CONOCO

Int roffice Communication

To Distribution

Date July 30, 1980

Subject MATERIAL SAFETY DATA SHEETS

Enclosed are the final drafts of revised Material Safety Data Sheets for cresols. As described in our letter of March 17, outlining the development process, we need your final review and comments before printing and distribution of the sheets.

Please return comments to me by August 11. If no comments or changes are noted, no response is necessary. Your prompt action on this matter is appreciated, as there are many more sheets to be reviewed.

Thomas G. Grumbles

TGG:dem

Enclosures

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UEU-274536

Conoco Chemicals
5 Greenway Plaza East
P.O. Box 2197
Houston, Texas 77001

MATERIAL SAFETY DATA SHEET

I PRODUCT IDENTIFICATION

MANUFACTURER'S NAME: Conoco Chemicals	REGULAR TELEPHONE NO.: 201/344-3800 EMERGENCY TELEPHONE NO.: 318/491-5070
ADDRESS: 191 Doremus Avenue - Newark, NJ 07105	
TRADE NAME: Cresol 110, 120, 121, 130	
SYNONYMS: Ortho-Cresol, o-cresol, o-methyl phenol	

II HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA
Ortho-Cresol	98	DOT: Corrosive liquid

III PHYSICAL DATA

BOILING POINT (°F.)	375	SPECIFIC GRAVITY (H_2O = 1)	1.05
VAPOR PRESURE (mm Hg.)	0.25 @ 250°C	PERCENT VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR = 1)	3.72	EVAPORATION RATE (_____ = 1)	
SOLUBILITY IN WATER	2.5g/100 ml	MELTING POINT	30°C (86°F)
APPEARANCE AND ODOR	Molten Solid - White to tan color; Phenolic odor		

IV FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	178°F PM		AUTOIGNITION TEMPERATURE	1038°F	
FLAMMABLE LIMITS IN AIR, % BY VOL.		LOWER	1.3	UPPER	
EXTINGUISHING MEDIA	Water (fog or spray), foam, dry chemical or CO_2.				
SPECIAL FIRE FIGHTING PROCEDURES	Wear self-contained breathing apparatus and full protective clothing. Cool tanks with water, if exposed to fire.				
UNUSUAL FIRE AND EXPLOSION HAZARD	Emits toxic fumes when heated.				

HEALTH HAZARD INFORMATION

FIRST AID

EYES: Immediately begin flushing with large amounts of water and continue at least for 15 minutes while transporting immediately for medical attention.

SKIN: Remove contaminated clothing. Immediately flush with large amounts of water, then wash affected areas with soap and water. Isopropanol can be used to further remove phenols. Seek medical attention as soon as possible.

INHALATION: Remove from exposure. Administer O_2 by nasal cannulae if available. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

INGESTION: Drink large amounts of water or weak sodium bicarbonate solution. DO NOT INDUCE VOMITTING. If spontaneous vomitting occurs, precautions should be taken to avoid aspiration. Seek immediate medical attention.

NATURE OF HAZARD

EYES: Corrosive

SKIN: Corrosive to skin tissue. Prolonged contact will cause severe burns. Cresols are absorbed through the skin, resulting in systemic poisoning.

INHALATION: Corrosive. Vapors can be absorbed by mucous membranes causing systemic effects.

INGESTION: Corrosive. Causes burning of mouth and throat, abdominal pain, nausea and vomitting. Cresols are absorbed and can adversely affect the central nervous system, heart, reproductive and urinary tissues, liver and kidneys.

EFFECTS OF OVEREXPOSURE:

ACUTE OVEREXPOSURE: Local skin burns. Acute systemic effects may occur from skin absorption.

CHRONIC OVEREXPOSURE: Dermatitis and chronic poisoning affecting the central nervous system, liver and kidney, reproductive and urinary tissues.

