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SAFETY POLICY & PROCEDURE

Hazard Communication

SPP # 1910.1200

Quick Reference

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1.0 Purpose

The purpose of this safety policy and procedure is the establishment of a program meeting the OSHA Hazard Communication Standard to protect North Carolina Department of Transportation (NCDOT) employees who are exposed to hazardous chemicals during the performance of their job duties.

2.0 Scope and Applicability

NCDOT purchases, stores, and uses a variety of chemicals in its everyday operations. Employees must be provided with information about the hazardous chemicals to which they may be exposed.

This safety policy and procedure provides the NCDOT Hazard Communication program to be used by NCDOT facilities and worksites to protect employees from chemical hazards. It includes provisions for training, discussion of classified chemical hazards, and discussion on the importance and structure of the safety data sheet (SDS), labeling requirements of the OSHA Hazard Communication standard consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS). It also presents information for accessing safety data sheets (SDS).

This document also details the areas of responsibility for managers/unit heads, supervisors, employees, Safety and Risk Management, Purchasing, and Central Equipment Unit within NCDOT.

This safety policy and procedure affects all NCDOT employees who are exposed to chemical hazards during the performance of their job duties.

3.0 Reference

This safety policy and procedure is established in accordance with Occupational Safety and Health Standards for General Industry (29 CFR 1910.1200 and mandatory Appendices) and Occupational Safety and Health Standards for Construction Industry (29 CFR 1926.59).

4.0 Policy

It is the policy of NCDOT to provide a place of employment that is free from recognized hazards that may cause death or serious physical harm to employees or the public. Therefore, employees will not handle hazardous chemicals until they have been trained in the NCDOT Hazard Communication program. When chemical hazards exist that cannot be eliminated, then engineering practices, administrative controls, safe work practices, Personal Protective Equipment (PPE), and proper training regarding Hazard Communication will be implemented. These measures will be implemented to minimize those hazards to ensure the safety of employees and the public.

5.0 General Responsibilities

It is the responsibility of each manager/unit head, supervisor, and employee to ensure implementation of NCDOT's safety policy and procedure on Hazard Communication. It is also the responsibility of each NCDOT employee to report immediately any unsafe act or condition to his or her supervisor. Specific responsibilities are outlined under Section 6.3.

6.0 Procedure

This section provides applicable definitions, establishes general provisions, and identifies specific responsibilities required by NCDOT safety policy and procedure on Hazard Communication.

6.1 Definitions

Chemical Manufacturer

An employer with a workplace where chemical(s) are produced for use or distribution.

Chemical Name

The scientific designation of a chemical in accordance with the nomenclature system developed by the International Union of Pure and Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS) or a name that will clearly identify the chemical for the purpose of conducting a hazard classification.

Classification

To identify the relevant data regarding the hazards of a chemical; review those data to ascertain the hazards associated with the chemical; and decide whether the chemical will be classified as hazardous according to the definition of hazardous chemical in this section. In addition, classification for health and physical hazards includes the determination of the degree of hazard, where appropriate, by comparing the data with the criteria for health and physical hazards.

Common Name

Any designation or identification such as code name, code number, trade name, brand name or generic name used to identify a chemical other than by its chemical name.

Container

Any bag, barrel, bottle, box, can, cylinder, drum, reaction vessel, storage tank, or the like that contains a hazardous chemical.

Distributor

Any business, other than a chemical manufacturer or importer, which supplies hazardous chemicals to other distributors or to employers.

Hazard Category

The division of criteria within each hazard class, e.g., oral acute toxicity and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally.

Hazard Class

The nature of the physical or health hazards, e.g., flammable solid, carcinogen, oral acute toxicity.

Hazard Not Otherwise Classified (HNOC)

An adverse physical or health effect identified through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical and health hazard classes addressed in the Hazard Communication standard.

Hazard Statement

A statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

Hazardous Chemical

Any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.

Health Hazard

A chemical which is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard.

Label

An appropriate group of written, printed or graphic information elements concerning a hazardous chemical that is affixed to, printed on, or attached to the immediate container of a hazardous chemical, or to the outside packaging.

Label Elements

The specified pictogram, hazard statement, signal word and precautionary statement for each hazard class and category.

Physical Hazard

Chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid or gas); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; or in contact with water emits flammable gas.

Pictogram

A composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical. Eight pictograms are designated under the Hazard Communication standard for application to a hazard category.

Precautionary Statement

A phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical or improper storage or handling.

