

Material Identifier: Sure-Bond Plus™

# MATERIAL SAFETY DATA SHEET

CODE NAME: SURE-BOND PLUS™

INFORMATION AND EMERGENCY PHONE NUMBERS:

TORONTO, ON CANADA 1-800-461-0700

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Date of Preparation: March 7, 2002

## Section 1 - MATERIAL IDENTIFICATION AND USE

Material Identifier:	Sure-Bond Plus™
Trade Name and Synonyms:	Sure-Bond Plus™
Chemical Family:	Urea-Formaldehyde Resin
Molecular Weight:	Not applicable/Polymer
Chemical Formula:	$(\text{CH}_4\text{N}_2\text{O} \cdot \text{CH}_2\text{O})_x$
Material Use:	Pellet binder for fish and animal feeds.
<u>Emergency Phone (24 hours):</u>	CHEMTREC 1-800-424-9300 Reference GP® 3865

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## Section 2 - COMPOSITION AND INFORMATION ON INGREDIENTS

<u>Hazardous Components</u>	<u>CAS No.</u>	<u>% By Weight</u>	<u>OSHA PEL</u>	<u>ACGIH TLV</u>
Formaldehyde	50-00-0	1.0 max	TWA: 0.75 ppm STEL: 2 ppm	CEIL: 0.3 ppm

Note: TWA's are 8 hour exposures unless otherwise noted. STEL's are 15 minute exposures unless otherwise noted.

## SECTION 3 - HAZARDS IDENTIFICATION

HMIS

Health Hazard	0
Fire Hazard	0
Reactivity	0
Personal Protection	0

Note: Personal protective equipment (PPE) is related to conditions of use. Determination of PPE is the responsibility of the employer. Refer to [Section 8](#) (Exposure Controls/Personal Protection) of this MSDS for recommendations.

Emergency Overview: White powder; formaldehyde odor.

Eye irritation or injury may form explosive dust/air mixtures. May cause skin irritation in sensitive individuals.

### Potential Health Effects

**Eye Contact:** Contact with powder or dust may cause moderate to severe eye irritation or injury. Symptoms may include redness, watering, itching, or a burning sensation in the eyes.

**Skin Contact:** Not expected to be a primary skin irritant or toxic by skin contact. However, cases of skin irritation have been reported upon repeated or prolonged exposure to powdered resin. Symptoms may include itching, scaling, cracking, or reddening.

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- Inhalation: This product is not expected to be toxic by inhalation. However, prolonged inhalation of dust or vapours released from curing product may cause respiratory tract irritation. Symptoms may include sneezing, coughing, shortness of breath, nausea, headaches, or dizziness.
- Ingestion: Not expected to be orally toxic. In normal industrial use, ingestion is not considered a probable route of exposure.
- Chronic: This product contains formaldehyde which may cause cancer based on animal data. Repeated or prolonged exposure to formaldehyde may cause skin sensitization, dermatitis, or other allergic reactions. The degree of sensitivity varies with individuals.
- This product contains ingredients which may affect the following target organs: **respiratory system, eyes, skin**

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### SECTION 4 - FIRST AID MEASURES

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- Eye Contact: Immediately rinse with water. Remove contact lenses. Hold eyelids apart and flush eyes with water for at least 15 minutes. Get immediate medical attention.
- Skin Contact: Wash skin thoroughly with soap and water. Get medical attention if irritation persists. Launder contaminated clothing before reuse.
- Inhalation: Remove to fresh air. Rest in half-upright position. Get medical attention if necessary.
- Ingestion: If conscious, immediately rinse mouth and give large quantities of water. Get immediate medical attention. Never give anything by mouth to an unconscious person.

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### SECTION 5 - FIRE AND EXPLOSION DATA

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- Flammable:  Yes  No
- Flashpoint: Not Applicable
- Explosion Limits (g/m<sup>3</sup>): Powder or dust LOWER: 85 UPPER: Not applicable
- Extinguishing Media: Use water spray, dry chemical, or carbon dioxide.
- Fire Fighting Instructions: Use self-contained breathing apparatus and protection for skin.
- Combustion Products: Irritating fumes and toxic gases.
- Special Hazards: Dust explosions may occur when finely divided particles are mixed with air in the presence of an ignition source.  
Water runoff can cause environmental damage. Dike and collect water used to fight fire.

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## SECTION 6 - ACCIDENTAL RELEASE MEASURES

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Spill and Leak Procedures: Do not walk through spilled material.  
Confine spill to minimize spreading.  
Sweep up or vacuum. Avoid creating dust. DO NOT use pressurized air.  
Uncontaminated spilled material may be reused.  
Retain all contaminated water for removal and treatment. DO NOT flush to sewer.

