SAFETY DATA SHEET

1. Identification

Product identifier	Fenpropimorph Solution		
Other means of identification			
Item	S-11961U1		
Recommended use	For Laboratory Use Only		
Recommended restrictions	None known.		
Manufacturer/Importer/Supplier/	Distributor information		
Manufacturer			
Company name	Chem Service, Inc.		
Address	660 Tower Lane		
	West Chester, PA 19380 United States		
Telephone	Toll Free	800-452-9994	
	Direct	610-692-3026	
Website	www.chemservice.com		
E-mail	info@chemservice.com	000 404 0000	
Emergency phone number	Chemtrec US Chemtrec outside US	800-424-9300 +1 703-527-3887	7
2. Hazard(s) identification			
Physical hazards	Flammable liquids		Category 2
Health hazards	Acute toxicity, oral		Category 4
	Acute toxicity, inhalation		Category 4
	Skin corrosion/irritation		Category 2
	Serious eye damage/eye irr	itation	Category 2A
	Reproductive toxicity		Category 1A
	Specific target organ toxicity	, single exposure	Category 3 narcotic effects
	Specific target organ toxicity exposure	/, repeated	Category 2
	Aspiration hazard		Category 1
Environmental hazards	Hazardous to the aquatic er hazard	nvironment, acute	Category 2
	Hazardous to the aquatic er long-term hazard	nvironment,	Category 2
OSHA defined hazards	Not classified.		

Label elements



Signal word Hazard statement

Highly flammable liquid and vapor. Harmful if swallowed. May be fatal if swallowed and enters airways. Causes skin irritation. Causes serious eye irritation. Harmful if inhaled. May cause drowsiness or dizziness. May damage fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. Toxic to aquatic life. Toxic to aquatic life with long lasting effects.

Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe mist/vapors. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response	If swallowed: Immediately call a poison center/doctor. Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash it before reuse. In case of fire: Use appropriate media to extinguish. Collect spillage.
Storage	Store in a well-ventilated place. Keep container tightly closed. Store in a well-ventilated place. Keep cool. Store locked up.
Disposal	Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion.
Supplemental information	None.

3. Composition/information on ingredients

Mixtures

media

Chemical name	Common name and synonyms	CAS number	%
Toluene		108-88-3	99.99
Fenpropimorph		67564-91-4	0.01

4. First-aid measures

Inhalation	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a poison center or doctor/physician if you feel unwell.
Skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
Eye contact	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
Ingestion	Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness or dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Provide general supportive measures and treat symptomatically. Thermal burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. Keep victim warm. Keep victim under observation. Symptoms may be delayed.
General information	Take off all contaminated clothing immediately. IF exposed or concerned: Get medical advice/attention. If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.
5. Fire-fighting measures	

Suitable extinguishing mediaWater fog. Foam. Carbon dioxide (CO2). Dry chemical powder, carbon dioxide, sand or earth may
be used for small fires only.Unsuitable extinguishingDo not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical	Vapors may form explosive mixtures with air. Vapors may travel considerable distance to a source of ignition and flash back. This product is a poor conductor of electricity and can become electrostatically charged. If sufficient charge is accumulated, ignition of flammable mixtures can occur. To reduce potential for static discharge, use proper bonding and grounding procedures. This liquid may accumulate static electricity when filling properly grounded containers. Static electricity accumulation may be significantly increased by the presence of small quantities of water or other contaminants. Material will float and may ignite on surface of water. During fire, gases hazardous to health may be formed.	
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.	
Fire fighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk.	
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.	
General fire hazards	Highly flammable liquid and vapor.	
6. Accidental release meas	sures	
Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Do not breathe mist/vapors. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Use appropriate containment to avoid environmental contamination. Transfer by mechanical means such as vacuum truck to a salvage tank or other	

spillages cannot be contained. For personal protection, see section 8 of the SDS.
 Methods and materials for containment and cleaning up
 Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Keep combustibles (wood, paper, oil, etc.) away from spilled material. Take precautionary measures against static discharge. Use only non-sparking tools. This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Following product recovery, flush area with water.

