

SAFETY DATA SHEET

1. Identification

Product identifier: JIG-A-LOO WHITE LITHIUM GREASE - JIG1101

Other means of identification

SDS number: RE1000020126

Recommended restrictions

Product Use: Lubricant

Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information

Manufacturer

Company Name: JIG-A-LOO INC.
Address: 316-2 KNOWLTON RD.
KNOWLTON, QC J0E 1V0
Telephone: 855-544-2566
Fax:

Emergency telephone number: 1-866-836-8855

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable aerosol Category 1

Health Hazards

Carcinogenicity Category 2
Toxic to reproduction Category 2
Specific Target Organ Toxicity - Category 2
Repeated Exposure
Aspiration Hazard Category 1

Environmental Hazards

Acute hazards to the aquatic environment Category 2

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement:	Extremely flammable aerosol. Suspected of causing cancer. Suspected of damaging fertility or the unborn child. May cause damage to organs through prolonged or repeated exposure. May be fatal if swallowed and enters airways. Toxic to aquatic life.
Precautionary Statements	
Prevention:	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response:	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. IF exposed or concerned: Get medical advice/attention.
Storage:	Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.
Disposal:	Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.
Other hazards which do not result in GHS classification:	None.

3. Composition/information on ingredients

Mixtures

Chemical Identity	Common name and synonyms	CAS number	Content in percent (%) [*]
Tetrachloroethylene		127-18-4	30 - 60%
Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO		64742-54-7	10 - 30%
Propane, 2-methyl-		75-28-5	7 - 13%
Propane		74-98-6	5 - 10%
Naphtha (petroleum), hydrotreated light		64742-49-0	3 - 7%
Hexane		110-54-3	1 - 5%
Titanium oxide (TiO ₂)		13463-67-7	1 - 5%
Heptane		142-82-5	0.1 - 1%
Methane, tetrachloro-		56-23-5	0.1 - 1%

^{*} All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

4. First-aid measures

Ingestion:	Rinse mouth. Call a physician or poison control center immediately. Never give liquid to an unconscious person. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
Inhalation:	Move to fresh air.
Skin Contact:	Wash skin thoroughly with soap and water. If skin irritation occurs: Get medical advice/attention.
Eye contact:	Any material that contacts the eye should be washed out immediately with water. If easy to do, remove contact lenses. If eye irritation persists: Get medical advice/attention.

Most important symptoms/effects, acute and delayed

Symptoms: No data available.

Hazards: No data available.

Indication of immediate medical attention and special treatment needed

Treatment: No data available.

5. Fire-fighting measures

General Fire Hazards: Use water spray to keep fire-exposed containers cool. Fight fire from a protected location. Move containers from fire area if you can do so without risk.

Suitable (and unsuitable) extinguishing media

Suitable extinguishing media: Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media: Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical: Vapors may travel considerable distance to a source of ignition and flash back.

Special protective equipment and precautions for firefighters

Special fire fighting procedures: No data available.

Special protective equipment for fire-fighters: Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures: Ventilate closed spaces before entering them. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Keep upwind.

Methods and material for containment and cleaning up: Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

Notification Procedures: Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do so without risk.

Environmental Precautions: Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.

7. Handling and storage

Precautions for safe handling: Wash hands thoroughly after handling. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not spray on an open flame or other ignition source. Do not pierce or burn, even after use.

Conditions for safe storage, including any incompatibilities: Store locked up. Pressurized container: protect from sunlight and do not expose to temperatures exceeding 50°C. Do not pierce or burn, even after use. Aerosol Level 1