Product Identifier

The name or number used for a hazardous chemical on a label or in the SDS. It provides a unique means by which the user can identify the chemical. The product identifier used shall permit cross-references to be made among the list of hazardous chemicals required in the written hazard communication program, the label and the SDS.

Pyrophoric Gas

A chemical in a gaseous state that will ignite spontaneously in air at a temperature of 130 degrees F (54.4 degrees C) or below.

Safety Data Sheet (SDS)

Written or printed material concerning a hazardous chemical provided by the manufacturer or importer which includes the required information listed in Section 6.2.3 of this procedure.

Signal Word

A word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used are "Danger" and "Warning." "Danger" is used for the more severe hazards, while "Warning" is used for the less severe.

Simple Asphyxiant

A substance or mixture that displaces oxygen in the ambient atmosphere, and can thus cause oxygen deprivation in those who are exposed, leading to unconsciousness and death.

6.2 General Provisions

This section details the provisions of this safety policy and procedure with each provision discussed in a separate subsection. These provisions are:

- Hazard Classification
- NCDOT Hazard Communication Program
- Safety Data Sheets
- Obtaining Safety Data Sheets
- Labels and Labeling
- Training

6.2.1 Hazard Classification

OSHA requires chemical manufacturers to classify the physical and health hazards of their chemicals, and where appropriate, the category of each class that applies. A hazardous chemical is any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, a combustible dust, a pyrophoric gas, or a hazard not otherwise classified.

Physical hazards pose one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid or gas); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; or in contact with water emits flammable gas. Refer to 1910.1200 Appendix B for more Physical Hazard Criteria associated with these materials.

Health hazards can cause health damage either immediately from short term (acute) exposure or slowly through long-term exposure (chronic). Exposures to these chemical hazards can occur through inhalation (breathing dust, vapors, or mists), ingestion (eating or smoking while working around hazardous chemicals), or absorption (chemicals entering the body through cuts, scratches, or broken skin). Refer to 1910.1200 Appendix A for more Health Hazard Criteria associated with these materials.

Combustible dust is fine particles that present an explosion hazard when suspended in air under certain conditions.

A simple asphyxiant displaces oxygen which causes oxygen deprivation to those exposed and can lead to unconsciousness or possible death.

A pyrophoric gas is a chemical in a gaseous state that will ignite spontaneously in air at a temperature of 130 degrees F (54.4 degrees C) or below. Examples of pyrophoric gases are arsine, silane, disilane, dichlorosilane, diborane, and phosphine.

Hazard Not Other Classified (HNOC) is a chemical where adverse physical or health effect identified through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical and health hazard classes addressed in the Hazard Communication standard. This hazard classification is intended to ensure that hazards by the previous version of Hazard Communication Standard continue to be covered.

Common types of hazardous chemicals found in NCDOT include but are not limited to:

Acids	• Flammables	Pesticides
Adhesives	• Glues	Petroleum products
Caustics	• Greases	Solders
Cleaning agents	• Inks	Strippers
Compressed Gases	• Lacquers	• Thinners
• Degreasing agents	Paints	• Sealers
• Dusts		

6.2.2 NCDOT's Written Hazard Communication Program

Appendix A presents NCDOT's Written Hazard Communication Program that can be used by any facility, worksite, work unit, or work location in NCDOT. NCDOT's Hazard Communication Program includes:

- Facility or worksite identification
- Program element contact list
- Chemical list
- Container labeling provisions
- SDS requirements and availability
- Non-routine tasks hazard awareness provisions
- · Hazard communication provisions for contractors
- Employee training documentation

Each facility or worksite with a hazard communication program should have a hazard communication program coordinator to oversee all the program elements. Additionally, all employees should know the location and availability of their hazard communication program.

6.2.3 Labels and Workplace Labeling

It is the responsibility of the chemical manufacturer, importer, or distributor to ensure that each container of shipped hazardous chemicals received by NCDOT is labeled, tagged or marked. Hazards not otherwise classified do not have to be addressed on the container. The following information shall be provided on shipped containers received:

- 1. Product Identifier (Name found on SDS)
- 2. Signal Word ("Danger" for more severe or "Warning" for less severe)
- 3. Hazard Statement (Describes Nature of Hazard)
- 4. Pictogram (Appendix B displays HCS Pictograms)
- 5. Precautionary Statement (Measures to minimize exposure to hazards)
- 6. Chemical Manufacturer name, address, and telephone number

These labels shall not be remove or defaced on incoming containers of hazardous chemicals.

