

MATERIAL SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION

Product identifier : **ACTION**

Product Code(s) : None reported.

Product Use : Embalming / Deodorizing Powder.

Chemical Family : Mixture.

Supplier's name and address:
The Dodge Chemical Company (Canada) Ltd.
 1265 Fewster Drive
 Mississauga, Ontario, Canada
 L4W 1A2

Manufacturer's name and address:
 Refer to Supplier

Information Telephone # : (905) 625-0311

24 Hr. Emergency Tel # : (613) 996-6666 (CANUTEC)

SECTION 2 - HAZARDS IDENTIFICATION

Classification : WHMIS classification:
 Class B4 (Flammable Solids);
 Class D1B (Materials Causing Immediate and Serious Toxic Effects, Toxic Material);
 Class D2A (Materials Causing Other Toxic Effects, Very Toxic Material);
 Class D2B (Materials Causing Other Toxic Effects, Toxic Material).

OSHA: This material is classified as hazardous under OSHA regulations (29CFR 1910.1200). Hazardous classification:
 Flammable solid;
 Acute Health Hazard;
 Chronic Health Hazard.

Emergency Overview : powder; crystalline (white). Pungent odour.
 Warning! Flammable solid. Will ignite when exposed to heat, flame and other sources of ignition.
 POISON! May be fatal if too much is inhaled. Harmful if swallowed. May be harmful if absorbed through the skin. Can cause cyanosis. May cause lung inflammation and lung damage with extreme exposures. Causes skin and eye irritation. Prolonged overexposure may cause liver and kidney effects. Suspect cancer hazard. May cause allergic skin reaction. May cause heritable genetic damage. Possible reproductive hazard. Contains material that may cause adverse reproductive effects, based on animal data.

POTENTIAL HEALTH EFFECTS:

Signs and symptoms of short-term (acute) exposure

Inhalation : May cause severe irritation to the nose, throat and respiratory tract. May cause lung inflammation. Inhalation may cause a burning sensation of the nose, throat and lungs. Could result in pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed. Large exposures may cause headache, dizziness, nausea, rash, a decrease in body temperature, renal injury, cyanosis, coma and death.

Skin : May cause moderate to severe skin irritation. May cause redness and itching or burning sensation. Prolonged or repeated contact may cause a hardening or tanning effect. May be absorbed through the skin.

Eyes : Exposure to high vapour concentrations or contact with liquid causes severe irritation, redness, tearing and pain. Chemical burns are possible. May cause corneal injury.

Ingestion : May cause severe irritation and corrosive damage in the mouth, throat and stomach. Abdominal pain, nausea, vomiting, and collapse. Liver and kidney injuries may occur. Cyanosis (bluish discoloration of skin, due to deficient oxygenation of the blood), coma and death may occur.

Effects of long-term (chronic) exposure

: Prolonged or repeated skin contact may cause drying and irritation. Prolonged overexposure may cause liver and kidney effects. Contains material which may cause adverse blood system effects.

Carcinogenic status : Cancer hazard. See TOXICOLOGICAL INFORMATION, Section 11.

Additional health hazards : Potential reproductive toxicant. See TOXICOLOGICAL INFORMATION, Section 11.

Potential environmental effects

: See ECOLOGICAL INFORMATION, Section 12.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

<u>Ingredients</u>	CAS #	Wt.%
Paraformaldehyde	30525-89-4	30.00 - 60.00
Paradichlorobenzene	106-46-7	30.00 - 60.00
Boric acid	10043-35-3	0.50 - 1.50
*Released from Paraformaldehyde		
Formaldehyde	50-00-0	Released from Paraformaldehyde

*Note: This product contains Paraformaldehyde. Paraformaldehyde will release Formaldehyde gas. Formaldehyde is not intentionally added to this product. Available acute toxicity data for Formaldehyde has been listed in Section 11. Exposure limits are listed in Section 8.

SECTION 4 - FIRST AID MEASURES

- Inhalation** : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. Keep warm and in a quiet place. If breathing is difficult, give oxygen by qualified medical personnel only. Obtain medical attention immediately.
- Skin contact** : Remove contaminated clothing. Wash affected areas with soap and water. Seek immediate medical attention/advice. Wash contaminated clothing before re-use.
- Eye contact** : Immediately flush eyes with running water for at least 15 minutes. Seek immediate medical attention/advice.
- Ingestion** : Call a physician or Poison Control Centre immediately. Do NOT induce vomiting. This material is corrosive to the digestive tract. Have victim rinse mouth with water, then give one to two glasses of water to drink. Never give anything by mouth to an unconscious person.
- Notes For Physician** : Treat symptomatically.