suitable container for recovery or safe disposal. Local authorities should be advised if significant

Small Spills: Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions Avoid rele environme

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Use appropriate containment to avoid environmental contamination.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Explosion-proof general and local exhaust ventilation. Minimize fire risks from flammable and combustible materials (including combustible dust and static accumulating liquids) or dangerous reactions with incompatible materials. Handling operations that can promote accumulation of static charges include but are not limited to: mixing, filtering, pumping at high flow rates, splash filling, creating mists or sprays, tank and container filling, tank cleaning, sampling, gauging, switch loading, vacuum truck operations. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not breathe mist/vapors. Do not taste or swallow. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. When using, do not eat, drink or smoke. Pregnant or breastfeeding women must not handle this product. Should be handled in closed systems, if possible. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

For additional information on equipment bonding and grounding, refer to the Canadian Electrical Code in Canada, (CSA C22.1), or the American Petroleum Institute (API) Recommended Practice 2003, "Protection Against Ignitions Arising out of Static, Lightning, and Stray Currents" or National Fire Protection Association (NFPA) 77, "Recommended Practice on Static Electricity" or National Fire Protection Association (NFPA) 70, "National Electrical Code".

Store locked up. Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Eliminate sources of ignition. Avoid spark promoters. Ground/bond container and equipment. These alone may be insufficient to remove static electricity. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. Keep in an area equipped with sprinklers. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit. At this time, the other constituents have no known exposure limits.

US. OSHA Table Z-2 (29 CFR 191) Components	Туре	Value	
Toluene (CAS 108-88-3)	Ceiling	300 ppm	
	TWA	200 ppm	
US. ACGIH Threshold Limit Value	9S		
Components	Туре	Value	
Componente			
Toluene (CAS 108-88-3)	TWA	20 ppm	
•	TWA	20 ppm	
Toluene (CAS 108-88-3)	TWA	20 ppm Value	
Toluene (CAS 108-88-3) US. NIOSH: Pocket Guide to Cher	TWA mical Hazards		
Toluene (CAS 108-88-3) US. NIOSH: Pocket Guide to Cher Components	TWA mical Hazards Type	Value	
Toluene (CAS 108-88-3) US. NIOSH: Pocket Guide to Cher Components	TWA mical Hazards Type	Value 560 mg/m3	

Biological limit values

Components	Value	Determinant	Specimen	Sampling Time
Toluene (CAS 108-88-3)	0.3 mg/g	o-Cresol, with hydrolysis	Creatinine in urine	*
	0.03 mg/l	Toluene	Urine	*
	0.02 mg/l	Toluene	Blood	*

* - For sampling details, please see the source document.

Exposure guidelines

US - California OELs: Skin designation

Toluene (CAS 108-88-3)

Can be absorbed through the skin.

US - Minnesota Haz Subs: Skin designation applies

Toluene (CAS 108-88-3) Skin designation applies. Explosion-proof general and local exhaust ventilation. Good general ventilation should be used. Appropriate engineering Ventilation rates should be matched to conditions. If applicable, use process enclosures, local controls exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station and safety shower. Individual protection measures, such as personal protective equipment Chemical respirator with organic vapor cartridge and full facepiece. Eye/face protection Skin protection Hand protection Wear appropriate chemical resistant gloves. Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended. Other Chemical respirator with organic vapor cartridge and full facepiece. **Respiratory protection Thermal hazards** Wear appropriate thermal protective clothing, when necessary. Observe any medical surveillance requirements. When using do not smoke. Keep away from food **General hygiene** and drink. Always observe good personal hygiene measures, such as washing after handling the considerations material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