For chemicals transferred from the manufacturer container to portable containers workplace labeling is required. These labels must be prominently displayed and contain product identifier, words, pictures, symbols, or combination thereof, which provide at least general information regarding the hazards of the chemicals, and which, in conjunction with the other information immediately available to employees under the hazard communication program, will provide employees with the specific information regarding the physical and health hazards of the hazardous chemical.

On individual stationary containers such as storage tanks, signs or placards may be used in place of the labels.

Portable containers of chemicals transferred from labeled containers for intended for immediate use by the employee who performs the transfer are not required to be labeled unless that portable container is transferred for use on another work shift.

6.2.4 Safety Data Sheet (SDS)

The safety data sheet (SDS) is a fact sheet for hazardous chemicals provided by the chemical manufacturer or importer. They must be available for every hazardous chemical in the work area and must contain information about the chemical including: Appendix C presents the minimum SDS information for each of (16) sections listed below:

Safety Data Sheets (SDS) – The 16 Required Sections			
1. Identification	9. Physical and chemical properties		
2. Hazard(s) identification	10. Stability and reactivity		
3. Composition/ information on ingredients	11. Toxicological information		
4. First aid measures	12. Ecological information		
5. Fire-fighting measures	13. Disposal considerations		
6. Accidental release measures	14. Transport information		
7. Handling and storage	15. Regulatory information		
8. Exposure controls and	16. Other information, including date		
personal protection	of preparation or last revision		

6.2.5 Obtaining SDS Sheets

SDS sheets can be obtained from:

- Internet access through 3E website established for NCDOT
- Call 3E Company for SDS (800-451-8346)
- Send Fax Request to 3E using Fax form. See Appendix D for Fax form.
- Some Units may maintain hard copies of SDS

For Internet access to NCDOT SDS use 3E website set up for NCDOT contact your supervisor or Safety & Risk Management for assistance.

The advantage of this method is that worksites and work locations do not necessarily have to maintain paper copies of SDSs. Rather, the availability and accessibility of SDSs is determined by need.

SDS requests fall into two categories:

- Routine
- Emergency

For routine requests, employees should request SDS from their immediate supervisor. For emergency requests, any employee can call 3E Co. (800-451-8346) to request SDS. If problems are encountered while obtaining a SDS, contact Safety & Risk Management or your unit Safety staff. **New chemical product purchases** should result in the SDS being added to the electronic 3E NCDOT database by the location making the purchase.

6.2.6 Training

Employees will be trained to work safely with chemicals. Training will include:

- The Hazard Communication standard and its requirements
- Operations in the work area where hazardous chemicals are present
- The location and availability of the written hazard communication program
- The physical, health, simple asphyxiation, combustible dust and pyrophoric gas hazards, as well as hazards not otherwise classified, of the chemicals in the work area
- Measures employees can take to protect themselves including NCDOT's specific procedures to provide engineering controls, work practices, and Personal Protective Equipment (PPE)
- Methods and observations to detect the presence of a hazardous chemical
- How to read and interpret information on labels and SDS

Employees will be trained at the time of initial employment or assignment and whenever a new chemical hazard is introduced into their workplace. Refresher training shall be provided annually.

All training will be documented. See Appendix E for the training documentation form. A copy of the training documentation shall be placed in the employee's personnel record file. Training may also be documented electronically through LMS.

6.3 Specific Responsibilities

6.3.1 Managers/Unit Heads

Managers/Unit Heads are responsible for ensuring that adequate funds are available and budgeted for the purchase of equipment and supplies for successful implementation and maintenance of NCDOT's Hazard Communication Program in their work areas. They will be also responsible for appointing a Hazard Communication Coordinator for their work area(s) and for identifying the employees affected by this safety policy and procedure.

Managers/Unit Heads will obtain and coordinate the required training for the affected employees. Managers/Unit Heads will also ensure compliance with this safety policy and procedure through their auditing process.

6.3.2 Supervisors

Supervisors will ensure that labels on hazardous chemicals are legible. They shall also ensure refresher training is provided to employees on NCDOT's Written Hazard Communication Program.

Supervisors will ensure that employees are provided with and instructed on the use of any PPE when working with hazardous chemicals.

6.3.3 Employees

Employees will be trained before working with any hazardous chemicals. They are responsible for reviewing chemical labels for procedures and hazards before using any hazardous chemicals.