THRESHOLD LIMIT VALUE (TLV)

5 ppm (22 mg/m^3) - skin hazard ACGIH 1979

TOXICITY DATA

SKIN CONTACT: Severe Irritant.
Rabbit Dermal LD_{50} 2gm/kg
Primary skin irritation index: 5.6/8.0
Corrosive by DOT definition (49 CFR 173.240)

EYE CONTACT: Rabbit eye irritation score (maximum score 110) @ 24 hours wash: 84 (corrosive).
Wash at 4 seconds: 43 (moderate)

INHALATION: Rat $LC_{50} > 20$ mg/L
No deaths occurred when rats, 5 per sex were exposed for 6 hours to atmospheric concentrations of 0.2, 2, and 20 ng/L.

INGESTION: Rat oral LD_{50} = 0.36 gm/kg
Deaths occurred at 1-3 days after treatment.

SPECIAL PRECAUTIONS: ALL SKIN CONTACT OR INHALATION SHOULD BE AVOIDED. SPEED IN REMOVING CRESOLS IS OF PRIMARY IMPORTANCE.

VI REACTIVITY DATA

CONDITIONS CONTRIBUTING TO [illegible]

Not Dangerously Reactive

INCOMPATIBILITY

Not Applicable

HAZARDOUS DECOMPOSITION PRODUCTS

Not Applicable

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Not Applicable

VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Ventilate area. Sawdust, vermiculite or sand may be used as sorbant. Pick up mechanically. Use personal protective equipment as appropriate.

NEUTRALIZING CHEMICALS

Two to five percent solution of sodium hydroxide.

WASTE DISPOSAL METHOD

Biological oxidation or incineration according to established Federal procedures.

VIII SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS

Ensure that ventilation is adequate to maintain concentration in air less than 5 ppm.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL):

Full face organic vapor cartridge or supplied air for high concentrations.

EYE:

Chemical safety goggles or face shield with goggles.

GLOVES:

Use rubber gloves to prevent skin contact.

OTHER CLOTHING AND EQUIPMENT:

Aprons, boots, etc. should be used where needed to prevent skin contact.

IX SPECIAL PRECAUTIONS

HAZARD CLASSIFICATION INFORMATION

IMCO HAZARD CLASS AND NUMBER	US DOT CLASSIFICATION
Class 6.1	Corrosive liquid (primary) Combustible liquid (secondary)
UN NUMBER 2076	EEC DANGEROUS SUBSTANCE CL
ADR CLASS NUMBER	EEC SPECIAL RISKS AND SAFETY ADVICE
CAS NUMBER 95-48-7	

TRANSPORTATION AND STORAGE

USUAL SHIPPING CONTAINERS	ELECTROSTATIC ACCUMULATION HAZARD
Tank cars, tank trucks, drums	Yes
	STORAGE/TRANSPORT PRESSURE
STORAGE TRANSPORT TEMPERATURE	LOADING/UNLOADING TEMPERATURE May require gentle heating with low pressure steam or hot water.
	VISCOSITY AT LOADING/UNLOADING TEMPERATURE

HANDLING AND STORAGE MATERIALS AND COATINGS

SUITABLE	UNSUITABLE
Stainless Steel Grasslines Heresite-lined Carbon Steel - for short periods if kept dry	Brass and copper - cause rapid discoloration

Conoco Chemicals
5 Greenway Plaza East
P.O. Box 2197
Houston, Texas 77001

MATERIAL SAFETY DATA SHEET

I PRODUCT IDENTIFICATION

MANUFACTURER'S NAME: Conoco Chemicals	REGULAR TELEPHONE NO.: 201/344-3800 EMERGENCY TELEPHONE NO.: 318/491-5070
ADDRESS: 191 Doremus Avenue - Newark, NJ 07105	
TRADE NAME: Cresol 140	
SYNONYMS: Ortho-cresol, o-cresol, o-methyl phenol	

II HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA
Ortho-Cresol	88	DOT: Corrosive Liquid
Phenol	12	

III PHYSICAL DATA

BOILING POINT (°F.)	381-392° F	SPECIFIC GRAVITY (H$_2$O = 1)	1.05
VAPOR PRESURE (mm Hg.)		PERCENT VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR = 1)	3.4	EVAPORATION RATE (_____ = 1)	
SOLUBILITY IN WATER	4.0 g/100 ml	MELTING POINT	72-77° F
APPEARANCE AND ODOR	White solid - Sweet Tarry Odor		

IV FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	178° F PM		AUTOIGNITION TEMPERATURE	1110° F	
FLAMMABLE LIMITS IN AIR, % BY VOL.		LOWER		UPPER	
EXTINGUISHING MEDIA	Water (fog or spray), foam, dry chemical or CO_2.				
SPECIAL FIRE FIGHTING PROCEDURES	Wear self-contained breathing apparatus and full protective clothing. Cool tanks with water if exposed to fire.				
UNUSUAL FIRE AND EXPLOSION HAZARD	Emits toxic fumes when heated.				

