

**TM-10**

Version 2.0	Revision Date: 2022-10-14	Date of last issue: 2021-10-18 Date of first issue: 2021-10-18	Print Date: 2022-10-15
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**SECTION 1. IDENTIFICATION**

Product name : TM-10  
Article-No. : 340177  
Other means of identification : No data available

**Manufacturer or supplier's details**

Company name of supplier : Klüber Lubrication NA LP  
9010 County Road 2120  
Tyler, Texas 75707  
USA  
Phone: +1 903 534-8021  
Fax: +1 903 581-4376  
  
32 Industrial Drive  
Londonderry, NH 03053  
USA  
Phone: +1 603 647-4104  
Fax: +1 603 647-4106

E-mail address of person responsible for the SDS : mcm@us.kluber.com  
Material Compliance Management

Emergency telephone number : +1-517-545-7070 NCEC

**Recommended use of the chemical and restrictions on use**


Recommended use : Lubricating oil  
Restrictions on use : Restricted to professional users.

**SECTION 2. HAZARDS IDENTIFICATION**

**GHS classification in accordance with the Hazardous Products Regulations**

**Reproductive toxicity** : **Category 2**

**GHS label elements**

Hazard pictograms : 

Signal word : Warning

**TM-10**

Version 2.0	Revision Date: 2022-10-14	Date of last issue: 2021-10-18 Date of first issue: 2021-10-18	Print Date: 2022-10-15
----------------	------------------------------	-------------------------------------------------------------------	---------------------------

Hazard statements : Suspected of damaging fertility.

Precautionary statements : **Prevention:**  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wear protective gloves/ protective clothing/ eye protection/ face protection.

**Response:**  
IF exposed or concerned: Get medical advice/ attention.

**Storage:**  
Store locked up.

**Disposal:**  
Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Mixture

Chemical nature : Mineral oil.  
ester oil

**Components**

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Distillates (petroleum), hydrotreated heavy paraffinic	distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	Trade secret** (>= 60 - < 80 *)
Distillates (petroleum), hydrotreated light paraffinic	Distillates (petroleum), hydrotreated light paraffinic; Baseoil — unspecified	64742-55-8	Trade secret** (>= 30 - < 60 *)
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	Benzenamine, N-phenyl-, reaction products with 2,4,4-	68411-46-1	Trade secret** (>= 0.1 - < 1 *)

**TM-10**

Version 2.0	Revision Date: 2022-10-14	Date of last issue: 2021-10-18 Date of first issue: 2021-10-18	Print Date: 2022-10-15
----------------	------------------------------	-------------------------------------------------------------------	---------------------------

	trimethylpenten e		
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\* Actual concentration or concentration range is withheld as a trade secret

\*\* See Section 15 for HMIRA information.

**SECTION 4. FIRST AID MEASURES**

- If inhaled : Obtain medical attention.  
Remove person to fresh air. If signs/symptoms continue, get medical attention.  
Keep patient warm and at rest.  
If unconscious, place in recovery position and seek medical advice.  
Keep respiratory tract clear.  
If breathing is irregular or stopped, administer artificial respiration.
- In case of skin contact : Remove contaminated clothing. If irritation develops, get medical attention.  
In case of contact, immediately flush skin with plenty of water.  
Wash clothing before reuse.  
Thoroughly clean shoes before reuse.
- In case of eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 10 minutes.  
If eye irritation persists, consult a specialist.
- If swallowed : Move the victim to fresh air.  
If unconscious, place in recovery position and seek medical advice.  
Keep respiratory tract clear.  
Do NOT induce vomiting.  
Rinse mouth with water.  
Never give anything by mouth to an unconscious person.
- Most important symptoms and effects, both acute and delayed : No information available.  
None known.
- Notes to physician : No information available.

**SECTION 5. FIREFIGHTING MEASURES**

- Suitable extinguishing media : Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
- Unsuitable extinguishing media : High volume water jet

**TM-10**

Version	Revision Date:	Date of last issue: 2021-10-18	Print Date:
2.0	2022-10-14	Date of first issue: 2021-10-18	2022-10-15

- Hazardous combustion products : Carbon oxides
- Further information : Standard procedure for chemical fires.  
Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.  
Exposure to decomposition products may be a hazard to health.

