

Firestone Fibers and Textiles Company, LLC

Material Safety Data Sheet

June 1, 2009

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SECTION 1: PRODUCT IDENTIFICATION

Product Name: Ammoniated Nylon Dip (AP209, AP329, AP419 & AP429)
 Polyester Dip (AP019 & AP339)
 Rayon RFL Dip (AP259)
 Industrial Dip (DG001, RT112, RT114, RT121 & RT212, RT-RF)

Chemical Name / Synonym: Ammoniated Resorcinol Formaldehyde Latex Resin with percent solids ranging 12.5 - 25% and variations in latex.

Chemical Family: Mixture

24-Hour Emergency Phone: (800) 424-9300 CHEMTREC

Manufacturer's Name: Firestone Fibers and Textiles Company, LLC

Manufacturer's Address: 100 Firestone Lane, King's Mountain, NC 28086

NFPA Hazard Rating: Health 2, Flammability 0, Reactivity 0

HMS Hazard Rating: Health 2*, Flammability 0, Reactivity 0

OSHA Hazardous: Yes

SECTION 2: CHEMICAL COMPOSITION

Chemical Name:	Common Name:	CAS #:	% (by wt)	Exposure Limits:
Formaldehyde	Formalin	50-00-0	<3	PEL 0.75 ppm OSHA STEL 2 ppm ACGIH CEIL 0.3 ppm
Resorcinol	Resorcin	108-46-3	<5	TLV 10 ppm ACGIH STEL 20 ppm
Ammonia	Ammonia	7664-41-7	<5	PEL 50 ppm TLV 25 ppm ACGIH STEL 35 ppm
Nonhazardous as per 29 CFR 1910.1200.	None	None	>88.5	None Established

SECTION 3: HAZARD IDENTIFICATION

Primary Route of Exposure: Inhalation, Skin absorption

Signs and Symptoms of Exposure: Formaldehyde is a severe eye and skin irritant. Eye contact with formaldehyde-containing liquids or vapors may result in discomfort, irritation, tearing and possible permanent corneal injury. Skin contact may cause skin discoloration and cracking. Some individuals may experience allergic type dermatitis or hives following exposure. Inhalation of formaldehyde vapors may cause upper respiratory tract irritation, difficulty in breathing, cough, and burning of the eyes and throat. Ingestion of dilute formaldehyde solutions may cause throat and stomach discomfort, vomiting, and diarrhea that could lead to collapse.

Resorcinol is a strong skin, eye and upper respiratory system irritant. It can cause systemic toxicity by acting on the blood and nervous systems, spleen, liver and kidneys. Resorcinol may be absorbed through the skin resulting in reddening and itching of

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	the skin, dermatitis and edema.
	Ammonia is an irritant of the respiratory tract and conjunctivae, and could cause intolerable irritation at extremely high concentrations. Massive ammonia exposures may lead to chronic airway hyperactivity and asthma.
	Ammonia LC ₅₀ : 2000 ppm/4 hours, rat, inhalation; ammonia LD ₅₀ : 1200 mg/kg, rat, oral. Formaldehyde LD ₅₀ :100 mg/kg, rat, oral; formaldehyde LC ₅₀ : 250 ppm/2 hours, rat, inhalation. Resorcinol LD ₅₀ 301 mg/kg, rat, oral.
Medical Conditions Aggravated by Exposure:	Exposure to this material may aggravate pre-existing skin and respiratory conditions.
Chronic Effects:	Prolonged and repeated exposure to formaldehyde may result in the sensitizing of the skin.
Carcinogenicity:	Inhalation of formaldehyde vapors has been associated with cancers of the lung and upper respiratory (nasal) system. Formaldehyde is classified as an OSHA <i>Carcinogen</i> , NIOSH <i>Potential occupational carcinogen, with no further categorization</i> , ACGIH <i>Suspected Human Carcinogen</i> , NTP <i>Reasonably Anticipated To Be A Human Carcinogen</i> , and an IARC Class 1, <i>Carcinogenic to Humans</i> . Resorcinol is an IARC Class 3, <i>unclassifiable as to carcinogenicity in humans</i> .

SECTION 4: FIRST AID MEASURES

First Aid Procedures:	In case of eye contact, open eyelids and flush eyes immediately with water for at least fifteen minutes, preferably at an eyewash fountain. If the material contacts the skin, remove the product by washing exposed surfaces with soap and water. If eye or respiratory irritation is experienced, move to fresh, uncontaminated air. Call a physician if eye, skin or respiratory irritation persists or if the material is accidentally ingested.
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SECTION 5: FIRE FIGHTING PROCEDURES

Suitable Extinguishing Media:	Combustion of this product is not likely due to its dilution rate. Use fire fighting media suitable for other materials involved in the fire.
Hazardous Combustion Products:	Containers exposed to fire conditions may release carbon oxides, formaldehyde, resorcinol, and acrid smoke and fumes.
Recommended Fire Fighting Procedures:	Wear impermeable protective clothing and self contained breathing apparatus suitable for other materials involved in the fire.
Unusual Fire and Explosion Hazards:	Pressure builds up in heated closed containers. Cool containers of this material with a water stream.

