

**Material Safety Data Sheet: FENOCIL III**

Supersedes Date 09/23/2003

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**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Name** FENOCIL III  
**Product Code** 0855  
**Information on Manufacturer**  
 CHEMSEARCH DIV. OF NCH CORP.  
 BOX 152170  
 IRVING, TX 75015

**Recommended Use** herbicide  
**Chemical Nature** Solvent mixture  
**Emergency Telephone Number**  
 CHEMTREC ® 800-424-9300

**2. HAZARDS IDENTIFICATION**

**Emergency Overview**

Warning  
 Combustible liquid and vapor  
 Causes skin irritation  
 Severe eye irritation  
 May cause allergic skin reaction  
 May be harmful if inhaled  
 Harmful or fatal if swallowed

**Color** Yellow - Amber

**Physical State** Liquid

**Odor** Solvent

**Potential Health Effects**

**Principle Route of Exposure**

Skin contact, Eye contact, Inhalation.

**Primary Routes of Entry**

Inhalation, Skin Absorption.

**Acute Effects**

**Eyes**

Severe eye irritant. May cause irreversible eye damage.

**Skin**

Causes skin irritation. May cause allergic skin reaction.

**Inhalation**

Inhalation may cause central nervous system effects. May cause central nervous system depression. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.

**Ingestion**

Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea . May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination. Aspiration hazard. May be fatal if swallowed and enters airways.

**Chronic Effects**

May cause skin sensitization in some individuals . Liver and kidney injuries may occur.

**Target Organ Effects**

Blood, Central nervous system, Kidney, Liver, Respiratory system, Skin, Eyes, Bone Marrow, Thyroid.

**Aggravated Medical Conditions**

Respiratory disorders. Skin disorders. Liver disorders. Kidney disorders. Neurological disorders. Blood disorders.

**Potential Environmental Effects**

See Section 12 for additional Ecological information.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Component	CAS-No
Hexylene glycol	107-41-5
1,3,5-Trimethylbenzene	108-67-8
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched, phosphates	152143-22-1
Bromacil	314-40-9
Naphtha (petroleum), heavy aromatic	64742-94-5
Benzenesulfonic acid, dodecyl-, branched, calcium salt	70528-83-5
Naphthalene	91-20-3
Pseudocumene	95-63-6
Cumene	98-82-8

**4. FIRST AID MEASURES**

**General Advice**

Avoid contact with skin, eyes and clothing. Avoid breathing vapors, mist or gas.

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes . Remove contact lenses. Call a physician or poison control center immediately.

**Skin Contact**

Remove contaminated clothing and shoes. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

**Inhalation**

Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention immediately.

**Ingestion**

If swallowed, call a poison control center or doctor immediately . Give small amounts of water to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center.

**Notes to Physician**

May cause sensitization of susceptible persons. Aspiration hazard if swallowed - can enter lungs and cause damage.

**5. FIRE-FIGHTING MEASURES**

**Flash Point** 150°F / 66°C

**Method**

Seta closed cup

**Autoignition Temperature** No information available

**Flammability Limits in Air % Mixture**

**Upper** 11.7

**Lower** 1.8

**Suitable Extinguishing Media**

Dry chemical. Carbon dioxide (CO<sub>2</sub>). Water spray. Foam. Alcohol-resistant foam .

**Specific Hazards Arising from the Chemical**

Solvent vapors are heavier than air and may spread along floors . Vapors may ignite and explode. Material can create slippery conditions.

**Protective Equipment and Precautions for Firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

<b>NFPA</b>	<b>Health</b>	2	<b>Flammability</b>	2	<b>Instability</b>	0
<b>HMIS</b>	<b>Health</b>	2	<b>Flammability</b>	2	<b>Instability</b>	0

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Use personal protective equipment. Remove all sources of ignition. Ensure adequate ventilation. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions.
<b>Environmental Precautions</b>	Do not flush into surface water or sanitary sewer system.
<b>Methods for Containment</b>	Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13)
<b>Methods for Cleaning Up</b>	Pick up and transfer to properly labeled containers .

