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SAFETY DATA SHEET

SECTION 1: MATERIAL IDENTIFICATION AND USE

**Material name: CP-0509 Urea Formaldehyde Spray
Dried Powder Splicer Glue**

Manufacturer: Spectrum Adhesives
Address: 5611 Universal Drive, Memphis, TN USA

Telephone #: Product Information: 740-763-2886
Emergency Contact: Infotrac: 800-535-5053

***Note: Call emergency numbers only in event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals.**

Chemical Name: Urea Formaldehyde Resins; Amino Resins

Product Codes: CP-0509
CAS Registry No.: Urea Resin; 9011-05-6 Formaldehyde; 50-00-0
Wood Flour: 9004-34-6

See section 3; Composition Information

Molecular Weight: Blend Not Applicable

Material Uses - Hot Press or Radio Frequency Curing Wood Veneer Splicing Adhesive

NFPA Ratings: Health: 2 Flammability: 1 Reactivity: 0 Protection: 0
0 weak → 4 severe

NPCA-HMIS Ratings: Health: 2 Flammability: 1 Reactivity: 0 Protection: 0
0 weak → 4 severe

SECTION 2: EXPOSURE HAZARDS INFORMATION

SIGNAL WORD: "DANGER"

PICTOGRAMS	HEALTH RISK	EXLIMATION POINT
	CARCINOGEN	SKIN, RESPIRATORY SENSITIZER; IRRITANT



FOR INDUSTRIAL USE ONLY

THIS RESIN CONTAINS FORMALDEHDYE WHICH IS LISTED BY CALIFORNIA PROP. 65 AS CAUSING CANCER

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Appearance and Odor: Tan to Brown free flowing powder. Has a slight chemical odor.

Primary Routes of Entry and exposure: Eyes, Inhalation, Skin contact

Inhalation – Dust or vapors can cause irritation. Inhalation may aggravate colds, allergies, asthma, emphysema and psoriasis. Material vapors maybe carcinogenic. See chronic hazards this section.

Skin Contact – Repeated skin contact can cause sensitization and dermatitis due to Formaldehyde

Eye Contact – If powder gets into eyes it can cause severe irritation.

Ingestion - Ingestion of material is not expected to occur during the normal use of this product. If ingested it may cause stomach and intestinal irritation, vomiting, diarrhea, sweating, weakness, and headache. Avoid swallowing if a large amount of material gets into mouth.

CHRONIC HAZARDS: Formaldehyde is listed as a human carcinogen, Group – 1, by IARC and OSHA and a suspected carcinogen by NTP. Evidence is based upon animal testing and data on human is inadequate. Formaldehyde vapors have been found to be carcinogenic to animals and are considered carcinogenic to humans by inhalation. While the amount of formaldehyde in this product is small < 0.3% exposure should be minimized or avoided and recommended personal protection measures should be followed.

IN ALL CASES WHERE SYMPTOMS AND EXPOSURE EFFECTS PERSISTS GETS MEDICAL ATTENTION.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Urea Formaldehyde Resin: Concentration < 85%

CAS No.: 9011-05-6

Carcinogen: No IARC, NTP, OSHA, ACGIH

Formaldehyde: Concentration: < 0.3%

CAS No. : 50-00-0 EINECS (EC) No.: 200-001-8

Carcinogen: Yes IARC, NTP, OSHA, ACGIH (Group 1)

Ammonium Sulfate: Concentration: < 3%

CAS No.: 7783-20-2 ECNo: 231-984 -1

Carcinogen: No IARC, NTP, OSHA, ACGIH

Irritant to eyes, respiratory system and skin

Cellulose: as hardwood wood flour Concentration: < 5%

CAS No.: 9004-34-6 (Cellulose) EC No. : 232-674-9

OSHA PEL/TWA: 15.0 mg/m³ (total dust) 5.0 mg/m³ (Respirable fraction)

ACGIH TLV: TWA 5.0 mg/m³ STEL (15 minutes): 10 0 mg/m³

Carcinogen: (OSHA, NTP, IARC) Yes as hard wood wood-flour

Dicalcium Phosphate: Concentration: < 2.0%

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CAS No.: 1306-06-5 EC No. : 231-840-8

OSHA PEL/TWA: 15.0 mg/m³ (total dust) & 5.0 mg/m³ (Respirable fraction)

ACGIH TLV: TWA 10.0 mg/m³ (total dust) & 3.0 mg/m³ (Respirable fraction)

Carcinogen: (OSHA, NTP, IARC) No

Irritant to eyes, skin and respiratory system.