SECTION 6: PRECAUTIONS FOR SAFE HANDLING AND USE

Steps to Be Taken in Case Material is Released or Spilled:	Assess the conditions of the emergency and determine the appropriate personal protective equipment that responders must
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Precautions to Be Taken in Handling and Storing:	wear. Evacuation may be necessary. Contain spill with absorbent material and place into drums for disposal. Store this material at room temperature in a closed container.
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SECTION 7: EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation:	Process, handle and store this material in an area that is provided with local or general exhaust ventilation to maintain exposure levels below the applicable exposure limits.
Respiratory Protection:	If personal exposure concentrations cannot be maintained below the appropriate exposure limits using engineering controls, a NIOSH approved full face formaldehyde and/or ammonia air purifying respirator may be appropriate based on employer-determined exposure levels. Air-supplied or SCBA respirators may be required when the measured chemical concentration exceeds the capacity of the air purifying respirator, in oxygen deficient atmospheres or when personal exposure levels are unknown.
Eye Protection:	It is recommended that individuals pouring, mixing, or applying this product in a way that may cause splashing wear chemical splash goggles and a full face shield.
Skin Protection:	Neoprene, nitrile, butyl, natural rubber, PVC or viton chemical resistant gloves may be necessary to prevent skin contact during pouring, mixing or applying this product.
Other:	Operators handling this product must assess the need to wear suitable clothing and footwear to prevent skin contact.
Work / Hygienic Practices:	Wash exposed skin prior to eating, drinking or smoking and at the end of each shift. Wash contaminated clothing prior to reuse.

SECTION 8: PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor:	Red or Grey-Black liquid with ammonia odor.		
Flash Point:	Not Applicable	Lower Explosive Limit:	Not Applicable
Method Used:	Not Applicable	Upper Explosive Limit:	Not Applicable
Evaporation Rate:	1 (Water = 1)	Boiling Point:	212° F
pH (undiluted product):	9.3 - 10.5	Melting Point:	Unknown
Solubility in Water:	100%	Specific Gravity:	1.0 – 1.2
Vapor Density:	Unknown	Percent Volatile:	75 – 87.5
Vapor Pressure:	Unknown		

SECTION 9: STABILITY AND REACTIVITY

Thermal Stability:	Stable
Hazardous Polymerization:	Will not occur
Conditions to Avoid:	Avoid contact with strong acids, alkalis, strong oxidizers, halogens. Ammonia may form explosive compounds on contact with gold, silver, mercury or hypochlorite.

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SECTION 10: TRANSPORTATION

Regulatory Agency:	Not Regulated
Proper Shipping Name:	Not Applicable
Hazard Classification:	Not Applicable
Identification Number:	Not Applicable
Labels Required:	Not Applicable
Other Requirements:	Not Applicable

SECTION 11: MISCELLANEOUS INFORMATION

Additional Comments: Information provided in this MSDS is based on the health and physical properties of the component chemicals combined with material specific physical data of the otherwise untested mixture. Versions of the aqueous mixture appearing Grey-Black contain <4% carbon black (CAS#1333-86-4). In October 1995, the International Agency for Research on Cancer (IARC) conducted a scientific review of carbon black. At the conclusion of the review, the recommendation was made that carbon black be reclassified from Group 3 (insufficient evidence to make a determination) to Group 2B possibly carcinogenic in humans). This recommendation was based upon results of rat inhalation studies, despite the lack of any parallel evidence in humans or other animal species. The carbon black is inextricably bound in solution such that it cannot present an inhalation hazard.

SARA Sec 313:	<u>Chemical</u>	<u>CAS #</u>	<u>Concentration (%)</u>
	Formaldehyde	50-00-0	<0.5

Date of Previous MSDS: August 18, 2008

Changes Since Previous MSDS: Company name change, combined multiple products (with common chemical composition) into one MSDS and phone number for additional information.

Telephone Number for Additional Information: (317) 575-7190

DISCLAIMER

The information contained herein is based on data considered accurate which has been obtained from other companies and organizations. However, no warranty or representation is expressed or implied that the information, is accurate, complete or representative. Firestone Fibers and Textiles Company, LLC assumes no responsibility for injury to the buyer, the buyer's employees, or any third persons, if reasonable safety procedures are not followed. Additionally, Firestone Fibers and Textiles Company, LLC assumes no responsibility for injury to buyer, the buyer's employees, or any third persons caused by abnormal use of this material, even if reasonable safety procedures are followed.