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Tetrachloroethylene	TWA	25 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (12 2007)
	STEL	100 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (12 2007)
Tetrachloroethylene	TWA	25 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	STEL	100 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Tetrachloroethylene	TWA	25 ppm	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
	STEL	100 ppm	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
Tetrachloroethylene	STEL	100 ppm 685 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
	TWA	25 ppm 170 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
Tetrachloroethylene	STEL	100 ppm 678 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (10 2006)
	TWA	25 ppm 170 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (10 2006)
Tetrachloroethylene	8 HR ACL	25 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	100 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Tetrachloroethylene	TWA	25 ppm	US. ACGIH Threshold Limit Values (2008)
	STEL	100 ppm	US. ACGIH Threshold Limit Values (2008)
Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO - Inhalable fraction.	TWA	5 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2014)
Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO - Mist.	TWA	1 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (05 2013)
Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO - Mist.	STEL	10 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	TWA	5 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO	15 MIN ACL	10 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO - Inhalable fraction.	TWA	5 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
	TWA	5 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO - Mist.	STEL	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
	TWA	5 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
	8 HR ACL	5 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)

Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO - Inhalable fraction.	TWA	5 mg/m3	US. ACGIH Threshold Limit Values (03 2014)
Propane, 2-methyl-	STEL	1,000 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (08 2017)
Propane, 2-methyl-	8 HR ACL	1,000 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	1,250 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Propane, 2-methyl-	STEL	1,000 ppm	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2018)
Propane, 2-methyl-	STEL	1,000 ppm	US. ACGIH Threshold Limit Values (03 2018)
Propane	TWA	1,000 ppm	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
Propane	8 HR ACL	1,000 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Propane	TWA	1,000 ppm 1,800 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Propane	TWA	1,000 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	15 MIN ACL	1,250 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Naphtha (petroleum), hydrotreated light	8 HR ACL	400 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Naphtha (petroleum), hydrotreated light	TWA	400 ppm 1,590 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
Naphtha (petroleum), hydrotreated light	TWA	400 ppm 1,590 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	15 MIN ACL	500 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Hexane	TWA	50 ppm 176 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Hexane	TWA	50 ppm 176 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (10 2006)
Hexane	TWA	20 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Hexane	15 MIN ACL	62.5 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Hexane	TWA	50 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
	8 HR ACL	50 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Hexane	TWA	50 ppm	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
Hexane	TWA	50 ppm	US. ACGIH Threshold Limit Values (2008)
Titanium oxide (TiO2)	TWA	10 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (10 2006)
Titanium oxide (TiO2) - Respirable fraction.	TWA	3 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium oxide (TiO2)	TWA	10 mg/m3	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
Titanium oxide (TiO2)	TWA	10 mg/m3	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (11 2010)
Titanium oxide (TiO2) - Total dust.	TWA	10 mg/m3	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Titanium oxide (TiO2)	8 HR ACL	10 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	15 MIN ACL	20 mg/m3	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Titanium oxide (TiO2) - Total dust.	TWA	10 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
Titanium oxide (TiO2)	TWA	10 mg/m3	US. ACGIH Threshold Limit Values (2008)

