EGS Electrical Group NELSON Firestop Products

MATERIAL SAFETY DATA SHEET

Prepared to U.S. OSHA, CMA, ANSI and Canadian WHMIS Standards

PART I *What is the material and what do I need to know in an emergency?*

1. PRODUCT IDENTIFICATION

TRADE NAME (AS LABELED):	**FSC3, Joint Fire Protective Coating**
CHEMICAL NAME/CLASS:	Filled Vinyl & Acrylic Emulsion
SYNONYMS:	None
PRODUCT USE:	Elastomeric Firestop, Intumescent
SUPPLIER/MANUFACTURER'S NAME:	EGS Nelson Firestop
ADDRESS:	4135 S. 100th East Avenue, Suite 100 Tulsa, Oklahoma 74146
CHEMTREC EMERGENCY NO.:	1-800-424-9300 (United States)
BUSINESS PHONE:	(918) 627-5530/(800) 331-7325
DATE OF PREPARATION:	June, 2002

2. COMPOSITION and INFORMATION ON INGREDIENTS

Ingredient	CAS #	Percent (max)
2-Propenoic acid, polymer	052640-81-0	25 – 50
Aluminum oxide	001344-28-1	1 – 10
Calcium carbonate	001317-65-3	10 – 25
Ethylene Glycol	000107-21-1	< 1
Methenamine	000100-97-0	< 1
Phenol,isopropylated, phosphate (3:1)	068937-41-7	1 – 10
Phenol-formaldehyde polymer	009003-35-4	1 – 10
Polyvinyl Acetate Emulsion	NJ801415075P	1 - 10
Quartz	014808-60-7	< 1
Triphenyl phosphate	000115-86-6	1 - 10

3. HAZARD IDENTIFICATION

EMERGENCY OVERVIEW: The chief health hazard associated with overexposure would be the potential to slightly irritate the eyes, skin, nose, and other tissues that come in contact with this product or in the event that particulates are generated from the product. This product is not flammable or reactive. Emergency responders must wear proper personal protective equipment for the releases to which they are responding.

SYMPTOMS OF OVEREXPOSURE BY ROUTE OF EXPOSURE: Under normal circumstances of use, this product should not present significant health hazards. The most significant routes of occupational overexposure would be via inhalation and contact with skin. The symptoms of overexposure to this product, via route of entry, are as follows:

INHALATION: Breathing airborne particulates, if generated during use of this product, may irritate the nose, throat, or upper respiratory system. Symptoms of such exposure could include nausea, coughing and sneezing, tightness of chest. Hypersensitive individuals may experience allergic respiratory reaction and wheezing. Symptoms are generally alleviated when exposure ends.

CONTACT WITH SKIN or EYES: Spray applications of this material may create aerosols which may be irritating to the eyes. Prolonged eye contact can result in permanent damage. Minor skin contact may cause irritation. Prolonged skin contact can result in burns. Hypersensitive individuals may develop an allergic reaction resulting in dermatitis, rash or hives.

SKIN ABSORPTION: Harmful if absorbed through the skin.

INGESTION: Ingestion of this product is unlikely. May be irritating if ingested, Reproductive and developmental effects have been reported for certain ingredients. Long-term repeated ingestion of small amounts of product may cause a decrease in red blood cells or liver and kidney damage. Ethylene glycol has been shown to produce teratogenic and developmental toxic effects in laboratory animals. Phenol-formaldehyde polymer has tested positive as a mutagen.

INJECTION: Injection of this product is unlikely.

HAZARDOUS MATERIAL IDENTIFICATION SYSTEM

HEALTH	(BLUE)	2
FLAMMABILITY	(RED)	0
REACTIVITY	(YELLOW)	0
PROTECTIVE EQUIPMENT		B

EYES	RESPIRATORY	HANDS	BODY
	SEE SECTION 8		

For routine applications.

See Section 16 for Definition of Ratings

PART II *What should I do if a hazardous situation occurs?*

4. FIRST-AID MEASURES

Contaminated individuals must seek medical attention if any adverse effect occurs. Rescuers should be taken for medical attention, if necessary. Take a copy of label and MSDS to physician or health professional with the contaminated individual.

SKIN EXPOSURE: Wash with soap and water. Remove contaminated clothing and wash before reuse. Seek medical attention if adverse reaction occurs.

EYE EXPOSURE: If fumes or particulates generated from the product contaminate the eyes, open victim's eyes while under gently running water. Use sufficient force to open eyelids. Have the contaminated individual "roll" eyes. The recommended minimum flushing time is 15 minutes. Seek medical attention if any adverse effect occurs.