Employees shall wear the necessary PPE before working with any hazardous chemical. Also, employees shall report any unlabeled or defaced hazardous chemical containers to their immediate supervisor.

6.3.4 Safety and Risk Management

Safety and Risk Management will provide prompt assistance to managers/unit heads, supervisors, or others as necessary on any matter concerning this safety policy and procedure. Safety and Risk Management will assist in developing or securing the required training.

Safety Engineers will provide consultative and audit assistance to ensure effective implementation of this safety policy and procedure.

APPENDIX A: NCDOT Hazard Communication Program

NCDOT Hazard Communication Program

Facility/Worksite:

Program Coordinator:

To ensure that information about the dangers of all hazardous chemicals used by NCDOT personnel at this location is known by all affected employees, the following Hazard Communication Program has been established. Under this program, employees will be informed of the contents of the OSHA Hazard Communications standard, the hazardous properties of chemicals with which you work, safe handling procedures, and measures to protect yourself from these chemicals. The requirements of this program are intended to be consistent with the provisions of the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

This program applies to all work operations where employees may be exposed to hazardous chemicals under normal working conditions or during an emergency situation. All work units will participate in the Hazard Communication Program. A copy of this Hazard Communication Program, Chemical List, and Safety Data Sheets shall be made available for review by any interested employee in your work unit.

Facility/Worksite Info

The Hazard Communication Program shall list the facility or worksite and identify the title of program coordinator for your location. The program coordinator is responsible for reviewing and updating this plan and the Chemical List of hazardous chemicals used.

Chemical List

All facilities or worksites shall compile and maintain a Chemical List of hazardous chemicals being used. This list will contain the product name used on the SDS and container label. The Chemical List may be compiled for the workplace as a whole or for individual work areas. It shall be updated as new chemicals are added or existing chemicals are deleted by the designated SDS administrator for the location.

Labels and Labeling System

Manufacturer container labels are sufficient to meet labeling requirements of the Hazard Communication Program. If contents are transferred from the original manufacture container to another container, a labeling system must be used to label the unmarked container with product identity and appropriate hazard information.

APPENDIX A: NCDOT Hazard Communication Program (Continued) 2

Safety Data Sheets (SDS)

SDS information shall be made available for all hazardous chemicals used at a facility or worksite through on-line access or by phone/fax request to NCDOT SDS system provider. Employees who are working with a hazardous chemical may request copy of the SDS from their immediate supervisor. The supervisor can obtain SDS by:

- Internet access through 3E website established for NCDOT
- Call 3E Co. for SDS; 800-451-8346
- Send Fax Request to 3E using Fax form. See Appendix D for Fax form.
- Access to hard copies of SDS if available in unit.

For Internet access to NCDOT SDS use the following hyperlink to 3E website set up for NCDOT; <u>3E Online NCDOT Access</u>

It is recommended that users create a short cut on computer desk top page for quick access. The advantage of this method is that worksites and work locations do not necessarily have to maintain paper copies of SDSs. Rather, the availability and accessibility of SDSs is determined by need. If problems are encountered while obtaining a SDS, contact Safety & Risk Management or your unit Safety staff.

Hazards of Non-Routine Tasks

Supervisors will inform employees of any special non-routine tasks that may involve possible exposure to hazardous chemicals. Safe work practices, use of required PPE, and standard operating procedures (SOPs) shall be reviewed prior to the start of such tasks.

Contractor Communication

All onsite contractors (and subcontractors) are responsible for adhering to NCDOT's Hazard Communication Program while they are on NCDOT worksites. Information on hazardous chemicals known to be used on the worksite will be exchanged with contractors.

Contractors are required to exchange SDS information with NCDOT personnel as requested. Additionally, all onsite contractors shall be provided a copy of NCDOT's Hazard Communication Program. Contractors will be responsible for providing necessary information to their employees and subcontractors.

APPENDIX B: Hazard Communication Standard Pictograms

	HCS Pictograms and I	Hazards
Health Hazard	Flame	Exclamation Mark
 Carcinogen Mutagenicity Reproductive Toxicity Respiratory Sensitizer Target Organ Toxicity Aspiration Toxicity 	 Flammables Pyrophorics Self-Heating Emits Flammable Gas Self-Reactives Organic Peroxides 	 Irritant (skin and eye) Skin Sensitizer Acute Toxicity (harmful) Narcotic Effects Respiratory Tract Irritant Hazardous to Ozone Layer (Non Mandatory)
Gas Cylinder	Corrosion	Exploding Bomb
Gases under Pressure	 Skin Corrosion/ burns Eye Damage Corrosive to Metals 	Explosives Self-Reactives Organic Peroxides
Flame over Circle	Environment (Non Mandatory)	Skull and Crossbones
• Oxidizers	Aquatic Toxicity	Acute Toxicity (fatal or toxic)

APPENDIX C: Safety Data Sheets (SDS)

A safety data sheet (SDS) shall include the information specified in Table below under the section number and heading indicated for sections 1-16. If no relevant information is found for any given section, the SDS shall clearly indicate that no applicable information is available.

