

PARAFORMALDEHYDE

Material Safety Data Sheet

1: Identification of the substance/mixture and of the company/undertaking

Product Details:

Trade Name	PARAFORMALDEHYDE
Synonyms	ALDACIDE; FLO-MOR; FORMAGENE; PARAFORM; POLYOXYMETHYLENE; TRIFORMOL, TRIOXYMETHYLENE
Chemical Formula	(C-H2-O)n polymer
Manufacturer /Supplier	Simalin Chemical Industries Pvt. Ltd.

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Further information obtainable from Information in case of emergency	Safety Department Tel:+91265-2840265

SECTION 2: Composition/information on ingredients

2.1 Substances

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].
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Section 3: Hazards Identification:

Potential Acute Health Effects:	<p>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.</p> <p>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.</p>
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.

	<p>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.</p> <p>Repeated exposure to a highly toxic material may produce general deterioration of health by an accumulation in one or many human organs.</p>
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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, CO ₂).
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.

Fire Fighting Media and Instructions:	<p>Flammable solid.</p> <p>SMALL FIRE: Use dry chemical powder.</p> <p>LARGE FIRE: Use water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, auto ignition or explosion.</p>
Special Remarks on Fire Hazards:	<p>May re-ignite after fire is extinguished. Decomposition into flammable formaldehyde gas on heating.</p>
Special Remarks on Explosion Hazards:	<p>May explode or burn with explosive violence</p>

Section 6: Accidental Release Measures:

Small Spill:	<p>Use appropriate tools to put the spilled solid in a convenient waste disposal container.</p>
Large Spill:	<p>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.</p>

Section 7: Handling and Storage:

Precautions:	<p>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.</p> <p>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.</p>
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 and 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:

Information on basic physical and chemical properties	<ul style="list-style-type: none"> a) Appearance Form: crystalline b) Odor pungent c) Odor Threshold no data available d) pH – 8.3 – 8.5 e) Melting point/freezing point melting point/range: 120 - 170 °C - lit. f) Initial boiling point and boiling range -no data available g) Flash point 70 °C - closed cup h) Evaporation rate no data available i) Flammability (solid, gas) The substance or mixture is a flammable solid with the category 2. j) Upper/lower flammability or explosive limits no data available k) Vapour pressure no data available l) Vapour density no data available m) Relative density 0,88 g/cm³ at 25 °C n) Water solubility insoluble o) Partition coefficient: noctanol/water -no data available p) Auto-ignition temperature - no data available q) Decomposition temperature -no data available r) Viscosity no data available s) Explosive properties no data available t) Oxidizing properties no data available
Other safety information	Bulk density 500 - 800 kg/m ³

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 here under 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].
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:

Toxicity:	Toxicity to daphnia and other aquatic invertebrates EC50 - Daphnia magna (Water flea) - 42 mg/l - 24 h
Persistence and degradability	no data available Ratio BOD/Th BOD - 37
Bio accumulative potential	no data available
Mobility in soil	no data available
Results of PBT and vPvB Assessment :	PBT/vPvB assessment not available as chemical safety assessment not required/not conducted
Other adverse effects	Harmful to aquatic life.

SECTION 13: Disposal considerations:

Waste treatment methods

Product :	Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.
Contaminated packaging :	Dispose of as unused product.

Section 14: Transport Information:

DOT Classification:	4.1, Flammable solid.
Identification:	2213 PG: III
Special Provisions for Transport:	Not available.

SECTION 15: Regulatory information:

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.	
Safety, health and environmental regulations/legislation specific for the substance or mixture	no data available
15.2 Chemical Safety Assessment	For this product a chemical safety assessment was not carried out

Section 16: Other Information:

References:	Not available.
Other Special Considerations:	Not available.
Further information	<p>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.</p> <p>It does not represent any guarantee of the properties of the product. Simalin Chemical Industries Pvt. Ltd. shall not be held liable for any damage resulting from handling or from contact with the above product.</p>

Department issuing MSDS: Safety Department

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This document is valid for 03years from the date of issue and is bound to be canceled, if not revised on or before the date of revision.	