20284 POWER STEERING OIL LEAK STOP 35ml

Liqui Moly GmbH

Chemwatch Hazard Alert Code: **2**

Chemwatch: **16-51671**
Version No: **2.1.1.1**
Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

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S.GHS.USA.EN

SECTION 1 IDENTIFICATION

Product Identifier

Product name	20284 POWER STEERING OIL LEAK STOP 35ml
Synonyms	Not Available
Other means of identification	Not Available

Recommended use of the chemical and restrictions on use

Relevant identified uses	Additives.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	**Liqui Moly GmbH**
Address	Jerg-Wieland-Strasse 4 Ulm D-89081 Germany
Telephone	+49 731 1420 0
Fax	+49 731 1420 82
Website	Not Available
Email	Not Available

Emergency phone number

Association / Organisation	**INFOTRAC**
Emergency telephone numbers	+1800 535 5053 (US, Canada & Mexico)
Other emergency telephone numbers	+1 352 323 3500 (International)

SECTION 2 HAZARD(S) IDENTIFICATION

Classification of the substance or mixture

CHEMWATCH HAZARD RATINGS

		Min	Max
Flammability	1		
Toxicity	0		
Body Contact	1		
Reactivity	1		
Chronic	2		

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

NFPA 704 diamond

Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification	Skin Sensitizer Category 1, Chronic Aquatic Hazard Category 3

Label elements

Hazard pictogram(s)	

SIGNAL WORD	**WARNING**

Hazard statement(s)

H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

Hazard(s) not otherwise classified

Continued...

Not Applicable

Precautionary statement(s) Prevention

P280	Wear protective gloves/protective clothing/eye protection/face protection.
P261	Avoid breathing mist/vapours/spray.
P273	Avoid release to the environment.
P272	Contaminated work clothing should not be allowed out of the workplace.

Precautionary statement(s) Response

P363	Wash contaminated clothing before reuse.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

P501	Dispose of contents/container in accordance with local regulations.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
72623-87-1.	20-<40	lubricating oils, petroleum C20-50, hydrotreated neutral
64742-56-9.	10-<20	paraffinic distillate, light, solvent-dewaxed (severe)
Not Available	5-<10	methacrylate copolymer.
398141-87-2	5-<10	3-(C9-11-isoalkyloxy)-tetrahydrothiophene 1,1-dioxide
125643-61-0	1-<10	C7-9 branched alkyl-3,5-di-tert-butyl-4-hydroxyhydrocinnamate
61791-44-4	0.1-<1	tallow alkyl-diethanolamine derivatives
73984-93-7	0.01-<1	5-(tert-dodecyldithio)-1,3,4-thiadiazole-2(3H)-thione
61791-44-4	0.01-<0.25	tallow alkyl-diethanolamine derivatives
218141-16-3	0.01-<0.1	3-isodecyloxypropylamine

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

SECTION 4 FIRST-AID MEASURES

Description of first aid measures

Eye Contact	If this product comes in contact with eyes: ▸ Wash out immediately with water. ▸ If irritation continues, seek medical attention. ▸ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: ▸ Immediately remove all contaminated clothing, including footwear. ▸ Flush skin and hair with running water (and soap if available). ▸ Seek medical attention in event of irritation.
Inhalation	▸ If fumes, aerosols or combustion products are inhaled remove from contaminated area. ▸ Other measures are usually unnecessary.
Ingestion	▸ Immediately give a glass of water. ▸ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

- Heavy and persistent skin contamination over many years may lead to dysplastic changes. Pre-existing skin disorders may be aggravated by exposure to this product.
- In general, emesis induction is unnecessary with high viscosity, low volatility products, i.e. most oils and greases.
- High pressure accidental injection through the skin should be assessed for possible incision, irrigation and/or debridement.

NOTE: Injuries may not seem serious at first, but within a few hours tissue may become swollen, discoloured and extremely painful with extensive subcutaneous necrosis. Product may be forced through considerable distances along tissue planes.

