Safety Data Sheet - GHS
UltraSol 100

Date of Revision: June 19, 2019

Section 1 - Chemical Product and Company Identification

Product Name	UltraSol 100
Synonyms	Enhanced Condensate
Product Use	Solvent, heavy oil diluent
Restriction on Use	None identified
Manufacturer/Supplier	CFR Chemicals 38451 Range Road 22 County of Red Deer T4E 2N6
General Assistance	1 (877) 269-3419
Emergency Telephone	**613-966-6666 (CANUTEC 24 Hour Phone Number)**
Date of Preparation of SDS	April 1, 2017

Section 2 – Hazard Identification

Signal Word Danger

GHS Pictogram(s)

Target Organs Narcotic Effects

Hazard Statement:

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315 + H320	Causes skin irritation and causes eye irritation.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H361	Suspected of damaging fertility or the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H401	Toxic to aquatic life.

Precautionary Statement

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. No smoking
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating, lighting and all material-handling equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P264	Wash skin thoroughly after handling.

	P271	Use only outdoors or in a well-ventilated area.
	P273	Avoid release to the environment.
	P280	Wear protective gloves/eye protection/face protection.
Response		
	P321	Specific Treatment: see response statements on the label
	P301 + P310	IF SWALLOWED: Immediately call a POISON CENTRE / DOCTOR.
	P331	DO NOT induce vomiting.
	P302 + P352	IF ON SKIN: Wash with plenty of water.
	P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminate clothing. Rinse skin with water / shower.
	P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P308 + P313	If exposed or concerned: get medical advice / attention.
	P312	Call a POISON CENTRE or doctor/physician if you feel unwell.
	P332 + P313	If skin irritation occurs: Get medical advice/attention.
	P337 + P313	If eye irritation persists: Get medical advice/attention.
	P362 + P364	Take off contaminated clothing and wash it before reuse.
	P370 + P378	In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam to extinguish.
Storage		
	P403 + P233	Store in well-ventilated place. Keep contained tightly closed.
	P403 + P235	Store in well-ventilated place. Keep cool.
	P405	Store locked up.
Disposal		
	P501	Dispose of contents/container to an approved waste disposal unit.

GHS Classification

Flammable liquids (Category 2)
Acute toxicity, dermal (Category 4)
Acute toxicity, inhalation (Category 4)
Skin corrosion/irritation (Category 2)
Serious eye damage/eye irritation (Category 2B)
Carcinogenicity (Category 2)
Toxic to reproduction (Category 2)
Specific target organ toxicity - single exposure (Category 3 respiratory tract irritation)
Specific target organ toxicity - single exposure (Category 3 narcotic effects)
Specific target organ toxicity - repeated exposure (Category 2)
Aspiration hazard (Category 1)
Hazardous to the aquatic environment, acute hazard (Category 2)

HMIS Classification

Health Hazard	**2**
Chronic Health Hazard	*****
Flammability	**3**
Physical Hazards	**0**

Potential health effects

Inhalation Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed. Aspiration hazard if swallowed – can enter lungs and cause damage.

Skin May be harmful if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.

Section 3 – Composition Information on Ingredients

HAZARDOUS INGREDIENT	Hazardous Ingredient, Synonyms	PERCENT	CAS NUMBER
Natural Gas Condensate	Not applicable	90 - 99%	8002-05-9
	This product also contains		
Hexane	n-hexane, normal-Hexane; Hexyl hydride; n-Hexylhydride; n-Caproylhydride; Hexane, normale	10 – 30%	110-54-3
Heptane	n-heptane, normal-heptane, heptyl hydride	10 – 30%	142-82-5
Octane	Not appliacable	10 – 20%	111-65-9
Nonane	Not applicable	6 – 12%	108-87-2
Methylcyclopentane	Methyl cyclopentane, methylpentamethylene	5 – 10%	96-37-7
Cyclohexane	Hexamethylene; Hexahydrobenzene; Hexanaphthene	4 – 7%	110-82-7
Pentane	n-pentane; normal pentane	6 – 7%	109-66-00
Toluene	benzyl hydride; methylbenzene; phenylmethane; toluol.	0 – 15%	108-88-3
Xylene, mixed isomers	Xylenes; Xylol; methyl toluene, benzene, dimethyl-; dimethylbenzene.	0 – 35%	1330-20-7
Benzene	Benzol,	0 – 0.5%	71-43-2
1,2,4-trimethylbenzene	Pseudocumene, pseudocumol	0-1.1	25551-13-7
	This product may also contain		
Methanol	Methyl alcohol, wood alcohol, carbinol, wood spirits, methyl hydroxide, methyl hydrate	0 – 2%	67-56-1
Isopropanol	2-propanol; IPA; Isopropyl Alcohol; 1-methylethanol; 1-methylethyl alcohol; 2-hydroxypropane; i-propanol; propan-2-ol; sec-propanol.	0 – 2%	67-63-0
Methylethyl ketone	2-Butanone; Butan-2-one; Butanone; Ethyl methyl ketone; MEK; methyl acetone	0 – 2%	78-93-3
Methylisobutyl ketone		0 – 8%	108-10-1
Ethylene Glycol Monobutyl Ether	EGMBE; 2-Butoxyethanol; Glycol ether EB; Butyl cellosolve; Butyl glycol	0 – 5%	111-76-2
2-Ethylhexanol	2-Ethyl-1-hexanol, Isooctanol, Isooctyl Alcohol	0 – 2%	104-76-7
Alkylbenzenesulfonic acid	Dodecylbenzene sulfonic acid, lauralbenzenesulfonic acid	0 – 2%	27176-87-0

