SAFETY DATA SHEET

BLUE TAC CHAIN LUBRICANT

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

1.1 Product identifier

Product name : BLUE TAC CHAIN LUBRICANT

UFI : E2E2-UFYR-QNKN-WRP4

Product code : 301125150285

Product description : Lubricating Oil

Product type : Aerosol.

Other means of identification : Not available.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Lubricating Oil

Uses advised against
None known.

1.3 Details of the supplier of the safety data sheet

Manufacturer:
Calumet Branded Products, LLC
2780 Waterfront Pkwy E. Drive Suite 200
Indianapolis, IN 46214
USA
Technical Services:317-328-5660

Supplier:
Monument Chemical BVBA
Haven 1972, Ketenislaan 3
B-9130 Kallo (Kieldrecht) Belgium
+32 3 570 28 11

e-mail address of person responsible for this SDS : technical@calumetspecialty.com

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : 0800-181-7059

CHEMTREC

Telephone number : 24 hr. CHEMTREC 1-800-424-9300 / International 1-703-527-3887

Belgium: +(32)-28083237
Czech Republic: +(420)-228880039
Denmark: +(45)-69918573
Finland: +(358)-942419014
France: +(33)-975181407
Germany: 0800-181-7059, +(49)-69643508409
Greece: +(30)-2111768478
Ireland: +(353)-19014670
Italy: 800-789-767, +(39)-0245557031
Latvia: +(371)-66165504
Netherlands: +(31)-858880596
Norway: +(47)-21930678

SECTION 1: Identification of the substance/mixture and of the company/ undertaking

Poland: +(48)-223988029
Portugal: +(351)-308801773
Spain: 900-868538, +(34)-931768545
Sweden: +(46)-852503403
United Kingdom (UK): +(44)-870-8200418

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Aerosol 1, H222, H229
Skin Irrit. 2, H315
Skin Sens. 1, H317
STOT SE 3, H336
Aquatic Chronic 2, H411

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H222, H229 - Extremely flammable aerosol. Pressurised container: may burst if heated.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H336 - May cause drowsiness or dizziness.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention : P280 - Wear protective gloves.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 - Do not spray on an open flame or other ignition source.
P273 - Avoid release to the environment.
P261 - Avoid breathing dust or mist.
P264 - Wash thoroughly after handling.
P251 - Do not pierce or burn, even after use.

Response : P391 - Collect spillage.
P304 + P312 - IF INHALED: Call a POISON CENTER or doctor if you feel unwell.
P362 + P364 - Take off contaminated clothing and wash it before reuse.
P302 + P352 - IF ON SKIN: Wash with plenty of water.
P333 + P313 - If skin irritation or rash occurs: Get medical advice or attention.

Storage : P410 + P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Ingredients identification information : Naphtha (petroleum), hydrotreated light and 2,5-bis(octyldithio)-1,3,4-thiadiazole

Supplemental label elements : Not applicable.

SECTION 2: Hazards identification

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Special packaging requirements

Containers to be fitted with child-resistant fastenings : Not applicable.

Tactile warning of danger : Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII : This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Naphtha (petroleum), hydrotreated light	EC: 265-151-9 CAS: 64742-49-0 Index: 649-328-00-1	≥25 - ≤50	Flam. Liq. 3, H226 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	-	[1]
Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)	EC: 500-004-7 CAS: 9003-29-6	≥25 - ≤50	Asp. Tox. 1, H304 EUH066	-	[1]
propane	EC: 200-827-9 CAS: 74-98-6	≥10 - ≤25	Flam. Gas 1A, H220 Press. Gas (Liq.), H280	-	[2]
butane	EC: 203-448-7 CAS: 106-97-8	≥10 - ≤25	Flam. Gas 1A, H220 Press. Gas (Comp.), H280 Aquatic Chronic 2, H411	-	[1] [2]
heptane	EC: 205-563-8 CAS: 142-82-5 Index: 601-008-00-2	≤3	Flam. Liq. 2, H225 Skin Irrit. 2, H315 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1] [2]
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	REACH #: 01-2119456620-43 EC: 926-141-6 CAS: -	≤3	Asp. Tox. 1, H304	-	[1] [2]