INHALATION: If fumes or particulates generated from the product are inhaled, remove victim to fresh air. If adverse effect occurs after removal to fresh air, seek medical attention.

INGESTION: Do not induce vomiting. If discomfort or irritation persists, consult a physician.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing dermatitis, and other skin disorders can be aggravated by exposure to this product.

RECOMMENDATIONS TO PHYSICIANS: Treat symptoms.

5. FIRE-FIGHTING MEASURES

FLASH POINT: > 212º F / 100º C Flash Point Method: Estimated
AUTOIGNITION TEMPERATURE: Not available.
FLAMMABLE LIMITS (in air by volume, %):
Lower (LEL): Not available.
Upper (UEL): Not available.

FIRE EXTINGUISHING MATERIALS: Select fire extinguishing media appropriate for the surrounding area.

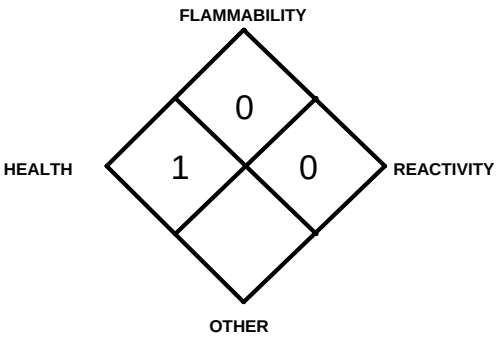
Water Spray: YES
Alcohol Foam: YES
Carbon Dioxide: YES
Dry Chemical: YES
Other: Any "ABC" Class.

UNUSUAL FIRE AND EXPLOSION HAZARDS: This product is not combustible and does not contribute to the intensity of a fire. When involved in a fire, this material may decompose and produce irritating vapors, acrid smoke, and toxic gases (e.g., oxides of nitrogen may be evolved).

Explosion Sensitivity to Mechanical Impact: Not sensitive.

Explosion Sensitivity to Static Discharge: Not sensitive.

NFPA RATING



See Section 16 for Definition of Ratings

SPECIAL FIRE-FIGHTING PROCEDURES: Incipient fire responders should wear eye protection. Structural firefighters must wear Self-Contained Breathing Apparatus and full protective equipment. Move fire-exposed containers if it can be done without risk to firefighters. If possible, firefighters should control runoff water to prevent environmental contamination. Rinse contaminated equipment with soapy water before returning such equipment to service. No special procedures specific to this product.

6. ACCIDENTAL RELEASE MEASURES

RELEASE RESPONSE: Prevent spills from entering drinking water supplies, streams, or sewers. Collect material with an inert, noncombustible material and remove for disposal.

PART III *How can I prevent hazardous situations from occurring?*

7. HANDLING and STORAGE

WORK AND HYGIENE PRACTICES: Avoid contact with eyes, skin and clothing. Do not take internally. Practice good personal hygiene to avoid ingestion. Wash clothing before reuse. Use only with adequate ventilation.

STORAGE AND HANDLING PRACTICES: Store this product in a cool, dry location, away from sources of intense heat. Store away from incompatible materials (see Section 10, Stability and Reactivity).

8. EXPOSURE CONTROLS - PERSONAL PROTECTION

VENTILATION AND ENGINEERING CONTROLS: No special ventilation and engineering controls are required for use of this product.

RESPIRATORY PROTECTION: For spray applications, respiratory protection is required. A dust/mist respirator such as a 3M Type P-95 or type 3-95 with organic vapor protection (or equivalent) is adequate. Certain working conditions may require increased levels of respiratory protection. A respirator equipped with organic vapor cartridges may be required indoors and other poorly ventilated areas. Respirators may not be required for non-spray applications. In all cases, maintain exposures below governmental limits specified (see Section 15). See Handling and Storage (Section 7) for additional information. A NIOSH approved respirator for Formaldehyde vapor is required whenever exposures exceed regulatory limits. For additional information, refer to US OSHA Regulations 29 CFR 1910.134 1998.

EYE PROTECTION: Wear goggles to prevent exposure to high vapor or mist concentrations. Wear goggles or safety glasses with side shields and a full-face shield to prevent contact due to splashing.

HAND PROTECTION: Wear Impervious (PVC, latex or nitrile) gloves for routine industrial use.

BODY PROTECTION: Work clothing with long sleeves, long pants and work boots must be worn. Clothing must be laundered before reuse. Disposable tyvek suits may be used during spray applications.

9. PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid
RELATIVE VAPOR DENSITY (air = 1): >1
SPECIFIC GRAVITY (water = 1): Not Available
SOLUBILITY IN WATER: Appreciable.
VAPOR PRESSURE, mm Hg @ 20°C: Unknown
BULK DENSITY (lbs/Cubic Foot) : Not Applicable

APPERANCE/ODOR: Red / Mild latex odor.
EVAPORATION RATE (n-BuAc = 1): 1
VISCOSITY: Unknown
BOILING POINT: >100ºC (212ºF).
pH: Not applicable.
% Volatiles (gr/L): (70ºF/21ºC): 30 g/l

10. STABILITY and REACTIVITY

STABILITY: Stable.
DECOMPOSITION PRODUCTS: Carbon dioxide, Carbon monoxide, Low molecular weight hydrocarbons, Aldehydes, magnesium carbonate and lime.
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: Strong oxidizers, strong acids, ammonium salts, flourine, maganese trioxide, oxygen diflouride and chlorine trifluoride.

PART IV *Is there any other useful information about this material?*

11. TOXICOLOGICAL INFORMATION

Ingredient	**CAS Number**	**LD20 and LC50**
Triphenyl phosphate	000115-86-6	Oral LD50 Rat : 3500 mg/kg; Oral LD50 Mouse : 1320 mg/kg

Carcinogenicity:

Ingredient	IARC Group1	IARC Group 2A	IARC Group 2B	NTP Known	NTP Suspect	OSHA
2-Propenoic acid, polymer…	No	No	No	No	No	No
Aluminum oxide	No	No	No	No	No	No
Calcium Carbonate	No	No	No	No	No	No
Magnesium Aluminum Silicate	No	No	Yes	No	No	No
Phenol, isopropylated, phosphate (3:1)	No	No	No	No	No	No
Phenol-formaldehyde polymer	No	No	No	No	No	No
Polyvinyl Acetate Emulsion	No	No	No	No	No	No
Quartz	Yes	No	No	Yes	Yes	Yes
Triphenyl Phosphate	No	No	No	No	No	No

Contains formaldehyde below 0.1% threshold. Product is capable of releasing formaldehyde under certain conditions. Exposures during typical applications are expected to be insignificant. Exposure to formaldehyde vapor is a potential concern if product is applied under confined space conditions. NTP: Suspect Carcinogen. IARC: Group 2A. OSHA: Potential.

Mutagenicity: Phenol-formaldehyde polymer in this product has tested positive as a mutagen.

Teratogenicity: Ethylene glycol contained in this product has been shown to produce teratogenic effects in laboratory animals.

Reproductive Toxicity: No information available.

12. ECOLOGICAL INFORMATION

ALL WORK PRACTICES MUST BE AIMED AT ELIMINATING ENVIRONMENTAL CONTAMINATION.

Environmental Fate: No data available for product.

Ecotoxicity: No data available for product.

13. DISPOSAL CONSIDERATIONS

PREPARING WASTES FOR DISPOSAL: Waste disposal must be in accordance with appropriate U.S. Federal, State, and local regulations or with regulations of Canada and its Provinces. According to EPA (40 CFR § 261), waste of this product is not defined as hazardous.

14. TRANSPORTATION INFORMATION

PROPER SHIPPING NAME:	Not applicable.
HAZARD CLASS NUMBER and DESCRIPTION:	Nonhazardous.
UN IDENTIFICATION NUMBER:	Not applicable.
PACKING GROUP:	Not applicable.
DOT LABEL(S) REQUIRED:	Not applicable.

NORTH AMERICAN EMERGENCY RESPONSE GUIDEBOOK NUMBER (2000): Not applicable.

TRANSPORT CANADA TRANSPORTATION OF DANGEROUS GOODS REGULATIONS: This material is not considered as dangerous goods by Transport Canada.

IATA DESIGNATION: This material is not considered as dangerous goods by the International Air Transport Association.

UPS SHIPPING: This material is not considered as Hazardous Materials by the United Parcel Service.