Hexamethylenetetramine (Hexa) or Methenamine: Concentration: < 3.0%

CAS No.: 100-97-0 EC No. 202-905-0

OSHA PEL/TWA: 15.0 mg/m³ (total dust) & 5.0 mg/m³ (Respirable fraction)

ACGIH TLV: TWA 10.0 mg/m³ (total dust) & 3.0 mg/m³ (Respirable fraction)

Carcinogen: (OSHA, NTP, IARC) No

Irritant to eyes, skin and respiratory system.

SECTION 4: FIRST AID MEASURES

Eye Contact: Flush eyes with water for 15 minutes. Get prompt medical attention.

Skin Contact: Wash effected areas for 15 minutes with soap and water while removing contaminated clothing. If skin problems occur get medical attention. Launder clothing before using them again.

Inhalation: Move to fresh air. Use artificial respiration if needed. Get medical attention.

Ingestion: Rinse mouth. Drink large quantities of water and induce vomiting. Do not give water or induce vomiting with a drowsy, convulsive, or unconscious person. Get medical attention.

SECTION 5: FIRE FIGHTING MEASURES

Flammability: not flammable under normal conditions

Means of Fire Extinguishments: Removal of heat (water spray) and displacement of oxygen for combustion.

Special Procedures: NIOSH approved self contained breathing apparatus. Complete skin protection. Treat as ordinary combustible powder. Possible dust explosion if dispersed in air in large quantities. If dispersion in air is likely S203 can wetted down with water to prevent it from floating into the air as dust.

Flash Point, °C, and method: >200°F by Closed Cup

Upper Explosion Limit, % volume: not available

Lower Explosion Limit, % volume: not available

Explosion Data: not available

Auto ignition Temperature: not available

Hazardous Combustible Products: Carbon Dioxide-CO₂, Carbon Monoxide-CO, Oxide of Nitrogen, Formaldehyde

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Rate of Burning: Not Available

Extinguishing Media: Water Fog, CO2, foam, dry chemical

Sensitivity to static discharge: Not applicable

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spill and leak procedures: see section 8 for type of protective equipment needed. Remove ignition sources. Provide adequate protective equipment and ventilation. Dike or surround spill with clean up material to prevent contamination of sewers, streams, ponds, or lakes by material. It is best to plan to collect spill up dry using brooms, dust pans and shovels. Collect material for reclaim and place in covered waste containers. Avoid generating dust. The material has some water solubility and wash water may have to be collected as a waste if water is used. Floors may become slippery with just the dry powder. The reportable quantity for formaldehyde is 100 pounds. About 5,000 lbs. of this material contains 100 lbs. of non reacted formaldehyde. Dispose of waste material as required by your local state and federal regulations.

Containers leaks: Leaks can be slowed by plugs. Powder will often prevent tape or glue from sticking to the surface of the container. If possible place container on side with leak facing up to stop leak. Clean leak area with dry cloth. Try to use plug with wide tape or glue and paper to patch leak. Or if leaking container is a resin bag will it fit into a large plastic bag, garbage bag, and be contained. Tie off plastic bag to seal it. Clean up spilled material and dispose of as waste. If the container is badly damaged transfer the resin to a suitable container for reclaim and use.

SECTION 7: HANDLING AND STORAGE

Storage and handling: See section 8 for types of protection equipment needed. Avoid eye contact and generating airborne dust. Provide adequate protective equipment and ventilation. At the material handling areas provide local exhaust to mechanical dust collection systems. Clean up any dust accumulations. Remove sources of ignition. Store in a cool (68°F) dry place elevated above floor with no contact against walls to allow air motion around containers to prevent water condensation on the material. Avoid direct sunlight, heat sources, open flames, ignition sources, and incompatible substances.

This resin is a thermoset material meaning it is cured by heat. Summertime heat and sunlight causing hot warehouses have greatly decreased the shelf life of this material.

SECTION 8: EXPOSURE CONTROL PERSONAL PROTECTION

Exposure Limit Guidelines To material Components:

Free Formaldehyde: CAS# 50 - 00 - 0 < 0.3%

Carcinogenicity: OSHA, IARC Yes, Listed as Group 1 carcinogen

OSHA Action Level: 0.5 ppm TWA

Worker Exposure: 0.75 ppm TWA (8 hours)

STEL: 2.0 ppm (15 minutes)

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ACGIH TLV: 0.3 ppm

Urea Formaldehyde Resin Powder CAS# 9011-05-6

Carcinogenicity (see free formaldehyde) Concern as airborne dust exposure.

OSHA PEL/TWA: 15 (total dust mg/m³) / 5 (Respirable dust mg/m³)

ACGIH TLV: 10 (total dust mg/m³) / 3 (Respirable dust mg/m³)

Exposure Control and Personal Protection:

At material handling areas and operations provide local exhaust and dust collection systems to control dust levels in the air and limit worker exposure.