SECTION 3: Composition/information on ingredients

petroleum process oil	-	≤1	Acute Tox. 3, H331	ATE [Inhalation (vapours)] = 3 mg/l	[1]
Amine Phosphate Compounds (NJTSR No. 800983-5011P)	EC: 269-119-5 CAS: 68187-67-7	<1	Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 500 mg/kg ATE [Dermal] = 1100 mg/kg M [Acute] = 1 M [Chronic] = 1	[1]
2,5-bis(octyldithio) -1,3,4-thiadiazole	EC: 948-020-7 CAS: -	≤0.3	Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1A, H317 **See Section 16 for the full text of the H statements declared above.**	ATE [Inhalation (vapours)] = 11 mg/l	[1]

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

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

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

Skin contact : Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. If necessary, call a poison center or physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

SECTION 4: First aid measures

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture : Extremely flammable aerosol. Runoff to sewer may create fire or explosion hazard. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. Gas may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back, causing fire or explosion. Bursting aerosol containers may be propelled from a fire at high speed. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous combustion products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. In the case of aerosols being ruptured, care should be taken due to the rapid escape of the pressurised contents and propellant. If a large number of containers are ruptured, treat as a bulk material spillage according to the instructions in the clean-up section. Do not touch or walk through spilt material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

: Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill : Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.

6.4 Reference to other sections

: See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Pressurised container: protect from sunlight and do not expose to temperature exceeding 50°C. Do not pierce or burn, even after use. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing gas. Avoid breathing vapour or mist. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Empty containers retain product residue and can be hazardous.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

SECTION 7: Handling and storage

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Eliminate all ignition sources. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds

Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
P3a E2	150 tonne 200 tonne	500 tonne 500 tonne

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
propane	**TRGS 900 OEL (Germany, 6/2022).** TWA: 1800 mg/m³ 8 hours. PEAK: 7200 mg/m³ 15 minutes. TWA: 1000 ppm 8 hours. PEAK: 4000 ppm 15 minutes. **DFG MAC-values list (Germany, 7/2022).** TWA: 1000 ppm 8 hours. PEAK: 4000 ppm, 4 times per shift, 15 minutes. TWA: 1800 mg/m³ 8 hours. PEAK: 7200 mg/m³, 4 times per shift, 15 minutes.
butane	**TRGS 900 OEL (Germany, 6/2022).** TWA: 2400 mg/m³ 8 hours. PEAK: 9600 mg/m³ 15 minutes. TWA: 1000 ppm 8 hours. PEAK: 4000 ppm 15 minutes. **DFG MAC-values list (Germany, 7/2022). [Butane (both isomers)]** TWA: 1000 ppm 8 hours. PEAK: 4000 ppm, 4 times per shift, 15 minutes. TWA: 2400 mg/m³ 8 hours. PEAK: 9600 mg/m³, 4 times per shift, 15 minutes.
heptane	**TRGS 900 OEL (Germany, 6/2022). [Heptane]** TWA: 500 ppm 8 hours. PEAK: 500 ppm 15 minutes. TWA: 2100 mg/m³ 8 hours. PEAK: 2100 mg/m³ 15 minutes. **DFG MAC-values list (Germany, 7/2022).** TWA: 500 ppm 8 hours. PEAK: 500 ppm, 4 times per shift, 15 minutes. TWA: 2100 mg/m³ 8 hours. PEAK: 2100 mg/m³, 4 times per shift, 15 minutes.
Hydrocarbons, C11-C14, n-alkanes, isoalkanes,	**DFG MAC-values list (Germany, 7/2022). [distillates**

SECTION 8: Exposure controls/personal protection

cyclics, <2% aromatics	**(petroleum), hydrotreated light (Aerosol)]** TWA: 5 mg/m³ 8 hours. Form: respirable fraction PEAK: 20 mg/m³, 4 times per shift, 15 minutes. Form: respirable fraction **DFG MAC-values list (Germany, 7/2022). [distillates (petroleum), hydrotreated light (vapour)]** TWA: 350 mg/m³ 8 hours. Form: vapour TWA: 50 ppm 8 hours. Form: vapour PEAK: 100 ppm, 4 times per shift, 15 minutes. Form: vapour PEAK: 700 mg/m³, 4 times per shift, 15 minutes. Form: vapour **TRGS 900 OEL (Germany, 6/2022).** TWA: 300 mg/m³ 8 hours.