SECTION 5 FIRE-FIGHTING MEASURES

Extinguishing media

Continued...

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

Special hazards arising from the substrate or mixture

Fire Incompatibility	▸ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Special protective equipment and precautions for fire-fighters

Fire Fighting	▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear full body protective clothing with breathing apparatus. ▸ Prevent, by any means available, spillage from entering drains or water course. ▸ Use water delivered as a fine spray to control fire and cool adjacent area.
Fire/Explosion Hazard	▸ Combustible. ▸ Slight fire hazard when exposed to heat or flame. ▸ Heating may cause expansion or decomposition leading to violent rupture of containers. ▸ On combustion, may emit toxic fumes of carbon monoxide (CO). Combustion products include: carbon dioxide (CO_2) sulfur oxides (SOx) other pyrolysis products typical of burning organic material. May emit corrosive fumes. **CARE**: Water in contact with hot liquid may cause foaming and a steam explosion with wide scattering of hot oil and possible severe burns. Foaming may cause overflow of containers and may result in possible fire.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Minor Spills	Slippery when spilt. ▸ Remove all ignition sources. ▸ Clean up all spills immediately. ▸ Avoid breathing vapours and contact with skin and eyes. ▸ Control personal contact with the substance, by using protective equipment.
Major Spills	Slippery when spilt. Moderate hazard. ▸ Clear area of personnel and move upwind. ▸ Alert Fire Brigade and tell them location and nature of hazard. ▸ Wear breathing apparatus plus protective gloves.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling	▸ **DO NOT** allow clothing wet with material to stay in contact with skin ▸ Avoid all personal contact, including inhalation. ▸ Wear protective clothing when risk of exposure occurs. ▸ Use in a well-ventilated area. ▸ Prevent concentration in hollows and sumps.
Other information	▸ Store in original containers. ▸ Keep containers securely sealed. ▸ No smoking, naked lights or ignition sources. ▸ Store in a cool, dry, well-ventilated area.

Conditions for safe storage, including any incompatibilities

Suitable container	▸ Metal can or drum ▸ Packaging as recommended by manufacturer. ▸ Check all containers are clearly labelled and free from leaks.
Storage incompatibility	**CARE**: Water in contact with heated material may cause foaming or a steam explosion with possible severe burns from wide scattering of hot material. Resultant overflow of containers may result in fire. ▸ Avoid reaction with oxidising agents

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes

Continued...

US NIOSH Recommended Exposure Limits (RELs)	lubricating oils, petroleum C20-50, hydrotreated neutral	Heavy mineral oil mist, Paraffin oil mist, White mineral oil mist	5 mg/m3	10 mg/m3	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	lubricating oils, petroleum C20-50, hydrotreated neutral	Mineral oil, excluding metal working fluids - Pure, highly and severely refined	5 mg/m3	Not Available	Not Available	TLV® Basis: URT irr
US OSHA Permissible Exposure Levels (PELs) - Table Z1	lubricating oils, petroleum C20-50, hydrotreated neutral	Oil mist, mineral	5 mg/m3	Not Available	Not Available	Not Available
US NIOSH Recommended Exposure Limits (RELs)	paraffinic distillate, light, solvent-dewaxed (severe)	Heavy mineral oil mist, Paraffin oil mist, White mineral oil mist	5 mg/m3	10 mg/m3	Not Available	Not Available
US ACGIH Threshold Limit Values (TLV)	paraffinic distillate, light, solvent-dewaxed (severe)	Mineral oil, excluding metal working fluids - Pure, highly and severely refined	5 mg/m3	Not Available	Not Available	TLV® Basis: URT irr
US OSHA Permissible Exposure Levels (PELs) - Table Z1	paraffinic distillate, light, solvent-dewaxed (severe)	Oil mist, mineral	5 mg/m3	Not Available	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
20284 POWER STEERING OIL LEAK STOP 35ml	Not Available	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
lubricating oils, petroleum C20-50, hydrotreated neutral	2,500 mg/m3	Not Available
paraffinic distillate, light, solvent-dewaxed (severe)	2,500 mg/m3	Not Available
3-(C9-11-isoalkyloxy)-tetrahydrothiophene 1,1-dioxide	Not Available	Not Available
C7-9 branched alkyl-3,5-di-tert-butyl-4-hydroxyhydrocinnamate	Not Available	Not Available
tallow alkyl-diethanolamine derivatives	Not Available	Not Available
5-(tert-dodecyldithio)-1,3,4-thiadiazole-2(3H)-thione	Not Available	Not Available
tallow alkyl-diethanolamine derivatives	Not Available	Not Available
3-isodecyloxypropylamine	Not Available	Not Available

