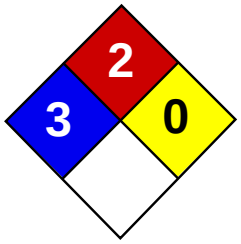

Health	2
Fire	2
Reactivity	0
Personal Protection	J

Material Safety Data Sheet
Paraformaldehyde MSDS

Section 1: Chemical Product and Company Identification

Product Name: Paraformaldehyde

Catalog Codes: SLP1627

CAS#: 30525-89-4

RTECS: RV0540000

TSCA: TSCA 8(b) inventory: Paraformaldehyde

CI#: Not available.

Synonym: Aldacide, Flo-Mor, Formagene, Paraform; Polyoxymethylene; Triformol; Trioxymethylene

Chemical Name: Paraformaldehyde

Chemical Formula: (C-H2-O)n polymer

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Paraformaldehyde	30525-89-4	100

Toxicological Data on Ingredients: Paraformaldehyde: ORAL (LD50): Acute: 800 mg/kg [Rat]. DUST (LC50): Acute: 1070 mg/m 4 hours [Rat].

Section 3: Hazards Identification

Potential Acute Health Effects:
Very hazardous in case of skin contact (irritant), of eye contact (irritant). Hazardous in case of skin contact (sensitizer), of ingestion, of inhalation. Slightly hazardous in case of skin contact (corrosive), of eye contact (corrosive). The amount of tissue damage depends on length of contact. Eye contact can result in corneal damage or blindness. Skin contact can produce inflammation and blistering. Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing. Severe over-exposure can produce lung damage, choking, unconsciousness or death. Inflammation of the eye is characterized by redness, watering, and itching. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.

Potential Chronic Health Effects:
Slightly hazardous in case of skin contact (sensitizer). CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Not available. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance

is toxic to mucous membranes. Repeated or prolonged exposure to the substance can produce target organs damage. Repeated exposure of the eyes to a low level of dust can produce eye irritation. Repeated skin exposure can produce local skin destruction, or dermatitis. Repeated inhalation of dust can produce varying degree of respiratory irritation or lung damage. Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.

Section 4: First Aid Measures

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.

Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Cover the irritated skin with an emollient. Cold water may be used.Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention immediately.

Serious Skin Contact:
Wash with a disinfectant soap and cover the contaminated skin with an anti-bacterial cream. Seek immediate medical attention.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. WARNING: It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled material is toxic, infectious or corrosive. Seek immediate medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Flammable.

Auto-Ignition Temperature: 300°C (572°F)

Flash Points: CLOSED CUP: 70°C (158°F).

Flammable Limits: LOWER: 7% UPPER: 73%

Products of Combustion: These products are carbon oxides (CO, CO2).

Fire Hazards in Presence of Various Substances:
Slightly flammable to flammable in presence of open flames and sparks, of heat. Non-flammable in presence of shocks.

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Slightly explosive in presence of open flames and sparks, of heat.

Fire Fighting Media and Instructions:
Flammable solid. SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, autoignition or explosion.

Special Remarks on Fire Hazards:

May re-ignite after fire is extinguished. Decomposition into flammable formaldehyde gas on heating.

Special Remarks on Explosion Hazards: May explode or burn with explosive violence

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Flammable solid. Corrosive solid. Stop leak if without risk. Do not get water inside container. Do not touch spilled material. Use water spray curtain to divert vapor drift. Use water spray to reduce vapors. Prevent entry into sewers, basements or confined areas; dike if needed. Eliminate all ignition sources. Call for assistance on disposal.

Section 7: Handling and Storage

Precautions:
Keep locked up.. Keep container dry. Keep away from heat. Keep away from sources of ignition. Ground all equipment containing material. Do not ingest. Do not breathe dust. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as oxidizing agents, reducing agents, metals, acids.

Storage:
Keep container in a cool, well-ventilated area. Keep container tightly closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection:
Splash goggles. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Vapor and dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Amorphous solid powder .)

Odor: Formaldehyde. Pungent. (Slight.)

Taste: Not available.

Molecular Weight: (30.03)n g/mole

Color: White.

pH (1% soln/water): 6.7 [Neutral.]

Boiling Point: Not available.