Heptane	TWA	400 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
	STEL	500 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Heptane	STEL	500 ppm 2,050 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
Heptane	8 HR ACL	400 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Heptane	TWA	400 ppm	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2012)
	STEL	500 ppm	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2012)
Heptane	STEL	500 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
Heptane	STEL	500 ppm 2,050 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
	TWA	400 ppm 1,640 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
	15 MIN ACL	500 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
	TWA	400 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (06 2015)
	TWA	400 ppm 1,640 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
Heptane	TWA	400 ppm	US. ACGIH Threshold Limit Values (02 2012)
	STEL	500 ppm	US. ACGIH Threshold Limit Values (02 2012)
Methane, tetrachloro-	STEL	10 ppm 63 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (10 2006)
	TWA	5 ppm 31 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (10 2006)
Methane, tetrachloro-	STEL	3 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (07 2010)
Methane, tetrachloro-	TWA	2 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Methane, tetrachloro-	TWA	5 ppm	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
	TWA	2 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (07 2010)
Methane, tetrachloro-	TWA	5 ppm 31 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
	STEL	10 ppm	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
	STEL	10 ppm 63 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (09 2017)
Methane, tetrachloro-	TWA	5 ppm	US. ACGIH Threshold Limit Values (2008)
	STEL	10 ppm	US. ACGIH Threshold Limit Values (2008)
Cyclohexane	TWA	100 ppm	Canada. British Columbia OELs. (Occupational Exposure Limits for Chemical Substances, Occupational Health and Safety Regulation 296/97, as amended) (07 2007)
Cyclohexane	TWA	300 ppm 1,030 mg/m3	Canada. Quebec OELs. (Ministry of Labor - Regulation Respecting the Quality of the Work Environment) (12 2008)
Cyclohexane	TWA	100 ppm	Canada. Ontario OELs. (Control of Exposure to Biological or Chemical Agents) (12 2007)
Cyclohexane	8 HR ACL	100 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Cyclohexane	TWA	100 ppm 344 mg/m3	Canada. Alberta OELs (Occupational Health & Safety Code, Schedule 1, Table 2) (07 2009)
Cyclohexane	TWA	100 ppm	Canada. Manitoba OELs (Reg. 217/2006, The Workplace Safety And Health Act) (03 2011)
	15 MIN ACL	150 ppm	Canada. Saskatchewan OELs (Occupational Health and Safety Regulations, 1996, Table 21) (05 2009)
Cyclohexane	TWA	100 ppm	US. ACGIH Threshold Limit Values (2008)

Appropriate Engineering Controls No data available.

Individual protection measures, such as personal protective equipment

General information: Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

Eye/face protection: Wear goggles/face shield.

Skin Protection

Hand Protection: No data available.

Other: No data available.

Respiratory Protection: In case of inadequate ventilation use suitable respirator. Seek advice from local supervisor.

Hygiene measures: Observe good industrial hygiene practices. Wash hands before breaks and immediately after handling the product. When using do not smoke. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.

9. Physical and chemical properties

Appearance

Physical state: liquid

Form: Spray Aerosol

Color: No data available.

Odor: No data available.

Odor threshold: No data available.

pH: No data available.

Melting point/freezing point: No data available.

Initial boiling point and boiling range: No data available.

Flash Point: -104 °C

Evaporation rate: No data available.

Flammability (solid, gas): No data available.

Upper/lower limit on flammability or explosive limits

Flammability limit - upper (%): No data available.

Flammability limit - lower (%): No data available.

Explosive limit - upper (%): No data available.

Explosive limit - lower (%): No data available.

Vapor pressure: 3,033 - 3,792 hPa (20 °C)

Vapor density: No data available.

Density: No data available.

Relative density: No data available.

Solubility(ies)

Solubility in water: No data available.

Solubility (other): No data available.

Partition coefficient (n-octanol/water): No data available.

Auto-ignition temperature: No data available.

Decomposition temperature: No data available.

Viscosity: No data available.

10. Stability and reactivity

Reactivity:	No data available.
Chemical Stability:	Material is stable under normal conditions.
Possibility of hazardous reactions:	No data available.
Conditions to avoid:	Avoid heat or contamination.
Incompatible Materials:	No data available.
Hazardous Decomposition Products:	No data available.

11. Toxicological information

Information on likely routes of exposure

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Symptoms related to the physical, chemical and toxicological characteristics

Inhalation:	No data available.
Skin Contact:	No data available.
Eye contact:	No data available.
Ingestion:	No data available.

Information on toxicological effects

Acute toxicity (list all possible routes of exposure)

Oral Product:	ATEmix: 104,712.04 mg/kg
Dermal Product:	ATEmix: 349,040.14 mg/kg
Inhalation Product:	ATEmix: 3,776.81 mg/l ATEmix : 346.08 mg/l