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Appearance	
Physical state	Liquid.
Form	Liquid Liquid.
Color	Colorless to Yellowish
Odor	Not available.
Odor threshold	Not available.
рН	Not available.
Melting point/freezing point	-138.82 °F (-94.9 °C) estimated
Initial boiling point and boiling range	231.08 °F (110.6 °C) estimated
Flash point	40.0 °F (4.4 °C) estimated
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or exp	losive limits
Explosive limit - lower (%)	1.27 % estimated
Explosive limit - upper (%)	7 % estimated
Vapor pressure	37.86 hPa estimated 0.000004 kPa at 20 °C
Vapor density	Not available.
Relative density	Not available.
Solubility(ies)	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	896 °F (480 °C) estimated
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Density	0.8635 g/cm3 estimated
Explosive properties	Not explosive.
Flammability class	Flammable IB estimated
Molecular formula	C20H33NO
Oxidizing properties	Not oxidizing.
Percent volatile	99.99 % estimated
Specific gravity	0.86 estimated
VOC	99.99 % estimated
10. Stability and reactivity	
Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of bazardous	Hazardous polymerization does not occur

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Inhalation

Information on likely routes of exposure

Harmful if inhaled. May cause drowsiness or dizziness. Headache. Nausea, vomiting.

Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Harmful if swallowed. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia.
Symptoms related to the physical, chemical and toxicological characteristics	Aspiration may cause pulmonary edema and pneumonitis. May cause drowsiness or dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. May cause redness and pain.
Information on toxicological effe	ects
Acute toxicity	May be fatal if swallowed and enters airways. Harmful if inhaled.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye irritation.
Respiratory or skin sensitization	l
Respiratory sensitization	Not a respiratory sensitizer.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.
IARC Monographs. Overall I	Evaluation of Carcinogenicity
Toluene (CAS 108-88-3) OSHA Specifically Regulate	3 Not classifiable as to carcinogenicity to humans. d Substances (29 CFR 1910.1001-1053)
Not listed.	
	gram (NTP) Report on Carcinogens
Not listed. Reproductive toxicity	May damage fertility or the unborn child.
Specific target organ toxicity -	May cause drowsiness or dizziness.
single exposure	
Specific target organ toxicity - repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	May be fatal if swallowed and enters airways.
Chronic effects	Prolonged inhalation may be harmful. May cause damage to organs through prolonged or repeated exposure.
12. Ecological information	
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Ecotoxicity	Toxic to aqua	atic life with long lasting effects.	
Components		Species	Test Results
Toluene (CAS 108-88-3)			
Aquatic			
Acute			
Crustacea	EC50	Water flea (Daphnia magna)	>= 5.46 - <= 9.83 mg/l, 48 hours
Fish	LC50	Coho salmon,silver salmon (Oncorhynchus kisutch)	8.11 mg/l, 96 hours
Persistence and degradability	No data is av	ailable on the degradability of any ingredie	ents in the mixture.
Bioaccumulative potential			
Partition coefficient n-octa	nol / water (log	Kow)	
Toluene	2.73		
Mobility in soil	No data available.		
Other adverse effects	The product contains volatile organic compounds which have a photochemical ozone creation potential.		

13. Disposal considerations

Disposal instructions	Dispose of this material and its container to hazardous or special waste collection point. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. If discarded, this product is considered a RCRA ignitable waste, D001. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	D001: Waste Flammable material with a flash point <140 F The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

UN numberUN1294VD proper shipping name Transport hazard class(es)Toluene, solution (Toluene RQ = 1000 LBS), MARINE POLLUTANTClass3Subsidiary risk-Label(s)3Packing groupIIEnvironmental hazardsKasMarine pollutantYesSpecial precautions for userRead safety instructions, SDS and emergency procedures before handling.Special precautions for userRead safety instructions, SDS and emergency procedures before handling.Special precautions for userRead safety instructions, SDS and emergency procedures before handling.Packaging ono bulk202Packaging non bulk202Packaging poupToluene solution (Toluene)Transport hazard class(es)Toluene solution (Toluene)Class3Subsidiary risk-Class3Special precautions for userRead safety instructions, SDS and emergency procedures before handling.Packing groupIIEnvironmental hazardsYesERG Code3LSpecial precautions for userRead safety instructions, SDS and emergency procedures before handling.Other informationToluene solutions, SDS and emergency procedures before handling.UN proper shipping name aircraftToluene solutions, SDS and emergency procedures before handling.UN numberUN proper shipping name aircraftUN proper shipping name Transport hazard class(es)ToluENE SOLUTION (Toluene), MARINE POLLUTANTIMDGUN proper shipping name Transport haz	DO	T	
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EmS F-E, S-D			
		-	
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Transport in bulk according to Not established. Annex II of MARPOL 73/78 and the IBC Code







General information

IMDG Regulated Marine Pollutant. DOT Regulated Marine Pollutant.