Melting Point:
120 - 170 deg. C Decomposition temperature: 164°C (327.2°F)

Critical Temperature: Not available.

Specific Gravity: Density: 1.46 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: 1.03 (Air = 1)

Volatility: 9% (w/w).

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water.

Solubility:
Partially soluble in cold water. Insoluble in diethyl ether. Soluble in fixed alkali hydroxide solution. Insoluble in alcohol. Insoluble in most organic solvents. The higher polymers are insoluble in water. The rate at which paraformaldehyde dissolves (hydrolyzes) in water is at a minimum at pH 3-5; it increases rapidly at lower or higher pHs Solubility in water: 500 mg/l of water @18 deg. C

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Heat, ignition sources (sparks, flames, friction), incompatible materials

Incompatibility with various substances: Reactive with oxidizing agents, reducing agents, metals, acids.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Incompatible with liquid oxygen, isocyanates, anhydrides, metals (bronze, brass, copper, copper alloys, steel) Moisture sensitive

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.

Toxicity to Animals:
WARNING: THE LC50 VALUES HEREUNDER ARE ESTIMATED ON THE BASIS OF A 4-HOUR EXPOSURE. Acute oral toxicity (LD50): 800 mg/kg [Rat]. Acute toxicity of the dust (LC50): 1070 mg/m 4 hours [Rat]. 3

Chronic Effects on Humans: Causes damage to the following organs: mucous membranes.

Other Toxic Effects on Humans:
Very hazardous in case of skin contact (irritant). Hazardous in case of skin contact (sensitizer), of ingestion, of inhalation (lung corrosive). Slightly hazardous in case of skin contact (corrosive), of eye contact (corrosive).

Special Remarks on Toxicity to Animals:
Lowest Published Lethal Dose: LDL [Rabbit] - Route: skin; Dose: 10000 mg/kg.

Special Remarks on Chronic Effects on Humans:

May affect genetic material (mutagenic). While Paraformaldehyde has not been identified as a carcinogen, it should be handled with caution since Formaldehyde (the monomer from which it is made) is a carcinogen.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Causes severe skin irritation and possible burns. Eyes: Causes severe eye irritation and burns. May result in corneal injury. Inhalation: May be harmful if inhaled. May affect respiration (dyspnea), cause severe irritation of the upper respiratory tract with pain, burns, and inflammation of the lining of the nose and throat and lungs. May cause loss of smell, and may cause pulmonary edema, bronchopneumonia. Ingestion: May be harmful if swallowed. May cause severe digestive tract irritation with inflammation of the mouth, throat and stomach, abdominal pain, nausea, vomiting, and diarrhea. Chronic Potential Health Effects: Skin: Repeated or prolonged skin contact may cause sensitization dermatitis. Eyes: Repeated or prolonged eye contact may cause conjunctivitis. Inhalation: Repeated or prolonged inhalation may cause chronic bronchitis or asthma. Ingestion: Repeated or prolonged ingestion may affect the kidneys

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 4.1: Flammable solid.

Identification: : Paraformaldehyde UNNA: 2213 PG: III

Special Provisions for Transport: Not available.

Section 15: Other Regulatory Information

Federal and State Regulations:
Connecticut hazardous material survey.: Paraformaldehyde Illinois toxic substances disclosure to employee act: Paraformaldehyde Illinois chemical safety act: Paraformaldehyde New York release reporting list: Paraformaldehyde Rhode Island RTK hazardous substances: Paraformaldehyde Pennsylvania RTK: Paraformaldehyde Massachusetts RTK: Paraformaldehyde Massachusetts spill list: Paraformaldehyde New Jersey: Paraformaldehyde New Jersey spill list: Paraformaldehyde Louisiana spill reporting: Paraformaldehyde California Director's list of Hazardous substances: Paraformaldehyde TSCA 8(b) inventory: Paraformaldehyde CERCLA: Hazardous substances.: Paraformaldehyde: 1000 lbs. (453.6 kg)

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

Other Classifications:

WHMIS (Canada):
CLASS B-4: Flammable solid. CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 2

Reactivity: 0

Personal Protection: j

National Fire Protection Association (U.S.A.):

Health: 3

Flammability: 2

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Synthetic apron. Vapor and dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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