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## SECTION 7 - HANDLING AND STORAGE

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Handling: Avoid breathing dust. Use only in a well ventilated area.  
Avoid eye contact. Avoid repeated or prolonged skin contact.  
Use proper protective equipment.  
Ground and bond product transferring equipment.  
Minimize dust generation and accumulation.  
Wash thoroughly after handling.  
Eyewash stations should be easily accessible to areas where product is used.

Storage: Storage in a controlled climate is recommended to maintain product integrity.  
Store in a cool, dry place at temperatures below 80°F (26.7°C).  
Do not store material in direct sunlight.  
Store away from incompatible materials.

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## SECTION 8 - EXPOSURE CONTROLS

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Personal Protective Equipment (PPE)

Eyes and Face: Safety glasses.

Skin: Leather, rubber or neoprene gloves. Wear additional Protective clothing as appropriate to protect skin.

Respiratory: None required under normal conditions of use. However, if feasible engineering controls do not prevent overexposure, a dust mask or half-mask respirator with cartridges approved by NIOSH/MSHA for formaldehyde, organic vapours and dusts/mists may be used only when exposure levels are known to be within the unit's capability.

Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or in any situation where air purifying respirators may not provide adequate protection.

Observe the OSHA respirator regulations cited in 29 CFR 1910.134.

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Engineering Controls Use ventilation as necessary to keep exposure to airborne contaminants below the exposure limits.

### **Inert or Nuisance Dust**

Total Dust (inhalable)  
Respirable Fraction

### **ACGIH TLV**

TWA: 10 mg/m<sup>3</sup>  
TWA: 3 mg/m<sup>3</sup>

### **OSHA PEL**

TWA: 15 mg/m<sup>3</sup>  
TWA: 5 mg/m<sup>3</sup>

Due to explosive potential of organic dust when suspended in air, precautions should be taken to prevent sparks or other ignition sources in ventilation equipment. The use of totally enclosed motos is recommended.

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## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

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Boiling Point:	Not applicable
Melting Point:	Approximately 250° F (121.11°C)
Bulk Density:	Approximately 53 lb/ft <sup>3</sup> (0.85 g/cm <sup>3</sup> )
pH (1:1 in water):	Approximately 7.5
Solubility in Water: Soluble	
Specific Gravity (H <sub>2</sub> O=1):	0.45 - 0.55 (powder)
Percent Volatile (w/w):	< 3.5%
Appearance & Odour:	White powder with slight formaldehyde odour.
Vapour Pressure (mm Hg):	Not Applicable
Vapour Density:	Not Applicable

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## SECTION 10 - STABILITY AND REACTIVITY DATA

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Chemical Stability:	This product is stable under the recommended storage conditions.
Conditions to Avoid:	Avoid storage at temperatures above 80° F(26.7° C).
Incompatibility with Other Materials:	Avoid contact or contamination with strong acids.
Hazardous Decomposition Products:	None known.
Hazardous Polymerization:	Hazardous polymerization will not occur.
Special Remarks on Reactivity:	Elevated storage temperatures will shorten product storage life.

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## SECTION 11 - TOXICOLOGICAL INFORMATION

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Eye:	This product is expected to be an eye irritant.
Dermal:	This product is not expected to be a skin irritant or dermally toxic.
Inhalation:	This product is not expected to be acutely toxic by inhalation.
Oral:	This product is not expected to be orally toxic.

**Subchronic Effects:** Exposure to gaseous formaldehyde may cause temporary irritation of the nose and throat and may lead to respiratory disorders. However, in a thorough review of sensory/respiratory irritation studies of formaldehyde from the standpoint of occupational exposure, an expert panel has observed that exposure to concentrations of 0.3 ppm or lower failed to produce irritation. No irritation will usually be reported at 0.5 ppm, especially if persons are exposed only 8 hours per day. With regard to respiratory disorders, studies have concluded the threshold for long-term exposures causing chronic pulmonary effects is between 0.4 and 3 ppm and chronic obstructive pulmonary disease is 2 ppm. Additionally, persons with asthma responded no differently than healthy individuals at concentrations as high as 3 ppm. Some reports, however, suggest formaldehyde may cause asthma and that pre-existing respiratory disorders may be aggravated by exposure.

**Chronic Effects:** Carcinogenicity Epidemiological studies of workers exposed to formaldehyde have failed to consistently identify an association between formaldehyde exposure and cancer. In animal studies, rats and mice exposed to high levels of formaldehyde developed nasal cancer while hamsters did not. These animal studies provide an inference of carcinogenic hazard for humans. Although human tissue may be inherently susceptible to formaldehyde carcinogenicity, this effect may require exposure to concentrations that humans could not tolerate. Formaldehyde is listed by the International Agency for Research on Cancer (IARC) as a probable human carcinogen (Group 2A). The National Toxicology Program has included formaldehyde in its Annual Report on Carcinogens. OSHA regulates formaldehyde as a potential carcinogen for exposures at or exceeding 0.5 ppm.