HEALTH HAZARD INFORMATION

FIRST AID

EYES: Immediately begin flushing with large amounts of water and continue at least for 15 minutes while transporting immediately for medical attention.

SKIN: Remove contaminated clothing. Immediately flush with large amounts of water, then wash affected areas with soap and water. Isopropanol can be used to further remove phenols. Seek medical attention as soon as possible.

INHALATION: Remove from exposure. Administer O_2 by nasal cannulae if available. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

INGESTION: Drink large amounts of water or weak sodium bicarbonate solution. DO NOT INDUCE VOMITTING. If spontaneous vomitting occurs, precautions should be taken to avoid aspiration. Seek immediate medical attention.

NATURE OF HAZARD

EYES: Corrosive.

SKIN: Corrosive to skin tissue. Prolonged contact will cause severe burns. Cresols are absorbed through the skin, resulting in systemic poisoning.

INHALATION: Corrosive. Vapors can be absorbed by mucous membranes causing systemic effects.

INGESTION: Corrosive. Causes burning of mouth and throat, abdominal pain, nausea and vomiting.

EFFECTS OF OVEREXPOSURE:

ACUTE OVEREXPOSURE: Local skin burns.

CHRONIC OVEREXPOSURE: Dermatitis and chronic poisoning central nervous system, liver and kidney.

THRESHOLD LIMIT VALUE (TLV)

5 ppm (22mg/m^3)	- skin	1979 ACGIH	for cresol
5 ppm (19mg/m^3)	- skin	1979 ACGIH	for phenol

TOXICITY DATA

SKIN CONTACT:

EYE CONTACT:

INHALATION:

INGESTION:

SPECIAL PRECAUTIONS: ALL SKIN CONTACT SHOULD BE AVOIDED. SPEED IN REMOVING CRESOLS IS OF PRIMARY IMPORTANCE.

VI REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY

Not Dangerously Reactive

INCOMPATIBILITY

Not Applicable

HAZARDOUS DECOMPOSITION PRODUCTS

Not Applicable

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Not Applicable

VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Ventilate area. Sawdust, vermiculite or sand may be used as sorbant. Pick up mechanically. Use personal protective equipment as appropriate.

NEUTRALIZING CHEMICALS

Two to five percent solution of sodium hydroxide.

WASTE DISPOSAL METHOD

Biological oxidation or incineration according to established Federal procedures.

VIII SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS

Ensure that ventilation is adequate to maintain concentration in air less than 5 ppm.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL):
Full face organic vapor cartridge or supplied air for high concentrations.

EYE: Chemical safety goggles or face shield with goggles.

GLOVES: Use rubber gloves to prevent skin contact.

OTHER CLOTHING AND EQUIPMENT:
Aprons, boots, etc. should be used where needed to prevent skin contact. Full slicker suit may be required where exposure is likely.

IX SPECIAL PRECAUTIONS

HAZARD CLASSIFICATION INFORMATION

IMCO HAZARD CLASS AND NUMBER	US DOT CLASSIFICATION
Class 6.1	Corrosive liquid (primary)
UN NUMBER: Cresol 2076 Phenol 1671	EEC DANGEROUS SUBSTANCE
ADR CLASS NUMBER	EEC SPECIAL RISKS AND SAFETY ADVICE
CAS NUMBER 95-48-7 (o-cresol) 108-95-2 (phenol)	