## 7. HANDLING AND STORAGE

<b>Handling</b>	Avoid contact with skin, eyes and clothing. Avoid breathing vapors, mist or gas. Keep away from open flames, hot surfaces and sources of ignition.		
<b>Storage</b>	Store in original container. Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.		
<b>Storage Temperature</b>	<b>Minimum</b>	35°F / 2°C	<b>Maximum</b>
<b>Storage Conditions</b>	<b>Indoor</b>	X	<b>Outdoor</b>
			X
			<b>Heated</b>
			120°F / 49°C
			<b>Refrigerated</b>

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH
Hexylene glycol	Ceiling: 25 ppm	no data available	Ceiling: 125 mg/m <sup>3</sup> Ceiling: 25 ppm
1,3,5-Trimethylbenzene	TWA: 25 ppm	no data available	TWA: 125 mg/m <sup>3</sup> TWA: 25 ppm
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched, phosphates	No data available	no data available	no data available
Bromacil	TWA: 10 mg/m <sup>3</sup>	no data available	TWA: 1 ppm TWA: 10 mg/m <sup>3</sup>
Naphtha (petroleum), heavy aromatic	No data available	no data available	no data available
Benzenesulfonic acid, dodecyl-, branched, calcium salt	No data available	no data available	no data available
Naphthalene	TWA: 10 ppm Skin STEL: 15 ppm	TWA: 10 ppm TWA: 50 mg/m <sup>3</sup>	IDLH: 250 ppm STEL 75 mg/m <sup>3</sup> STEL 15 ppm TWA: 50 mg/m <sup>3</sup> TWA: 10 ppm
Pseudocumene	TWA: 25 ppm	no data available	TWA: 25 ppm TWA: 125 mg/m <sup>3</sup>
Cumene	TWA: 50 ppm	TWA: 245 mg/m <sup>3</sup> TWA: 50 ppm Skin	IDLH: 900 ppm TWA: 50 ppm TWA: 245 mg/m <sup>3</sup>

<b>Engineering Measures</b>	Use with local exhaust ventilation. Ensure adequate ventilation, especially in confined areas.
<b>Personal Protective Equipment</b>	
<b>Eye/Face Protection</b>	Tightly fitting safety goggles.
<b>Skin Protection</b>	Impervious gloves. Impervious clothing.
<b>Respiratory Protection</b>	Use NIOSH approved respiratory protection.
<b>General Hygiene Considerations</b>	Remove and wash contaminated clothing before re-use. Ensure that eyewash stations and safety showers are close to the workstation location.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State</b>	Liquid	<b>Viscosity</b>	Non viscous
<b>Color</b>	Yellow - Amber	<b>Odor</b>	Solvent
<b>Appearance</b>	Transparent	<b>pH</b>	Not applicable
<b>Specific Gravity</b>	0.923	<b>Bulk Density</b>	No information available
<b>Evaporation Rate</b>	0.05 (Butyl acetate=1)	<b>Percent Volatile (Volume)</b>	96.5
<b>VOC Content (%)</b>	93.2	<b>VOC Photoreactive (Y/N)</b>	Yes
<b>VOC Max Use Dilution (g/l)</b>	86.0	<b>VOC Max Use Dilution (wt%)</b>	9.32
<b>VOC Content (g/l)</b>	860	<b>Vapor Pressure</b>	0.54 mmHg @ 70 °F
<b>Vapor Density</b>	4.7	<b>Solubility</b>	Partly miscible
<b>Boiling Point/Range</b>	360°F / 182°C		

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable. Hazardous polymerization does not occur .
<b>Conditions to Avoid</b>	Keep away from open flames, hot surfaces, and sources of ignition.
<b>Incompatible Products</b>	Strong oxidizing agents. Strong acids. Amines.
<b>Hazardous Decomposition Products</b>	None under normal use