* = Various ** = Mixture *** = Proprietary

Chemical Formula mixture

Section 4 - First Aid Measures

Inhalation Move victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that vas of vapour is still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular, or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison centre or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as collar, tie, belt or waistband.

Eye Contact Immediately flush eyes with plenty of water, occasionally lifting the upper and lower lids. Check for and remove contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.

Skin Contact Flush contaminated skin with plenty of water. Remove contaminated clothing and shows. Continue to rinse for at least 10 minutes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion Get medical attention immediately. Call a poison control centre or physician. Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Aspiration hazard if swallowed. Can enter lungs and cause damage. Do not induce vomiting. If vomiting occurs, the head should be kept low so vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as collar, tie, belt or waistband.

Most Important Symptoms/Effects

Acute

Eye contact	Causes eye irritation.
Inhalation	Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.
Skin contact	No known significant effects or critical hazards.
Ingestion	Can cause central nervous system (CNS) depression.

Delayed

Eye contact	No specific data.
Inhalation	Adverse symptoms may include the following:, nausea or vomiting, headache, drowsiness/fatigue, dizziness/vertigo, unconsciousness, reduced fetal weight, increase in fetal deaths, skeletal malformations
Skin contact	Adverse symptoms may include the following:, reduced fetal weight, increase in fetal deaths, skeletal malformations
Ingestion	Adverse symptoms may include the following:, reduced fetal weight, increase in fetal deaths, skeletal malformations

Note to Physician Treat symptomatically.

Section 5 – Fire-Fighting Measures

Conditions of Flammability	Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/ hot surface.
Extinguishing Media	Use water spray (fog), alcohol-resistant foam, dry chemical or carbon dioxide
Unsuitable Extinguishing Media	Do not use water jet.
Unusual Fire/ Explosion Hazard	No data available.
Hazardous Combustion Products	Carbon oxides
Fire Fighting Equipment	Wear appropriate protective equipment and self-contained breathing apparatus with a full face-piece operated in positive pressure mode.

Section 6 – Accidental Release Measures

Personal precautions	Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
Environmental precautions	Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
Methods and materials for containment and cleaning up	Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Section 7 – Handling and Storage

Precautions for safe handling	Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.
Conditions for safe storage	Keep container tightly closed in a dry and well-ventilated place.
Incompatible Conditions	Heat, flames and sparks.
Incompatible Materials	Oxidizing materials, strong acids.

Section 8 – Exposure Controls / Personal Protection

Occupational Exposure Limits

Ingredient Name	**Exposure Limits**
Hexanes	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** TWA: 50ppm
Heptane	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** TWA: 400ppm
Octane	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** TWA: 300ppm

Nonanes	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** TWA: 200ppm
Methylcyclopentane	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** None established **ACGIH TLV (USA, 4/2014).** TWA: 500ppm 8 Hours, 1760 mg/m^3 8 Hours STEL: 1000 ppm 15 minutes, 1050 mg/m^3 15 minutes
Cyclohexane	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** TWA: 100ppm
Pentane	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** TWA: 600ppm
Toluene	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** TWA: 50ppm
Xylene, mixed isomers	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** TWA: 100ppm STEL: 150ppm
Benzene	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** TWA: 0.5ppm, 1.6mg/m^3 Ceiling: 2.5ppm, 8mg/m^3
1,2,4-trimethylbenzene	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** TWA: 25ppm
Methanol	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** TWA: 200ppm STEL: 250ppm
Isopropanol	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** STEL: 400ppm TWA: 200ppm
Methylethyl ketone	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** TWA: 200ppm Ceiling: 300ppm (15 min)
Methylisobutyl ketone	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** TWA: 50ppm
Ethylene Glycol Monobutyl Ether	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** TWA: 20ppm
2-Ethylhexanol	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** None established
Alkylbenzenesulfonic acid	**Canada, Alberta, Occupational Health and Safety Cote (table 2: OEL)** None established

Personal protective equipment

Eye/face protection	Chemical safety glasses with side shields to prevent eye contact. As a general rule do not wear contact lenses when handling chemicals.
Skin protection	Wear chemical resistant gloves, impermeable protective clothing and safety shoes.
Respiratory protection	Use NIOSH approved respirators and components.
General hygiene Considerations	Handle in accordance with good industrial hygiene and safety.
Specific engineering controls	Use mechanical exhaust or laboratory fumehood to avoid exposure. Safety shower, eye wash, and fire extinguisher should be present.