Repeated dose toxicity Product:	No data available.
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Specified substance(s): Tetrachloroethylene	LOAEL (Rat(Female, Male), Inhalation, 103 Weeks): 200 ppm(m) Inhalation Experimental result, Key study LOAEL (Mouse(Female), Oral, 78 - 90 Weeks): 390 mg/kg Oral Experimental result, Key study
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Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO	NOAEL (Rat(Female, Male), Inhalation): > 980 mg/m ³ Inhalation Experimental result, Key study LOAEL (Mouse(Male), Dermal, 24 Months): 100 mg/kg Dermal Experimental result, Key study NOAEL (Rat(Female, Male), Dermal, 13 Weeks): >= 2,000 mg/kg Dermal Experimental result, Key study
Propane, 2-methyl-	NOAEL (Rat(Female, Male), Inhalation, >= 42 d): 16,000 ppm(m) Inhalation Experimental result, Key study NOAEL (Rat(Female, Male), Inhalation): 21,394 mg/m ³ Inhalation Experimental result, Key study
Propane	NOAEL (Rat(Female, Male), Inhalation, >= 28 d): 4,000 ppm(m) Inhalation Experimental result, Key study LOAEL (Rat(Female, Male), Inhalation, >= 28 d): 12,000 ppm(m) Inhalation Experimental result, Key study
Naphtha (petroleum), hydrotreated light	LOAEL (Rat(Female, Male), Oral, 13 Weeks): 1,250 mg/kg Oral Read-across based on grouping of substances (category approach), Key study NOAEL (Rat(Female, Male), Dermal, 28 d): > 375 mg/kg Dermal Experimental result, Supporting study NOAEL (Rat(Female, Male), Inhalation): 10,000 mg/m ³ Inhalation Experimental result, Key study
Hexane	NOAEL (Mouse(Male), Inhalation, 13 Weeks): 500 ppm(m) Inhalation Experimental result, Key study LOAEL (Mouse(Male), Inhalation, 13 Weeks): 1,000 ppm(m) Inhalation Experimental result, Key study LOAEL (Rat(Male), Inhalation, 16 Weeks): 3,000 ppm(m) Inhalation Experimental result, Key study LOAEL (Mouse(Female), Inhalation, 13 Weeks): 500 ppm(m) Inhalation Experimental result, Key study NOAEL (Rat(Male), Oral, 29 d): 24,000 mg/kg Oral Experimental result, Key study NOAEL (Rat(Female, Male), Inhalation): 50 mg/m ³ Inhalation Experimental result, Key study
Titanium oxide (TiO ₂)	NOAEL (Rat(Male), Inhalation): 12,470 mg/m ³ Inhalation Experimental result, Key study LOAEL (Mouse(Female, Male), Inhalation): 64 mg/m ³ Inhalation Experimental result, Key study
Heptane	
Methane, tetrachloro-	

Skin Corrosion/Irritation Product:

Specified substance(s):

Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO

No data available.

in vivo (Rabbit): Not irritant Experimental result, Key study

Titanium oxide (TiO₂)

in vivo (Rabbit): Not irritant Experimental result, Key study

Heptane

in vivo (Rabbit): Irritating Read-across based on grouping of substances (category approach), Key study

Serious Eye Damage/Eye Irritation Product:

No data available.

Specified substance(s):

Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO

Rabbit, 48 hrs: Not irritating

Naphtha (petroleum), hydrotreated light

Rabbit, 24 - 72 hrs: Not irritating

Hexane

Rabbit, 1 - 72 hrs: Not irritating

Titanium oxide (TiO₂)

Rabbit, 24 - 72 hrs: Not irritating

Heptane

Rabbit, 24 - 72 hrs: Not irritating

Respiratory or Skin Sensitization

Product: No data available.

Specified substance(s):

Tetrachloroethylene	Not sensitising
Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Naphtha (petroleum), hydrotreated light	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Titanium oxide (TiO2)	Skin sensitization:, in vivo/in vitro (Guinea pig): Non sensitising
Heptane	Skin sensitization:, in vivo (Guinea pig): Non sensitising

Carcinogenicity

Product: No data available.

