

EMS CATALOG NO: 19208 & 19210
EMS PRODUCT: Paraformaldehyde Granular
DATE: 06/15/2006
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MATERIAL SAFETY DATA SHEET

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

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FOR PRODUCT AND SALES INFORMATION

CONTACT ELECTRON MICROSCOPY SCIENCES OFFICE ABOVE.

PRODUCT IDENTIFICATION

PRODUCT NAME: **Paraformaldehyde** Granular

TRADE NAMES/SYNONYMS: Granuform^(R), Para, Paraform

CAS NUMBER: 30525-89-4

CHEMICAL FAMILY: Aldehyde

CHEMICAL FORMULA: HO-(CH₂O)_n-H (n=10-30)

This material is in compliance with the Toxic Substances Control Act.

SUMMARY OF HAZARDS

CAUTION! This product causes severe irritation to the eyes. May cause irritation and sensitization to the skin and respiratory tract.

HAZARD RATING SYSTEMS:

NFPA

HEALTH = 2

FIRE = 1

REACTIVITY = 0

NOTE = FLAMMABLE SOLID

HMIS

HEALTH = 2

FIRE = 1

REACTIVITY = 0

PERSONAL PROTECTION = J

HAZARDOUS COMPONENTS

NOTE! There are no established exposure limits for Paraformaldehyde. Formaldehyde has an OSHA PEL of 0.75 ppm and an ACGIH TLV of 1.0 ppm. The OSHA STEL of 2 ppm.

CHEMICAL NAME	CAS #	%
Formaldehyde	50-00-0	89-92

CARCINOGENICITY

DESIGNATED BY: NTP #1 IARC #1 OSHA #1 OTHER: NIOSH

CHEMICAL AND PHYSICAL PROPERTIES

The pH level corresponds to 10 grams in 1 liter H₂O @ 68°F.

BOILING POINT:	Not applicable
MELTING POINT:	248°F (120°C)
SOLUBILITY IN WATER:	Appreciable
pH:	3.5 - 5
VAPOR PRESSURE:	1.22 mm Hg at 68°F
VAPOR DENSITY:	Not applicable
SPECIFIC GRAVITY:	1.22 - 1.25 (H ₂ O=1)
EVAPORATION RATE:	Not applicable
APPEARANCE/ODOR:	White granules with a pungent odor.

HEALTH HAZARD DATA & FIRST AID PROCEDURES

TOXICITY DATA (Formaldehyde):

LD50 800 mg/kg oral, rat.

LC50 Not established.

EYE CONTACT:

Causes eye irritation. In case of contact, immediately flush eyes with plenty of water for 15 minutes. Call a physician.

SKIN CONTACT:

May cause irritation. In case of contact, wash skin with soap and water. Call a physician if irritation persists.

SKIN ABSORPTION:

Not expected to be absorbed through skin. In case of contact flush skin with soap and water.

INHALATION:

May cause irritation to the respiratory tract. If inhaled and irritation occurs, remove to fresh air. If irritation persists, call a physician.

INGESTION:

Expected to cause irritation to the gastrointestinal tract. If swallowed give victim a glass of water and induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person.

CHRONIC EFFECTS OF OVEREXPOSURE:

Paraformaldehyde becomes formaldehyde in solution and de-polymerizes to form formaldehyde gas when exposed to air. Formaldehyde causes cancer in laboratory animals.

OTHER HEALTH EFFECTS:

Medical conditions which may be aggravated by exposure to this product include: Conjunctivitis of the eye, dermatitis of the skin, asthma and respiratory diseases. Sensitization may occur from the inhalation of skin contact of this product.

EXPOSURE CONTROL MEASURES

EYE PROTECTION: Chemical goggles or face shield is required.

PROTECTIVE GLOVES: Wear chemical resistant gloves.

RESPIRATORY PROTECTION:

Exposure limits have not been established for this product or its components. Atmospheric levels should be maintained as low as possible by using engineering controls. If not feasible, use an air-purifying respirator with approved filters.

OTHER PROTECTION:

If skin contact or contamination of clothing is possible, chemical resistant clothing must be worn.

VENTILATION:

Provide general and/or local exhaust ventilation in enclosed areas to maintain airborne concentrations at a minimum. Refer to "Industrial Ventilation" by ACGIH for a manual of recommended practices.

PERSONAL HYGIENE/WORK PRACTICES:

Establish good personal hygiene and work practices. Always wash hands and face before eating, drinking or smoking. Provide safety shower and eye wash station in work area.

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (METHOD USED): 158°F (70°C) (closed cup)

FLAMMABLE LIMITS: LOWER: 7%
UPPER: 73%

EXTINGUISHING MEDIA: Use water mist, foam, CO₂ or dry powder.

FIRE FIGHTING INSTRUCTIONS:

Evacuate enclosed and surrounding areas. If smoke and fumes cannot be avoided, use proximity suit and self-contained breathing apparatus.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

May form explosive organic dust cloud. Avoid use of compressed air as a motive gas.

REACTIVITY DATA

STABILITY: Stable at normal temperatures and conditions of storage.

INCOMPATIBILITY:

Alkalis, reactive organic substances, combustible materials, caustics, isocyanates, anhydrides, oxides and inorganic acid.

HAZARDOUS PRODUCTS OF DECOMPOSITION:

Can include formaldehyde, carbon dioxide, carbon monoxide and hydrogen.

HAZARDOUS POLYMERIZATION:

Will not undergo hazardous polymerization.

ENVIRONMENTAL & DISPOSAL INFORMATION

GENERAL:

CERCLA/SARA requires notification to the appropriate Federal, State and local authorities of releases of hazardous or extremely hazardous quantities equal to or greater than the Reportable Quantities (RQs) in 40 CFR 302.4 and 40 CFR 355.

SARA Title 313 requires submissions of annual reports of releases of toxic chemicals that appear in 40 CFR 372. Components present in this product at a level which could require reporting under statute is; paraformaldehyde.

ACTION TO TAKE FOR SPILLS/LEAKS:

For small spills, sweep or shovel solids into proper container for disposal.

DISPOSAL METHOD:

Dispose of in accordance with all Local, State and Federal regulations.

PRECAUTIONS FOR SAFE HANDLING, STORAGE AND USE

Store in cool, dry, well-ventilated area away from sources of ignition. Keep containers tightly closed when not in use. When working with this product, measures to prevent electrostatic charging should always be taken, and explosion protected equipment should always be used. Shelf life is limited.

SHIPPING INFORMATION

PRIMARY HAZARD:	Flammable Solid
SECONDARY HAZARD:	None
DOT SHIPPING NAME:	Paraformaldehyde
HAZARD CLASS:	Flammable Solid

UN NUMBER: 2213
UN CLASS: 4.1
PG NUMBER: III
49 CFR REFERENCE: 173.510, 173.240 (HM-181)
LABELS: Flammable, solid

SHIPPING RESTRICTIONS:

Passenger A/C - 25 kg. max./pkg. Cargo only A/C – 100 kg. max./pkg. Single packages not permitted on A/C.

AUTHORIZED CONTAINER TYPE(S):

Refer to 40 CFR - Sections referenced above.

ADDITIONAL INFORMATION

SARA TITLE 313 REPORTING: Paraformaldehyde