Exposure controls

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.
Personal protection	
Eye and face protection	▸ Safety glasses with side shields. ▸ Chemical goggles. ▸ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.
Skin protection	See Hand protection below
Hands/feet protection	▸ Wear chemical protective gloves, e.g. PVC. ▸ Wear safety footwear or safety gumboots, e.g. Rubber **NOTE:** ▸ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. ▸ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application. The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and.has to be observed when making a final choice. Personal hygiene is a key element of effective hand care.
Body protection	See Other protection below
Other protection	▸ Overalls. ▸ P.V.C. apron. ▸ Barrier cream.

Respiratory protection

Type AK-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.
Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Continued...

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	AK-AUS P2	-	AK-PAPR-AUS / Class 1 P2
up to 50 x ES	-	AK-AUS / Class 1 P2	-
up to 100 x ES	-	AK-2 P2	AK-PAPR-2 P2 ^

^ - Full-face
A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

- Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content.
- The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.
- Cartridge performance is affected by humidity. Cartridges should be changed after 2 hr of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hr. Used cartridges should be discarded daily, regardless of the length of time used

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Brown colour liquid with characteristic odour; not miscible with water.

Physical state	Liquid	**Relative density (Water = 1)**	0.888
Odour	Not Available	**Partition coefficient n-octanol / water**	Not Available
Odour threshold	Not Available	**Auto-ignition temperature (°C)**	Not Available
pH (as supplied)	Not Applicable	**Decomposition temperature**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	166, 26 @ 100C
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Applicable
Flash point (°C)	>100	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Applicable	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Immiscible	**pH as a solution (1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	▸ Unstable in the presence of incompatible materials. ▸ Product is considered stable. ▸ Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	Inhalation hazard is increased at higher temperatures. Inhalation of oil droplets or aerosols may cause discomfort and may produce chemical inflammation of the lungs.
Ingestion	Ingestion may result in nausea, abdominal irritation, pain and vomiting
Skin Contact	There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons. Open cuts, abraded or irritated skin should not be exposed to this material The material may accentuate any pre-existing dermatitis condition Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
Eye	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
Chronic	Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population. Oil may contact the skin or be inhaled. Extended exposure can lead to eczema, inflammation of hair follicles, pigmentation of the face and warts on the soles of the feet.

20284 POWER STEERING OIL	TOXICITY	IRRITATION

Continued...