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**SECTION 6. ACCIDENTAL RELEASE MEASURES**

- Personal precautions, protective equipment and emergency procedures : Evacuate personnel to safe areas.  
Use personal protective equipment.  
Ensure adequate ventilation.  
Refer to protective measures listed in sections 7 and 8.
- Environmental precautions : Do not allow contact with soil, surface or ground water.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

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**SECTION 7. HANDLING AND STORAGE**

- Advice on safe handling : Avoid inhalation of vapour or mist.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Wash hands and face before breaks and immediately after handling the product.  
Do not get in eyes or mouth or on skin.  
Do not get on skin or clothing.  
Do not ingest.  
Do not repack.  
Do not re-use empty containers.  
These safety instructions also apply to empty packaging which may still contain product residues.  
Keep container closed when not in use.

**TM-10**

Version	Revision Date:	Date of last issue: 2021-10-18	Print Date:
2.0	2022-10-14	Date of first issue: 2021-10-18	2022-10-15

Conditions for safe storage : Store in original container.  
 Keep container closed when not in use.  
 Keep in a dry, cool and well-ventilated place.  
 Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
 Store in accordance with the particular national regulations.  
 Keep in properly labelled containers.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	TWA (Mist)	5 mg/m3	CA AB OEL (2009-04-30)
		STEL (Mist)	10 mg/m3	CA AB OEL (2009-04-30)
		TWAEV (Mist)	5 mg/m3	CA QC OEL (2012-11-28)
		STEV (Mist)	10 mg/m3	CA QC OEL (2012-11-28)
		TWA (Mist)	1 mg/m3	CA BC OEL (2012-04-20)
		TWA (Mist)	1 mg/m3	CA BC OEL (2021-01-04)
Distillates (petroleum), hydrotreated light paraffinic	64742-55-8	TWA (Inhalable particulate matter)	5 mg/m3	ACGIH (2013-03-01)
		TWA (Mist)	5 mg/m3	CA AB OEL (2009-04-30)
		STEL (Mist)	10 mg/m3	CA AB OEL (2009-04-30)
		TWAEV (Mist)	5 mg/m3	CA QC OEL (2012-11-28)
		STEV (Mist)	10 mg/m3	CA QC OEL (2012-11-28)
		TWA (Mist)	1 mg/m3	CA BC OEL (2012-04-20)
		TWA (Mist)	1 mg/m3	CA BC OEL (2021-01-04)
		TWA (Inhalable particulate matter)	5 mg/m3	ACGIH (2013-03-01)

**Engineering measures** : Handle only in a place equipped with local exhaust (or other

**TM-10**

Version 2.0	Revision Date: 2022-10-14	Date of last issue: 2021-10-18 Date of first issue: 2021-10-18	Print Date: 2022-10-15
----------------	------------------------------	-------------------------------------------------------------------	---------------------------

appropriate exhaust).

**Personal protective equipment**

Respiratory protection : Not required; except in case of aerosol formation.

Filter type : Filter type A-P

Hand protection

Material : Nitrile rubber

Break through time : > 10 min

Protective index : Class 1

Remarks : Wear protective gloves. The break through time depends amongst other things on the material, the thickness and the type of glove and therefore has to be measured for each case.

Eye protection : Safety glasses with side-shields

Skin and body protection : Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place.

Protective measures : The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures : Wash face, hands and any exposed skin thoroughly after handling.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance : liquid

Colour : colourless

Odour : characteristic

Odour Threshold : No data available

pH : Not applicable

Melting point/range : No data available

**TM-10**

Version 2.0	Revision Date: 2022-10-14	Date of last issue: 2021-10-18 Date of first issue: 2021-10-18	Print Date: 2022-10-15
----------------	------------------------------	-------------------------------------------------------------------	---------------------------

Boiling point/boiling range : No data available

Flash point : 227 °C  
Method: ASTM D 92

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Self-ignition : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : < 0.001 hPa (20 °C)

Relative vapour density : No data available

Relative density : 0.864 (20 °C)  
Reference substance: Water  
The value is calculated