TRANSPORTATION AND STORAGE

USUAL SHIPPING CONTAINERS	ELECTROSTATIC ACCUMULATION HAZARD
Tank cars, tank trucks, drums	Yes
	STORAGE/TRANSPORT PRESSURE
STORAGE TRANSPORT TEMPERATURE	LOADING/UNLOADING TEMPERATURE May require gentle heating with low
	pressure steam or hot water.
	VISCOSITY AT LOADING/UNLOADING TEMPERATURE

HANDLING AND STORAGE MATERIALS AND COATINGS

Stainless steel Glasslined Heresite-lined Carbon steel - for short periods if kept dry	Brass and copper - cause rapid discoloration

Conoco Chemicals
5 Greenway Plaza East
P.O. Box 2197
Houston, Texas 77001

MATERIAL SAFETY DATA SHEET

I PRODUCT IDENTIFICATION

MANUFACTURER'S NAME: Conoco Chemicals	REGULAR TELEPHONE NO. 201/344-3800 EMERGENCY TELEPHONE NO. 318/491-5070
ADDRESS: 191 Doremus Avenue - Newark, NJ 07105	
TRADE NAME: Cresol 174	
SYNONYMS: Ortho-cresol, o-cresol, o-methyl phenol	

II HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA
Phenol	27-32	DOT: Corrosive liquid
o-cresol	50-55	
m,p-cresol	13-18	
2,6-xylenol	5 max.	

III PHYSICAL DATA

BOILING POINT (°F.)	378-408° F	SPECIFIC GRAVITY (H_2O = 1) 60°F	1.05
VAPOR PRESURE (mm Hg.)		PERCENT VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR = 1)	3.4	EVAPORATION RATE (_____ = 1)	
SOLUBILITY IN WATER	4.0 (9/100ml)	MELTING POINT POUR POINT	40° F
APPEARANCE AND ODOR	Light colored liquid with sweet tarry odor		

IV FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	180° F PM	AUTOIGNITION TEMPERATURE	
FLAMMABLE LIMITS IN AIR, % BY VOL.	LOWER		UPPER
EXTINGUISHING MEDIA	Water (fog or spray), foam, dry chemical or CO_2.		
SPECIAL FIRE FIGHTING PROCEDURES	Wear self-contained breathing apparatus and full protective clothing. Cool tanks with water if exposed to fire.		
UNUSUAL FIRE AND EXPLOSION HAZARD	Emits toxic fumes when heated.		

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FIRST AID

EYES: Immediately begin flushing with large amounts of water and continue at least for 15 minutes while transporting immediately for medical attention.

SKIN: Remove contaminated clothing. Immediately flush with large amounts of water, then wash affected areas with soap and water. Isopropanol can be used to further remove phenols. Seek medical attention as soon as possible.

INHALATION: Remove from exposure. Administer O_2 by nasal cannulae if available. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

INGESTION: Drink large amounts of water or weak sodium bicarbonate solution. DO NOT INDUCE VOMITTING. If spontaneous vomitting occurs, precautions should be taken to avoid aspiration. Seek immediate medical attention.

NATURE OF HAZARD

EYES: Corrosive

SKIN: Corrosive to skin tissue. Prolonged contact will cause severe burns. Cresols are absorbed through the skin, resulting in systemic poisoning.

INHALATION: Corrosive. Vapors can be absorbed by mucous membranes causing systemic effects.

INGESTION: Corrosive. Causes burning of mouth and throat, abdominal pain, nausea and vomiting.

EFFECTS OF OVEREXPOSURE:

ACUTE OVEREXPOSURE: Local skin burns

CHRONIC OVEREXPOSURE: Dermatitis and chronic poisoning affecting the central nervous system, liver and kidney.

THRESHOLD LIMIT VALUE (TLV)

Cresol	5 ppm (22 mg/m^3) - skin hazard	ACGIH 1979
Phenol	5 ppm (19 mg/m^3) - skin hazard	ACGIH 1979

TOXICITY DATA

SKIN CONTACT:

EYE CONTACT:

INHALATION:

INGESTION:

SPECIAL PRECAUTIONS: ALL SKIN CONTACT SHOULD BE AVOIDED. SPEED IN REMOVING CRESOLS IS OF PRIMARY IMPORTANCE.