Specified substance(s):

Tetrachloroethylene	Suspect cancer hazard - may cause cancer.
Methane, tetrachloro-	Suspect cancer hazard - may cause cancer.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

Methane, tetrachloro- Overall evaluation: 2B. Possibly carcinogenic to humans.

US. National Toxicology Program (NTP) Report on Carcinogens:

No carcinogenic components identified

ACGIH Carcinogen List:

Methane, tetrachloro- Group A2: Suspected human carcinogen.

Germ Cell Mutagenicity

In vitro

Product: No data available.

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available.

Specified substance(s):

Hexane Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specified substance(s):

Hexane Inhalation - vapor: Narcotic effect. - Category 3 with narcotic effects.
Heptane Narcotic effect. - Category 3 with narcotic effects.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Specified substance(s):

Hexane Inhalation - vapor: Nervous System - Category 2
Methane, tetrachloro- Inhalation - vapor: Liver, Kidney - Category 1

Aspiration Hazard

Product: No data available.

Specified substance(s):

Naphtha (petroleum), hydrotreated light May be fatal if swallowed and enters airways.

Hexane May be fatal if swallowed and enters airways.

Heptane May be fatal if swallowed and enters airways.

Other effects: No data available.

12. Ecological information

Ecotoxicity:

Acute hazards to the aquatic environment:

Fish Product:	No data available.
Specified substance(s):	
Tetrachloroethylene	LC 50 (Oncorhynchus mykiss, 96 h): 5 mg/l Experimental result, Key study
Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO	LL 50 (Pimephales promelas, 96 h): > 100 mg/l Experimental result, Key study
Propane	LC 50 (Various, 96 h): 147.54 mg/l QSAR QSAR, Key study
Naphtha (petroleum), hydrotreated light	LC 50 (96 h): 8.41 mg/l Experimental result, Key study
Hexane	LC 50 (Fathead minnow (Pimephales promelas), 96 h): 2.101 - 2.981 mg/l Mortality
Titanium oxide (TiO2)	LC 50 (Oncorhynchus mykiss, 96 h): > 100 mg/l Experimental result, Weight of Evidence study
Heptane	LC 50 (Mozambique tilapia (Tilapia mossambica), 96 h): 375 mg/l Mortality
Aquatic Invertebrates	
Product:	No data available.
Specified substance(s):	
Tetrachloroethylene	LC 50 (Daphnia magna, 48 h): 9 - 18 mg/l Experimental result, Key study
Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO	EC 50 (Daphnia magna, 48 h): > 10,000 mg/l Experimental result, Key study
Naphtha (petroleum), hydrotreated light	EC 50 (Daphnia magna, 48 h): 4.5 mg/l Experimental result, Key study
Hexane	EC 50 (Daphnia magna, 48 h): 21.85 mg/l QSAR QSAR, Key study LC 50 (Water flea (Daphnia magna), 24 h): > 50 mg/l Mortality
Titanium oxide (TiO2)	LC 50 (Daphnia magna, 48 h): > 100 mg/l Experimental result, Weight of Evidence study
Heptane	EC 50 (Daphnia magna, 48 h): 1.5 mg/l Experimental result, Key study
Methane, tetrachloro-	LC 50 (Water flea (Daphnia magna), 24 h): > 770 mg/l Mortality

Chronic hazards to the aquatic environment:

Fish Product:	No data available.
Specified substance(s):	
Tetrachloroethylene	NOAEL (Jordanella floridae): 1.99 mg/l Experimental result, Key study

Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO NOAEL (Oncorhynchus mykiss): >= 1,000 mg/l QSAR QSAR, Supporting study

Naphtha (petroleum), hydrotreated light EC 50 (Daphnia magna): 10 mg/l Other, Key study
NOAEL (Daphnia magna): 2.6 mg/l Other, Key study

Hexane NOAEL (Oncorhynchus mykiss): 2.8 mg/l QSAR QSAR, Key study

Heptane NOAEL (Oncorhynchus mykiss): 1.284 mg/l QSAR QSAR, Key study

Methane, tetrachloro- LC 50 (Pimephales promelas): 16.25 mg/l Experimental result, Supporting study