LEAK STOP 35ml	Not Available	Not Available
lubricating oils, petroleum C20-50, hydrotreated neutral	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: >2000 mg/kg[2]	Not Available
	Inhalation (rat) LC50: >5.3 mg/l4 h[1]	
	Oral (rat) LD50: >5000 mg/kg[2]	
paraffinic distillate, light, solvent-dewaxed (severe)	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: >2000 mg/kg[2]	Not Available
	Inhalation (rat) LC50: >5.3 mg/l4 h[1]	
	Oral (rat) LD50: >5000 mg/kg[2]	
3-(C9-11-isoalkyloxy)-tetrahydrothiophene 1,1-dioxide	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
C7-9 branched alkyl-3,5-di-tert-butyl-4-hydroxyhydrocinnamate	**TOXICITY**	**IRRITATION**
	dermal (rat) LD50: >2000 mg/kg[1]	Eye (rabbit: non-irritating *
	Oral (rat) LD50: >200 mg/kg[2]	Skin (rat): non-irritating *
tallow alkyl-diethanolamine derivatives	**TOXICITY**	**IRRITATION**
	Oral (rat) LD50: 1200 mg/kg[1]	Not Available
5-(tert-dodecyldithio)-1,3,4-thiadiazole-2(3H)-thione	**TOXICITY**	**IRRITATION**
	Dermal (rabbit) LD50: >2000 mg/kg[2]	Eye: mild *
	Oral (rat) LD50: 6480 mg/kg[2]	Skin: Primary Irritation Score *
tallow alkyl-diethanolamine derivatives	**TOXICITY**	**IRRITATION**
	Oral (rat) LD50: 1200 mg/kg[1]	Not Available
3-isodecyloxypropylamine	**TOXICITY**	**IRRITATION**
	Oral (rat) LD50: 1240 mg/kg[1]	Not Available

Legend:	*1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*

PARAFFINIC DISTILLATE, LIGHT, SOLVENT-DEWAXED (SEVERE)	The substance is classified by IARC as Group 3: **NOT** classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.
3-(C9-11-ISOALKYLOXY)-TETRAHYDROTHIOPHENE 1,1-DIOXIDE	For sulfolane and sulfolene: The considerable existing mammalian toxicity information for sulfolene and sulfolane demonstrates that these substances share a similar order of toxicity, regardless of the additional double bond in sulfolene. These two substances are expected to demonstrate similar mammalian toxicity. Metabolism studies in rats show that sulfolane is metabolized via ring hydroxylation into 3-hydroxytetrahydrothiophene-1:1-dioxide. Mammalian toxicity data demonstrates a low order. Mean 24 -72 hours scores were determined to be 1.5 and 0 erythema, respectively, in both intact and abraded skin. In accordance with EU CLP Regulation (EC) No. 1272/2008, classification is not required for skin irritation. No corneal opacity, iritis, conjunctival irritation was observed in any animal at any observation period. In accordance with EU CLP Regulation (EC) No. 1272/2008, classification of this substance is not required for eye irritation. Negative for the induction of structural and numerical chromosome aberrations in the in vitro mammalian chromosome aberration test using human peripheral blood lymphocytes in both the non-activated and the S9-activated test systems. Based on the results of a study, a dosage level of 600 mg/kg/day (the highest dosage level tested) appeared to be the no-observed-adverse-effect level (NOAEL) for reproductive toxicity of thiophene when administered orally by gavage to Crl:CD(SD) rats. Under the conditions of this study, the NOAEL for male systemic toxicity was considered to be 175 mg/kg/day based on increased organ weights and microscopic findings in the 600 mg/kg/day group but lack of microscopic findings in the 175 mg/kg/day group. The NOAEL for female systemic toxicity was considered to be 175 mg/kg/day based on increased liver weight in the 600 mg/kg/day group. Based on the lack of effects on live litter size, postnatal survival and F1 body weights at any dosage level, the NOAEL for F1 neonatal toxicity was considered to be at least 600 mg/kg/day. * REACh Dossier
C7-9 BRANCHED ALKYL-3,5-DI-TERT-BUTYL-4-HYDROXYHYDROCINNAMATE	Data show that acute toxicity following oral and topical use of hindered phenols is low. They are not proven to cause mutations. However, long term use may affect the liver, thyroid, kidney and lymph nodes. Liver tumours have been reported. Non-sensirising to guinea pig skin * Everspring Chemical MSDS
5-(TERT-DODECYLDITHIO)-1,3,4-THIADIAZOLE-2(3H)-THIONE	The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. 2,5-Dimercapto-1,3,4-thiadiazole (DMcT) may cause eye irritation, chemical conjunctivitis, skin irritation, respiratory tract irritation, and gastrointestinal irritation, including nausea, vomiting, and diarrhea. During acute inhalation exposure, it can produce irritation to mucous membranes and the upper respiratory tract, and upon short-term exposure, it can cause skin irritation and severe eye irritation. DMcT was one of 43 compounds tested in 16 men as an antidote to the skin vesicant lewisite, an arsenic compound. It was not an effective decontaminant of lewisite, producing 14 erythemas compared to 7 induced by 2,3-dimercaptopropanol. for similar substituted thiadiazole: (Vanlube 829)