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

One or more components of the mixture are not on the TSCA 8(b) inventory

Toxic Substances Control Act (TSCA)

or are designated "inactive".

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Toluene (CAS 108-88-3) Listed. SARA 304 Emergency release notification Not regulated. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) Not listed. Superfund Amendments and Reauthorization Act of 1986 (SARA) SARA 302 Extremely hazardous substance Not listed.

SARA 311/312 Hazardous Yes chemical

Classified hazard categories	Flammable (gases, aerosols, liquids, or solids) Acute toxicity (any route of exposure) Skin corrosion or irritation					
		Skin conosion of initiation Serious eye damage or eye irritation				
	Reproductive toxicit	у				
	Aspiration hazard	n toxicity (single or repeat	ed exposure)			
		e classified (HNOC)				
SARA 313 (TRI reporting)						
Chemical name		CAS number	% by wt.			
Toluene		108-88-3	99.99			
Other federal regulations						
Clean Air Act (CAA) Section		Pollutants (HAPs) List				
Toluene (CAS 108-88-3	,	alagaa Brovention /40 Cl	ED 69 420)			
Clean Air Act (CAA) Section Not regulated.		elease Prevention (40 Ci	FR 00.130)			
Safe Drinking Water Act (SDWA)	Contains componen	t(s) regulated under the S	Safe Drinking Water Act.			
		st 2, Essential Chemical	s (21 CFR 1310.02(b) and 1	l310.04(f)(2) and		
Toluene (CAS 108-	-	6594				
			al Mixtures (21 CFR 1310.1	2(c))		
Toluene (CAS 108-	-88-3)	35 %WV				
DEA Exempt Chemica	I Mixtures Code Numb	ber				
Toluene (CAS 108-	-88-3)	594				
US state regulations						
US. California. Candidate (a))	Chemicals List. Safer	Consumer Products Reg	gulations (Cal. Code Regs,	tit. 22, 69502.3, subd.		
Toluene (CAS 108-88-3	3)					
California Proposition 65						
			known to the State of Califo rmation go to www.P65Warn			
California Proposition	65 - CRT: Listed date	/Developmental toxin				
Toluene (CAS 108		Listed: Janua	ry 1, 1991			
International Inventories	,					
Country(s) or region	Inventory name			On inventory (yes/no)*		
Australia	-	of Industrial Chemicals (AICIS)	No		
Canada	Domestic Substance		,	No		
Canada	Non-Domestic Subs	stances List (NDSL)		No		
China	Inventory of Existing	Chemical Substances in	China (IECSC)	No		
Europe	European Inventory Substances (EINEC	of Existing Commercial C S)	Chemical	Yes		
Europe	European List of No	tified Chemical Substance	es (ELINCS)	No		
Japan	Inventory of Existing	and New Chemical Subs	stances (ENCS)	No		
Korea	Existing Chemicals	List (ECL)		Yes		
New Zealand	New Zealand Invent	tory		Yes		
Philippines	Philippine Inventory (PICCS)	of Chemicals and Chemic	cal Substances	No		
Taiwan	Taiwan Chemical S	ubstance Inventory (TCSI)	Yes		
United States & Puerto Rico	Toxic Substances C	ontrol Act (TSCA) Invento	ory	No		
*A "Yes" indicates that all comp	onents of this product com	ply with the inventory require	ements administered by the gov	verning country(s)		

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s) A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

08-31-2014

Revision date	04-27-2022
Version #	03
NFPA ratings	Health: 2 Flammability: 3 Instability: 0
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Revision information	This document has undergone significant changes and should be reviewed in its entirety.