Bulk density : No data available

Solubility(ies)  
Water solubility : insoluble  
Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity  
Viscosity, dynamic : No data available  
Viscosity, kinematic : 32 mm<sup>2</sup>/s ( 40 °C)

Explosive properties : Not explosive

Oxidizing properties : No data available

**TM-10**

Version 2.0	Revision Date: 2022-10-14	Date of last issue: 2021-10-18 Date of first issue: 2021-10-18	Print Date: 2022-10-15
----------------	------------------------------	-------------------------------------------------------------------	---------------------------

Sublimation point : No data available

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**SECTION 10. STABILITY AND REACTIVITY**

Reactivity : No hazards to be specially mentioned.

Chemical stability : Stable under normal conditions.

Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.

Conditions to avoid : No conditions to be specially mentioned.

Incompatible materials : No materials to be especially mentioned.

Hazardous decomposition products : No decomposition if stored and applied as directed.

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**SECTION 11. TOXICOLOGICAL INFORMATION**

**Acute toxicity**

**Product:**

Acute oral toxicity : Remarks: This information is not available.

Acute inhalation toxicity : Remarks: This information is not available.

Acute dermal toxicity : Remarks: This information is not available.

**Components:**

**Distillates (petroleum), hydrotreated heavy paraffinic:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 401  
GLP: yes

Acute inhalation toxicity : LC50 (Rat): > 5.53 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg  
Method: OECD Test Guideline 402

**Distillates (petroleum), hydrotreated light paraffinic:**



**TM-10**

Version	Revision Date:	Date of last issue: 2021-10-18	Print Date:
2.0	2022-10-14	Date of first issue: 2021-10-18	2022-10-15

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 401  
GLP: yes

Acute inhalation toxicity : LC50 (Rat): > 5.53 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: OECD Test Guideline 403  
Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg  
Method: OECD Test Guideline 402  
GLP: yes

**Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:**

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg  
Method: OECD Test Guideline 401

Acute dermal toxicity : LD50 (Rat): > 2,000 mg/kg  
Method: OECD Test Guideline 402  
Assessment: The substance or mixture has no acute dermal toxicity

**Skin corrosion/irritation**

**Product:**

Remarks : This information is not available.

**Components:**

**Distillates (petroleum), hydrotreated heavy paraffinic:**

Species : Rabbit  
Assessment : No skin irritation  
Method : OECD Test Guideline 404  
Result : No skin irritation  
GLP : yes

**Distillates (petroleum), hydrotreated light paraffinic:**

Species : Rabbit  
Assessment : No skin irritation  
Result : No skin irritation  
GLP : yes

**Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:**

Species : Rabbit  
Assessment : No skin irritation  
Method : OECD Test Guideline 404

**TM-10**

Version	Revision Date:	Date of last issue: 2021-10-18	Print Date:
2.0	2022-10-14	Date of first issue: 2021-10-18	2022-10-15

Result : No skin irritation

**Serious eye damage/eye irritation**

**Product:**

Remarks : This information is not available.

**Components:**

**Distillates (petroleum), hydrotreated heavy paraffinic:**

Species : Rabbit  
Result : No eye irritation  
Assessment : No eye irritation  
Method : OECD Test Guideline 405  
GLP : yes

**Distillates (petroleum), hydrotreated light paraffinic:**

Species : Rabbit  
Result : No eye irritation  
Exposure time : 48 h  
Assessment : No eye irritation  
Method : OECD Test Guideline 405  
GLP : yes

**Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:**

Species : Rabbit  
Result : No eye irritation  
Assessment : No eye irritation  
Method : OECD Test Guideline 405

**Respiratory or skin sensitisation**

**Product:**

Remarks : This information is not available.

**Components:**

**Distillates (petroleum), hydrotreated heavy paraffinic:**

Species : Guinea pig  
Assessment : Does not cause skin sensitisation.  
Method : OECD Test Guideline 406  
Result : Does not cause skin sensitisation.  
GLP : yes

**Distillates (petroleum), hydrotreated light paraffinic:**

Test Type : Buehler Test  
Species : Guinea pig

**TM-10**

Version	Revision Date:	Date of last issue: 2021-10-18	Print Date:
2.0	2022-10-14	Date of first issue: 2021-10-18	2022-10-15

Assessment : Did not cause sensitisation on laboratory animals.  
Method : OECD Test Guideline 406  
Result : Did not cause sensitisation on laboratory animals.  
GLP : no

**Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:**

Species : Guinea pig  
Assessment : Did not cause sensitisation on laboratory animals.  
Method : OECD Test Guideline 406  
Result : Did not cause sensitisation on laboratory animals.