Section 9 – Physical and Chemical Properties

Physical State	Liquid	**Water Solubility**	Insoluble
Appearance & Odour	Clear colourless to pale brown liquid with distinct hydrocarbon odour.	**Boiling Point**	52.5°C
Vapour Pressure	Varies with feedstock.	**Boiling Range**	52.5°C – 350°C
Odour Threshold	Not available	**Melting Point**	<-40°C
Evaporation Rate	Not available	**Freezing Point**	<-40°C
Vapour Density	>1 (Air = 1)	**Lower Explosive Limit (LEL)**	0.6%
Specific Gravity	0.68 – 0.85	**Upper Explosive Limit (UEL)**	15%
pH	Not available	**Partition coefficient (n-octonal/water)**	Not available
Flammability (Solid, Gas)	Not available		
Decomposition Temperature	Not available	**Viscosity**	Not available
Flash Point	-49° (PMCC)	**Auto-ignition temperature**	>400°C

Section 10 – Stability and Reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	Stable under recommended storage conditions.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur
Conditions to avoid	Heat, flames and sparks.
Materials to avoid	Oxidizing materials, strong acids.

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides, sulfur oxides.
Other decomposition products – May release carbon oxides, aldehydes, ketones, reactive hydrocarbons, smoke and irritating vapors when heated to decomposition.

Section 11- Toxicological Information

Information on Likely Routes of Exposure

No data available

Acute toxicity

Product/Ingredient Name	Result	Species	Dose	Exposure
Hexanes	LC50 Inhalation gas	Rat	48000ppm	4 Hr
	LD50 Oral	Rat	15840mg/kg	-
Heptane	LD50 Dermal	Rabbit	>2000mg/kg	-
	LD50 Oral	Rat	>5000mg/kg	-
Octane	LC50 Inhalation gas	Rat	25260ppm	4 Hr

Nonanes	LD50 Oral	Rat	15g/kg	-
	LC50 Inhalation gas	Rat	3200ppm	4 Hr
Methylcyclopentane	LD50 Oral	Rat	5 – 15g/kg	-
	LC50 Inhalation gas	Mouse	95000 – 120000ppm	4 Hr
Cyclohexane	LC50 Inhalation gas	Mouse	70000mg/m^3	2 Hr
	LD50 Oral	Rat	>5000mg/kg	-
Pentane	LD50 Oral	Rat	> 5000g/kg	-
Toluene	LC50 Inhalation gas	Rat	>20mg/L	4 Hr
	LD50 Oral	Rat	5580mg/kg	-
	LD50 Dermal	Rabbit	12223mg/kg	-
	LC50 Inhalation gas	Rat	6350ppm	4 Hr
Xylene, mixed isomers	LD50 Oral	Rat	3253mg/kg	-
	LD50 Dermal	Rabbit	12126mg/kg	24 Hr
	LC50 Inhalation gas	Rat	13700ppm	4 H4
Benzene	LD50 Oral	Rat	4920mg/kg	-
	LD50 Dermal	Rabbit	>8240mg/kg	-
1,2,4-trimethylbenzene	LC50 Inhalation gas	Rat	18000mg/m^3	4 Hr
	LD50 Oral	Rat	50000mg/kg	-
Methanol	LC50 Inhalation, vapour	Rat	128.2mg/L	4 Hr
	LD50 Oral	Rat	1187-2769mg/kg	-
	LD50 Dermal	Rabbit	17100mg/kg	-
	LC50 Inhalation gas	Rat	73mg/L	4 Hr
Isopropanol	LD50 Oral	Rat	5045mg/kg	-
	LD50 Dermal	Rabbit	12870mg/kg	-
Methylethyl ketone	LD50 Oral	Rat	2737mg/kg	-
	LC50 Inhalation gas	Mouse	32000ppm	4 Hr
Methylisobutyl ketone	LD50 Oral	Guinea Pig	1600mg/kg	-
	LC50 Inhalation gas	Rat	8000ppm	4 Hr
Ethylene Glycol Monobutyl Ether	LD50 Oral	Rat	3730mg/kg	-
	LD50 Dermal	Rat	>3000mg/kg	-
2-Ethylhexanol	LD50 Oral	Rat	3370mg/kg	-
	LD50 Dermal	Rat	>3000mg/kg	-
Alkylbenzenesulfonic acid	LD50 Oral	Rat	438mg/kg	-

Skin corrosion/irritation Causes skin and eye irritation.