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## SECTION 12 - ECOLOGICAL INFORMATION AND DISPOSAL CONSIDERATIONS

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Ecotoxicity:	This product is biodegradable under aerobic and anaerobic conditions.
Waste Disposal:	Dispose of contaminated material in accordance with all federal, state, and local regulations. Dispose of water in a contained waste treatment system.
RCRA:	The requirements of the federal hazardous waste regulations do not apply unless the waste fails to pass any of EPA's four tests for determining hazardous wastes. <b>Note:</b> If this product is altered, it is the responsibility of the user to determine whether the material meets the criteria for hazardous waste at the time of disposal.

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## SECTION 13 - TRANSPORTATION INFORMATION

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DOT: Non-regulated in bulk and non-bulk bags.

<u>Shipping Description</u>	<u>Bulk Shipments</u>	<u>Non-bulk Shipments</u>
Proper Shipping Name	Non-regulated	Non-regulated
Hazard Class	Not applicable	Not applicable
Identification Number	Not applicable	Not applicable
Packing Group	Not applicable	Not applicable
Reportable Quantities	Not applicable	Not applicable
Placards/Labels	<b>Placards:</b> Not applicable	<b>Labels:</b> Not applicable
Special Provisions for Transport	Not applicable	Not applicable

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## SECTION 14 - REGULATORY INFORMATION

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**Federal Regulations:** The following regulations may have reporting requirements for the components listed. See "Key to Abbreviations and Acronyms" under section XV for definitions.

CERCLA/SARA  
Emergency Reporting A spill or release of this material may trigger the emergency release reporting requirements under CERCLA (40 CFR Part 300) and/or SARA Title 111 (40 CFR Part 355). State or local reporting requirements may differ from federal requirements. Consult counsel for further guidance on your responsibilities under these laws.

SARA Title III This product is known to contain the following chemicals which are listed in 40 CFR 372.65 as toxic chemicals requiring notification. This information must be included in all MSDS's that are copied and distributed for this product.

<u>Component</u>	<u>CAS#</u>	<u>% by Weight</u>
Formaldehyde	50-00-0	1.0 max.

CWA Section 307 The following chemicals are listed under Section 307 as toxic pollutants not eligible for waiver from best available technology economically achievable (BAT) effluent limitations.  
**Not applicable.**

CWA Section 311 The following chemicals are listed under Section 311 as hazardous substances requiring the submission of a National Pollutant Discharge Elimination System (NPDES) permit application to EPA.  
**Formaldehyde**

TSCA All components of this product are listed on the Toxic Substances Control Act Inventory or are excluded from listing requirements.

**Other Regulations:** See the OSHA Formaldehyde Standard 29 CFR 1910.1048 for worker training, workplace monitoring, and medical surveillance requirements.

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California Safe Drinking Water and Toxic Enforcement Act (Proposition 65):  
This product contains the following substance (s) known to the State of California to cause cancer: **Formaldehyde**

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## SECTION 15 - OTHER INFORMATION

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FDA Status: Not applicable.

Other Special Considerations: To minimize the generation of airborne dust, the use of pressurized air is not recommended for cleaning dust accumulated on floors, beams, or equipment.  
**CAUTION:** Empty containers may contain product residue. Continue to observe recommended safety precautions when handling empty containers.

Key to Abbreviations and Acronyms:

ACGIH - American Conference of Governmental Industrial Hygienists  
ANSI - American National Standards Institute  
CEIL - Ceiling value  
CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act  
CFR - Code of Federal Regulations  
CWA - Clean Water Act  
DOT - Department of Transportation  
FDA - Food and Drug Administration  
HCS - Hazard Communication Standard  
HMIS - Hazardous Materials Information System  
IARC - International Agency for Research on Cancer  
MSHA - Mine Safety and Health Administration  
N.O.S. - Not Otherwise Specified  
NFPA - National Fire Protection Association  
NIOSH - National Institute for Occupational Safety and Health  
NTP - National Toxicology Program  
OSHA - Occupational Safety and Health Administration  
PEL - Permissible Exposure Limit (OSHA)  
RCRA - Resource Conservation and Recovery Act  
RQ - Reportable Quantity  
SARA - Superfund Amendments and Reauthorization Act  
STEL - Short Term Exposure Limit  
TLV - Threshold Limit Value (recommended by ACGIH)  
TSCA - Toxic Substances Control Act  
TWA - Time Weighted Average

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## SECTION 16 - PREPARATION DATE OF MSDS

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Prepared By: Cra-Vac Industries Inc.



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Emergency Telephone Number

During Office Hours: 416-461-0731  
1-800-461-0700

Preparation Date: March 7, 2003

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