SECTION 5 - FIRE FIGHTING MEASURES**Fire hazards/conditions of flammability**

- : Flammable solid. Will ignite when exposed to heat, flame and other sources of ignition. Material will float on water. Closed containers may rupture if exposed to excess heat or flame due to a build-up of internal pressure. Vapours are heavier than air and collect in confined and low-lying areas.

Flammability classification (OSHA 29 CFR 1910.1200)

- : Flammable solid.

Oxidizing properties

- : None known.

Explosion data: Sensitivity to mechanical impact / static discharge

- : Not expected to be sensitive to mechanical impact. Dust can form an explosive mixture in air. May be sensitive to static discharge.

Suitable extinguishing media

- : Dry chemical, alcohol foam, carbon dioxide, or water spray.

Special fire-fighting procedures/equipment

- : Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame. Disperse vapour with water spray. Avoid spreading burning powder with water spray used for cooling purposes.

Hazardous combustion products

- : formaldehyde; Carbon oxides; Hydrocarbons.

NFPA Rating

- 0 - Minimal 1 - Slight 2 - Moderate 3 - Serious 4 - Severe
- : *Health:* 2 *Flammability:* 3 *Instability:* 0 *Special Hazards:* None.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

- Personal precautions** : Restrict access to area until completion of clean-up. Keep all other personnel upwind and away from the spill/release. Individuals involved in the cleanup must wear appropriate personal protective equipment. Refer to protective measures listed in sections 7 and 8.
- Environmental precautions** : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces.

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Spill response/cleanup : Remove all sources of ignition. Ventilate area of release. Stop the spill at source if it is safe to do so. Cover spilled solid with inert, absorbent material, such as sand, then place in suitable, covered container for later disposal. Refer to Section 13 for disposal of contaminated material. Notify the appropriate authorities as required.

Prohibited materials : None known or reported by the manufacturer.

Special spill response procedures

: If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8002).
US CERCLA Reportable quantity (RQ): Paraformaldehyde (1000 lbs / 454 kg); formaldehyde (100 lbs / 45,4 kg); paradichlorobenzene (100 lbs / 45.4 kg).

SECTION 7 - HANDLING AND STORAGE

Safe Handling procedures : Wear chemically resistant protective equipment during handling. Use only in well-ventilated areas. Avoid breathing dust. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Keep away from incompatibles. Avoid and control operations which create dust. Ground all equipment during handling. Keep containers closed when not in use. Wash thoroughly after handling.

Storage requirements : Store in a cool, dry, well-ventilated area. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. No smoking in the area. Inspect periodically for damage or leaks.

Incompatible materials : Avoid contact with strong alkalis, strong mineral acids or strong oxidizing agents.

Special packaging materials : Always keep in containers made of the same materials as the supply container.

SECTION 8 - EXPOSURE CONTROLS AND PERSONAL PROTECTION**Exposure Limits**

<u>Ingredients</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Paraformaldehyde	N/Av	N/Av	N/Av	N/Av
Paradichlorobenzene	10 ppm	N/Av	75 ppm	N/Av
Boric acid	*2 mg/m ³ (inhalable fraction)	*6 mg/m ³ (inhalable fraction)	N/Av	N/Av
*Released from Paraformaldehyde				
Formaldehyde	0.3 ppm (ceiling)	N/Av	0.75 ppm	2 ppm

*Note: The ACGIH TLV listed above for Boric acid is for 'Borate compounds, inorganic'.

Ventilation and engineering measures

: Local exhaust ventilation is preferred to prevent contaminant dispersion into work area.

Respiratory protection

: Use in a well-ventilated area. If the TLV is exceeded, a NIOSH/MSHA-approved respirator is advised. Advice should be sought from respiratory protection specialists.

Skin protection

: Impervious gloves must be worn when using this product. Advice should be sought from glove suppliers.

Eye / face protection

: Chemical goggles must be worn to prevent dusts from entering the eyes.

Other protective equipment

: An eyewash station and safety shower should be made available in the immediate working area. Depending on conditions of use, an impervious apron should be worn.