	Section Heading	Information Provided
1.	Identification	(a) Product identifier used on the label.
		(b) Other means of identification.
		(c) Recommended use of the chemical and restrictions on use.
		(d) Name, address, and telephone number of the chemical manufacturer, importer, or
		other responsible party.
		(e) Emergency phone number.
2.	Hazard(s)	(a) Classification of the chemical in accordance with paragraph (d) of §1910.1200.
	identification	(b) Signal word, hazard statement(s), symbol(s) and precautionary statement(s) in
		accordance with paragraph (f) of §1910.1200. (Hazard symbols may be provided as
		graphical reproductions in black and white or the name of the symbol, e.g., flame, skull
		and crossbones).
		(c) Describe any hazards not otherwise classified that have been identified during the
		classification process.
		(d) Where an ingredient with unknown acute toxicity is used in a mixture at a
		concentration = 1% and the mixture is not classified based on testing of the mixture as a
		whole, a statement that X% of the mixture consists of ingredient(s) of unknown acute
		toxicity is required.
3.	Composition/	Except as provided for in paragraph (i) of §1910.1200 on trade secrets:
	information on	For Substances
	ingredients	(a) Chemical name.
	0	(b) Common name and synonyms.
		(c) CAS number and other unique identifiers.
		(d) Impurities and stabilizing additives which are themselves classified and which
		contribute to the classification of the substance.
		For Mixtures
		In addition to the information required for substances:
		(a) The chemical name and concentration (exact percentage) or concentration ranges of
		all ingredients which are classified as health hazards in accordance with paragraph
		(d) of §1910.1200 and
		(1) are present above their cut-off/concentration limits; or
		(2) present a health risk below the cut-off/concentration limits.
		(b) The concentration (exact percentage) shall be specified unless a trade secret claim
		is made in accordance with paragraph (i) of §1910.1200, when there is batch-to-
		batch variability in the production of a mixture, or for a group of substantially
		similar mixtures (See A.0.5.1.2) with similar chemical composition. In these cases,
		concentration ranges may be used.
		For All Chemicals Where a Trade Secret is Claimed
		Where a trade secret is claimed in accordance with paragraph (i) of §1910.1200, a
		statement that the specific chemical identity and/or exact percentage (concentration) of
		composition has been withheld as a trade secret is required.

APPENDIX C: Safety Data Sheets (SDS) (Continued) 2

	Section Heading	Information Provided		
4.	First-aid measures	(a) Description of necessary measures, subdivided according to the different routes of		
		exposure, i.e., inhalation, skin and eye contact, and ingestion;		
		(b) Most important symptoms/effects, acute and delayed.		
		(c) Indication of immediate medical attention and special treatment needed, if necessary.		
5.	Fire-fighting measures	(a) Suitable (and unsuitable) extinguishing media.		
		(b) Specific hazards arising from the chemical (e.g., nature of any hazardous combustion		
		products).		
		(c) Special protective equipment and precautions for fire-fighters.		
6.	Accidental release	(a) Personal precautions, protective equipment, and emergency procedures.		
	measures	(b) Methods and materials for containment and cleaning up.		
7.	Handling and storage	(a) Precautions for safe handling.		
		(b) Conditions for safe storage, including any incompatibilities.		
8.	Exposure	(a) OSHA permissible exposure limit (PEL), American Conference of Governmental		
	controls/personal	Industrial Hygienists (ACGIH) Threshold Limit Value (TLV), and any other exposure		
	protection	limit used or recommended by the chemical manufacturer, importer, or employer		
		preparing the safety data sheet, where available.		
		(b) Appropriate engineering controls.		
		(c) Individual protection measures, such as personal protective equipment.		
9.	Physical and chemical	(a) Appearance (physical state, color, etc.);		
	properties	(b) Odor.		
		(c) Odor threshold.		
		(d) pH.		
		(e) Melting point/freezing point.		
		(f) Initial boiling point and boiling range.		
		(g) Flash point.		
		(h) Evaporation rate;		
		(i) Flammability (solid, gas);		
		(j) Upper/lower flammability or explosive limits.		
		(k) Vapor pressure.		
		(l) Vapor density.		
		(m) Relative density.		
		(n) Solubility		
		(o) Partition coefficient: n-octanol/water.		
		(p) Auto-ignition temperature.		
		(q) Decomposition temperature.		
		(r) Viscosity.		
10.	Stability and reactivity	(a) Reactivity.		
		(b) Chemical stability.		
		(c) Possibility of hazardous reactions.		
		(d) Conditions to avoid (e.g., static discharge, shock, or vibration).(e) Incompatible materials.		
		(f) Hazardous decomposition products.		