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3-ISODECYLOXYPROPYLAMINE	FND ether amines and FND amines are very similar in structure (length of chain or degree of saturation), function and toxicity. Acute exposure to FND ether amines by oral, dermal and inhalation may produce moderate to slight toxicity but repeated skin contact can be highly irritating. However, exposure did not produce any organ-specific toxicity, genetic, reproductive or developmental defect same as in FND amines. The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
LUBRICATING OILS, PETROLEUM C20-50, HYDROTREATED NEUTRAL & PARAFFINIC DISTILLATE, LIGHT, SOLVENT-DEWAXED (SEVERE)	The materials included in the Lubricating Base Oils category are related from both process and physical-chemical perspectives; The potential toxicity of a specific distillate base oil is inversely related to the severity or extent of processing the oil has undergone, since: • The adverse effects of these materials are associated with undesirable components, and • The levels of the undesirable components are inversely related to the degree of processing; • Distillate base oils receiving the same degree or extent of processing will have similar toxicities; • The potential toxicity of residual base oils is independent of the degree of processing the oil receives. • The reproductive and developmental toxicity of the distillate base oils is inversely related to the degree of processing. Unrefined & mildly refined distillate base oils contain the highest levels of undesirable components, have the largest variation of hydrocarbon molecules and have shown the highest potential cancer-causing and mutation-causing activities. Highly and severely refined distillate base oils are produced from unrefined and mildly refined oils by removing or transforming undesirable components. For highly and severely refined distillate base oils: In animal studies, the acute, oral, semilethal dose is >5g/kg body weight and the semilethal dose by skin contact is >2g/kg body weight. The semilethal concentration for inhalation is 2.18 to >4 mg/L. The materials have varied from “non-irritating” to “moderately irritating” when tested for skin and eye irritation. Testing for sensitisation has been negative.
PARAFFINIC DISTILLATE, LIGHT, SOLVENT-DEWAXED (SEVERE) & TALLOW ALKYL-DIETHANOLAMINE DERIVATIVES & 3-ISODECYLOXYPROPYLAMINE	No significant acute toxicological data identified in literature search.
TALLOW ALKYL-DIETHANOLAMINE DERIVATIVES	The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. Laboratory testing shows that the fatty acid amide, cocoamide DEA, causes occupational allergic contact dermatitis, and that allergy to this substance is becoming more common. Alkanolamides are manufactured by condensation of diethanolamine and the methyl ester of long chain fatty acids. Tallow derivatives used in the manufacture of cosmetic products are safe for consumption when it undergoes- transesterification or hydrolysis at 200 C, under pressure for 20 minutes (for glycerol, fatty acids and esters) ; saponification with 12 M of NaOH (for glycerol and soap) at 95 C for 3 hours; continuous process at 140 C, for about 8 minutes or its equivalent. The chemicals in the Fatty Nitrogen Derived (FND) Amides are generally similar in terms of physical and chemical properties, environmental fate and toxicity. Its low acute oral toxicity is well established across all subcategories by the available data and show no apparent organ specific toxicity, mutation, reproductive or developmental defects.
TALLOW ALKYL-DIETHANOLAMINE DERIVATIVES & 3-ISODECYLOXYPROPYLAMINE	Asthma-like symptoms may continue for months or even years after exposure to the material ends. This may be due to a non-allergic condition known as reactive airways dysfunction syndrome (RADS) which can occur after exposure to high levels of highly irritating compound. Main criteria for diagnosing RADS include the absence of previous airways disease in a non-atopic individual, with sudden onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. Other criteria for diagnosis of RADS include a reversible airflow pattern on lung function tests, moderate to severe bronchial hyperreactivity on methacholine challenge testing, and the lack of minimal lymphocytic inflammation, without eosinophilia. The material may produce respiratory tract irritation, and result in damage to the lung including reduced lung function. The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