General hygiene considerations

: Avoid breathing dust. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use cosmetics while working with this product. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical state	: powder; crystalline	Appearance	: white
Odour	: Pungent odour.	Odour threshold	: N/Av
pH	: N/Av		
Boiling point	: 77 - 79 °C (171 - 175° F)	Specific gravity	: 0.9 - 0.95

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Melting/Freezing point	: N/Av	Coefficient of water/oil distribution	: N/Av
Vapour pressure (mmHg @ 20° C / 68° F)	: N/Av	Solubility in water	: Partial
Vapour density (Air = 1)	: > 1	Evaporation rate (n-Butyl acetate = 1)	: N/Av
Volatile organic Compounds (VOC's)	: N/Av	Volatiles (% by weight)	: 53%
Flash point	: 64 - 67°C (148 - 152°F)	Auto-ignition temperature	: N/Av
Flash point Method	: TCC	Upper flammable limit (% by vol.)	: 73
Lower flammable limit (% by vol.)	: 2.5	Flashback observed	: N/Av
Flame Projection Length	: N/Av		

Section 10: Stability And Reactivity

Stability and reactivity	: Stable at ambient temperatures and pressures. May release Formaldehyde slowly, at room temperature.
Hazardous polymerization	: Hazardous polymerisation does not occur.
Conditions to avoid	: Avoid heating, which will result in the liberation of formaldehyde gas.
Materials To Avoid And Incompatibility	: Avoid contact with strong alkalis, strong mineral acids or strong oxidizing agents.
Hazardous decomposition products	: This product can generate formaldehyde at elevated temperatures. Refer to Section 5 for additional 'Hazardous combustion products'.

SECTION 11 - TOXICOLOGICAL INFORMATION

Target organs	: Eyes, skin, respiratory system, central nervous system, liver and kidneys.
Routes of exposure	: <i>Inhalation:</i> YES <i>Skin Absorption:</i> YES <i>Skin & Eyes:</i> YES <i>Ingestion:</i> YES
Toxicological data	: There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

Ingredients	LC₅₀(4hr)	LD₅₀	
	inh, rat	(Oral, rat)	(Rabbit, dermal)
Paraformaldehyde	1070 mg/m ³	800 mg/kg	N/Av
Paradichlorobenzene	N/Av	3790 mg/kg	> 6000 mg/kg
Boric acid	N/Av >0	5140 mg/kg	N/Av
*Released from Paraformaldehyde			
Formaldehyde	287 ppm	100 mg/kg (rat); 42 mg/kg (mouse)	300 mg/kg

Carcinogenic status	: Paraformaldehyde may release formaldehyde gas. Formaldehyde is classified as carcinogenic by IARC (Group 1), ACGIH (Group A2) and NTP (Group 2). This product contains Paradichlorobenzene. Paradichlorobenzene is classified as carcinogenic by IARC (Group 2B), ACGIH (Group A3) and NTP (Group 2).
Reproductive effects	: Contains: Boric acid. The data regarding subchronic and chronic oral exposure to boric acid or borax (Disodium tetraborate, decahydrate) in laboratory animals have demonstrated reproductive toxicity. Available animal data indicates that this substance has toxic effects on the male reproductive tract. Testicular lesions have been observed in rats, mice, and dogs administered boric acid or borax in food or drinking-water (INTERNATIONAL PROGRAMME ON CHEMICAL SAFETY Environmental Health Criteria document # 204).
Teratogenicity	: No data is available on the product itself.
Mutagenicity	: Paraformaldehyde will release Formaldehyde gas. Formaldehyde may cause mutations to non-reproductive (somatic) cells, based on animal data.
Epidemiology	: Not available.
Sensitization to material	: May release small amounts of formaldehyde, a known skin and respiratory sensitizer.
Synergistic materials	: N/Av
Irritancy	: Severe eye irritation. Moderate skin irritant.
other important hazards	: None known or reported by the manufacturer.

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Conditions aggravated by overexposure

: Pre-existing skin, eye, respiratory and central nervous system disorders.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity : No data is available on the product itself. The product should not be allowed to enter drains or water courses, or be deposited where it can affect ground or surface waters.

Mobility : No data is available on the product itself.

Persistence : No data is available on the product itself.

Bioaccumulation potential : No data is available on the product itself.

Other Adverse Environmental effects : No data is available on the product itself.



SECTION 13 - DISPOSAL CONSIDERATIONS

Handling for Disposal : Handle waste according to recommendations in Section 7.

Methods of Disposal : Improper disposal can cause damage to the environment. Dispose in accordance with all applicable federal, state, provincial and local regulations. Contact your local, state, provincial or federal environmental agency for specific rules.

RCRA : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method. For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14: TRANSPORT INFORMATION

Regulatory Information	UN Number	Shipping Name	Class	Packing Group	Label
TDG	UN1325	FLAMMABLE SOLID, ORGANIC, N.O.S. (Paraformaldehyde)	4.1	III	
TDG Additional information	May be shipped as Limited Quantity when transported in containers no larger than 5.0 kg; in packages not exceeding 30 kg gross mass. Under the TDGR, refer to Section 1.17 for additional exemption information, if shipping under this exemption.				
49CFR/DOT	UN1325	Flammable solids, organic, n.o.s. (Contains: Paraformaldehyde)	4.1	III	
49CFR/DOT Additional information	May be shipped as Limited Quantity when transported in containers no larger than 5.0 kg; in packages not exceeding 30 kg gross mass. Refer to 49 CFR Section 173.151. US CERCLA Reportable quantity (RQ): paradichlorobenzene (100 lbs / 45.4 kg); Paraformaldehyde (1000 lbs / 454 kg); formaldehyde (100 lbs / 45.4 kg).				

SECTION 15 - REGULATORY INFORMATION**US Federal Information:**

TSCA: All listed ingredients appear on the Toxic Substances Control Act (TSCA) inventory.

CERCLA Reportable Quantity (RQ) (40 CFR 117.302): Paraformaldehyde (1000 lbs / 454 kg); formaldehyde (100 lbs / 45.4 kg); paradichlorobenzene (100 lbs / 45.4 kg).

SARA TITLE III: Sec. 302, Extremely Hazardous Substances, 40 CFR 355: This product contains an Extremely Hazardous Substance under SARA Section 302. Contains: formaldehyde.

SARA TITLE III: Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: Acute Health Hazard; Chronic Health Hazard. Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

SARA TITLE III: Sec. 313, Toxic Chemicals Notification, 40 CFR 372: This product may be subject to SARA notification requirements, since it contains Toxic Chemical constituents above their de minimus concentrations. This product contains: formaldehyde; paradichlorobenzene .

US State Right to Know Laws:

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California Proposition 65: This product contains a chemical known to the State of California to cause cancer. Contains: formaldehyde; paradichlorobenzene .

Other U.S. State "Right to Know" Lists: The following chemicals are specifically listed by individual States: Paraformaldehyde (CA, MA, NJ, PA, RI); formaldehyde (CA, MA, MN, NJ, PA, RI); paradichlorobenzene (CA, MA, MN, NJ, PA, RI).

International Information:

WHMIS information: This product is a WHMIS Controlled Product. It meets one or more of the criteria for a controlled product provided in Part IV of the Canadian Controlled Products Regulations (CPR). Refer to Section 2 for a WHMIS Classification for this product.

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and this MSDS contains all the information required by the CPR.

SECTION 16 - OTHER INFORMATION

HMIS Rating	:	* - Chronic hazard	0 - Minimal	1 - Slight	2 - Moderate	3 - Serious	4 - Severe
		<i>Health: *2</i>		<i>Flammability: 3</i>		<i>Reactivity: 0</i>	

Legend :

- ACGIH: American Conference of Governmental Industrial Hygienists
- CA: California
- CAS: Chemical Abstract Services
- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
- CFR: Code of Federal Regulations
- CNS: Central Nervous System
- DOT: Department of Transportation
- HMIS: Hazardous Materials Identification System
- HSDB: Hazardous Substances Data Bank
- IARC: International Agency for Research on Cancer
- Inh: Inhalation
- LC: Lethal Concentration
- LD: Lethal Dose
- MA: Massachusetts
- MN: Minnesota
- MSHA: Mine Safety and Health Administration
- N/Ap: Not Applicable
- N/Av: Not Available
- NFPA: National Fire Protection Association
- NIOSH: National Institute of Occupational Safety and Health
- NJ: New Jersey
- OSHA: Occupational Safety and Health Administration
- PA: Pennsylvania
- PEL: Permissible exposure limit
- RCRA: Resource Conservation and Recovery Act
- RI: Rhode Island
- RTECS: Registry of Toxic Effects of Chemical Substances
- SARA: Superfund Amendments and Reauthorization Act
- STEL: Short Term Exposure Limit
- TCC: Tagliabue Closed Cup
- TDG: Canadian Transportation of Dangerous Goods Act & Regulations
- TLV: Threshold Limit Values
- TWA: Time Weighted Average
- WHMIS: Workplace Hazardous Materials Identification System


References :

1. ACGIH, Threshold Limit Values and Biological Exposure Indices for 2009.
2. International Agency for Research on Cancer Monographs, searched 2009.
3. Canadian Centre for Occupational Health and Safety, CCIInfoWeb databases, 2009 (Chempendium, HSDB and RTECs).
4. Material Safety Data Sheet from manufacturer.
5. US EPA Title III List of Lists - October 2006 version.
6. California Proposition 65 List - December 18, 2009 version.

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<p>Prepared for: The Dodge Chemical Company (Canada) Ltd. 1265 Fewster Drive Mississauga, ON, Canada L4W 1A2 Telephone: (905) 625-0311 Please direct all enquiries to The Dodge Chemical Company (Canada).</p>	
<p>Prepared by: ICC The Compliance Center Inc. http://www.thecompliancecenter.com</p>	

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Revision Information

: Converted from 9 section format to 16 section format. All sections modified.

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