APPENDIX C: Safety Data Sheets (SDS) (Continued)3

	Section Heading	Information Provided		
11.	Toxicological	Description of the various toxicological (health) effects and the available data used to		
	information	identify those effects, including:(a) Information on the likely routes of exposure (inhalation, ingestion, skin and eye		
		contact);		
		(b) Symptoms related to the physical, chemical and toxicological characteristics;		
		(c) Delayed and immediate effects and also chronic effects from short- and long-term		
		exposure;		
		(d) Numerical measures of toxicity (such as acute toxicity estimates).		
		(e) Whether the hazardous chemical is listed in the National Toxicology Program (NTP)		
		Report on Carcinogens (latest edition) or has been found to be a potential carcinogen in		
		the International Agency for Research on Cancer (IARC) Monographs (latest edition), or		
		by OSHA.		
12.	Ecological information	(a) Eco toxicity (aquatic and terrestrial, where available);		
		(b) Persistence and degradability;		
		(c) Bio accumulative potential;		
		(d) Mobility in soil;		
		(e) Other adverse effects (such as hazardous to the ozone layer).		
13.	Disposal considerations	Description of waste residues and information on their safe handling and methods of		
		disposal, including the disposal of any contaminated packaging.		
14.	Transport information	(a) UN number;		
		(b) UN proper shipping name;		
		(c) Transport hazard class(es);		
		(d) Packing group, if applicable;		
		(e) Environmental hazards (e.g., Marine pollutant (Yes/No));		
		(f) Transport in bulk (according to Annex II of MARPOL 73/78 and the IBC Code);		
		(g) Special precautions which a user needs to be aware of, or needs to comply with, in		
		connection with transport or conveyance either within or outside their premises.		
15.	Regulatory	Safety, health and environmental regulations specific for the product in question.		
	information			
16.	Other information,	The date of preparation of the SDS or the last change to it.		
	including date of			
	preparation or last			
	revision			

APPENDIX D: NCDOT SDS Fax Request Form

Request Type:	Emergency (15 mins)	Immediate (2 hrs.)	Standard (24hrs)
FOR ROUTI	AL EMERGENCIES NE SDS FAX REQUESTS E THE FOLLOWING AND FAX	3;	
REQUESTO	R INFORMATION		
Date Requeste	d:		
Name of Perso	on Requesting:		
Street Address	:		
City:		, NC Zip:	
Telephone: ())	Fax: ()	
<i>(PROVIDE AS I</i> Complete Labe Manufacturer F UPC:	FURER AND PRODUCT IN MUCH INFORMATION AS POSSIE el Name on Product: Product/ Item Number:	BLE.)	
	Name:		
	S Phone # (If available): (
	EMERGENCY INFOR		
	/ider: Fax No: ()		
	vider Phone No: ()		

Questions, other than SDS requests, may be directed to: 3E Company, 1905 Aston Avenue, Carlsbad, CA 92008 by calling (800) 360-3220

Appendix D updated 5-11-2016

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APPENDIX E: Hazard Communication Training Documentation

Employee Training

Date:_____

Location: Instructor:

Title: SAF 130 Hazard Communication

Program Elements to be Covered

- > The Hazard Communication standard and its requirements
- > Operations in work area where hazardous chemicals are present
- > The location and availability of the written Hazard Communication program
- > Physical and health hazards of the chemicals in the work areas
- Measures employees can take to protect themselves including NCDOT's specific procedures to provide engineering controls, work practices, and PPE
- > Methods and observations to detect the presence of a hazardous chemical
- How to read and interpret information on labels and SDS

Employees Trained

Name	Title	Employee #	Signature

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