Aquatic Invertebrates Product:

Specified substance(s):
Tetrachloroethylene

NOAEL (Daphnia magna): 510 µg/l Experimental result, Key study

Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO NOAEL (Daphnia magna): >= 1,000 mg/l Experimental result, Supporting study

Naphtha (petroleum), hydrotreated light EC 50 (Daphnia magna): 10 mg/l Experimental result, Key study
NOAEL (Daphnia magna): 2.6 mg/l Experimental result, Key study

Hexane NOAEL (Daphnia magna): 4.888 mg/l QSAR QSAR, Key study

Titanium oxide (TiO₂) NOAEL (Daphnia magna): 100 mg/l Experimental result, Supporting study

Heptane NOAEL (Daphnia magna): 0.17 mg/l Read-across based on grouping of substances (category approach), Key study
EC 50 (Daphnia magna): 0.23 mg/l Read-across based on grouping of substances (category approach), Key study

Methane, tetrachloro- LOAEL (Daphnia magna): 5.6 mg/l Experimental result, Key study

Toxicity to Aquatic Plants Product:

Persistence and Degradability

Biodegradation Product:

No data available.

Specified substance(s):
Tetrachloroethylene

11 % (28 d) Detected in water. Experimental result, Supporting study

Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO 2 - 8 % (28 d) Detected in water. Experimental result, Supporting study
31 % (28 d) Detected in water. Experimental result, Supporting study

Propane, 2-methyl- 100 % Detected in water. QSAR, Weight of Evidence study

Propane 100 % (385.5 h) Detected in water. Experimental result, Key study
50 % (3.19 d) Detected in water. QSAR, Weight of Evidence study

Naphtha (petroleum), hydrotreated light 90.35 % (28 d) Detected in water. Experimental result, Supporting study

Hexane 81 % Detected in water. Read-across based on grouping of substances (category approach), Key study

Heptane 70 % Detected in water. Experimental result, Key study
Methane, tetrachloro- 100 % Detected in water. Experimental result, Weight of Evidence study

BOD/COD Ratio
Product: No data available.

Bioaccumulative potential
Bioconcentration Factor (BCF)
Product: No data available.

Specified substance(s):

Tetrachloroethylene Lepomis macrochirus, Bioconcentration Factor (BCF): 49 Aquatic sediment Experimental result, Key study
Naphtha (petroleum), hydrotreated light Bioconcentration Factor (BCF): 10 - 2,500 Aquatic sediment Estimated by calculation, Key study
Hexane Pimephales promelas, Bioconcentration Factor (BCF): 501.19 Aquatic sediment QSAR, Key study
Titanium oxide (TiO2) Oncorhynchus mykiss, Bioconcentration Factor (BCF): 34 - 352 Aquatic sediment Experimental result, Key study
Heptane Bioconcentration Factor (BCF): 552 Aquatic sediment Estimated by calculation, Key study
Methane, tetrachloro- Bluegill (Lepomis macrochirus), Bioconcentration Factor (BCF): 30 (Flow through)

Partition Coefficient n-octanol / water (log Kow)

Product: No data available.

Specified substance(s):

Naphtha (petroleum), hydrotreated light Log Kow: > 2.4 - < 5.7 23 °C Yes Experimental result, Key study
Log Kow: 2.2 - 5.2 23 °C Yes Experimental result, Key study
Log Kow: 2.2 - 6.1 23 °C Yes Experimental result, Key study

Mobility in soil: No data available.

Known or predicted distribution to environmental compartments

Tetrachloroethylene No data available.
Distillates (petroleum), hydrotreated heavy paraffinic No data available.
<3% DMSO No data available.
Propane, 2-methyl- No data available.
Propane No data available.
Naphtha (petroleum), hydrotreated light No data available.
Hexane No data available.
Titanium oxide (TiO2) No data available.
Heptane No data available.
Methane, tetrachloro- No data available.