Biological exposure indices

Product/ingredient name	Exposure indices
heptane	**DFG BEI-values list (Germany, 7/2022)** BEI: 250 µg/l, heptane-2,5-dione [in urine]. Sampling time: end of exposure or end of shift. **TRGS 903 - BEI Values (Germany, 2/2022)** BEI: 250 µg/l, heptane-2,5-dione [in urine]. Sampling time: end of exposure or end of shift.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Type	Exposure	Value	Population	Effects
Naphtha (petroleum), hydrotreated light	DNEL	Long term Inhalation	0.41 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	1.9 mg/m³	Workers	Systemic
	DNEL	Long term Oral	149 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	149 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	178.57 mg/m³	General population	Local
	DNEL	Long term Dermal	300 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	640 mg/m³	General population	Local
	DNEL	Long term Inhalation	837.5 mg/m³	Workers	Local
	DNEL	Short term Inhalation	1066.67 mg/m³	Workers	Local
	DNEL	Short term Inhalation	1152 mg/m³	General population	Systemic
	DNEL	Short term Inhalation	1286.4 mg/m³	Workers	Systemic
heptane	DNEL	Long term Oral	149 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	149 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	300 mg/kg	Workers	Systemic

SECTION 8: Exposure controls/personal protection

	DNEL	Long term Inhalation	bw/day 447 mg/m³	General population	Systemic
	DNEL	Long term Inhalation	2085 mg/m³	Workers	Systemic

PNECs

No PNECs available

8.2 Exposure controls

Appropriate engineering controls : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapour or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
Recommended: EN = European Standard (Norm) 166.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.
> 8 hours (breakthrough time): Wear suitable gloves tested to EN374. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment. Recommended : nitrile rubber, 55 mm thickness.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots and gloves. Refer to European Standard EN 1149 for further information on material and design requirements and test methods.
Recommended: EN = European Standard (Norm) 340, EN = European Standard (Norm) 369, EN = European Standard (Norm) 465.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

SECTION 8: Exposure controls/personal protection

Recommended: No personal respiratory protective equipment normally required. In case of inadequate ventilation wear respiratory protection. Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. EN = European Standard (Norm)149.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Appearance

Physical state : Liquid. [Aerosol.]

Colour : Not available.

Odour : Characteristic.

Odour threshold : Not available.

Melting point/freezing point : Not available.

Initial boiling point and boiling range : Not available.

Flammability : Not available.

Lower and upper explosion limit : Not available.

Flash point : Open cup: -104°C (-155.2°F) [Propellant]

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

pH : Not available.

Viscosity : Kinematic (40°C): 1500 mm^2/s

Not available.

Solubility in water : Not available.

Partition coefficient: n-octanol/water : Not applicable.

Vapour pressure :

Ingredient name	Vapour Pressure at 20°C			Vapour pressure at 50°C		
	mm Hg	kPa	Method	mm Hg	kPa	Method
propane	6300.51	840				

Evaporation rate : Not available.

Relative density : 0.536

Vapour density : Not available.

Explosive properties : Not available.

Oxidising properties : Not available.

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

Heat of combustion : 12.23 kJ/g

Aerosol product

Type of aerosol : Spray

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Avoid all possible sources of ignition (spark or flame).

10.5 Incompatible materials : No specific data.

10.6 Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Naphtha (petroleum), hydrotreated light	LC50 Inhalation Vapour	Rat	>5.2 mg/l	4 hours
	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)	LD50 Dermal	Rabbit	>10250 mg/kg	-
	LD50 Oral	Rat	>34600 mg/kg	-
butane	LC50 Inhalation Vapour	Rat	658000 mg/m³	4 hours
heptane	LC50 Inhalation Gas.	Rat	48000 ppm	4 hours
	LC50 Inhalation Vapour	Rat	103 g/m³	4 hours
	LD50 Dermal	Rabbit	>3160 mg/kg	-
	LD50 Oral	Rat	>15000 mg/kg	-
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
petroleum process oil	LC50 Inhalation Vapour	Rat	>5 mg/l	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Rat	>5000 mg/kg	-
Amine Phosphate Compounds (NJTSR No. 800983-5011P)	LD50 Oral	Rat	300 mg/kg	-

Conclusion/Summary : Not available.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
BLUE TAC CHAIN LUBRICANT	N/A	N/A	N/A	509.6	N/A
butane	N/A	N/A	N/A	658	N/A
heptane	N/A	N/A	48000	103	N/A
petroleum process oil	N/A	N/A	N/A	3	N/A
Amine Phosphate Compounds (NJTSR No. 800983-5011P)	500	1100	N/A	N/A	N/A
2,5-bis(octyldithio)-1,3,4-thiadiazole	N/A	N/A	N/A	11	N/A

SECTION 11: Toxicological information

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Naphtha (petroleum), hydrotreated light	Eyes - Mild irritant	Rabbit	-	10 milligrams	-

Conclusion/Summary : Not available.

