HHS 2000, Adhesive synthetic lubricating oil, 397 g

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	03/22/2024	11365632-00001	Date of first issue: 03/22/2024

SECTION 1. IDENTIFICATION

Product name	:	HHS 2000, Adhesive synthetic lubricating oil, 397 g
Product code	:	893.1060
Other means of identification	:	No data available

Manufacturer or supplier's details

Company name of supplier	:	Würth Canada Limited
Address	:	345 Hanlon Creek Blvd GUELPH, ON N1C 0A1
Telephone	:	+1 (905) 564 6225
Telefax	:	+1 (905) 564 3671
Emergency telephone	:	Emergencies involving a spill, fire, explosion or exposure: CHEMTREC (24/7): 1-800-424-9300 Transport related emergencies: CANUTEC (24/7): 1-613-996-6666 or * 666 (cell) Urgences impliquant un déversement, incendie, explosion ou exposition: CHEMTREC (24/7): 1-800-424-9300 Urgences liées au transport: CANUTEC (24/7): 1-613-996-6666 ou * 666 (cellulaire)
E-mail address	:	prodsafe@wurth.ca

Recommended use of the chemical and restrictions on use

Recommended use	:	Lubricant
Restrictions on use	:	Not applicable

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Aerosols	:	Category 1
Skin irritation	:	Category 2
Eye irritation	:	Category 2A
Skin sensitization	:	Category 1

Reproductive toxicity	:	Category 2
Specific target organ toxicity - single exposure	:	Category 3

GHS label elements

Hazard pictograms :

Signal Word : Danger

Hazard Statements :
H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H361f Suspected of damaging fertility.

Precautionary Statements :

Prevention:

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
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.
P251 Do not pierce or burn, even after use.
P261 Avoid breathing spray.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing should not be allowed out of the workplace.
P280 Wear protective gloves, protective clothing, eye protection and face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a doctor if you feel unwell.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical attention.
P333 + P313 If skin irritation or rash occurs: Get medical attention.
P337 + P313 If eye irritation persists: Get medical attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Storage:

P405 Store locked up.
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C (122 °F).

Disposal:

P501 Dispose of contents and container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Residual oils (petroleum), hydrotreated	No data available	64742-57-0	>= 10 - < 30 *
Acetone	2-Propanone	67-64-1	>= 10 - < 30 *
Distillates (petroleum), hydrotreated heavy paraffinic	No data available	Not Assigned	>= 10 - < 30 *
Isobutane	Propane, 2-methyl-	75-28-5	>= 10 - < 30 *
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	Naphtha (petroleum), hydrotreated light	Not Assigned	>= 1 - < 5 *
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	Heptane, branched, cyclic and linear	64742-49-0	>= 1 - < 5 *
Propane	Dimethylmethane	74-98-6	>= 1 - < 5 *
Carbon dioxide	Carbonic anhydride	124-38-9	>= 1 - < 5 *
Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts	No data available	68584-23-6	>= 0.1 - < 1 *
Benzenamine, N-phenyl-, reaction products with 2,4,4-trimethylpentene	4-(2,2,3-Trimethylbut-3-en-1-yl)-N-[4-(2,2,3-trimethylbut-3-en-1-yl)phenyl]aniline	68411-46-1	>= 0.1 - < 1 *

* Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

General advice	:	In the case of accident or if you feel unwell, seek medical advice immediately. When symptoms persist or in all cases of doubt seek medical advice.
If inhaled	:	If inhaled, remove to fresh air. Get medical attention.
In case of skin contact	:	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
In case of eye contact	:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. If easy to do, remove contact lens, if worn. Get medical attention.
If swallowed	:	If swallowed, DO NOT induce vomiting. Get medical attention. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed	:	Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause drowsiness or dizziness. Suspected of damaging fertility.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).
Notes to physician	:	Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire fighting	:	Flash back possible over considerable distance. Vapors may form explosive mixtures with air. Exposure to combustion products may be a hazard to health. If the temperature rises there is danger of the vessels bursting

due to the high vapor pressure.