Eyes – Use dust proof goggles if dust is generated.

Skin – Skin protection is not required under conditions of normal use. Protective gloves (polychloroprene-nitrile rubber recommended), long sleeve shirts and long leg pants should be worn. Protective barrier clothing, boots and/or head covering as needed to prevent dust exposure. Wear a face shield if face contact is likely. All resin contaminated clothing should be laundered before reuse.

Respiratory Protection - Not required under conditions of normal use and when ventilation is adequate. Use NIOSH / MSHA approved masks and respirators if airborne dust is generated or formaldehyde exposure is a concern.

Other- access to eye wash stations and safety showers.

9: PHYSICAL AND CHEMICAL PROPERTIES:

Color: Tan to Brown

Odor: Slight formaldehyde

Odor Threshold: Not available

Physical State: Solid as Powder

pH (50% solution in water) 8 – 10 in solution after time pH drop to 4 - 6

Freezing Point: Not Applicable

Melt Point: 105 – 115°C (221 – 239°F)

Boiling Point: Does not melt to true liquid state thermoset curing material

Flash Point: >200°F (Closed Cup)

Evaporation Rate: Does not sublime; not applicable

Flammability: Not available

Upper Flammability Limit: Not available

Lower Flammability Limit: Not available

Vapor Pressure: Not available

Vapor Density: Not Applicable

Specific Gravity: not available

Auto ignition Temperature: not available

Percent volatile: 1 – 2 % as moisture

Volatile Organic Compound Content, wt %: 0

Solubility in water: Slightly soluble

Coefficient of oil/water distribution: not available.

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10: STABILITY AND REACTIVITY

Stability: Stable **Hazardous Polymerization:** Does not occur
Incompatibilities: Strong oxidizing agents and strong acids
Conditions To Avoid: Heat, ignition sources, open flames, storage at elevated temperatures for prolonged periods of time. Contact with incompatible substances. Avoid dispersing as dust cloud in air.
Hazardous Decomposition Products: Carbon Dioxide – CO₂, Carbon Monoxide CO, Oxides of Nitrogen, formaldehyde

11: TOXICOLOGICAL INFORMATION

Toxicological information on urea formaldehyde resin itself was not found but studies have been done on formaldehyde. The unbound formaldehyde content of material is small but action maybe needed to prevent overexposure to *formaldehyde* during the use of the material by the customer.

General Information: Formaldehyde is irritating to the eyes and mucous membranes. Formaldehyde is a known skin sensitizer. Repeated and prolonged skin contact with this product may lead to skin rashes due to its low unreacted formaldehyde content. Formaldehyde can also sensitize the respiratory tracts leading to chest tightness and coughing. Ammonium Sulfate is known to be an irritant to eyes skin and the respiratory tract.

Eye- may cause severe eye irritation or injury. Formaldehyde – EYE Rabbit, 50 µg (24hours); severe irritation.

Skin- Prolonged single exposure can produce severe skin irritation or injury. Formaldehyde – DERMAL LD₅₀: Rabbit, 270 mg/kg

Inhalation – This product may be toxic by inhalation. Severe over exposure may cause serious burns of the entire respiratory tract. Severe over exposure may cause lung damage, choking, unconsciousness, or death. Formaldehyde: VAPOR

(LC₅₀) Rat 480 mg/m³ 4 hours (LC₅₀) Cat, 400 mg/m³ (2 hrs)

Ingestion – Formaldehyde is orally toxic and may be harmful or fatal if swallowed. Expect the gastrointestinal tract to be irritated by this material if it is swallowed.

Formaldehyde: Oral (LD₅₀): Rat 600 - 800 mg/kg body weight

CHRONIC HAZARD: Formaldehyde is listed as a probable carcinogen by IARC and OSHA and a suspected carcinogen by NTP. Evidence is based upon animal testing and data on human is inadequate. Formaldehyde vapors have been found to be carcinogenic to animals and are considered possible carcinogenic to humans by inhalation. While the amount of formaldehyde in this product is small < 0.3% exposure should be minimized or avoided and recommended personal protection measures should be followed.

12: ECOLOGICAL INFORMATION

The evaluation of available toxicity data for fish, aquatic invertebrates and aquatic plants indicates that the potential hazard of urea formaldehyde resin to aquatic organisms is low.

The Biodegradability of this material is considered to be poor.