Other adverse effects: Toxic to aquatic organisms.

13. Disposal considerations

Disposal instructions: Discharge, treatment, or disposal may be subject to national, state, or local laws.

Contaminated Packaging: No data available.

14. Transport information

TDG

UN Number:	UN 1950
UN Proper Shipping Name:	Aerosols, Flammable, 6.1
Transport Hazard Class(es)	
Class:	2.1
Label(s):	—
EmS No.:	
Packing Group:	—
Environmental Hazards:	Yes
Marine Pollutant	No
Special precautions for user:	Not regulated.

IMDG

UN Number:	UN 1950
UN Proper Shipping Name:	Aerosols, Flammable, 6.1
Transport Hazard Class(es)	
Class:	2
Label(s):	—
EmS No.:	F-D, S-U
Packing Group:	—
Environmental Hazards:	Yes
Marine Pollutant	No
Special precautions for user:	Not regulated.

IATA

UN Number:	UN 1950
Proper Shipping Name:	Aerosols, Flammable, 6.1
Transport Hazard Class(es):	
Class:	2.1
Label(s):	—
Packing Group:	—
Environmental Hazards:	Yes
Marine Pollutant	No
Special precautions for user:	Not regulated.
Cargo aircraft only:	Forbidden.

15. Regulatory information

Canada Federal Regulations List of Toxic Substances (CEPA, Schedule 1)

Chemical Identity

Tetrachloroethylene
Hexane
Titanium oxide (TiO₂)
Methane, tetrachloro-

Export Control List (CEPA 1999, Schedule 3)

Chemical Identity

Hexane
Methane, tetrachloro-

National Pollutant Release Inventory (NPRI)

Canada. National Pollutant Release Inventory (NPRI) Substances, Part 5, VOCs with Additional Reporting Requirements

NPRI PT5	Propane, 2-methyl- Propane Naphtha (petroleum), hydrotreated light Hexane Heptane
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Canada. National Pollutant Release Inventory (NPRI) (Schedule 1, Parts 1-4)

NPRI	Tetrachloroethylene Hexane Titanium oxide (TiO2)
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Greenhouse Gases

Chemical Identity

Hexane

Controlled Drugs and Substances Act

CA CDSI	Hexane
CA CDSII	Hexane
CA CDSIII	Hexane
CA CDSIV	Hexane
CA CDSV	Hexane
CA CDSVII	Hexane
CA CDSVIII	Hexane

Precursor Control Regulations

Chemical Identity

Hexane

International regulations

Montreal protocol

Hexane
Methane, tetrachloro- Ozone Depletion Potential: Group II Annex B

Stockholm convention

Hexane

Rotterdam convention

Hexane

Kyoto protocol

Inventory Status:

Australia AICS:	On or in compliance with the inventory
Canada DSL Inventory List:	On or in compliance with the inventory
Canada NDSL Inventory:	Not in compliance with the inventory.
Ontario Inventory:	On or in compliance with the inventory
China Inv. Existing Chemical Substances:	On or in compliance with the inventory
Japan (ENCS) List:	Not in compliance with the inventory.
Japan ISHL Listing:	Not in compliance with the inventory.
Japan Pharmacopoeia Listing:	Not in compliance with the inventory.
Korea Existing Chemicals Inv. (KECI):	On or in compliance with the inventory
Mexico INSQ:	On or in compliance with the inventory
New Zealand Inventory of Chemicals:	On or in compliance with the inventory
Philippines PICCS:	On or in compliance with the inventory
Taiwan Chemical Substance Inventory:	On or in compliance with the inventory
US TSCA Inventory:	On or in compliance with the inventory
EINECS, ELINCS or NLP:	Not in compliance with the inventory.

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

Issue Date: 12/23/2019

Revision Date: No data available.

Version #: 1.0

Further Information: No data available.

Disclaimer: This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment.