



# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** M1 MOLY CHAIN & CABLE LUBRICANT

**Other means of identification**

**SDS number:** RE1000009233

**Recommended restrictions**

**Product use:** Lubricant

**Restrictions on use:** Not known.

**Manufacturer/Importer/Distributor Information**

**Manufacturer**

**Company Name:** Sprayway, Inc.  
**Address:** 1000 INTEGRAM DR.  
Pacific, MO 63069  
**Telephone:** 1-630-628-3000  
**Fax:**

**Emergency telephone number:** 1-866-836-8855

## 2. Hazard(s) identification

**Hazard Classification**

**Physical Hazards**

Flammable aerosol Category 1

**Health Hazards**

Serious Eye Damage/Eye Irritation Category 2A

Carcinogenicity Category 2

Specific Target Organ Toxicity - Repeated Exposure Category 1<sup>1</sup>

**Target Organs**

1. Nervous System

**Label Elements**

**Hazard Symbol:**



**Signal Word:** Danger

**Hazard Statement:** Extremely flammable aerosol.  
Causes serious eye irritation.  
Suspected of causing cancer.  
Causes damage to organs through prolonged or repeated exposure.



### 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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product.
- Response:** 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 exposed or concerned: Get medical advice/attention.
- Storage:** Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F. 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

#### Mixtures

Chemical Identity	CAS number	Content in percent (%)*
Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO	64742-54-7	50 - <100%
Propane	74-98-6	10 - <20%
Stoddard solvent	8052-41-3	5 - <10%
Solvent naphtha (petroleum), medium aliph.	64742-88-7	1 - <5%
Amides, coco, N,N-bis(hydroxyethyl)	68603-42-9	1 - <3%
Ethanol, 2,2'-iminobis-	111-42-2	0.1 - <1%
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	0.1 - <1%
Molybdenum sulfide (MoS <sub>2</sub> )	1317-33-5	0.1 - <1%
Sulfonic acids, petroleum, calcium salts	61789-86-4	0.1 - <1%
Graphite	7782-42-5	0.1 - <1%
Distillates (petroleum), solvent-refined heavy paraffinic	64741-88-4	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 POISON CENTER/doctor if you feel unwell. Rinse mouth.
- 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.

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



## 7. Handling and storage

<b>Precautions for safe handling:</b>	Do not handle until all safety precautions have been read and understood. Obtain special instructions before use. Use personal protective equipment as required. 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.
<b>Conditions for safe storage, including any incompatibilities:</b>	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 3

## 8. Exposure controls/personal protection

### Control Parameters

#### Occupational Exposure Limits

Chemical Identity	Type	Exposure Limit Values	Source
Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO - Inhalable fraction.	TWA	5 mg/m3	US. ACGIH Threshold Limit Values (03 2014)
Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO - Mist.	TWA	5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	STEL	10 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2016)
	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (01 2017)
	REL	5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2016)
Propane	REL	1,000 ppm 1,800 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	1,000 ppm 1,800 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	1,000 ppm 1,800 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Stoddard solvent	TWA	100 ppm 525 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	100 ppm	US. ACGIH Threshold Limit Values (2008)
	REL	350 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	Ceil_Time	1,800 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	PEL	500 ppm 2,900 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Ethanol, 2,2'-iminobis-	REL	3 ppm 15 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	3 ppm 15 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Ethanol, 2,2'-iminobis- - Inhalable fraction and vapor.	TWA	1 mg/m3	US. ACGIH Threshold Limit Values (2009)
Benzene, 1,2,4-trimethyl-	TWA	25 ppm 125 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	REL	25 ppm 125 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	25 ppm	US. ACGIH Threshold Limit Values (2008)
Distillates (petroleum), hydrotreated heavy naphthenic	TWA	400 ppm 1,600 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	PEL	500 ppm 2,000 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Distillates (petroleum), hydrotreated heavy naphthenic - 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 heavy naphthenic	Ceil_Time	1,800 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)



Distillates (petroleum), hydrotreated heavy naphthenic - Inhalable fraction.	TWA	5 mg/m3	US. ACGIH Threshold Limit Values (03 2014)
Distillates (petroleum), hydrotreated heavy naphthenic Nonane	REL	350 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	TWA	200 ppm 1,050 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	REL	200 ppm 1,050 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	200 ppm	US. ACGIH Threshold Limit Values (02 2012)
Molybdenum sulfide (MoS2) - Respirable fraction. - as Mo	TWA	3 mg/m3	US. ACGIH Threshold Limit Values (2009)
Molybdenum sulfide (MoS2) - Inhalable fraction. - as Mo	TWA	10 mg/m3	US. ACGIH Threshold Limit Values (2009)
Molybdenum sulfide (MoS2) - Total dust. - as Mo	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	10 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Graphite - Total dust.	PEL	15 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Graphite - Respirable.	REL	2.5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
Graphite - Respirable fraction.	TWA	2 mg/m3	US. ACGIH Threshold Limit Values (2008)
Graphite	TWA	15 millions of particles per cubic foot of air	US. OSHA Table Z-3 (29 CFR 1910.1000) (2000)
Graphite - Respirable dust.	TWA	2.5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Graphite - Respirable fraction.	PEL	5 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Distillates (petroleum), solvent-refined heavy paraffinic	TWA	400 ppm 1,600 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Distillates (petroleum), solvent-refined heavy paraffinic - Mist.	REL	5 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	TWA	5 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
Distillates (petroleum), solvent-refined heavy paraffinic	PEL	500 ppm 2,000 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
Distillates (petroleum), solvent-refined heavy paraffinic - Inhalable fraction.	TWA	5 mg/m3	US. ACGIH Threshold Limit Values (01 2010)
Distillates (petroleum), solvent-refined heavy paraffinic - Mist.	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)
Distillates (petroleum), solvent-refined heavy paraffinic	REL	350 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
	Ceil_Time	1,800 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2010)
Naphthalene	PEL	10 ppm 50 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) (02 2006)
	TWA	10 ppm 50 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
	TWA	10 ppm	US. ACGIH Threshold Limit Values (2008)
	STEL	15 ppm 75 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	REL	10 ppm 50 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2005)
	STEL	15 ppm 75 mg/m3	US. OSHA Table Z-1-A (29 CFR 1910.1000) (1989)
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, dimethyl-	STEL	150 ppm 655 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	100 ppm	US. ACGIH Threshold Limit Values (2008)
	REL	100 ppm 435 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2016)
	PEL	100 ppm 435 mg/m3	US. OSHA Table Z-1 Limits for Air Contaminants



			(29 CFR 1910.1000) (02 2006)
	STEL	150 ppm	US. ACGIH Threshold Limit Values (2008)
	STEL	150 ppm 655 mg/m3	US. NIOSH: Pocket Guide to Chemical Hazards (2016)

**Biological Limit Values**

Chemical Identity	Exposure Limit Values	Source
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, dimethyl- (Methylhippuric acids: Sampling time: End of shift.)	1.5 g/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.

**Eye/face protection:** Wear safety glasses with side shields (or goggles).

**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. 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:** 152.62 °C

**Flash Point:** -104.4 °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.



<b>Explosive limit - upper (%):</b>	No data available.
<b>Explosive limit - lower (%):</b>	No data available.
<b>Vapor pressure:</b>	Estimated 5,516 - 6,205 hPa
<b>Vapor density:</b>	No data available.
<b>Density:</b>	No data available.
<b>Relative density:</b>	No data available.
<b>Solubility(ies)</b>	
<b>Solubility in water:</b>	No data available.
<b>Solubility (other):</b>	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition temperature:</b>	No data available.
<b>Decomposition temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.

## 10. Stability and reactivity

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

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation:</b>	No data available.
<b>Skin Contact:</b>	No data available.
<b>Eye contact:</b>	No data available.
<b>Ingestion:</b>	No data available.

### Symptoms related to the physical, chemical and toxicological characteristics

<b>Inhalation:</b>	No data available.
<b>Skin Contact:</b>	No data available.
<b>Eye contact:</b>	No data available.
<b>Ingestion:</b>	No data available.

### Information on toxicological effects

#### Acute toxicity (list all possible routes of exposure)

<b>Oral Product:</b>	Not classified for acute toxicity based on available data.
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**Specified substance(s):**

Distillates (petroleum),  
hydrotreated heavy  
paraffinic <3% DMSO LD 50 (Rat): > 5,000 mg/kg

Solvent naphtha  
(petroleum), medium  
aliph. LD 50 (Rat): > 5,000 mg/kg

Amides, coco, N,N-  
bis(hydroxyethyl) LD 50: > 2,000 mg/kg

Ethanol, 2,2'-iminobis- LD 50 (Rat): 1,100 mg/kg

Distillates (petroleum),  
hydrotreated heavy  
naphthenic LD 50 (Rat): > 5,000 mg/kg

Molybdenum sulfide  
(MoS<sub>2</sub>) LD 50: > 5,000 mg/kg

Sulfonic acids,  
petroleum, calcium salts LD 50 (Rat): > 16,000 mg/kg

Graphite LD 50 (Rat): > 2,000 mg/kg

Distillates (petroleum),  
solvent-refined heavy  
paraffinic LD 50 (Rat): > 5,000 mg/kg

**Dermal**

**Product:** Not classified for acute toxicity based on available data.

**Specified substance(s):**

Distillates (petroleum),  
hydrotreated heavy  
paraffinic <3% DMSO LD 50 (Rabbit): > 5,000 mg/kg

Solvent naphtha  
(petroleum), medium  
aliph. LD 50 (Rabbit): > 2,000 mg/kg

Amides, coco, N,N-  
bis(hydroxyethyl) LD 50: > 2,000 mg/kg

Ethanol, 2,2'-iminobis- LD 50: > 2,000 mg/kg

Distillates (petroleum),  
hydrotreated heavy  
naphthenic LD 50 (Rabbit): > 2,000 mg/kg

Molybdenum sulfide  
(MoS<sub>2</sub>) LD 50: > 5,000 mg/kg

Sulfonic acids,  
petroleum, calcium salts LD 50 (Rabbit): > 4,000 mg/kg

Graphite LD 0 (Rat): >= 2,000 mg/kg  
Distillates (petroleum),  
solvent-refined heavy  
paraffinic LD 50 (Rabbit): > 5,000 mg/kg





### Inhalation

**Product:** Not classified for acute toxicity based on available data.

#### Specified substance(s):

Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO	LC 50: > 100 mg/l LC 50: > 100 mg/l
Propane	LC 50: > 100 mg/l LC 50: > 100 mg/l
Solvent naphtha (petroleum), medium aliph.	LC 50: > 100 mg/l LC 50: > 100 mg/l
Amides, coco, N,N-bis(hydroxyethyl)	LC 50: > 100 mg/l LC 50: > 100 mg/l
Ethanol, 2,2'-iminobis-	LC 0 (Rat): 3.35 mg/l LC 50: > 5 mg/l LC 50: > 20 mg/l
Distillates (petroleum), hydrotreated heavy naphthenic	LC 50 (Rat): > 5.53 mg/l LC 50: > 100 mg/l LC 50: > 100 mg/l
Molybdenum sulfide (MoS <sub>2</sub> )	LC 50: > 100 mg/l LC 50: > 100 mg/l
Sulfonic acids, petroleum, calcium salts	LC 50 (Rat): > 1.9 mg/l LC 50: > 100 mg/l LC 50: > 100 mg/l
Graphite	LC 50: > 100 mg/l LC 50: > 100 mg/l
Distillates (petroleum), solvent-refined heavy paraffinic	LC 50: > 100 mg/l LC 50: > 100 mg/l LC 50 (Rat): > 5.53 mg/l

### Repeated dose toxicity

**Product:** No data available.

#### Specified substance(s):

Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO	NOAEL (Rat(Female, Male), Inhalation): > 980 mg/m <sup>3</sup> 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	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
Solvent naphtha (petroleum), medium aliph.	LOAEL (Rat(Female), Oral, 70 - 147 d): 750 mg/kg (Rat(Female), Oral, 70 - 147 d): 750 mg/kg Oral Experimental result, Key study LOAEL (Rat(Female, Male), Inhalation - vapor): 0.024 mg/l (Target Organ(s): Nervous System) Inhalation Experimental result, Key study LOAEL (Rabbit(Female, Male), Dermal): 200 mg/kg (Rabbit(Female, Male), Dermal): 200 mg/kg Dermal Experimental result, Supporting study



Ethanol, 2,2'-iminobis-	LOAEL (Rat(Female), Oral, 13 Weeks): 14 mg/kg Oral Experimental result, Key study LOAEL (Rat(Female, Male), Dermal, 13 Weeks): 32 mg/kg Dermal Experimental result, Key study NOAEL (Rat(Female, Male), Inhalation): 3 mg/m3 Inhalation Experimental result, Key study
Distillates (petroleum), hydrotreated heavy naphthenic	NOAEL (Rat(Female, Male), Inhalation): > 980 mg/m3 Inhalation Experimental result, Key study NOAEL (Rat(Female, Male), Dermal, 13 Weeks): >= 2,000 mg/kg Dermal Experimental result, Key study
Sulfonic acids, petroleum, calcium salts	NOAEL (Rat, Oral, 28 d): 1,000 mg/kg Oral Experimental result, Supporting study NOAEL (Rat, Dermal, 28 d): > 1,000 mg/kg Dermal Experimental result, Key study
Graphite	NOAEL (Rat(Female, Male), Inhalation): 12 mg/m3 Inhalation Experimental result, Key study NOAEL (Rat(Female), Oral): 930 mg/kg Oral Experimental result, Key study
Distillates (petroleum), solvent-refined heavy paraffinic	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), Dermal, 13 Weeks): >= 2,000 mg/kg Dermal Experimental result, Key study NOAEL (Rat(Female, Male), Inhalation): 220 mg/m3 Inhalation Experimental result, Key study

#### Skin Corrosion/Irritation

**Product:** No data available.

**Specified substance(s):**

Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO in vivo (Rabbit): Not irritant Experimental result, Key study

Distillates (petroleum), hydrotreated heavy naphthenic in vivo (Rabbit): Not irritant Experimental result, Key study

Sulfonic acids, petroleum, calcium salts in vivo (Rabbit): Not irritant Experimental result, Key study

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

Distillates (petroleum), solvent-refined heavy paraffinic in vivo (Rabbit): Not irritant Experimental result, 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

Solvent naphtha (petroleum), medium aliph. Rabbit, 24 - 72 hrs: Not irritating



Distillates (petroleum), hydrotreated heavy naphthenic	Rabbit, 48 hrs: Not irritating
Sulfonic acids, petroleum, calcium salts	Rabbit, 24 - 72 hrs: Not irritating
Graphite	Rabbit, 24 - 72 hrs: Not irritating
Distillates (petroleum), solvent-refined heavy paraffinic	Rabbit, 48 hrs: Not irritating

**Respiratory or Skin Sensitization**

**Product:** No data available.

**Specified substance(s):**

Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Solvent naphtha (petroleum), medium aliph.	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Amides, coco, N,N-bis(hydroxyethyl)	Not sensitising
Ethanol, 2,2'-iminobis-	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Distillates (petroleum), hydrotreated heavy naphthenic	Skin sensitization:, in vivo (Guinea pig): Non sensitising
Sulfonic acids, petroleum, calcium salts	Skin sensitization:, in vivo (Guinea Pig): Sensitising
Graphite	Not sensitising
Distillates (petroleum), solvent-refined heavy paraffinic	Skin sensitization:, in vivo (Guinea pig): Non sensitising

**Carcinogenicity**

**Product:** No data available.

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**

Amides, coco, N,N-bis(hydroxyethyl)	Overall evaluation: 2B. Possibly carcinogenic to humans.
Ethanol, 2,2'-iminobis-	Overall evaluation: 2B. Possibly carcinogenic to humans.

**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.

**Specific Target Organ Toxicity - Repeated Exposure**

**Product:** No data available.

**Specified substance(s):**

Stoddard solvent                      Nervous System - Category 1  
Ethanol, 2,2'-iminobis-              Category 2

**Target Organs**

Specific Target Organ Toxicity - Repeated Exposure: Nervous System

**Aspiration Hazard**

**Product:** No data available.

**Specified substance(s):**

Stoddard solvent                      May be fatal if swallowed and enters airways.  
Solvent naphtha                      May be fatal if swallowed and enters airways.  
(petroleum), medium  
aliph.

**Other effects:** No data available.

**12. Ecological information**

**Ecotoxicity:**

**Acute hazards to the aquatic environment:**

**Fish**

**Product:** No data available.

**Specified substance(s):**

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

Solvent naphtha  
(petroleum), medium  
aliph.                                      LL 50 (Oncorhynchus mykiss, 96 h): 2 - 5 mg/l Experimental result, Key  
study

Ethanol, 2,2'-iminobis-              LC 50 (Pimephales promelas, 96 h): 1,370 mg/l Experimental result, Key  
study

Distillates (petroleum),  
hydrotreated heavy  
naphthenic                              LL 50 (Pimephales promelas, 96 h): > 100 mg/l Experimental result, Key  
study

Sulfonic acids,  
petroleum, calcium salts              LL 0 (Cyprinodon variegatus, 96 h): 10,000 mg/l Experimental result, Key  
study

Graphite                                  LC 50 (Danio rerio, 96 h): > 100 mg/l Experimental result, Key study

Distillates (petroleum),  
solvent-refined heavy  
paraffinic                                  LL 50 (Pimephales promelas, 96 h): > 100 mg/l Experimental result, Key  
study



**Aquatic Invertebrates**

**Product:**

No data available.

**Specified substance(s):**

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

EC 50 (Daphnia magna, 48 h): > 10,000 mg/l Experimental result, Key study

Solvent naphtha  
(petroleum), medium  
aliph.

EC 50 (Daphnia magna, 48 h): 1.4 mg/l Experimental result, Key study

Ethanol, 2,2'-iminobis-

EC 50 (Daphnia magna, 48 h): 55 mg/l Experimental result, Supporting  
study  
EC 50 (Ceriodaphnia dubia, 48 h): 30.1 mg/l Experimental result, Key study

Distillates (petroleum),  
hydrotreated heavy  
naphthenic

EC 50 (Daphnia magna, 48 h): > 10,000 mg/l Experimental result, Key study  
NOAEL (Daphnia magna, 48 h): >= 10,000 mg/l Experimental result, Key  
study

Sulfonic acids,  
petroleum, calcium salts

EC 50 (Daphnia magna, 48 h): > 1,000 mg/l Experimental result, Key study

Graphite

NOAEL (Daphnia magna, 48 h): >= 100 mg/l Experimental result, Key study  
EC 50 (Daphnia magna, 48 h): > 100 mg/l Experimental result, Key study

Distillates (petroleum),  
solvent-refined heavy  
paraffinic

EC 50 (Daphnia magna, 48 h): > 10,000 mg/l Experimental result, Key study

**Chronic hazards to the aquatic environment:**

**Fish**

**Product:**

No data available.

**Specified substance(s):**

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

NOAEL (Oncorhynchus mykiss): >= 1,000 mg/l QSAR QSAR, Supporting  
study

Solvent naphtha  
(petroleum), medium  
aliph.

NOAEL (Oncorhynchus mykiss): 0.098 mg/l QSAR QSAR, Key study

Ethanol, 2,2'-iminobis-

NOAEL (Various): > 1 mg/l Estimated by calculation, Supporting study

Distillates (petroleum),  
hydrotreated heavy  
naphthenic

NOAEL (Oncorhynchus mykiss): >= 1,000 mg/l QSAR QSAR, Supporting  
study

Graphite

NOAEL (Danio rerio): 120 - 360 mg/l Experimental result, Not specified  
LOAEL (Danio rerio): >= 120 mg/l Experimental result, Not specified

Distillates (petroleum),  
solvent-refined heavy  
paraffinic

NOAEL (Oncorhynchus mykiss): >= 1,000 mg/l QSAR QSAR, Supporting  
study

**Aquatic Invertebrates**

**Product:**

No data available.



**Specified substance(s):**

Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO	NOAEL (Daphnia magna): >= 1,000 mg/l Experimental result, Supporting study
Solvent naphtha (petroleum), medium aliph.	NOAEL (Daphnia magna): 0.48 mg/l Experimental result, Key study
Ethanol, 2,2'-iminobis-	NOAEL (Daphnia magna): 0.78 mg/l Experimental result, Key study
Distillates (petroleum), hydrotreated heavy naphthenic	NOAEL (Daphnia magna): 10 mg/l Experimental result, Key study
Graphite	NOAEL (Daphnia magna): 47 mg/l Experimental result, Key study
Distillates (petroleum), solvent-refined heavy paraffinic	NOAEL (Daphnia magna): 10 mg/l Experimental result, Key study

**Toxicity to Aquatic Plants**

**Product:** No data available.

**Persistence and Degradability**

**Biodegradation**

**Product:** No data available.

**Specified substance(s):**

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	100 % (385.5 h) Detected in water. Experimental result, Key study 50 % (3.19 d) Detected in water. QSAR, Weight of Evidence study
Solvent naphtha (petroleum), medium aliph.	61 % Detected in water. Experimental result, Supporting study
Ethanol, 2,2'-iminobis-	93 % (28 d) Detected in water. Experimental result, Key study
Distillates (petroleum), hydrotreated heavy naphthenic	31 % (28 d) Detected in water. Read-across based on grouping of substances (category approach), Supporting study
Sulfonic acids, petroleum, calcium salts	2 - 4 % (28 d) Detected in water. Experimental result, Supporting study 8 % (28 d) Detected in water. Read-across based on grouping of substances (category approach), Key study 8.6 % (28 d) Detected in water. Experimental result, Supporting study
Graphite	6 % (28 d) Detected in water. Experimental result, Supporting study 26 % (5 h) Sediment Experimental result, Not specified
Distillates (petroleum), solvent-refined heavy paraffinic	2 - 4 % (28 d) Detected in water. Experimental result, Supporting study 31 % (28 d) Detected in water. Read-across based on grouping of substances (category approach), Supporting study

**BOD/COD Ratio**

**Product:** No data available.



**Bioaccumulative potential**

**Bioconcentration Factor (BCF)**

**Product:** No data available.

**Specified substance(s):**

Ethanol, 2,2'-iminobis- Bioconcentration Factor (BCF): 9.2 Aquatic sediment Estimated by calculation, Weight of Evidence study

Graphite Eisenia fetida, Terrestrial Experimental result, Weight of Evidence study

**Partition Coefficient n-octanol / water (log Kow)**

**Product:** No data available.

**Mobility in soil:** No data available.

**Known or predicted distribution to environmental compartments**

Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO	No data available.
Propane	No data available.
Stoddard solvent	No data available.
Solvent naphtha (petroleum), medium aliph.	No data available.
Amides, coco, N,N-bis(hydroxyethyl)	No data available.
Ethanol, 2,2'-iminobis-	No data available.
Distillates (petroleum), hydrotreated heavy naphthenic	No data available.
Molybdenum sulfide (MoS2)	No data available.
Sulfonic acids, petroleum, calcium salts	No data available.
Graphite	No data available.
Distillates (petroleum), solvent-refined heavy paraffinic	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)**  
None present or none present in regulated quantities.

**CERCLA Hazardous Substance List (40 CFR 302.4):**

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Propane	lbs. 100
Ethanol, 2,2'-iminobis-	lbs. 100
Nonane	lbs. 100
Naphthalene	lbs. 100
Benzene, ethyl-	lbs. 1000
Benzene, dimethyl-	lbs. 100

**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
- Carcinogenicity
- Specific Target Organ Toxicity - Repeated Exposure

**SARA 302 Extremely Hazardous Substance**

<u>Chemical Identity</u>	<u>Reportable quantity</u>	<u>Threshold Planning Quantity</u>
Amides, coco, N,N-bis(hydroxyethyl)		





**SARA 304 Emergency Release Notification**

<u>Chemical Identity</u>	<u>Reportable quantity</u>
Propane	lbs. 100
Amides, coco, N,N-bis(hydroxyethyl)	
Ethanol, 2,2'-iminobis-	lbs. 100
Nonane	lbs. 100
Naphthalene	lbs. 100
Benzene, ethyl-	lbs. 1000
Benzene, dimethyl-	lbs. 100

**SARA 311/312 Hazardous Chemical**

<u>Chemical Identity</u>	<u>Threshold Planning Quantity</u>
Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO	10000 lbs
Propane	10000 lbs
Stoddard solvent	10000 lbs
Amides, coco, N,N-bis(hydroxyethyl)	10000 lbs
Ethanol, 2,2'-iminobis-	10000 lbs
Benzene, 1,2,4-trimethyl-	10000 lbs
Distillates (petroleum), hydrotreated heavy naphthenic	10000 lbs
Nonane	10000 lbs
Molybdenum sulfide (MoS <sub>2</sub> )	10000 lbs
Sulfonic acids, petroleum, calcium salts	10000 lbs
Graphite	10000 lbs
Distillates (petroleum), solvent-refined heavy paraffinic	10000 lbs
Naphthalene	10000 lbs
Benzene, ethyl-	10000 lbs
Benzene, dimethyl-	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.

Amides, coco, N,N-bis(hydroxyethyl)	Carcinogenic. 06 2015
Ethanol, 2,2'-iminobis-	Carcinogenic. 07 2012
Fatty acids, coco, compds. with diethanolamine	Carcinogenic. 06 2015
Naphthalene	Carcinogenic. 05 2011
Benzene, ethyl-	Carcinogenic. 05 2011

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

<u>Chemical Identity</u>
Distillates (petroleum), hydrotreated heavy paraffinic <3% DMSO
Propane
Stoddard solvent
Amides, coco, N,N-bis(hydroxyethyl)
Distillates (petroleum), hydrotreated heavy naphthenic
Distillates (petroleum), solvent-refined heavy paraffinic

**US. Massachusetts RTK - Substance List**

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



**US. Pennsylvania RTK - Hazardous Substances**

**Chemical Identity**

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

Propane

Stoddard solvent

**US. Rhode Island RTK**

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

**International regulations**

**Montreal protocol**

Amides, coco, N,N-bis(hydroxyethyl)

**Stockholm convention**

Amides, coco, N,N-bis(hydroxyethyl)

**Rotterdam convention**

Amides, coco, N,N-bis(hydroxyethyl)

**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.
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
China Inv. Existing Chemical Substances:	On or in compliance with the inventory



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

**Issue Date:** 01/31/2020

**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.