Sensitisation

Product/ingredient name	Route of exposure	Species	Result
petroleum process oil Amine Phosphate Compounds (NJTSR No. 800983-5011P)	skin skin	Guinea pig Mouse	Not sensitizing Sensitising

Conclusion/Summary : Not available.

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Amine Phosphate Compounds (NJTSR No. 800983-5011P)	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
	OECD	Experiment: In vitro Subject: Mammalian-Animal	Negative
	OECD 487 In vitro Micronucleus Test	Experiment: In vitro Subject: Mammalian-Human	Negative

Conclusion/Summary : Not available.

Carcinogenicity

Conclusion/Summary : Not available.

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
Amine Phosphate Compounds (NJTSR No. 800983-5011P)	-	-	-	Rat	Oral: 75 mg/kg	28 days

Conclusion/Summary : Not available.

Teratogenicity

Conclusion/Summary : Not available.

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Naphtha (petroleum), hydrotreated light heptane	Category 3 Category 3	- -	Narcotic effects Narcotic effects

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Product/ingredient name	Result
Naphtha (petroleum), hydrotreated light	ASPIRATION HAZARD - Category 1
Butene, homopolymer (products derived from either/or But-1-ene/ But-2-ene)	ASPIRATION HAZARD - Category 1
heptane	ASPIRATION HAZARD - Category 1
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	ASPIRATION HAZARD - Category 1

SECTION 11: Toxicological information

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.

Inhalation : Can cause central nervous system (CNS) depression. May cause drowsiness or dizziness.

Skin contact : Causes skin irritation. May cause an allergic skin reaction.

Ingestion : Can cause central nervous system (CNS) depression.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing
nausea or vomiting
headache
drowsiness/fatigue
dizziness/vertigo
unconsciousness

Skin contact : Adverse symptoms may include the following:
irritation
redness

Ingestion : No specific data.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
Amine Phosphate Compounds (NJTSR No. 800983-5011P)	Chronic NOAEL Oral	Rat	75 mg/kg	-

Conclusion/Summary : Not available.

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.

11.2.2 Other information

SECTION 11: Toxicological information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species	Exposure
Naphtha (petroleum), hydrotreated light	Acute EC50 1 to 10 mg/l	Algae	72 hours
	Acute EC50 1 to 10 mg/l	Daphnia	48 hours
	Acute LC50 1 to 10 mg/l	Fish	96 hours
Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)	Acute EC50 >1000 mg/l	Daphnia	48 hours
	Acute LC50 >1000 mg/l	Fish	96 hours
butane	EC50 7.71 to 19.37 mg/l	Algae	4 days
	LC50 24.11 to 147.54 mg/l	Fish	4 days
	Acute LC50 14.22 to 69.43 mg/l	Daphnia	48 hours
heptane	Acute EC50 1.5 mg/l	Daphnia	48 hours
	Acute LC50 375000 µg/l Fresh water	Fish - *Oreochromis mossambicus*	96 hours
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	Acute EC50 >1000 mg/l	Algae	72 hours
	Acute LC50 >1000 mg/l Fresh water	Daphnia	48 hours
petroleum process oil	Acute LC50 >100 mg/l	Daphnia	48 hours
	Acute LC50 >10000 mg/l	Fish	96 hours
Amine Phosphate Compounds (NJTSR No. 800983-5011P)	Acute EC50 1.9 mg/l	Algae	72 hours
	Acute EC50 6.8 mg/l	Daphnia	48 hours
	Acute LC50 18 mg/l	Fish	96 hours
	Acute NOEC 0.1 mg/l	Algae	72 hours
	Acute NOEC 3.9 mg/l	Daphnia	48 hours
	Acute NOEC 12 mg/l	Fish	96 hours

Conclusion/Summary : Not available.

12.2 Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	OECD 301F Ready Biodegradability - Manometric Respirometry Test	69 % - Readily - 28 days	-	-
Amine Phosphate Compounds (NJTSR No. 800983-5011P)	OECD 301B Ready Biodegradability - CO2 Evolution Test	9 % - Not readily - 28 days	-	-

Conclusion/Summary : Not available.