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13: DISPOSAL CONSIDERATIONS

The information on RCRA waste classification and disposal methodology provided below applies only to the Tembec BTL SR inc. product as supplied. If the material has been altered, contaminated, or has exceeded its recommended shelf life the guidance may not be applicable. Hazardous waste classification under federal regulations is dependent upon whether a material is RCRA listed hazardous waste or has any of four RCRA hazardous waste characteristics. Refer to 40CFR Part 261.33 to determine if a given material is to be disposed of as a RCRA listed hazardous waste. RCRA Hazardous waste characteristics: There are four characteristics defined in 40CFR 261.21-61.24: Ignitability, Corrosivity, reactivity, and toxicity. To determine ignitability see section 9 of this MSDS (flashpoint). For corrosivity, see section 9 and 14 (pH and DOT), for reactivity see section 10 (incompatible materials), for toxicity see section 11. Federal regulations are subject to change. State and local regulations may differ from or be more stringent than the federal regulations and may also apply to alternate disposal as waste. It is the responsibility of the user to check local and state waste regulations as to the waste classification for this material and the proper method to be used for its disposal.

14. TRANSPORTATION INFORMATION:

DOT Non Hazardous
 NMFC 46030
 Class 55

Synthetic resin Plastic Material Powder

Chemical of concern: formaldehyde CAS # 50-00-0
 Resin latent formaldehyde content: < 0.3%

Reportable Quantities (RQ): 100 lbs.
 Pounds Resin to get RQ: 33,333 lbs.

Corrosivity: None

Harmonized Tariff System Number: 390910 0000

15: REGULATORY INFORMATION:

United States (USA): All components of this material are included on the TSCA inventory in compliance with the Toxic Substance Control Act. No reactions have occurred that make a secondary substance or chemical that is not listed on TSCA.

Canada: Components of this product have been reported to environment Canada in accordance with sections 66 and/ or 81 of the Canadian Environmental Protection Act.

European Union (EU): All components of this product are included in the European Inventory of Existing Chemical Substances (EINECS) in compliance Council Directives 67/548/EEC.

Australia: All components of this product have not yet been included in the Australian inventory of Chemical Substances (AICS) or assessed by Worksafe Australia.

China: All components of this product are not included in the China Inventory.

Japan: All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese inventory.

Korea: All components of this product are not included on the Korean (ECL) inventory.

Philippines: All components of this product are not included on the Philippines (PICCS) inventory.

Other Regulatory Information:

The following components of this product may be subjected to reporting requirements pursuant to section 313

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of the CERCLA (40 CFR 372) Section 12b of TSCA or may be subject to release reporting requirements (40 CFR 307, 40 CFR 411, etc) see section 13 for information on waste classification and waste disposal of this product.

<u>Component/ CAS #</u>	<u>%</u>	<u>Reportable Quantity</u>	
Formaldehyde 50-00-0	0.3% max.	100 lbs.	Equals 33,333 of this material

16. OTHER INFORMATION

Abbreviations and anacronyms:

- ACGIH – American Conference of Governmental Industrial Hygienists
- TWA – Time Weight Average; average total exposure over 8 hours allowed to a hazardous material
- STEL - Short Term Exposure Limit; maximum exposure allowed over 15 minutes to a hazardous material
- CAS # - chem. Abstracts number used to identify the compound
- CERCLA – Comprehensive Environmental Response Compensation and Liability Act
- IARC – International Association Research of Cancer
- NIOSH-National Institute for Occupational Safety and Health
- NTP-National Toxicology Program
- OSHA- Occupational Safety and Health Administration
- PEL – Permissible exposure limit
- Ppm – parts per million
- RCRA – Resources Conservation Recovery Act
- RQ – Reportable Quantity
- TSCA – Toxic Substance Control Act
- TLV – Threshold Limit Value
- WHMIS – Workplace Hazardous materials Information System (Canada)
- GHS – Global Harmonization System

PREPARATION INFORMATION AND DATE	
Prepared by: Andy Fairchild, Technical Dep't	Spectrum Adhesives, Inc.
Date approved: 03-28-17	
<p>Sources: Government Regulations, recognized safety practices, technical experience and knowledge of the product, and scientific, technical and general literature. The data and information contained herein is believed to be accurate and complete to best of our knowledge at Spectrum Adhesives. No warranty or representation for which Spectrum Adhesives assumes legal responsibility is implied. The information refers only to the controlled product described herein and does not relate to use of the product with any other materials and processes. Spectrum Adhesives encourages our customers to consider, investigate, and verify information for their uses. Spectrum Adhesives assumes no responsibility for damage to property or equipment or injury to recipient or third party persons as a result of misuse or handling of this quality product. Customers are encouraged to conduct appropriate testing before use of product. The user must assure that use of information contained herein is done according to local, provincial, state and federal regulations and laws.</p>	