**Germ cell mutagenicity**

**Product:**

Genotoxicity in vitro : Remarks: No data available  
Genotoxicity in vivo : Remarks: No data available

**Components:**

**Distillates (petroleum), hydrotreated light paraffinic:**

Germ cell mutagenicity - Assessment : Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

**Carcinogenicity**

**Product:**

Remarks : No data available

**Components:**

**Distillates (petroleum), hydrotreated heavy paraffinic:**

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

**Distillates (petroleum), hydrotreated light paraffinic:**

Carcinogenicity - Assessment : No evidence of carcinogenicity in animal studies.

**Reproductive toxicity**

**Product:**

Effects on fertility : Remarks: No data available  
Effects on foetal development : Remarks: No data available

**TM-10**

Version 2.0	Revision Date: 2022-10-14	Date of last issue: 2021-10-18 Date of first issue: 2021-10-18	Print Date: 2022-10-15
----------------	------------------------------	-------------------------------------------------------------------	---------------------------

**Components:**

**Distillates (petroleum), hydrotreated heavy paraffinic:**

Reproductive toxicity - Assessment : - Fertility -  
No toxicity to reproduction

**Distillates (petroleum), hydrotreated light paraffinic:**

Reproductive toxicity - Assessment : - Fertility -  
No toxicity to reproduction  
- Teratogenicity -  
No effects on or via lactation

**Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:**

Reproductive toxicity - Assessment : - Fertility -  
Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

**Repeated dose toxicity**

**Product:**

Remarks : This information is not available.

**Aspiration toxicity**

**Product:**

This information is not available.

**Components:**

**Distillates (petroleum), hydrotreated heavy paraffinic:**

No aspiration toxicity classification

**Distillates (petroleum), hydrotreated light paraffinic:**

May be fatal if swallowed and enters airways.

**Further information**

**Product:**

Remarks : Information given is based on data on the components and the toxicology of similar products.

**TM-10**

Version 2.0	Revision Date: 2022-10-14	Date of last issue: 2021-10-18 Date of first issue: 2021-10-18	Print Date: 2022-10-15
----------------	------------------------------	-------------------------------------------------------------------	---------------------------

**SECTION 12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Product:**

Toxicity to fish : Remarks: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Toxicity to algae/aquatic plants : Remarks: No data available

Toxicity to microorganisms : Remarks: No data available

**Components:**

**Distillates (petroleum), hydrotreated heavy paraffinic:**

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l  
Exposure time: 48 h  
Test Type: Immobilization  
Method: OECD Test Guideline 202  
GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 10 mg/l  
Exposure time: 21 d  
Test Type: semi-static test  
Method: OECD Test Guideline 211  
GLP: yes

**Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:**

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 100 mg/l  
Exposure time: 96 h  
Test Type: static test  
Method: OECD Test Guideline 203

**TM-10**

Version 2.0	Revision Date: 2022-10-14	Date of last issue: 2021-10-18 Date of first issue: 2021-10-18	Print Date: 2022-10-15
----------------	------------------------------	-------------------------------------------------------------------	---------------------------

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 51 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202

Toxicity to algae/aquatic plants : EC50 (Desmodesmus subspicatus (green algae)): > 100 mg/l  
Exposure time: 72 h  
Test Type: static test  
Method: OECD Test Guideline 201

**Persistence and degradability**

**Product:**

Biodegradability : Remarks: No data available

Physico-chemical removability : Remarks: No data available

**Components:**

**Distillates (petroleum), hydrotreated heavy paraffinic:**

Biodegradability : aerobic  
Inoculum: activated sludge  
Result: Not rapidly biodegradable  
Biodegradation: 3 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B  
GLP: yes