VI REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY

Not Dangerously Reactive

INCOMPATIBILITY

Not Applicable

HAZARDOUS DECOMPOSITION PRODUCTS

Not Applicable

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Not Abblicable

VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Ventilate area. Sawdust, vermiculite or sand may be used as sorbant. Pick up mechanically. Use personal protective equipment as appropriate.

NEUTRALIZING CHEMICALS

Two to five percent solution of sodium hydroxide.

WASTE DISPOSAL METHOD

Biological oxidation or inceneration according to established Federal procedures.

VIII SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS

Ensure that ventilation is adequate to maintain concentration in air less than 5 ppm.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL):
Full face organic vapor cartridge or supplied air for high concentrations.

EYE: Chemical safety goggles or face shield with goggles.

GLOVES: Use rubber gloves to prevent skin contact.

OTHER CLOTHING AND EQUIPMENT:
Aprons, boots, etc. should be used where needed to prevent skin contact. Full slicker suit may be required where exposure is likely.

IX SPECIAL PRECAUTIONS

HAZARD CLASSIFICATION INFORMATION

IMCO HAZARD CLASS AND NUMBER	US DOT CLASSIFICATION
Class 6.1	DOT: Corrosive
UN NUMBER Cresols 2076 Phenol 1671	**EEC DANGEROUS SUBSTANCE CLASSIFICATION**
ADR CLASS NUMBER	**EEC SPECIAL RISKS AND SAFETY ADVICE**
CAS NUMBER Mixed Cresols 1319-77-3	

TRANSPORTATION AND STORAGE

USUAL SHIPPING CONTAINERS	ELECTROSTATIC ACCUMULATION HAZARD
Tank cars, tank trucks, drums	STORAGE/TRANSPORT PRESSURE
STORAGE TRANSPORT TEMPERATURE	LOADING/UNLOADING TEMPERATURE
	VISCOSITY AT LOADING/UNLOADING TEMPERATURE

HANDLING AND STORAGE MATERIALS AND COATINGS

SUITABLE	UNSUITABLE
Stainless steel Glasslined Heresite-lined Carbon steel - for short periods if kept dry	Brass and copper - cause rapid discoloration

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MATERIAL SAFETY DATA SHEET

I PRODUCT IDENTIFICATION

MANUFACTURER'S NAME: Conoco Chemicals	REGULAR TELEPHONE NO. 201/344-3800 EMERGENCY TELEPHONE NO. 318/491-5070
ADDRESS: 191 Doremus Avenue, Newark, NJ 07105	
TRADE NAME: Cresol 180	
SYNONYMS: Phenol, Carbolic Acid	

II HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	%	HAZARD DATA
Phenol	78-82	DOT: Poison B
O-cresol	18-22	

III PHYSICAL DATA

BOILING POINT (°F.)	393-398° F	SPECIFIC GRAVITY (H$_2$O = 1)	1.068
VAPOR PRESURE (mm Hg.)		PERCENT VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR = 1)	3.2	EVAPORATION RATE (_____ = 1)	
SOLUBILITY IN WATER		MELTING POINT	72° F
APPEARANCE AND ODOR	Light colored liquid with sweet tarry odor		

IV FIRE AND EXPLOSION DATA

FLASH POINT (TEST METHOD)	178° F PM		AUTOIGNITION TEMPERATURE		
FLAMMABLE LIMITS IN AIR, % BY VOL.		LOWER		UPPER	
EXTINGUISHING MEDIA	Water (fog or spray), foam, dry chemical or CO_2.				
SPECIAL FIRE FIGHTING PROCEDURES	Wear self-contained breathing apparatus and full protective clothing. Cool tank with water if exposed to fire.				
UNUSUAL FIRE AND EXPLOSION HAZARD	Emits toxic fumes when heated.				

HEALTH HAZARD INFORMATION

FIRST AID

EYES: Immediately begin flushing with large amounts of water and continue at least for 15 minutes while transporting immediately for medical attention.

SKIN: Remove contaminated clothing. Immediately flush with large amounts of water, then wash affected areas with soap and water. Isopropanol can be used to further remove phenols. Seek medical attention as soon as possible.