15. REGULATORY INFORMATION

Regulatory Chemical Lists:

CERCLA (Comprehensive Response Compensation and Liability Act):

(None present unless listed below)

SARA Title III (Superfund Amendments and Reauthorization Act)

SARA Section 312/Tier I & II Hazard Categories:

Health Immediate (acute)	Yes
Health Delayed (chronic)	Yes
Flammable	No
Reative	No
Pressure	No

302 Reportable Ingredients (Identification Threshold 1%): None

313 Reportable Ingredients (Chemicals present below reporting threshold are exempt):

Chemical Name	CAS	WT %
Acetaldehyde	000075-07-0	.0024
Acrylamide	00079-06-01	.00144
Acrylonitrile	000107-13-1	.00048

313 Reportable Ingredients (Chemicals present below reporting threshold are exempt): (cont.)

Chemical Name	CAS	WT %
Aluminum Oxide	001344-28-1	6.7
Ammonia	007664-41-7	.12
Chlorothalonil	001897-45-6	.0404
Ethyl acrylate	000140-88-5	.00384
Ethylene Glycol	000107-21-1	.27
Formaldehyde	000050-00-0	.032
Methyl alcohol	000067-56-1	.0018
Vinyl acetate	000108-05-4	.015

National Volatile Organic Compound Emission Standards For Architectural Coatings:

Volatile Organic Content: (gr/L) 30 g/l

WHMIS Classification(s): D2 B

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

State Regulatory Information:

California Proposition 65: Warning! This product contains substances known to the state of California to cause cancer, birth defects or other reproductive harm.

Massachusetts Hazardous Substance List (Identification threshold 0.001% (1ppm)):

Chemical Name	CAS #	Wt %
Acetaldehyde	000075-07-0	.0014
Acrylamide	000079-06-1	.0008
Acrylonitrile	00107-13-1	.0002
Ammonia	007664-41-7	.12
Chlorothalonil	001897-45-6	.0404
Ethyl Acrylate	000140-88-5	.0022
Formaldehyde	000050-00-0	.0321
Quartz	014808-60-7	.2675
Vinyl Acetate	000108-05-4	.0742

New Jersey Hazardous Substance List (Identification threshold (0.1%)):

Chemical Name	CAS #	Wt %
Aluminum Oxide	001344-28-1	6.7
Ammonia	007664-41-7	.12
Ethylene Glycol	000107-21-1	.27

Pennsylvania Hazardous Substance List (Identification threshold (0.1%):

Chemical Name	CAS #	Wt %
Formaldehyde	000050-00-0	.032

Chemical Inventory Status:

All Chemicals in this product are listed or exempt from listing in the following countries:

US	CANADA		EUROPE	AUSTRALIA	JAPAN	KOREA	PHILIPPINES
TSCA	DSL	NDSL	EINECS/ELINCS	AICS	ENCS	ECL	PICCS
Yes	Yes	No	Not Determined	Not Determined	Not Determined	Not Determined	Not Determined

16. OTHER INFORMATION

PREPARED BY: Nelson Firestop Products

DATE OF PRINTING: June, 2002

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof. Nelson EGS assumes no responsibility for injury to the vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Additionally, Nelson EGS assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.

DEFINITIONS OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these which are commonly used include the following:

CAS #: This is the Chemical Abstract Service Number which uniquely identifies each constituent.

EXPOSURE LIMITS IN AIR:

ACGIH - American Conference of Governmental Industrial Hygienists, a professional association which establishes exposure limits. **TLV -** Threshold Limit Value - an airborne concentration of a substance which represents conditions under which it is generally believed that nearly all workers may be repeatedly exposed without adverse effect. The duration must be considered, including the 8-hour Time Weighted Average **(TWA)**, the 15-minute Short Term Exposure Limit, and the instantaneous Ceiling Level **(C)**. Skin absorption effects must also be considered.

OSHA - U.S. Occupational Safety and Health Administration.

PEL - Permissible Exposure Limit - This exposure value means exactly the same as a TLV, except that it is enforceable by OSHA. The OSHA Permissible Exposure Limits are based in the 1989 PELs and the June, 1993 Air Contaminants Rule (Federal Register: 58: 35338-35351 and 58: 40191). Both the current PELs and the vacated PELs are indicated. The phrase, "Vacated 1989 PEL," is placed next to the PEL which was vacated by Court Order. **IDLH -** Immediately Dangerous to Life and Health **-** This level represents a concentration from which one can escape within 30-minutes without suffering escape-preventing or permanent injury. **The DFG - MAK** is the Republic of Germany's Maximum Exposure Level, similar to the U.S. PEL. **NIOSH** is the National Institute of Occupational Safety and Health, which is the research arm of the U.S. Occupational Safety and Health Administration (**OSHA**). NIOSH issues exposure guidelines called Recommended Exposure Levels (**REL**s). When no exposure guidelines are established, an entry of **NE** is made for reference.