Hazardous combustion products	:	Carbon oxides
Specific extinguishing methods	:	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers. Remove undamaged containers from fire area if it is safe to do so. Evacuate area.
Special protective equipment for fire-fighters	:	In the event of fire, wear self-contained breathing apparatus. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Remove all sources of ignition. Use personal protective equipment. Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).
Environmental precautions	:	Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prevent spreading over a wide area (e.g., by containment or oil barriers). Retain and dispose of contaminated wash water. Local authorities should be advised if significant spillages cannot be contained.
Methods and materials for containment and cleaning up	:	Non-sparking tools should be used. Soak up with inert absorbent material. Suppress (knock down) gases/vapors/mists with a water spray jet. For large spills, provide diking or other appropriate containment to keep material from spreading. If diked material can be pumped, store recovered material in appropriate container. Clean up remaining materials from spill with suitable absorbent. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable. Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

SECTION 7. HANDLING AND STORAGE

Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation	:	If sufficient ventilation is unavailable, use with local exhaust ventilation. If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.
Advice on safe handling	:	Do not get on skin or clothing. Avoid breathing spray. Do not swallow. Do not get in eyes. Wash skin thoroughly after handling. Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Take precautionary measures against static discharges. Take care to prevent spills, waste and minimize release to the environment. Do not spray on an open flame or other ignition source.
Conditions for safe storage	:	Store locked up. Keep in a cool, well-ventilated place. Store in accordance with the particular national regulations. Do not pierce or burn, even after use. Keep cool. Protect from sunlight.
Materials to avoid	:	Do not store with the following product types: Self-reactive substances and mixtures Organic peroxides Oxidizing agents Flammable solids Pyrophoric liquids Pyrophoric solids Self-heating substances and mixtures Substances and mixtures which in contact with water emit flammable gases Explosives Gases
Recommended storage temperature	:	< 40 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Residual oils (petroleum), hy-	64742-57-0	TWA (Mist)	5 mg/m³	CA AB OEL

drotreated				
		STEL (Mist)	10 mg/m³	CA AB OEL
		TWA (Mist)	1 mg/m³	CA BC OEL
		TWA (Inhalable particulate matter)	5 mg/m³	ACGIH
Acetone	67-64-1	TWA	500 ppm 1,200 mg/m³	CA AB OEL
		STEL	750 ppm 1,800 mg/m³	CA AB OEL
		TWA	250 ppm	CA BC OEL
		STEL	500 ppm	CA BC OEL
		TWAEV	250 ppm	CA QC OEL
		STEV	500 ppm	CA QC OEL
		TWA	250 ppm	ACGIH
		STEL	500 ppm	ACGIH
Distillates (petroleum), hydrotreated heavy paraffinic	Not Assigned	TWA (Mist)	5 mg/m³	CA AB OEL
		STEL (Mist)	10 mg/m³	CA AB OEL
		TWAEV (Mist - Inhalable dust)	5 mg/m³	CA QC OEL
		TWA (Mist)	1 mg/m³	CA BC OEL
		TWA (Inhalable particulate matter)	5 mg/m³	ACGIH
Isobutane	75-28-5	TWA	1,000 ppm	CA AB OEL
		STEL	1,000 ppm	CA BC OEL
		STEL	1,000 ppm	ACGIH
Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane	Not Assigned	STEL	1,000 ppm 3,500 mg/m³	CA AB OEL
		TWA	500 ppm 1,760 mg/m³	CA AB OEL
		STEV	1,000 ppm 3,500 mg/m³	CA QC OEL
		TWAEV	500 ppm 1,760 mg/m³	CA QC OEL
		TWA	200 ppm	CA BC OEL
		TWA	500 ppm	ACGIH
		STEL	1,000 ppm	ACGIH
Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics	64742-49-0	TWA	400 ppm	CA BC OEL
		STEL	500 ppm	CA BC OEL
		TWA	400 ppm 1,640 mg/m³	CA AB OEL
		STEL	500 ppm 2,050 mg/m³	CA AB OEL
		TWAEV (Mist - Inhalable	5 mg/m³	CA QC OEL

		dust)		
		TWA	400 ppm	ACGIH
		STEL	500 ppm	ACGIH
Propane	74-98-6	TWA	1,000 ppm	CA AB OEL
		TWAEV	1,000 ppm 1,800 mg/m³	CA QC OEL
Carbon dioxide	124-38-9	TWA	5,000 ppm 9,000 mg/m³	CA AB OEL
		STEL	30,000 ppm 54,000 mg/m³	CA AB OEL
		TWA	5,000 ppm	CA BC OEL
		STEL	15,000 ppm	CA BC OEL
		STEV	30,000 ppm 54,000 mg/m³	CA QC OEL
		TWAEV	5,000 ppm 9,000 mg/m³	CA QC OEL
		TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sam-pling time	Permissible concentra-tion	Basis
Acetone	67-64-1	Acetone	Urine	End of shift (As soon as possible after exposure ceases)	25 mg/l	ACGIH BEI

Engineering measures : Minimize workplace exposure concentrations.
If sufficient ventilation is unavailable, use with local exhaust ventilation.
If advised by assessment of the local exposure potential, use only in an area equipped with explosion-proof exhaust ventilation.

Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Self-contained breathing apparatus

Hand protection
Material : Nitrile rubber
Break through time : 480 min
Glove thickness : 0.45 mm

Remarks	:	Choose gloves to protect hands against chemicals depending on the concentration specific to place of work. For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove manufacturer. Wash hands before breaks and at the end of workday.
Eye protection	:	Wear the following personal protective equipment: Safety goggles
Skin and body protection	:	Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential. Wear the following personal protective equipment: If assessment demonstrates that there is a risk of explosive atmospheres or flash fires, use flame retardant antistatic protective clothing. Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).
Hygiene measures	:	If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place. When using do not eat, drink or smoke. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Aerosol containing a dissolved gas
Propellant	:	Isobutane, Propane, Carbon dioxide, Butane
Color	:	yellow, cloudy
Odor	:	characteristic
Odor Threshold	:	No data available
pH	:	substance/mixture is non-soluble (in water)
Melting point/freezing point	:	No data available
Initial boiling point and boiling range	:	56 °C

Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Extremely flammable aerosol.
Upper explosion limit / Upper flammability limit	:	14.3 %(V)
Lower explosion limit / Lower flammability limit	:	0.6 %(V)
Vapor pressure	:	Not applicable
Relative vapor density	:	Not applicable
Density	:	0.83 g/cm³ (20 °C) Method: DIN 51757
Solubility(ies) Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity Viscosity, kinematic	:	Not applicable
Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Particle characteristics Particle size	:	Not applicable

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Not classified as a reactivity hazard.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Extremely flammable aerosol. Vapors may form explosive mixture with air. If the temperature rises there is danger of the vessels bursting

due to the high vapor pressure.
Can react with strong oxidizing agents.

Conditions to avoid	:	Heat, flames and sparks.
Incompatible materials	:	Oxidizing agents
Hazardous decomposition products	:	No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Skin contact
Ingestion
Eye contact

Acute toxicity

Not classified based on available information.

Product:

Acute inhalation toxicity	:	Acute toxicity estimate: > 20 mg/l Exposure time: 4 h Test atmosphere: vapor Method: Calculation method

Components:

Residual oils (petroleum), hydrotreated:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401 Remarks: Based on data from similar materials
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 Remarks: Based on data from similar materials
Acute dermal toxicity	:	LD50 (Rabbit): > 5,000 mg/kg Method: OECD Test Guideline 402

Acetone:

Acute oral toxicity	:	LD50 (Rat): 5,800 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): 76 mg/l Exposure time: 4 h Test atmosphere: vapor

Acute dermal toxicity : LD50 (Rabbit): 7,426 mg/kg

Distillates (petroleum), hydrotreated heavy paraffinic:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

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
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Method: OECD Test Guideline 402
Remarks: Based on data from similar materials

Isobutane:

Acute inhalation toxicity : LC50 (Mouse): 260200 ppm
Exposure time: 4 h
Test atmosphere: gas

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 25.2 mg/l
Exposure time: 4 h
Test atmosphere: vapor

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Acute oral toxicity : LD50 (Rat): > 5,840 mg/kg
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 23.3 mg/l
Exposure time: 4 h
Test atmosphere: vapor
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rat): > 2,800 mg/kg
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Propane:

Acute inhalation toxicity : LC50 (Rat): > 800000 ppm
Exposure time: 15 min
Test atmosphere: gas

Carbon dioxide:

Acute inhalation toxicity : LC50 (Rat): 40000 - 50000 ppm
Exposure time: 30 min
Test atmosphere: vapor

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg
Method: OECD Test Guideline 401
Remarks: Based on data from similar materials

Acute inhalation toxicity : LC50 (Rat): > 1.9 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403
Remarks: Based on data from similar materials

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg
Remarks: Based on data from similar materials

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
Assessment: The substance or mixture has no acute dermal toxicity

Skin corrosion/irritation

Causes skin irritation.

Components:

Residual oils (petroleum), hydrotreated:

Species : Rabbit
Result : No skin irritation

Acetone:

Assessment : Repeated exposure may cause skin dryness or cracking.

Distillates (petroleum), hydrotreated heavy paraffinic:

Species : Rabbit
Result : No skin irritation
Remarks : Based on data from similar materials

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	Skin irritation

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Species	:	Rabbit
Result	:	Skin irritation
Remarks	:	Based on data from similar materials

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	No skin irritation
Remarks	:	Based on data from similar materials

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

Species	:	Rabbit
Method	:	OECD Test Guideline 404
Result	:	Mild skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Components:

Residual oils (petroleum), hydrotreated:

Species	:	Rabbit
Result	:	No eye irritation

Acetone:

Species	:	Rabbit
Result	:	Irritation to eyes, reversing within 21 days
Method	:	OECD Test Guideline 405

Distillates (petroleum), hydrotreated heavy paraffinic:

Species	:	Rabbit
Result	:	No eye irritation
Method	:	OECD Test Guideline 405
Remarks	:	Based on data from similar materials

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Species	:	Rabbit
Result	:	No eye irritation

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Species	:	Rabbit
Result	:	No eye irritation
Remarks	:	Based on data from similar materials

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

Species	:	Rabbit
Result	:	No eye irritation
Method	:	OPPTS 870.2400
Remarks	:	Based on data from similar materials

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

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

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Components:

Residual oils (petroleum), hydrotreated:

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	negative

Acetone:

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	negative

Distillates (petroleum), hydrotreated heavy paraffinic:

Test Type	:	Buehler Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative
Remarks	:	Based on data from similar materials

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Test Type	:	Buehler Test

Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	negative

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Result	:	negative
Remarks	:	Based on data from similar materials

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

Test Type	:	Human repeat insult patch test (HRIPT)
Routes of exposure	:	Skin contact
Species	:	Humans
Result	:	positive
Remarks	:	Based on data from similar materials
Assessment	:	Probability or evidence of skin sensitization in humans

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

Test Type	:	Maximization Test
Routes of exposure	:	Skin contact
Species	:	Guinea pig
Method	:	OECD Test Guideline 406
Result	:	negative

Germ cell mutagenicity

Not classified based on available information.

Components:

Residual oils (petroleum), hydrotreated:

Genotoxicity in vitro	:	Test Type: In vitro mammalian cell gene mutation test Method: OECD Test Guideline 476 Result: negative
Genotoxicity in vivo	:	Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay) Species: Mouse Application Route: Intraperitoneal injection Method: OECD Test Guideline 474 Result: negative

Acetone:

Genotoxicity in vitro	:	Test Type: In vitro mammalian cell gene mutation test Result: negative Test Type: Bacterial reverse mutation assay (AMES)

Result: negative

Test Type: Chromosome aberration test in vitro
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Result: negative

Distillates (petroleum), hydrotreated heavy paraffinic:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Intraperitoneal injection
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

Isobutane:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (vapor)
Method: OPPTS 870.5395
Result: negative

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Genotoxicity in vitro : Test Type: Chromosome aberration test in vitro
Result: negative
Remarks: Based on data from similar materials

Test Type: Bacterial reverse mutation assay (AMES)
Result: negative
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative
Remarks: Based on data from similar materials

Propane:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Result: negative

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 474
Result: negative

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)
Method: OECD Test Guideline 471
Result: negative
Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test
Method: OECD Test Guideline 476
Result: negative
Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro
Method: OECD Test Guideline 473
Result: negative
Remarks: Based on data from similar materials

Genotoxicity in vivo : Test Type: Mammalian erythrocyte micronucleus test (in vivo cytogenetic assay)
Species: Mouse
Application Route: Ingestion
Method: OECD Test Guideline 474
Result: negative
Remarks: Based on data from similar materials

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

Genotoxicity in vitro : Test Type: Bacterial reverse mutation assay (AMES)

Method: OECD Test Guideline 471
Result: negative

Carcinogenicity

Not classified based on available information.

Components:

Residual oils (petroleum), hydrotreated:

Species	:	Mouse
Application Route	:	Skin contact
Exposure time	:	78 weeks
Result	:	negative

Acetone:

Species	:	Mouse
Application Route	:	Skin contact
Exposure time	:	424 days
Result	:	negative

Distillates (petroleum), hydrotreated heavy paraffinic:

Species	:	Mouse
Application Route	:	Skin contact
Exposure time	:	78 weeks
Method	:	OECD Test Guideline 451
Result	:	negative
Remarks	:	Based on data from similar materials
Carcinogenicity - Assessment	:	Classified based on DMSO extract content < 3% (Regulation (EC) 1272/2008, Annex VI, Part 3, Note L)

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Species	:	Mouse
Application Route	:	Skin contact
Exposure time	:	102 weeks
Result	:	negative

Reproductive toxicity

Suspected of damaging fertility.

Components:

Residual oils (petroleum), hydrotreated:

Effects on fertility	:	Test Type: Reproduction/Developmental toxicity screening test Species: Rat

Application Route: Ingestion
Method: OECD Test Guideline 421
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Skin contact
Result: negative

Acetone:

Effects on fertility : Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Distillates (petroleum), hydrotreated heavy paraffinic:

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: Skin contact
Method: OECD Test Guideline 414
Result: negative
Remarks: Based on data from similar materials

Isobutane:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Inhalation
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 422
Result: negative

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Effects on fetal development : Test Type: Embryo-fetal development
Species: Rat
Application Route: inhalation (vapor)
Result: negative

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Effects on fertility : Test Type: Two-generation reproduction toxicity study
Species: Rat
Application Route: inhalation (vapor)
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: Fertility/early embryonic development
Species: Rat
Application Route: inhalation (vapor)
Result: negative
Remarks: Based on data from similar materials

Propane:

Effects on fertility : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 422
Result: negative

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: inhalation (gas)
Method: OECD Test Guideline 422
Result: negative

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

Effects on fertility : Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 415
Result: negative
Remarks: Based on data from similar materials

Effects on fetal development : Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion

Method: OECD Test Guideline 415
Result: negative
Remarks: Based on data from similar materials

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

Effects on fertility : Test Type: One-generation reproduction toxicity study
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 443
Result: positive

Effects on fetal development : Test Type: Combined repeated dose toxicity study with the reproduction/developmental toxicity screening test
Species: Rat
Application Route: Ingestion
Method: OECD Test Guideline 422
Result: negative

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

STOT-single exposure

May cause drowsiness or dizziness.

Components:

Acetone:

Assessment : May cause drowsiness or dizziness.

Isobutane:

Assessment : May cause drowsiness or dizziness.

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Assessment : May cause drowsiness or dizziness.

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Assessment : May cause drowsiness or dizziness.

Propane:

Assessment : May cause drowsiness or dizziness.

STOT-repeated exposure

Not classified based on available information.

Components:

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

Assessment : No significant health effects observed in animals at concentra-

tions of 100 mg/kg bw or less.

Repeated dose toxicity

Components:

Residual oils (petroleum), hydrotreated:

Species	:	Rat
NOAEL	:	> 2,000 mg/kg
Application Route	:	Skin contact
Exposure time	:	13 Weeks
Method	:	OECD Test Guideline 411

Acetone:

Species	:	Rat
NOAEL	:	900 mg/kg
LOAEL	:	1,700 mg/kg
Application Route	:	Ingestion
Exposure time	:	90 Days

Species	:	Rat
NOAEL	:	45 mg/l
Application Route	:	inhalation (vapor)
Exposure time	:	8 Weeks

Distillates (petroleum), hydrotreated heavy paraffinic:

Species	:	Rabbit
NOAEL	:	1,000 mg/kg
Application Route	:	Skin contact
Exposure time	:	4 Weeks
Method	:	OECD Test Guideline 410
Remarks	:	Based on data from similar materials

Species	:	Rat
NOAEL	:	> 980 mg/m³
Application Route	:	inhalation (dust/mist/fume)
Exposure time	:	4 Weeks

Isobutane:

Species	:	Rat
NOAEL	:	9000 ppm
Application Route	:	inhalation (gas)
Exposure time	:	6 Weeks
Method	:	OECD Test Guideline 422

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Species	:	Rat
NOAEL	:	> 20 mg/l
Application Route	:	inhalation (vapor)

Exposure time : 13 Weeks

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Species : Rat
NOAEL : 12.47 mg/l
Application Route : Inhalation
Exposure time : 90 Days
Remarks : Based on data from similar materials

Propane:

Species : Rat
NOAEL : 7.214 mg/l
Application Route : inhalation (gas)
Exposure time : 6 Weeks
Method : OECD Test Guideline 422

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

Species : Rat
NOAEL : > 300 mg/kg
Application Route : Ingestion
Exposure time : 29 Days
Method : OECD Test Guideline 407
Remarks : Based on data from similar materials

Species : Rat
NOAEL : > 600 mg/kg
Application Route : Skin contact
Exposure time : 28 Days
Method : OECD Test Guideline 410
Remarks : Based on data from similar materials

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

Species : Rat
NOAEL : 25 mg/kg
LOAEL : 75 mg/kg
Application Route : Ingestion
Exposure time : 53 Days
Method : OECD Test Guideline 422

Aspiration toxicity

Not classified based on available information.

Components:

Acetone:

The substance or mixture causes concern owing to the assumption that it causes a human aspiration toxicity hazard.

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:
The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:
The substance or mixture is known to cause human aspiration toxicity hazards or has to be regarded as if it causes a human aspiration toxicity hazard.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Residual oils (petroleum), hydrotreated:

Toxicity to fish	:	LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 48 h Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	NOEL (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials

Acetone:

Toxicity to fish	:	LC50 (Oncorhynchus mykiss (rainbow trout)): 5,540 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia pulex (Water flea)): 8,800 mg/l Exposure time: 48 h
Toxicity to algae/aquatic plants	:	NOEC (Pseudokirchneriella subcapitata (green algae)): 7,000 mg/l Exposure time: 96 h
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): >= 79 mg/l Exposure time: 21 d Method: OECD Test Guideline 211
Toxicity to microorganisms	:	EC50: 61,150 mg/l Exposure time: 30 min Method: ISO 8192

Distillates (petroleum), hydrotreated heavy paraffinic:

Toxicity to fish	:	LC50 (Pimephales promelas (fathead minnow)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): > 10,000 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 10 mg/l Exposure time: 21 d Method: OECD Test Guideline 211 Remarks: Based on data from similar materials
Toxicity to microorganisms	:	NOEC: > 1.93 mg/l Exposure time: 10 min Method: DIN 38 412 Part 8 Remarks: Based on data from similar materials

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Toxicity to fish	:	LL50 (Pimephales promelas (fathead minnow)): 8.2 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 4.5 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 202 Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	EL50 (Pseudokirchneriella subcapitata (green algae)): 3.1 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 Remarks: Based on data from similar materials NOELR (Pseudokirchneriella subcapitata (green algae)): 0.5 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
Toxicity to daphnia and other	:	NOELR (Daphnia magna (Water flea)): 2.6 mg/l

aquatic invertebrates (Chronic toxicity)		Exposure time: 21 d Method: OECD Test Guideline 211

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): > 13.4 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203 Remarks: No toxicity at the limit of solubility.
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): 3 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 202 Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	:	EL50 (Selenastrum capricornutum (green algae)): > 10 - 100 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 Remarks: Based on data from similar materials NOELR (Selenastrum capricornutum (green algae)): 0.1 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC (Daphnia magna (Water flea)): 0.17 mg/l Exposure time: 21 d Test substance: Water Accommodated Fraction Method: OECD Test Guideline 211 Remarks: Based on data from similar materials

Carbon dioxide:

Toxicity to fish	:	NOEC (Lepomis macrochirus (Bluegill sunfish)): > 100 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	NOEC (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Remarks: Based on data from similar materials

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

Toxicity to fish	:	LL50 (Cyprinodon variegatus (sheepshead minnow)): > 100 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203

Remarks: Based on data from similar materials

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 100 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction
Remarks: Based on data from similar materials

Toxicity to algae/aquatic plants : EL50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction
Remarks: Based on data from similar materials

NOELR (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction
Remarks: Based on data from similar materials

Toxicity to microorganisms : NOEC (activated sludge): > 100 mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Based on data from similar materials

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

Ecotoxicology Assessment

Chronic aquatic toxicity : Harmful to aquatic life with long lasting effects.