Acute Toxicity	✗	**Carcinogenicity**	✗
Skin Irritation/Corrosion	✗	**Reproductivity**	✗
Serious Eye Damage/Irritation	✗	**STOT - Single Exposure**	✗
Respiratory or Skin sensitisation	✓	**STOT - Repeated Exposure**	✗
Mutagenicity	✗	**Aspiration Hazard**	✗

Legend: ✗ *– Data either not available or does not fill the criteria for classification*
✓ *– Data available to make classification*

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

20284 POWER STEERING OIL LEAK STOP 35ml

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
Not Available	Not Available	Not Available	Not Available	Not Available

lubricating oils, petroleum C20-50, hydrotreated neutral

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	>100mg/L	2
EC50	48	Crustacea	>10-mg/L	2
NOEC	504	Crustacea	>1mg/L	1

paraffinic distillate, light, solvent-dewaxed (severe)

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	>100mg/L	2
EC50	48	Crustacea	>10-mg/L	2
NOEC	504	Crustacea	>1mg/L	1

3-(C9-11-isoalkyloxy)-tetrahydrothiophene 1,1-dioxide

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	2.4mg/L	2
EC50	48	Crustacea	4.6mg/L	2

Continued...

	NOEC	48	Crustacea	0.63mg/L	2

C7-9 branched alkyl-3,5-di-tert-butyl-4-hydroxyhydrocinnamate

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	>0.001mg/L	2
EC50	48	Crustacea	>0.008mg/L	2
EC50	72	Algae or other aquatic plants	>3mg/L	2
NOEC	96	Fish	0.001mg/L	2

tallow alkyl-diethanolamine derivatives

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	0.1mg/L	2
EC50	48	Crustacea	0.043mg/L	2
EC50	72	Algae or other aquatic plants	0.004mg/L	2
NOEC	72	Algae or other aquatic plants	0.0024mg/L	2

5-(tert-dodecyldithio)-1,3,4-thiadiazole-2(3H)-thione

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	>1-mg/L	2
EC50	48	Crustacea	41mg/L	2
EC50	72	Algae or other aquatic plants	>100mg/L	2
EL10	72	Algae or other aquatic plants	>100mg/L	2

tallow alkyl-diethanolamine derivatives

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
LC50	96	Fish	0.1mg/L	2
EC50	48	Crustacea	0.043mg/L	2
EC50	72	Algae or other aquatic plants	0.004mg/L	2
NOEC	72	Algae or other aquatic plants	0.0024mg/L	2

3-isodecyloxypropylamine

ENDPOINT	TEST DURATION (HR)	SPECIES	VALUE	SOURCE
Not Available	Not Available	Not Available	Not Available	Not Available

Legend: *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash-waters.
Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

Bioaccumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal

- Containers may still present a chemical hazard/ danger when empty.
- Return to supplier for reuse/ recycling if possible.

Otherwise:

- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
- Where possible retain label warnings and SDS and observe all notices pertaining to the product.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.
A Hierarchy of Controls seems to be common - the user should investigate:

- Reduction
- Reuse
- Recycling
- Disposal (if all else fails)

Continued...

	This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. ▸ **DO NOT** allow wash water from cleaning or process equipment to enter drains. ▸ It may be necessary to collect all wash water for treatment before disposal. ▸ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▸ Where in doubt contact the responsible authority. ▸ Recycle wherever possible or consult manufacturer for recycling options. ▸ Consult State Land Waste Authority for disposal. ▸ Bury or incinerate residue at an approved site. ▸ Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO Not Applicable

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture

LUBRICATING OILS, PETROLEUM C20-50, HYDROTREATED NEUTRAL(72623-87-1.) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs	US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants
US - Alaska Limits for Air Contaminants	US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants
US - California Permissible Exposure Limits for Chemical Contaminants	US - Washington Permissible exposure limits of air contaminants
US - Hawaii Air Contaminant Limits	US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants
US - Idaho - Limits for Air Contaminants	US ACGIH Threshold Limit Values (TLV)
US - Michigan Exposure Limits for Air Contaminants	US ACGIH Threshold Limit Values (TLV) - Carcinogens
US - Minnesota Permissible Exposure Limits (PELs)	US NIOSH Recommended Exposure Limits (RELs)
US - Oregon Permissible Exposure Limits (Z-1)	US OSHA Permissible Exposure Levels (PELs) - Table Z1
US - Pennsylvania - Hazardous Substance List	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	US TSCA Chemical Substance Inventory - Interim List of Active Substances

PARAFFINIC DISTILLATE, LIGHT, SOLVENT-DEWAXED (SEVERE)(64742-56-9.) IS FOUND ON THE FOLLOWING REGULATORY LISTS

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs	US - Vermont Permissible Exposure Limits Table Z-1-A Final Rule Limits for Air Contaminants
US - Alaska Limits for Air Contaminants	US - Vermont Permissible Exposure Limits Table Z-1-A Transitional Limits for Air Contaminants
US - California Permissible Exposure Limits for Chemical Contaminants	US - Washington Permissible exposure limits of air contaminants
US - Hawaii Air Contaminant Limits	US - Wyoming Toxic and Hazardous Substances Table Z1 Limits for Air Contaminants
US - Idaho - Limits for Air Contaminants	US ACGIH Threshold Limit Values (TLV)
US - Massachusetts - Right To Know Listed Chemicals	US ACGIH Threshold Limit Values (TLV) - Carcinogens
US - Michigan Exposure Limits for Air Contaminants	US NIOSH Recommended Exposure Limits (RELs)
US - Minnesota Permissible Exposure Limits (PELs)	US OSHA Permissible Exposure Levels (PELs) - Table Z1
US - Oregon Permissible Exposure Limits (Z-1)	US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory
US - Pennsylvania - Hazardous Substance List	US TSCA Chemical Substance Inventory - Interim List of Active Substances
US - Tennessee Occupational Exposure Limits - Limits For Air Contaminants	

3-(C9-11-ISOALKYLOXY)-TETRAHYDROTHIOPHENE 1,1-DIOXIDE(398141-87-2) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory	US TSCA Chemical Substance Inventory - Interim List of Active Substances

C7-9 BRANCHED ALKYL-3,5-DI-TERT-BUTYL-4-HYDROXYHYDROCINNAMATE(125643-61-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory	US TSCA Chemical Substance Inventory - Interim List of Active Substances

TALLOW ALKYL-DIETHANOLAMINE DERIVATIVES(61791-44-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory	US TSCA Chemical Substance Inventory - Interim List of Active Substances

5-(TERT-DODECYLDITHIO)-1,3,4-THIADIAZOLE-2(3H)-THIONE(73984-93-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory	US TSCA Chemical Substance Inventory - Interim List of Active Substances

TALLOW ALKYL-DIETHANOLAMINE DERIVATIVES(61791-44-4) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory	US TSCA Chemical Substance Inventory - Interim List of Active Substances

3-ISODECYLOXYPROPYLAMINE(218141-16-3) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory	US TSCA Chemical Substance Inventory - Interim List of Active Substances

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Continued...

SECTION 311/312 HAZARD CATEGORIES

Flammable (Gases, Aerosols, Liquids, or Solids)	No
Gas under pressure	No
Explosive	No
Self-heating	No
Pyrophoric (Liquid or Solid)	No
Pyrophoric Gas	No
Corrosive to metal	No
Oxidizer (Liquid, Solid or Gas)	No
Organic Peroxide	No
Self-reactive	No
In contact with water emits flammable gas	No
Combustible Dust	No
Carcinogenicity	No
Acute toxicity (any route of exposure)	No
Reproductive toxicity	No
Skin Corrosion or Irritation	No
Respiratory or Skin Sensitization	Yes
Serious eye damage or eye irritation	No
Specific target organ toxicity (single or repeated exposure)	No
Aspiration Hazard	No
Germ cell mutagenicity	No
Simple Asphyxiant	No

US. EPA CERCLA HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES (40 CFR 302.4)

None Reported

State Regulations

US. CALIFORNIA PROPOSITION 65

None Reported

National Inventory Status

National Inventory	Status
Australia - AICS	No (3-(C9-11-isoalkyloxy)-tetrahydrothiophene 1,1-dioxide; methacrylate copolymer.) Non-disclosed ingredients
Canada - DSL	No (3-(C9-11-isoalkyloxy)-tetrahydrothiophene 1,1-dioxide; methacrylate copolymer.) Non-disclosed ingredients
Canada - NDSL	No (tallow alkyl-diethanolamine derivatives; paraffinic distillate, light, solvent-dewaxed (severe); C7-9 branched alkyl-3,5-di-tert-butyl-4-hydroxyhydrocinnamate; 5-(tert-dodecyldithio)-1,3,4-thiadiazole-2(3H)-thione; lubricating oils, petroleum C20-50, hydrotreated neutral; methacrylate copolymer.) Non-disclosed ingredients
China - IECSC	No (3-(C9-11-isoalkyloxy)-tetrahydrothiophene 1,1-dioxide; methacrylate copolymer.) Non-disclosed ingredients
Europe - EINEC / ELINCS / NLP	No (3-(C9-11-isoalkyloxy)-tetrahydrothiophene 1,1-dioxide; C7-9 branched alkyl-3,5-di-tert-butyl-4-hydroxyhydrocinnamate; 5-(tert-dodecyldithio)-1,3,4-thiadiazole-2(3H)-thione; methacrylate copolymer.) Non-disclosed ingredients
Japan - ENCS	No (tallow alkyl-diethanolamine derivatives; paraffinic distillate, light, solvent-dewaxed (severe); 3-(C9-11-isoalkyloxy)-tetrahydrothiophene 1,1-dioxide; C7-9 branched alkyl-3,5-di-tert-butyl-4-hydroxyhydrocinnamate; 5-(tert-dodecyldithio)-1,3,4-thiadiazole-2(3H)-thione; lubricating oils, petroleum C20-50, hydrotreated neutral; methacrylate copolymer.) Non-disclosed ingredients
Korea - KECI	No (3-(C9-11-isoalkyloxy)-tetrahydrothiophene 1,1-dioxide; methacrylate copolymer.) Non-disclosed ingredients
New Zealand - NZIoC	No (methacrylate copolymer.) Non-disclosed ingredients
Philippines - PICCS	No (3-(C9-11-isoalkyloxy)-tetrahydrothiophene 1,1-dioxide; methacrylate copolymer.) Non-disclosed ingredients
USA - TSCA	No (methacrylate copolymer.) Non-disclosed ingredients
Legend:	*Yes = All ingredients are on the inventory* *No = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)*

SECTION 16 OTHER INFORMATION

Revision Date	10/12/2018
Initial Date	10/12/2018

Other information

Ingredients with multiple cas numbers

Name	CAS No
3-(C9-11-isoalkyloxy)-tetrahydrothiophene 1,1-dioxide	398141-87-2, 1876-04-6
tallow alkyl-diethanolamine derivatives	61791-44-4, 1218787-32-6

Continued...

tallow alkyl-diethanolamine derivatives	61791-44-4, 1218787-32-6
3-isodecyloxypropylamine	30113-45-2, 218141-16-3

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC—TWA: Permissible Concentration-Time Weighted Average
PC—STEL: Permissible Concentration-Short Term Exposure Limit
IARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEEL: Temporary Emergency Exposure Limit。
IDLH: Immediately Dangerous to Life or Health Concentrations
OSF: Odour Safety Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index