SECTION 12: Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Naphtha (petroleum), hydrotreated light	-	-	Inherent
Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)	-	-	Not readily
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	-	-	Readily
petroleum process oil	-	-	Inherent
Amine Phosphate Compounds (NJTSR No. 800983-5011P)	-	-	Not readily

12.3 Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Naphtha (petroleum), hydrotreated light	2.2 to 5.2	10 to 2500	High
Butene, homopolymer (products derived from either/or But-1-ene/But-2-ene)	7.6 to 7.8	314 to 1882	High
butane	2.89	-	Low
heptane	4.66	552	High
petroleum process oil	>6	-	High

12.4 Mobility in soil

Soil/water partition coefficient (K_{OC}) : Not available.

Mobility : Not available.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : The classification of the product may meet the criteria for a hazardous waste.

SECTION 13: Disposal considerations

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

Special precautions : This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Do not puncture or incinerate container.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	UN1950	UN1950	UN1950	UN1950
14.2 UN proper shipping name	AEROSOLS	AEROSOLS	AEROSOLS	Aerosols, flammable
14.3 Transport hazard class(es)	2 	2 	2.1 	2.1 
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

- : Not applicable.

Additional information

ADR/RID : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Limited quantity 1 L
Special provisions 190, 327, 625, 344
Tunnel code (D)

ADN : The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Special provisions 190, 327, 625, 344

IMDG : The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.
Emergency schedules F-D, S-U
Special provisions 63, 190, 277, 327, 344, 381, 959

IATA : The environmentally hazardous substance mark may appear if required by other transportation regulations.
Quantity limitation Passenger and Cargo Aircraft: 75 kg. Packaging instructions: 203. Cargo Aircraft Only: 150 kg. Packaging instructions: 203. Limited Quantities - Passenger Aircraft: 30 kg. Packaging instructions: Y203.
Special provisions A145, A167, A802

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XIV - List of substances subject to authorisation

Annex XIV

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
BLUE TAC CHAIN LUBRICANT	≥90	3

Labelling : Not applicable.

Other EU regulations

Explosive precursors : Not applicable.

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Aerosol dispensers :

3

Extremely flammable

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
P3a E2

National regulations

Product/ingredient name	List name	Name on list	Classification	Notes
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, <2% aromatics	DFG MAC-values list	distillates (petroleum), hydrotreated light (Aerosol)	K3B	-

Storage class (TRGS 510) : 2B

Hazardous incident ordinance

This product is controlled under the Germany Hazardous Incident Ordinance.

Danger criteria

SECTION 15: Regulatory information

Category	Reference number
P3a E2	1.2.3.1 1.3.2

Hazard class for water : 3

Registration number (UBA) : Not available.

Technical instruction on air quality control : TA-Luft Class I - Number 5.2.5: 72.2%
TA-Luft Number 5.2.5: 27.9-29.4%

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Inventory list

Australia : All components are listed or exempted.

Canada : At least one component is not listed in DSL but all such components are listed in NDSL.

China : All components are listed or exempted.

Eurasian Economic Union : **Russian Federation inventory**: Not determined.

New Zealand : All components are listed or exempted.

Philippines : All components are listed or exempted.

Republic of Korea : All components are listed or exempted.

Taiwan : All components are listed or exempted.

Thailand : Not determined.

Turkey : Not determined.

United States : All components are active or exempted.

Viet Nam : Not determined.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
SGG = Segregation Group
vPvB = Very Persistent and Very Bioaccumulative

SECTION 16: Other information

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Aerosol 1, H222, H229	On basis of test data
Skin Irrit. 2, H315	Calculation method
Skin Sens. 1, H317	Calculation method
STOT SE 3, H336	Calculation method
Aquatic Chronic 2, H411	Calculation method

Full text of abbreviated H statements

H220	Extremely flammable gas.
H222, H229	Extremely flammable aerosol. Pressurised container: may burst if heated.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H280	Contains gas under pressure; may explode if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications [CLP/GHS]

Acute Tox. 3	ACUTE TOXICITY - Category 3
Acute Tox. 4	ACUTE TOXICITY - Category 4
Aerosol 1	AEROSOLS - Category 1
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Gas 1A	FLAMMABLE GASES - Category 1A
Flam. Liq. 2	FLAMMABLE LIQUIDS - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Press. Gas (Comp.)	GASES UNDER PRESSURE - Compressed gas
Press. Gas (Liq.)	GASES UNDER PRESSURE - Liquefied gas
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1	SKIN SENSITISATION - Category 1
Skin Sens. 1A	SKIN SENSITISATION - Category 1A
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

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Notice to reader

SECTION 16: Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.