

SAFETY DATA SHEET

1. Identification

Product identifier: Penray Penetrating Gel Lubricant with PTFE #4716

Other means of identification

SDS number: RE1000040592

Recommended restrictions

Product Use: Lubricant

Restrictions on use: Not known.

Manufacturer/Importer/Distributor Information

Manufacturer

Company Name: The Penray Companies, Inc.
Address: 440 Denniston Ct.
Wheeling, IL 60090
Telephone: (800) 373-6729
Fax:

Emergency telephone number: 1-800-424-9300

2. Hazard(s) identification

Hazard Classification

Physical Hazards

Flammable aerosol Category 1

Health Hazards

Serious Eye Damage/Eye Irritation Category 2A

Specific Target Organ Toxicity -
Single Exposure Category 3¹.

Specific Target Organ Toxicity -
Repeated Exposure Category 2

Aspiration Hazard Category 1

Target Organs

1. Narcotic effect.

Environmental Hazards

Acute hazards to the aquatic
environment Category 3

Label Elements

Hazard Symbol:



Signal Word: Danger

Hazard Statement: Extremely flammable aerosol.
Causes serious eye irritation.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure.
May be fatal if swallowed and enters airways.
Harmful to aquatic life.

Precautionary Statements

Prevention: 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. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid release to the environment.

Response: 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 eye irritation persists: Get medical advice/attention. IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell.

Storage: Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. Store in a well-ventilated place. Keep container tightly closed. Store locked up.

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.

Hazard(s) not otherwise classified (HNOC): None.

3. Composition/information on ingredients
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Mixtures

Chemical Identity	CAS number	Content in percent (%)*
2-Propanone	67-64-1	20 - <50%
Petrolatum	8009-03-8	10 - <20%
Distillates (petroleum), hydrotreated light	64742-47-8	10 - <20%
Acetic acid, methyl ester	79-20-9	10 - <20%
Naphtha (petroleum), hydrotreated light	64742-49-0	5 - <10%
Carbon dioxide	124-38-9	1 - <5%
Heptane	142-82-5	1 - <5%
Cyclohexane, methyl-	108-87-2	0.1 - <1%
Methanol	67-56-1	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:	Call a physician or poison control center immediately. Rinse mouth. 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:	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical 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.
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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.
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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. Dike far ahead of larger spill for later recovery and disposal.

Notification Procedures: Dike for later disposal. 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: Avoid contact with eyes. Wash hands thoroughly after handling. 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 2

8. Exposure controls/personal protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
2-Propanone	STEL	1,000 ppm 2,400 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	PEL	1,000 ppm 2,400 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	250 ppm	US. ACGIH Threshold Limit Values (03 2015)
	TWA	750 ppm 1,800 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	500 ppm	US. ACGIH Threshold Limit Values (03 2015)
	REL	250 ppm 590 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Petrolatum - Inhalable	TWA	5 mg/m3	US. ACGIH Threshold Limit Values (01 2010)

fraction.			
Petrolatum - Mist.	REL	5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	STEL	10 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Distillates (petroleum), hydrotreated light	REL	100 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Distillates (petroleum), hydrotreated light - Non-aerosol. - as total hydrocarbon vapor	TWA	200 mg/m3	US. ACGIH Threshold Limit Values (2008)
	TWA	200 mg/m3	US. ACGIH Threshold Limit Values (2008)
Acetic acid, methyl ester	REL	200 ppm 610 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	STEL	250 ppm 760 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	200 ppm 610 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	STEL	250 ppm	US. ACGIH Threshold Limit Values (2008)
	TWA	200 ppm 610 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	250 ppm 760 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	200 ppm	US. ACGIH Threshold Limit Values (2008)
Naphtha (petroleum), hydrotreated light	PEL	100 ppm 400 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (03 2016)
	REL	100 ppm 400 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	TWA	100 ppm 400 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Carbon dioxide	TWA	5,000 ppm	US. ACGIH Threshold Limit Values (2008)
	STEL	30,000 ppm	US. ACGIH Threshold Limit Values (2008)
	STEL	30,000 ppm 54,000 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	REL	5,000 ppm 9,000 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	5,000 ppm 9,000 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	10,000 ppm 18,000 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	30,000 ppm 54,000 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Heptane	TWA	400 ppm 1,600 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	REL	85 ppm 350 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	500 ppm 2,000 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	STEL	500 ppm 2,000 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	400 ppm	US. ACGIH Threshold Limit Values (02 2012)
	STEL	500 ppm	US. ACGIH Threshold Limit Values (02 2012)
	Ceil_Time	440 ppm 1,800 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Cyclohexane, methyl-	PEL	500 ppm 2,000 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	400 ppm 1,600 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	400 ppm	US. ACGIH Threshold Limit Values (2008)
	REL	400 ppm 1,600 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Methanol	REL	200 ppm 260 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	200 ppm 260 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)

	TWA	200 ppm	260 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	250 ppm	325 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	200 ppm		US. ACGIH Threshold Limit Values (2008)
	STEL	250 ppm		US. ACGIH Threshold Limit Values (2008)
	STEL	250 ppm	325 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Benzene, methyl-	STEL	150 ppm	560 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	REL	100 ppm	375 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	100 ppm	375 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	Ceiling	300 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)
	TWA	20 ppm		US. ACGIH Threshold Limit Values (2008)
	TWA	200 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)
	MAX. CONC	500 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)
	STEL	150 ppm	560 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Hexane	TWA	50 ppm	180 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	PEL	500 ppm	1,800 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	REL	50 ppm	180 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	50 ppm		US. ACGIH Threshold Limit Values (2008)
Cyclohexane	TWA	100 ppm		US. ACGIH Threshold Limit Values (2008)
	TWA	300 ppm	1,050 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	REL	300 ppm	1,050 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	300 ppm	1,050 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Benzene, ethyl-	STEL	125 ppm	545 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	REL	100 ppm	435 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	100 ppm	435 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	STEL	125 ppm	545 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	100 ppm	435 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	20 ppm		US. ACGIH Threshold Limit Values (12 2010)
Benzene	REL	0.1 ppm		US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	1 ppm		US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	Ceiling	25 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)
	TWA	0.5 ppm		US. ACGIH Threshold Limit Values (2008)
	STEL	2.5 ppm		US. ACGIH Threshold Limit Values (2008)
	STEL	5 ppm		US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (02 2006)
	OSHA_ACT	0.5 ppm		US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (02 2006)
	TWA	10 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)
	MAX. CONC	50 ppm		US. OSHA Table Z-2 (29 CFR 1910.1000) (02 2006)
	STEL	5 ppm		US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	1 ppm		US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053) (02 2006)

	STEL	1 ppm	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
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Biological Limit Values

Chemical Identity	Exposure Limit Values	Source
2-Propanone (acetone: Sampling time: End of shift.)	25 mg/l (Urine)	ACGIH BEL (03 2015)
Methanol (methanol: Sampling time: End of shift.)	15 mg/l (Urine)	ACGIH BEL (03 2013)
Benzene, methyl- (toluene: Sampling time: End of shift.)	0.03 mg/l (Urine)	ACGIH BEL (03 2013)
Benzene, methyl- (o-Cresol, with hydrolysis: Sampling time: End of shift.)	0.3 mg/g (Creatinine in urine)	ACGIH BEL (03 2013)
Benzene, methyl- (toluene: Sampling time: Prior to last shift of work week.)	0.02 mg/l (Blood)	ACGIH BEL (03 2013)
Hexane (2,5-Hexanedion, without hydrolysis: Sampling time: End of shift.)	0.5 mg/l (Urine)	ACGIH BEL (03 2018)
Benzene, ethyl- (Sum of mandelic acid and phenylglyoxylic acid: Sampling time: End of shift.)	0.15 g/g (Creatinine in urine)	ACGIH BEL (02 2014)
Benzene (S- Phenylmercapturic acid: Sampling time: End of shift.)	25 µg/g (Creatinine in urine)	ACGIH BEL (03 2013)
Benzene (t,t-Muconic acid: Sampling time: End of shift.)	500 µg/g (Creatinine in urine)	ACGIH BEL (03 2013)

Appropriate Engineering Controls

No data available.

Individual protection measures, such as personal protective equipment

General information:

Provide easy access to water supply and eye wash facilities. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local 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. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Eye/face protection:

Wear safety glasses with side shields (or goggles).

Skin Protection

Hand Protection:

No data available.

Other:

Wear suitable protective clothing.

Respiratory Protection:

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

Hygiene measures:

Observe good industrial hygiene practices. Avoid contact with eyes. When using do not smoke.

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:	No data available.
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:	No data available.
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: Not classified for acute toxicity based on available data.

Specified substance(s):

2-Propanone	LD 50 (Rat): 5,800 mg/kg
Petrolatum	LD 50 (Rat): > 5,000 mg/kg LD 50 (Rat): > 5,000 mg/kg LD 50 (Rat): > 5,000 mg/kg LD 50 (Rat): > 5,000 mg/kg
Distillates (petroleum), hydrotreated light	LD 50 (Rat): > 5,000 mg/kg
Acetic acid, methyl ester	LD 50 (Rat): 6,482 mg/kg
Naphtha (petroleum), hydrotreated light	LD 50 (Rat): > 5,000 mg/kg
Heptane	LD 50 (Rat): > 5,000 mg/kg
Cyclohexane, methyl-	LD Lo (Rabbit): 4,000 - 4,500 mg/kg
Methanol	ATE: 100 mg/kg LD 50 (Rat): > 1,187 - 2,769 mg/kg

Dermal

Product: ATEmix: 361,663.65 mg/kg

Inhalation

Product: ATEmix: 280.29 mg/l

Repeated dose toxicity

Product: No data available.

Specified substance(s):

2-Propanone	NOAEL (Rat(Male), Oral, 13 Weeks): 10,000 ppm(m) Oral Experimental result, Key study
Petrolatum	LOAEL (Rat(Male), Oral, 13 Weeks): 125 mg/kg Oral Read-across from supporting substance (structural analogue or surrogate), Key study NOAEL (Rat(Female, Male), Oral, 2 yr): 5,000 mg/kg Oral Experimental result, Key study NOAEL (Rat(Female, Male), Oral, 2 yr): > 5,700 mg/kg Oral Read-across from supporting substance (structural analogue or surrogate), Supporting study NOAEL (Rat(Female, Male), Oral, 90 d): 1.5 mg/kg Oral Read-across from supporting substance (structural analogue or surrogate), Key study NOAEL (Rat(Female, Male), Oral, 90 d): 1,500 mg/kg Oral Read-across from supporting substance (structural analogue or surrogate), Key study
Distillates (petroleum), hydrotreated light	NOAEL (Rat(Female, Male), Inhalation): >= 24 mg/m3 Inhalation Experimental result, Key study NOAEL (Rat(Female), Oral, 70 - 147 d): 750 mg/kg Oral Experimental result, Key study
Acetic acid, methyl ester	NOAEL (Rat(Female, Male), Inhalation, 28 d): 350 ppm(m) Inhalation Experimental result, Key study LOAEL (Rat(Female, Male), Inhalation, 28 d): 2,000 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/m3 Inhalation Experimental result, Key study
Heptane	NOAEL (Rat(Male), Inhalation): 12,470 mg/m3 Inhalation Experimental result, Key study
Cyclohexane, methyl-	LOAEL (Rat(Female, Male), Oral, 28 d): 1,000 mg/kg Oral Experimental result, Key study NOAEL (Rat(Female, Male), Oral, 28 d): 250 mg/kg Oral Experimental result, Key study NOAEL (Rat(Female, Male), Inhalation): 1,600 mg/m3 Inhalation Experimental result, Key study
Methanol	LOAEL (Rat(Male), Inhalation, 1 - 6 Weeks): 13.3 mg/l Inhalation Experimental result, Supporting study

Skin Corrosion/Irritation

Product: No data available.

Specified substance(s):

2-Propanone	in vivo (Rabbit): Not irritant Experimental result, Supporting study
Petrolatum	in vivo (Rabbit): Not irritant Read-across from supporting substance (structural analogue or surrogate), Key study in vivo (Rabbit): Not irritant Read-across from supporting substance (structural analogue or surrogate), Key study
Distillates (petroleum), hydrotreated light	in vivo (Rabbit): Not irritant Experimental result, Key study
Acetic acid, methyl ester	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
Methanol	in vivo (Rabbit): Not irritant Experimental result, Key study

Serious Eye Damage/Eye Irritation

Product: No data available.

Specified substance(s):

2-Propanone	Irritating. Rabbit, 24 hrs: Minimum grade of severe eye irritant
Petrolatum	Rabbit, 24 - 72 hrs: Not irritating Rabbit, 24 - 72 hrs: Not irritating Rabbit, 24 - 72 hrs: Not irritating
Distillates (petroleum), hydrotreated light	Rabbit, 24 - 72 hrs: Not irritating
Acetic acid, methyl ester	Rabbit: Irritating
Naphtha (petroleum), hydrotreated light	Rabbit, 24 - 72 hrs: Not irritating
Heptane	Rabbit, 24 - 72 hrs: Not irritating
Cyclohexane, methyl-	Rabbit, 0.5 - 168 hrs: Not irritating

Respiratory or Skin Sensitization

Product: No data available.

Specified substance(s):

2-Propanone	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Petrolatum	Skin sensitization:, in vivo (Guinea pig): Non sensitising
	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Distillates (petroleum), hydrotreated light	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Naphtha (petroleum), hydrotreated light	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Heptane	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Cyclohexane, methyl-	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Methanol	Skin sensitization:, in vivo (Guinea pig): Non sensitising

Carcinogenicity

Product: No data available.

Specified substance(s):

Cyclohexane, methyl- May cause cancer.

IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:

No carcinogenic components identified

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

No carcinogenic components identified

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050):

No carcinogenic components identified

Germ Cell Mutagenicity

In vitro

Product: No data available.

In vivo

Product: No data available.

Reproductive toxicity

Product: No data available.

Specific Target Organ Toxicity - Single Exposure

Product: No data available.

Specified substance(s):

2-Propanone	Inhalation - vapor: Narcotic effect. - Category 3 with narcotic effects.
Heptane	Narcotic effect. - Category 3 with narcotic effects.
Cyclohexane, methyl-	Inhalation - vapor: Narcotic effect. - Category 3 with narcotic effects.
Methanol	Causes damage to organs.

Specific Target Organ Toxicity - Repeated Exposure

Product: No data available.

Specified substance(s):

Cyclohexane, methyl- Category 1

Target Organs

Specific Target Organ Toxicity - Single Exposure: Narcotic effect.

Aspiration Hazard

Product:	No data available.
Specified substance(s):	
Distillates (petroleum), hydrotreated light	May be fatal if swallowed and enters airways.
Naphtha (petroleum), hydrotreated light	May be fatal if swallowed and enters airways.
Heptane	May be fatal if swallowed and enters airways.
Cyclohexane, methyl-	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):	
2-Propanone	LC 50 (Oncorhynchus mykiss, 96 h): 5,540 mg/l Experimental result, Key study
Petrolatum	LL 50 (Pimephales promelas, 96 h): > 100 mg/l Read-across from supporting substance (structural analogue or surrogate), Key study NOAEL (Pimephales promelas, 96 h): >= 100 mg/l Read-across from supporting substance (structural analogue or surrogate), Key study LL 50 (Oncorhynchus mykiss, 96 h): > 1,000 mg/l QSAR QSAR, Supporting study
Acetic acid, methyl ester	LC 50 (Fathead minnow (Pimephales promelas), 96 h): 295 - 348 mg/l Mortality LC 50 (Danio rerio, 48 h): 250 - 350 mg/l Experimental result, Key study
Naphtha (petroleum), hydrotreated light	LC 50 (96 h): 8.41 mg/l Experimental result, Key study
Heptane	LC 50 (Mozambique tilapia (Tilapia mossambica), 96 h): 375 mg/l Mortality
Cyclohexane, methyl-	LC 50 (Oryzias latipes, 96 h): 2.07 mg/l Experimental result, Key study
Methanol	EC 50 (Lepomis macrochirus, 96 h): 12,700 mg/l Experimental result, Key study

Aquatic Invertebrates

Product:	No data available.
Specified substance(s):	
2-Propanone	LC 50 (Daphnia pulex, 48 h): 8,800 mg/l Experimental result, Key study
Petrolatum	NOAEL (Daphnia magna, 48 h): >= 10,000 mg/l Read-across from supporting substance (structural analogue or surrogate), Key study LL 50 (Gammarus pulex, 96 h): > 10,000 mg/l Read-across from supporting

	substance (structural analogue or surrogate), Key study EC 50 (Daphnia magna, 48 h): > 10,000 mg/l Read-across from supporting substance (structural analogue or surrogate), Key study LL 50 (Daphnia magna, 48 h): > 1,000 mg/l QSAR QSAR, Supporting study LL 50 (Gammarus pulex, 24 h): > 10,000 mg/l Read-across from supporting substance (structural analogue or surrogate), Key study
Acetic acid, methyl ester	EC 50 (Daphnia magna, 48 h): 1,026.7 mg/l Experimental result, Key study
Naphtha (petroleum), hydrotreated light	EC 50 (Daphnia magna, 48 h): 4.5 mg/l Experimental result, Key study
Heptane	EC 50 (Daphnia magna, 48 h): 1.5 mg/l Experimental result, Key study
Cyclohexane, methyl-	EC 50 (Daphnia magna, 48 h): 0.326 mg/l Experimental result, Key study ED 0 (Daphnia magna, 48 h): 0.037 mg/l Experimental result, Key study
Methanol	EC 50 (Daphnia magna, 96 h): 18,260 mg/l Experimental result, Key study

Chronic hazards to the aquatic environment:

Fish

Product:	No data available.
Specified substance(s):	
Petrolatum	NOAEL (Oncorhynchus mykiss): >= 1,000 mg/l QSAR QSAR, Supporting study LL 50 (Oncorhynchus mykiss): > 1,000 mg/l QSAR QSAR, Supporting study
Distillates (petroleum), hydrotreated light	NOAEL (Oncorhynchus mykiss): 0.098 mg/l QSAR QSAR, Key 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
Heptane	NOAEL (Oncorhynchus mykiss): 1.284 mg/l QSAR QSAR, Key study
Methanol	EC 50 (Oryzias latipes): 9,164 mg/l Experimental result, Supporting study

Aquatic Invertebrates

Product:	No data available.
Specified substance(s):	
2-Propanone	LOAEL (Daphnia magna): 2,212 mg/l Experimental result, Key study NOAEL (Daphnia magna): 2,212 mg/l Experimental result, Key study
Petrolatum	NOAEL (Daphnia magna): 10 mg/l Read-across from supporting substance (structural analogue or surrogate), Key study NOAEL (Daphnia magna): >= 1,000 mg/l QSAR QSAR, 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
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

Methanol NOAEL (Daphnia magna): 122 mg/l Experimental result, Supporting study

**Toxicity to Aquatic Plants
Product:**

No data available.

Persistence and Degradability

**Biodegradation
Product:**

No data available.

Specified substance(s):

2-Propanone	90.9 % (28 d) Detected in water. Experimental result, Key study
Petrolatum	31 % (28 d) Detected in water. Read-across from supporting substance (structural analogue or surrogate), Supporting study
Distillates (petroleum), hydrotreated light	61 % Detected in water. Experimental result, Supporting study
Acetic acid, methyl ester	70 % Detected in water. Experimental result, Key study
Naphtha (petroleum), hydrotreated light	90.35 % (28 d) Detected in water. Experimental result, Supporting study
Heptane	70 % Detected in water. Experimental result, Key study
Cyclohexane, methyl-	> 0 % (28 d) Detected in water. Experimental result, Weight of Evidence study > 0 % (28 d) Detected in water. Experimental result, Weight of Evidence study
Methanol	97 % Detected in water. Experimental result, Key study

**BOD/COD Ratio
Product:**

No data available.

Bioaccumulative potential

Bioconcentration Factor (BCF)

Product:	No data available.
Specified substance(s):	
2-Propanone	Haddock, adult, Bioconcentration Factor (BCF): 0.69 Aquatic sediment Experimental result, Not specified
Naphtha (petroleum), hydrotreated light	Bioconcentration Factor (BCF): 10 - 2,500 Aquatic sediment Estimated by calculation, Key study
Heptane	Bioconcentration Factor (BCF): 552 Aquatic sediment Estimated by calculation, Key study
Cyclohexane, methyl-	Cyprinus carpio, Bioconcentration Factor (BCF): > 95 - < 321 Aquatic sediment Experimental result, Key study
Methanol	Leuciscus idus, Bioconcentration Factor (BCF): < 10 Aquatic sediment Experimental result, Supporting study

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

2-Propanone No data available.
Petrolatum No data available.
Distillates (petroleum),
hydrotreated light No data available.
Acetic acid, methyl ester No data available.
Naphtha (petroleum),
hydrotreated light No data available.
Carbon dioxide No data available.
Heptane No data available.
Cyclohexane, methyl- No data available.
Methanol No data available.

Other adverse effects: Harmful 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**DOT**

UN Number: UN 1950
UN Proper Shipping Name: Aerosols, flammable
Transport Hazard Class(es)
Class: 2.1
Label(s): —
Packing Group: II
Marine Pollutant: No

Environmental Hazards: No
Marine Pollutant No

Special precautions for user: Not regulated.

IMDG

UN Number: UN 1950
UN Proper Shipping Name: Aerosols, flammable
Transport Hazard Class(es)
Class: 2
Label(s): –
EmS No.: –
Packing Group: –
Environmental Hazards: No
Marine Pollutant: No

Special precautions for user: Not regulated.

IATA

UN Number: UN 1950
Proper Shipping Name: Aerosols, flammable
Transport Hazard Class(es):
Class: 2.1
Label(s): –
Packing Group: –
Environmental Hazards: No
Marine Pollutant: No

Special precautions for user: Not regulated.

15. Regulatory information

US Federal Regulations

Restrictions on use: Not known.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

<u>Chemical Identity</u>	<u>OSHA hazard(s)</u>
Benzene	Flammability Cancer Aspiration Eye Blood Skin respiratory tract irritation Central nervous system

CERCLA Hazardous Substance List (40 CFR 302.4):

<u>Chemical Identity</u>	<u>Reportable quantity</u>
2-Propanone	lbs. 5000
Acetic acid, methyl ester	lbs. 100
Heptane	lbs. 100
Cyclohexane, methyl-	lbs. 100
Methanol	lbs. 5000
Benzene, methyl-	lbs. 1000
Hexane	lbs. 5000
Cyclohexane	lbs. 1000
Benzene, ethyl-	lbs. 1000
Benzene	lbs. 10

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Fire Hazard
Immediate (Acute) Health Hazards
Delayed (Chronic) Health Hazard
Flammable aerosol
Serious Eye Damage/Eye Irritation
Specific Target Organ Toxicity - Single Exposure
Specific Target Organ Toxicity - Repeated Exposure
Aspiration Hazard

SARA 302 Extremely Hazardous Substance

<u>Chemical Identity</u>	<u>Reportable quantity</u>	<u>Threshold Planning Quantity</u>
2-Propanone		
Distillates (petroleum), hydrotreated light		
Acetic acid, methyl ester		
Hexane		

SARA 304 Emergency Release Notification

<u>Chemical Identity</u>	<u>Reportable quantity</u>
2-Propanone	lbs. 5000
Distillates (petroleum), hydrotreated light	
Acetic acid, methyl ester	lbs. 100
Heptane	lbs. 100
Cyclohexane, methyl-	lbs. 100
Methanol	lbs. 5000
Benzene, methyl-	lbs. 1000
Hexane	lbs. 5000
Cyclohexane	lbs. 1000
Benzene, ethyl-	lbs. 1000
Benzene	lbs. 10

SARA 311/312 Hazardous Chemical

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
2-Propanone	10000 lbs
Petrolatum	10000 lbs
Distillates (petroleum), hydrotreated light	10000 lbs
Acetic acid, methyl ester	10000 lbs
Naphtha (petroleum), hydrotreated light	10000 lbs
Carbon dioxide	10000 lbs
Heptane	10000 lbs
Cyclohexane, methyl-	10000 lbs
Methanol	10000 lbs
Benzene, methyl-	10000 lbs
Hexane	10000 lbs
Cyclohexane	10000 lbs
Benzene, ethyl-	10000 lbs
Benzene	10000 lbs

SARA 313 (TRI Reporting)

None present or none present in regulated quantities.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130):

Clean Water Act Section 311 Hazardous Substances (40 CFR 117.3)

US State Regulations

US. California Proposition 65

This product contains chemical(s) known to the State of California to cause cancer and/or to cause birth defects or other reproductive harm.

Methanol	Developmental toxin. 03 2012
Benzene, methyl-	Developmental toxin. 03 2008
Hexane	Male reproductive toxin. 12 2017
Benzene, ethyl-	Carcinogenic. 05 2011
Benzene	Developmental toxin. 03 2008
Benzene	Carcinogenic. 05 2011
Benzene	Male reproductive toxin. 03 2008

US. New Jersey Worker and Community Right-to-Know Act

Chemical Identity

2-Propanone
Petrolatum
Distillates (petroleum), hydrotreated light
Acetic acid, methyl ester
Naphtha (petroleum), hydrotreated light
Carbon dioxide
Heptane

US. Massachusetts RTK - Substance List

No ingredient regulated by MA Right-to-Know Law present.

US. Pennsylvania RTK - Hazardous Substances

Chemical Identity

2-Propanone
Petrolatum
Distillates (petroleum), hydrotreated light
Acetic acid, methyl ester
Naphtha (petroleum), hydrotreated light
Carbon dioxide
Heptane

US. Rhode Island RTK

No ingredient regulated by RI Right-to-Know Law present.

International regulations

Montreal protocol

2-Propanone
Distillates (petroleum),
hydrotreated light
Acetic acid, methyl ester

Stockholm convention

2-Propanone	--
Distillates (petroleum), hydrotreated light	--
Acetic acid, methyl ester	--

Rotterdam convention

2-Propanone	--
Distillates (petroleum), hydrotreated light	--
Acetic acid, methyl ester	--

Kyoto protocol

Inventory Status:

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

16. Other information, including date of preparation or last revision
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Issue Date:	10/23/2019
Revision Information:	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.