

**MATERIAL SAFETY DATA SHEET**

**SECTION 1 - IDENTIFICATION**

**Product identifier** : **FREEDOM ART**

**Product Code(s)** : None reported.

**Product Use** : Arterial embalming chemical.

**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 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:  
 Acute Health Hazard;  
 Chronic Health Hazard.

**Emergency Overview** : Deep red / orange red liquid with slight fluorescence; or red-brown liquid. Odourless.  
 Warning! May be harmful if inhaled or swallowed. May cause headache, nausea, dizziness and other symptoms of central nervous system depression. Causes skin and eye irritation. Prolonged overexposure may cause liver and kidney effects. Contains material which may cause adverse blood system effects. 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* : Inhalation may cause respiratory irritation and central nervous system depression. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.

*Skin* : May cause mild to moderate irritation. Product may be absorbed.

*Eyes* : May cause moderate to severe irritation. Symptoms will include pain, redness and tearing.

*Ingestion* : Ingestion of large amounts may cause nausea, vomiting, diarrhea, as well as depression of the central nervous system. Kidney injury may occur.

**Effects of long-term (chronic) exposure**

: Prolonged or repeated contact may cause drying, cracking and defatting of the skin. Contains material which may cause adverse blood system effects. Prolonged overexposure may cause liver and kidney effects.

**Carcinogenic status** : 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>	<u>CAS #</u>	<u>Wt.%</u>
Isopropanol	67-63-0	5.00 - 10.00
Borax	1303-96-4	0.50 - 1.50

**SECTION 4 - FIRST AID MEASURES**

- Inhalation** : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. If symptoms develop, seek medical attention.
- Skin contact** : Immediately flush with plenty of water, while removing contaminated clothing. If irritation or symptoms develop, seek medical attention. 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** : Do NOT induce vomiting. Rinse mouth with water. Have victim drink one to two glasses of water. Get medical attention.
- Notes For Physician** : Treat symptomatically. This product is a CNS depressant.

**SECTION 5 - FIRE FIGHTING MEASURES**

- Fire hazards/conditions of flammability** : Not flammable under normal conditions of use. However, may ignite if exposed to extreme heat and flame. Vapours are heavier than air and collect in confined and low-lying areas.
- Flammability classification (OSHA 29 CFR 1910.1200)** : Combustible Liquid Class III B.
- Oxidizing properties** : None known.
- Explosion data: Sensitivity to mechanical impact / static discharge** : Not expected to be sensitive to mechanical impact or static discharge.
- Suitable extinguishing media** : Use media suitable to the surrounding fire such as water fog or fine spray, alcohol foams, carbon dioxide and dry chemical.
- 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. Avoid spreading burning liquid with water spray used for cooling purposes.
- Hazardous combustion products** : Carbon oxides; unburned alcohols; formaldehyde; other unidentified organic compounds.
- NFPA Rating** : 

0 - Minimal	1 - Slight	2 - Moderate	3 - Serious	4 - Severe
<hr style="border: 0; border-top: 1px solid black; margin: 0;"/>				
<i>Health:</i> 2	<i>Flammability:</i> 1	<i>Instability:</i> 0	<i>Special Hazards:</i>	None

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

- Personal precautions** : Restrict access to area until completion of clean-up. Ensure clean-up is conducted by trained personnel only. All persons dealing with the clean-up should wear the appropriate chemically 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.
- Spill response/cleanup** : Remove all sources of ignition. Ventilate area of release. Stop the spill at source if it is safe to do so. Contain and absorb spilled material with inert, non-combustible absorbent material, such as sand. Place absorbent material in a suitable, closed and labelled container for later disposal (see below). Notify the appropriate authorities as required.
- Prohibited materials** : Do not use combustible absorbents, such as sawdust.
- 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): None reported.

**SECTION 7 - HANDLING AND STORAGE**

- Safe Handling procedures** : Wear chemically resistant protective equipment during handling. Use only in well-ventilated areas. Avoid breathing vapors or mists. Avoid contact with skin, eyes and clothing. Keep away from extreme heat and flame. Keep away from acids and incompatibles. Use caution when opening cap. Keep containers tightly 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. Inspect periodically for damage or leaks.
- Incompatible materials** : Oxidizing agents; Acids; Alkali metals; Bases; Amines.
- Special packaging materials** : Always keep in containers made of the same materials as the supply container.

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

<u>Exposure Limits</u>				
<u>Ingredients</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Isopropanol	200 ppm	400 ppm	400 ppm	N/Av
Borax	*2 mg/m <sup>3</sup>	*6 mg/m <sup>3</sup>	*10 mg/m <sup>3</sup>	N/Av

\*Note: The ACGIH TLV's listed above for Borax are for 'Borate compounds, inorganic'. The OSHA PEL listed above for Borax is a final rule / vacated value, and is for 'Borates, tetra, sodium salts'.

- Ventilation and engineering measures** : Use general or local exhaust ventilation to maintain air concentrations below recommended exposure limits.
- Respiratory protection** : NIOSH-approved respirators are recommended. Advice should be sought from respiratory protection specialists.
- Skin protection** : Chemical-resistant impervious gloves, such as Neoprene or nitrile rubber, should be worn where skin contact is a risk. Advice should be sought from glove suppliers.
- Eye / face protection** : Chemical goggles are recommended when there is a potential for splashing.
- Other protective equipment** : Wear a chemically resistant apron and long sleeves when dispensing, to prevent skin contact. An eyewash station and safety shower should be made available in the immediate working area. Other equipment may be required depending on workplace standards.
- General hygiene considerations** : Avoid breathing vapors or mists. 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** : Viscous liquid      **Appearance** : Deep red / orange red liquid with slight fluorescence; or red-brown liquid.
- Odour** : Odourless.      **Odour threshold** : N/Av
- pH** : 7.5 - 9.0
- Boiling point** : 100°C (212°F)      **Specific gravity** : 1.030 - 1.040
- Melting/Freezing point** : N/Av      **Coefficient of water/oil distribution** : N/Av
- Vapour pressure (mmHg @ 20° C / 68° F)** : 0.07      **Solubility in water** : Complete
- Vapour density (Air = 1)** : > 1      **Evaporation rate (n-Butyl acetate = 1)** : < 1
- Volatile organic Compounds (VOC's)** : N/Av      **Volatiles (% by weight)** : 98%
- Flash point** : > 93.3°C (200°F)
- Flash point Method** : Not reported      **Auto-ignition temperature** : N/Av
- Lower flammable limit (% by vol.)** : N/Av      **Upper flammable limit (% by vol.)** : N/Av
- Flame Projection Length** : N/Av      **Flashback observed** : N/Av

**Section 10: Stability And Reactivity**

- Stability and reactivity** : Stable at ambient temperatures and pressures.
- Hazardous polymerization** : Hazardous polymerisation does not occur.

**Conditions to avoid** : Avoid heat and open flame. Avoid contact with incompatible materials.

**Materials To Avoid And Incompatibility**

: Oxidizing agents; Acids; Alkali metals; Bases; Amines.

**Hazardous decomposition products**

: None known, refer to hazardous combustion products in Section 4.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

**Target organs** : Eyes, skin, respiratory system, central nervous system, blood system, liver, brain and kidneys.

**Routes of exposure** : *Inhalation:* YES *Skin Absorption:* YES *Skin & Eyes:* YES *Ingestion:* YES

**Toxicological data** : There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.

<u>Ingredients</u>	<u>LC<sub>50</sub>(4hr)</u>		<u>LD<sub>50</sub></u>	
	<u>inh, rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>	
Isopropanol	17,000 ppm	4710 mg/kg	12,890 mg/kg	
Borax	> 2030 mg/m <sup>3</sup>	2660 mg/kg	> 2000 mg/kg	

**Carcinogenic status** : No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.

**Reproductive effects** : This product contains Disodium tetraborate, decahydrate (CAS # 1303-96-4). 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** : This product contains Isopropanol. Isopropanol is no longer considered a developmental toxin. Teratogenic / fetotoxic effects were observed in animals, however the effects were observed in the presence of maternal toxicity or at concentrations where maternal toxicity is expected to occur. This product contains Disodium tetraborate, decahydrate (CAS # 1303-96-4). Sodium tetraborate has been investigated as a developmental hazard.

**Mutagenicity** : Not expected to be mutagenic in humans.

**Epidemiology** : None known or reported by the manufacturer.

**Sensitization to material** : Not expected to be a skin or respiratory sensitizer.

**Synergistic materials** : No information available.

**Irritancy** : Moderate to severe eye irritant. Mild to moderate skin irritant.

**other important hazards** : CNS depression may result from extreme exposures.

**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** : 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	None	Not regulated.	Not regulated	none	
<b>TDG Additional information</b>	None.				
49CFR/DOT	None	Not regulated.	Not regulated	none	
<b>49CFR/DOT Additional information</b>	None.				

**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): None reported.

SARA TITLE III: Sec. 302, Extremely Hazardous Substances, 40 CFR 355: No Extremely Hazardous Substances are present in this material.

SARA TITLE III: Sec. 311 and 312, MSDS Requirements, 40 CFR 370 Hazard Classes: Immediate (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: Isopropanol.

**US State Right to Know Laws:**

California Proposition 65: To the best of our knowledge, this product does not contain any chemicals known to the State of California to cause cancer or reproductive harm.

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

**International Information:**

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

Canadian WHMIS Classification: 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.

**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  
*Health:* \*2 *Flammability:* 1 *Reactivity:* 0

**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  
 DOT: Department of Transportation  
 EPA: Environmental Protection Agency  
 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  
 N/Ap: Not Applicable  
 N/Av: Not Available  
 NFPA: National Fire Protection Association  
 NJ: New Jersey  
 NTP: National Toxicology Program  
 NIOSH: National Institute of Occupational Safety and Health  
 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  
 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, CCInfoWeb databases, 2009 (Chempendium, HSDB and RTECs).
- 4. US EPA Title III List of Lists - October 2006 version.
- 5. California Proposition 65 List - September 11, 2009 version.

<p><b><u>Prepared for:</u></b>                  The Dodge Chemical Company (Canada) Ltd.                  Mississauga, ON, Canada, L4W 1A2                  Telephone: (905) 625-0311                  Please direct all enquiries to The Dodge Chemical Company.</p>	
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**Preparation Date (dd/mm/yyyy)**

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