**Distillates (petroleum), hydrotreated light paraffinic:**

Biodegradability : Result: not rapidly degradable  
Biodegradation: 31 %  
Exposure time: 28 d

**Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:**

Biodegradability : aerobic  
Inoculum: activated sludge  
Result: Not rapidly biodegradable  
Biodegradation: 1 %  
Exposure time: 28 d  
Method: OECD Test Guideline 301B  
GLP: yes

**TM-10**

Version 2.0	Revision Date: 2022-10-14	Date of last issue: 2021-10-18 Date of first issue: 2021-10-18	Print Date: 2022-10-15
----------------	------------------------------	-------------------------------------------------------------------	---------------------------

**Bioaccumulative potential**

**Product:**

Bioaccumulation : Remarks: This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT). This mixture contains no substance considered to be very persistent and very bioaccumulating (vPvB).

**Components:**

**Distillates (petroleum), hydrotreated heavy paraffinic:**

Partition coefficient: n-octanol/water : log Pow: > 2

**Distillates (petroleum), hydrotreated light paraffinic:**

Partition coefficient: n-octanol/water : Pow: > 6  
Remarks: Information given is based on data obtained from similar substances.

**Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene:**

Partition coefficient: n-octanol/water : log Pow: > 5

**Mobility in soil**

**Product:**

Mobility : Remarks: No data available

Distribution among environmental compartments : Remarks: No data available

**Other adverse effects**

**Product:**

Additional ecological information : Harmful to aquatic life with long lasting effects.

**Components:**

**Distillates (petroleum), hydrotreated heavy paraffinic:**

Results of PBT and vPvB assessment : Non-classified vPvB substance Non-classified PBT substance

**TM-10**

Version 2.0	Revision Date: 2022-10-14	Date of last issue: 2021-10-18 Date of first issue: 2021-10-18	Print Date: 2022-10-15
----------------	------------------------------	-------------------------------------------------------------------	---------------------------

**Distillates (petroleum), hydrotreated light paraffinic:**

Results of PBT and vPvB assessment : Non-classified PBT substance Non-classified vPvB substance

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**SECTION 13. DISPOSAL CONSIDERATIONS**

**Disposal methods**

- Waste from residues : The product should not be allowed to enter drains, water courses or the soil.  
Do not dispose of with domestic refuse.  
Dispose of as hazardous waste in compliance with local and national regulations.
- Contaminated packaging : Packaging that is not properly emptied must be disposed of as the unused product.  
Dispose of waste product or used containers according to local regulations.

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**SECTION 14. TRANSPORT INFORMATION**

**International Regulations**

**UNRTDG**

Not regulated as a dangerous good

**IATA-DGR**

Not regulated as a dangerous good

**IMDG-Code**

Not regulated as a dangerous good

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable for product as supplied.

**National Regulations**

**TDG**

Not regulated as a dangerous good

**Special precautions for user**

Not applicable

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**SECTION 15. REGULATORY INFORMATION**

- NPRI Components** : Canadian National Pollutant Release Inventory (NPRI): No component is listed on NPRI.



**TM-10**

Version	Revision Date:	Date of last issue: 2021-10-18	Print Date:
2.0	2022-10-14	Date of first issue: 2021-10-18	2022-10-15

**Canadian lists**

No substances are subject to a Significant New Activity Notification.

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**SECTION 16. OTHER INFORMATION**

**Full text of other abbreviations**

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
CA AB OEL : Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)  
CA BC OEL : Canada. British Columbia OEL  
CA QC OEL : Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants  
ACGIH / TWA : 8-hour, time-weighted average  
CA AB OEL / TWA : 8-hour Occupational exposure limit  
CA AB OEL / STEL : 15-minute occupational exposure limit  
CA BC OEL / TWA : 8-hour time weighted average  
CA QC OEL / TWAEV : Time-weighted average exposure value  
CA QC OEL / STEV : Short-term exposure value

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United

**TM-10**

Version	Revision Date:	Date of last issue: 2021-10-18	Print Date:
2.0	2022-10-14	Date of first issue: 2021-10-18	2022-10-15

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Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

Revision Date : 2022-10-14  
Date format : mm/dd/yyyy

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