HAZARD RATINGS:

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: Health Hazard: **0** (minimal acute or chronic exposure hazard); **1** (slight acute or chronic exposure hazard); **2** (moderate acute or significant chronic exposure hazard); **3** (severe acute exposure hazard; onetime overexposure can result in permanent injury and may be fatal); **4** (extreme acute exposure hazard; onetime overexposure can be fatal). Flammability Hazard: **0** (minimal hazard); **1** (materials that require substantial pre-heating before burning); **2** (combustible liquid or solids; liquids with a flash point of 38-93°C [100-200°F]); **3** (Class IB and IC flammable liquids with flash points below 38°C [100°F]); **4** (Class IA flammable liquids with flash points below 23°C [73°F] and boiling points below 38°C [100°F]. Reactivity Hazard: **0** (normally stable); 1 (material that can become unstable at elevated temperatures or which can react slightly with water); **2** (materials that are unstable but do not detonate or which can react violently with water); **3** (materials that can detonate when initiated or which can react explosively with water); **4** (materials that can detonate at normal temperatures or pressures).

NATIONAL FIRE PROTECTION ASSOCIATION: Health Hazard: **0** (material that on exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials); **1** (materials that on exposure under fire conditions could cause irritation or minor residual injury); **2** (materials that on intense or continued exposure under fire conditions could cause temporary incapacitation or possible residual injury); **3** (materials that can on short exposure could cause serious temporary or residual injury); **4** (materials that under very short exposure causes death or major residual injury). Flammability Hazard and Reactivity Hazard: Refer to definitions for "Hazardous Materials Identification System".

FLAMMABILITY LIMITS IN AIR:

Much of the information related to fire and explosion is derived from the National Fire Protection Association (**NFPA**). Flash Point - Minimum temperature at which a liquid gives off sufficient vapors to form an ignitable mixture with air. Autoignition Temperature: The minimum temperature required to initiate combustion in air with no other source of ignition. LEL - the lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source. UEL - the highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source.

TOXICOLOGICAL INFORMATION:

Human and Animal Toxicology: Possible health hazards as derived from human data, animal studies, or from the results of studies with similar compounds are presented. Definitions of some terms used in this section are: **LD_{50}** - Lethal Dose (solids & liquids) which kills 50% of the exposed animals; **LC_{50}** - Lethal Concentration (gases) which kills 50% of the exposed animals; **ppm** concentration expressed in parts of material per million parts of air or water; **mg/m^3** concentration expressed in weight of substance per volume of air; **mg/kg** quantity of material, by weight, administered to a test subject, based on their body weight in kg. Other measures of toxicity include **TDLo**, the lowest dose to cause a symptom and **TCLo** the lowest concentration to cause a symptom; **TDo**, **LDLo**, and **LDo**, or **TC**, **TCo**, **LCLo**, and **LCo**, the lowest dose (or concentration) to cause lethal or toxic effects. **Cancer Information:** The sources are: **IARC** - the International Agency for Research on Cancer; **NTP** - the National Toxicology Program, **RTECS** - the Registry of Toxic Effects of Chemical Substances, **OSHA** and **CAL/OSHA**. IARC and NTP rate chemicals on a scale of decreasing potential to cause human cancer with rankings from 1 to 4. Sub rankings (2A, 2B, etc.) are also used. **Other Information: BEI** - ACGIH Biological Exposure Indices, represent the levels of determinants which are most likely to be observed in specimens collected from a healthy worker who has been exposed to chemicals to the same extent as a worker with inhalation exposure to the TLV. **Ecological Information:** EC is the effect concentration in water. **BCF** = Bioconcentration Factor, which is used to determine if a substance will concentrate in life forms which consume contaminated plant or animal matter. Coefficient of Oil/Water Distribution is represented by **log K_{ow}** or **log K_{oc}** and is used to assess a substance's behavior in the environment.

REGULATORY INFORMATION:

This section explains the impact of various laws and regulations on the material. **U.S.: EPA** is the U.S. Environmental Protection Agency. **DOT** is the U.S. Department of Transportation. **SARA** is the Superfund Amendments and Reauthorization Act. **TSCA** is the U.S. Toxic Substance Control Act. **CERCLA (or Superfund)** refers to the Comprehensive Environmental Response, Compensation, and Liability Act. Labeling is per the American National Standards Institute (**ANSI Z129.1**). **CANADA: CEPA** is the Canadian Environmental Protection Act. **WHMIS** is the Canadian Workplace Hazardous Materials Information System. **TC** is Transport Canada. **DSL/NDSL** are the Canadian Domestic/Non-Domestic Substances Lists.