## Possibility of Hazardous Reactions

None under normal processing

## 11. TOXICOLOGICAL INFORMATION

Product Information

No information available

## Component Information

## Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Hexylene glycol	3692 mg/kg ( Rat )	8560 µL/kg ( Rabbit )	310 mg/m <sup>3</sup> ( Rat ) 1 h	no data available	no data available
1,3,5-Trimethylbenzene	5000 mg/kg ( Rat )	no data available	24 g/m <sup>3</sup> ( Rat ) 4 h	no data available	no data available
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched, phosphates	no data available	no data available	no data available	no data available	no data available
Bromacil	641 mg/kg ( Rat )	2500 mg/kg ( Rat ) 5 g/kg ( Rabbit )	no data available	no data available	no data available
Naphtha (petroleum), heavy aromatic	7050 mg/kg ( Rat )	2 mL/kg ( Rabbit )	590 mg/m <sup>3</sup> ( Rat ) 4 h	no data available	no data available
Benzenesulfonic acid, dodecyl-, branched, calcium salt	no data available	no data available	no data available	no data available	no data available
Naphthalene	490 mg/kg ( Rat )	20 g/kg ( Rabbit ) 2500 mg/kg ( Rat )	340 mg/m <sup>3</sup> ( Rat ) 1 h	no data available	no data available
Pseudocumene	3400 mg/kg ( Rat )	3160 mg/kg ( Rabbit )	18 g/m <sup>3</sup> ( Rat ) 4 h	no data available	no data available
Cumene	1400 mg/kg ( Rat )	3160 mg/kg ( Rabbit )	39000 mg/m <sup>3</sup> ( Rat ) 4 h	no data available	no data available

## Chronic Toxicity

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Hexylene glycol	no data available	yes	no data available	no data available	skin, eyes, CNS, bone marrow
1,3,5-Trimethylbenzene	no data available	no data available	no data available	no data available	eyes, skin, respiratory system, CNS, blood
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched, phosphates	no data available	no data available	no data available	no data available	no data available
Bromacil	no data available	no data available	no data available	no data available	respiratory system, eyes, skin, thyroid
Naphtha (petroleum), heavy aromatic	no data available	no data available	no data available	no data available	CNS
Benzenesulfonic acid, dodecyl-, branched, calcium salt	no data available	no data available	no data available	no data available	no data available
Naphthalene	no data available	no data available	no data available	no data available	eyes, blood, liver, kidneys, skin, CNS, Bone marrow
Pseudocumene	no data available	no data available	no data available	no data available	eyes, skin, respiratory system, CNS, blood
Cumene	no data available	no data available	no data available	no data available	eyes, respiratory system, skin, CNS

## Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Other
Hexylene glycol	not applicable	not applicable	not applicable	not applicable	not applicable
1,3,5-Trimethylbenzene	not applicable	not applicable	not applicable	not applicable	not applicable
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched, phosphates	not applicable	not applicable	not applicable	not applicable	not applicable
Bromacil	A3	not applicable	not applicable	not applicable	not applicable
Naphtha (petroleum), heavy aromatic	not applicable	not applicable	not applicable	not applicable	not applicable
Benzenesulfonic acid, dodecyl-, branched, calcium salt	not applicable	not applicable	not applicable	not applicable	not applicable
Naphthalene	not applicable	Group 2B	Reasonably Anticipated	X	not applicable
Pseudocumene	not applicable	not applicable	not applicable	not applicable	not applicable
Cumene	not applicable	not applicable	not applicable	not applicable	not applicable