Persistence and degradability

Components:

Residual oils (petroleum), hydrotreated:

Biodegradability : Result: Inherently biodegradable.
Biodegradation: 31 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Acetone:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 91 %
Exposure time: 28 d

Distillates (petroleum), hydrotreated heavy paraffinic:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 31 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Isobutane:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 385.5 h
Remarks: Based on data from similar materials

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 77.05 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Biodegradability : Result: Readily biodegradable.
Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

Propane:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 100 %
Exposure time: 385.5 h
Remarks: Based on data from similar materials

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

Biodegradability : Result: Not readily biodegradable.
Method: OECD Test Guideline 301D
Remarks: Based on data from similar materials

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

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 1 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

Bioaccumulative potential

Components:

Acetone:

Partition coefficient: n-octanol/water : log Pow: -0.27 - -0.23

Isobutane:

Partition coefficient: n-octanol/water : log Pow: 2.8

Hydrocarbons, C6-C7, n-alkanes, isoalkanes, cyclics, <5% n-hexane:

Partition coefficient: n-octanol/water : log Pow: 4
Remarks: Based on data from similar materials

Hydrocarbons, C7, n-alkanes, isoalkanes, cyclics:

Partition coefficient: n-octanol/water : log Pow: > 4
Remarks: Based on data from similar materials

Carbon dioxide:

Partition coefficient: n-octanol/water : log Pow: 0.83

Benzenesulfonic acid, C10-16-alkyl derivs., calcium salts:

Partition coefficient: n-octanol/water : log Pow: > 4
Remarks: Expert judgment

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

Partition coefficient: n-octanol/water : log Pow: > 4
Remarks: Calculation

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues : Do not dispose of waste into sewer.

Dispose of in accordance with local regulations.

Contaminated packaging : Please ensure aerosol cans are sprayed completely empty (including propellant)
Empty containers should be taken to an approved waste handling site for recycling or disposal.
Empty containers retain residue and can be dangerous.
Do not pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, or other sources of ignition. They may explode and cause injury and/or death.
If not otherwise specified: Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 1950
Proper shipping name	:	AEROSOLS
Class	:	2.1
Packing group	:	Not assigned by regulation
Labels	:	2.1
Environmentally hazardous	:	no

IATA-DGR

UN/ID No.	:	UN 1950
Proper shipping name	:	Aerosols, flammable
Class	:	2.1
Packing group	:	Not assigned by regulation
Labels	:	Flammable Gas
Packing instruction (cargo aircraft)	:	203
Packing instruction (passenger aircraft)	:	203

IMDG-Code

UN number	:	UN 1950
Proper shipping name	:	AEROSOLS
Class	:	2.1
Packing group	:	Not assigned by regulation
Labels	:	2.1
EmS Code	:	F-D, S-U
Marine pollutant	:	no

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

Not applicable for product as supplied.

Domestic regulation

TDG

UN number	:	UN 1950
Proper shipping name	:	AEROSOLS
Class	:	2.1
Packing group	:	Not assigned by regulation
Labels	:	2.1
ERG Code	:	126
Marine pollutant	:	no

Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15. REGULATORY INFORMATION

Volatile organic compounds (VOC) content

Canada - Volatile Organic Compound Concentration Limits for Certain Products Regulations
VOC content: 25 % / 343 g/l
Remarks: VOC content excluding water and exempt com-

pounds

The ingredients of this product are reported in the following inventories:

DSL : All chemical substances in this product comply with the CEPA 1999 and NSNR and are on or exempt from listing on the Canadian Domestic Substances List (DSL).

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
ACGIH BEI	:	ACGIH - Biological Exposure Indices (BEI)
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
ACGIH / STEL	:	Short-term exposure limit
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 BC OEL / STEL	:	short-term exposure limit
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 Substanc-

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

Sources of key data used to compile the Material Safety Data Sheet	:	Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, http://echa.europa.eu/
Revision Date	:	03/22/2024
Date format	:	mm/dd/yyyy

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user’s end product, if applicable.

CA / Z8