INHALATION: Remove from exposure. Administer O_2 by nasal cannulae if available. Administer artificial respiration if breathing has stopped. Seek immediate medical attention.

INGESTION: Drink large amounts of water or weak sodium bicarbonate solution. DO NOT INDUCE VOMITTING. If spontaneous vomitting occurs, precautions should be taken to avoid aspiration. Seek immediate medical attention.

NATURE OF HAZARD

EYES: Causes severe burns

SKIN: Causes severe burns. Readily absorbed through the skin resulting in systemic toxicity. Skin exposures can be fatal.

INHALATION: Corrosive to mucous membranes. May be absorbed through the mucous membranes causing systemic toxicity.

INGESTION: Corrosive. Causes burning of mouth and throat, abdominal pain, nausea and vomitting.

EFFECTS OF OVEREXPOSURE:

ACUTE OVEREXPOSURE: Local skin burns

CHRONIC OVEREXPOSURE: Dermatitis and chronic poisoning affecting the central nervous system, liver and kidney.

THRESHOLD LIMIT VALUE (TLV)

Cresol	5 ppm (22 mg/m^3)	- skin hazard	ACGIH 1979
Phenol	5 ppm (19 mg/m^3)	- skin hazard	ACGIH 1979

TOXICITY DATA

SKIN CONTACT:

EYE CONTACT:

INHALATION:

INGESTION:

SPECIAL PRECAUTIONS: ALL SKIN CONTACT SHOULD BE AVOIDED. SPEED IN REMOVING CRESOLS IS OF PRIMARY IMPORTANCE.

VI REACTIVITY DATA

CONDITIONS CONTRIBUTING TO INSTABILITY

Not Applicable

INCOMPATIBILITY

Not Applicable

HAZARDOUS DECOMPOSITION PRODUCTS

Not Applicable

CONDITIONS CONTRIBUTING TO HAZARDOUS POLYMERIZATION

Will not occur

VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED

Ventilate area. Sawdust, vermiculite or sand may be used as sorbant. Pick up mechanically. Use personal protective equipment as appropriate.

NEUTRALIZING CHEMICALS

Two to five percent solution of sodium hydroxide.

WASTE DISPOSAL METHOD

Biological oxidation or inceneration according to established Federal procedures.

VIII SPECIAL PROTECTION INFORMATION

VENTILATION REQUIREMENTS

Ensure that ventilation is adequate to maintain concentration in air less than 5 ppm.

SPECIFIC PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY (SPECIFY IN DETAIL):

Full face organic vapor cartridge or supplied air for high concentrations.

EYE: Chemical safety goggles or face shield with goggles.

GLOVES: Use rubber gloves to prevent skin contact.

OTHER CLOTHING AND EQUIPMENT:

Aprons, boots, etc. should be used where needed to prevent skin contact. Full slicker suit may be required where exposure is likely.

IX SPECIAL PRECAUTIONS

HAZARD CLASSIFICATION INFORMATION

IMCO HAZARD CLASS AND NUMBER	US DOT CLASSIFICATION
Class 6.1	Poison B Corrosive Liquid
UN NUMBER Phenol 1671 Cresol 2076	**EEC DANGEROUS SUBSTANCE CLASSIFICATION**
ADR CLASS NUMBER	**EEC SPECIAL RISKS AND SAFETY ADVICE**
CAS NUMBER Phenol 108-95-2 Cresol 95-48-7	

TRANSPORTATION AND STORAGE

USUAL SHIPPING CONTAINERS	ELECTROSTATIC ACCUMULATION HAZARD
Tank cars, tank trucks, drums	Yes
	STORAGE/TRANSPORT PRESSURE
STORAGE TRANSPORT TEMPERATURE	**LOADING/UNLOADING TEMPERATURE** May require gentle heating with low pressure steam or hot water.
	VISCOSITY AT LOADING/UNLOADING TEMPERATURE

HANDLING AND STORAGE MATERIALS AND COATINGS

SUITABLE	UNSUITABLE
Stainless Steel Glasslined Heresite-lined Carbon Steel - for short periods if kept dry	Iron or copper cause discoloration