Respiratory or skin sensitization

No data available

Mutagenicity Xylene and Toluene have been investigated as mutagens. There has been some evidence of chromosomal changes in workers exposed to benzene.

Carcinogenicity Components are suspected of causing cancer.

IARC:

Benzene 1 Carcinogenic to Humans

Ethylbenzene 2B Possibly carcinogenic to Humans

Reproductive toxicity Not available

Teratogenicity Not available

Specific target organ toxicity - single exposure

This product is not reported to have any specific target organ general toxicity single exposure effects.

Specific target organ toxicity - repeated exposure

Causes damage to organs (liver, kidneys, blood, nervous system and skin) through prolonged or repeated exposure.

Aspiration hazard Aspiration may result in chemical pneumonia, severe lung damage, respiratory failure and even death.

Signs and Symptoms of Exposure

Inhalation Adverse symptoms may include: nausea and vomiting, headache, drowsiness/fatigue, dizziness/vertigo and unconsciousness

Ingestion Adverse symptoms may include: nausea and vomiting

Skin Adverse symptoms may include: irritation, redness

Eyes Adverse symptoms may include: pain or irritation, watering, redness

Synergistic effects No data available

Delayed and Immediate Effects and also Chronic Effects from Short and Long Term Exposure

Short Term Exposure

Potential immediate Health Effects

Inhalation Can cause central nervous system (CNS) depression. May cause drowsiness and dizziness. May cause respiratory tract irritation.

Ingestion May be harmful if swallowed. Aspiration hazard if swallowed – can enter lungs and cause damage.

Skin May be harmful if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Potential Delayed Health Effects No data available.

Long Term Exposure

Potential immediate Health Effects No data available**.**

Potential Delayed Health Effects No data available.

Potential Chronic Effects No data available.

Section 12 – Ecological Information

Toxicity

Product / Ingredient Name	Result	Species	Exposure
Toluene	Acute LC50 24mg/L	Fish – Onchohynchus mykiss	96 Hr
	Acute EC50 84mg/L	Daphnia – Daphnia magna	24 Hr
	Acute LC50 13mg/L	Fish – Lepomis macrochirus	96 Hr
Xylene (o, m, p isomers)	Acute LC50 13.1 - 16.5mg/L	Fish – Lepomis macrochirus	96 Hr
	Acute LC50 13.5 – 17.3mg/L	Fish – Oncorhynchus mykiss	96 Hr
Hexanes	Acute LC50 2500µg/L Fresh Water	Fish – Pimephales promelas	96 Hr
Benzene			
Ethylbenzene	Acute LC50 4mg/L	Fish – Oncorhynchus mykiss	96 Hr
	Acute EC50 1 – 4mg/L	Daphnia – Daphnia magna	48 Hr
1,2,4-trimethylbenzene	Acute LC50 10.7 -14.7mgL	Fish – Pimephales promelas	96 Hr

Persistence and degradability

Biodegradability No data available

Bioaccumulative potential

Product/Ingredient Name	$LogP_{ow}$	BCF	Potential
n-hexane	4	502	High

Mobility in soil No data available

PBT and vPvB assessment No data available

Other adverse effects No known significant effects or critical hazards.

Section 13 – Disposal Considerations

Product	This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.
Contaminated packaging	Dispose of as unused product.

Section 14 - Transportation Information

CANADA Transportation of Dangerous Goods (TDG)

Shipping Name	UN1268, PETROLEUM DISTILLATES, N.O.S. (condensate), 3. PG II
Class	3
UN Number	UN1268
Packaging Group	I
Label	

Environmental hazards	Not a marine pollutant.
Transportation in bulk, if applicable	No data available
Special Precautions	No data available
Reportable Quantity	12345.7 lbs / 5604.9Kg [2177.5 gal / 8242.6L] Package sizes shipped in quantities less than the product reportable quantity are not subject to the RW transportation requirements.

Section 15 – Regulatory Information

DSL (Canadian Domestic Substances List) and CEPA (Canadian Environmental Protection Act)
All components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

TSCA Inventory (8b) All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations.

Section 16 – Other Information

REVISION SUMMARY:

Date of Preparation	April 1, 2017
Date of Revision	June 19, 2019

Date of Revision: June 19, 2019

SDS Prepared by: CFR Lab Manager

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