## 12. ECOLOGICAL INFORMATION

Product Information

No information available

## Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Hexylene glycol	no data available	LC50= 10700 mg/L Pimephales promelas 96 h LC50= 12800 mg/L Lepomis macrochirus 96 h LC50= 8690 mg/L Pimephales promelas 96 h	EC50 = 3038 mg/L 5 min	EC50 = 3200 mg/L 48 h	0.14
1,3,5-Trimethylbenzene	no data available	LC50= 3.48 mg/L Pimephales promelas 96 h	no data available	EC50 = 50 mg/L 24 h	N/A
Poly(oxy-1,2-ethanediyl), .alpha.-(4-nonylphenyl)-.omega.-hydroxy-, branched, phosphates	no data available	no data available	no data available	no data available	N/A
Bromacil	no data available	LC50= 186 mg/L Pimephales promelas 96 h	EC50 = 6.65 mg/L 5 min	no data available	N/A
Naphtha (petroleum), heavy aromatic	EC50= 2.5 mg/L Skeletonema costatum 72 h	LC50= 1740 mg/L Lepomis macrochirus 96 h LC50= 19 mg/L Pimephales promelas 96 h	no data available	EC50 = 0.95 mg/L 48 h	2.9 - 6.1

		LC50= 2.34 mg/L Oncorhynchus mykiss 96 h			
Benzenesulfonic acid, dodecyl-, branched, calcium salt	no data available	no data available	no data available	no data available	N/A
Naphthalene	EC50= 0.4 mg/L Skeletonema costatum 96 h	LC50= 1.60 mg/L Oncorhynchus mykiss 96 h LC50= 1.99 mg/L Pimephales promelas 96 h LC50= 6.08 mg/L Pimephales promelas 96 h LC50= 6.14 mg/L Pimephales promelas 96 h	EC50 = 0.93 mg/L 30 min EC50 > 20 mg/L 18 h	EC50 = 2.16 mg/L 48 h	3.3
Pseudocumene	no data available	LC50= 7.72 mg/L Pimephales promelas 96 h	no data available	EC50 = 6.14 mg/L 48 h	3.63
Cumene	EC50= 2.6 mg/L Selenastrum capricornutum 72 h	LC50= 4.8 mg/L Oncorhynchus mykiss 96 h LC50= 5.1 mg/L Poecilia reticulata 96 h LC50= 6.32 mg/L Pimephales promelas 96 h	EC50 = 0.89 mg/L 5 min EC50 = 1.10 mg/L 15 min EC50 = 1.48 mg/L 30 min EC50 = 172 mg/L 24 h	EC50 = 0.6 mg/L 48 h	3.55

**Persistence and Degradability** No information available  
**Bioaccumulation** No information available  
**Mobility** No information available

## 13. DISPOSAL CONSIDERATIONS

**Product Disposal** Dispose of in accordance with local regulations  
**Container Disposal** Empty containers should be taken for local recycling, recovery or waste disposal. Do not re-use empty containers.

## 14. TRANSPORT INFORMATION

**DOT** Not regulated  
**TDG** Not regulated  
**ICAO** Not regulated  
**IATA** Not regulated  
**IMDG/IMO** Not regulated

## 15. REGULATORY INFORMATION

**Inventories**  
**TSCA** Complies  
**DSL** Does not Comply  
**U.S. Federal Regulations**  
**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40n of the Code of Federal Regulations, Part 372:

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Bromacil	314-40-9	1-5	1.0
Naphthalene	91-20-3	5-10	0.1
Pseudocumene	95-63-6	1-5	1.0
Cumene	98-82-8	1-5	1.0

## SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	Yes	No	No

## CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Hexylene glycol	Not applicable	Not applicable
1,3,5-Trimethylbenzene	Not applicable	Not applicable
Poly(oxy-1,2-ethanediyl), -alpha-(4-nonylphenyl)-omega-hydroxy-, branched, phosphates	Not applicable	Not applicable
Bromacil	Not applicable	Not applicable
Naphtha (petroleum), heavy aromatic	Not applicable	Not applicable
Benzenesulfonic acid, dodecyl-, branched, calcium salt	Not applicable	Not applicable
Naphthalene	100 lb	Not applicable
Pseudocumene	Not applicable	Not applicable
Cumene	5000 lb	Not applicable

## Canada

**WHMIS Hazard Class**  
 Not applicable .

## 16. OTHER INFORMATION

Prepared By	Dan Hollas
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Reason for Revision	No information available
Glossary	No information available
List of References	No information available

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