

Multi-purpose additive for petrol fuel

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2.0	09/27/2018	896246-00005	Date of first issue: 12/22/2016

SECTION 1. IDENTIFICATION

Product name : Multi-purpose additive for petrol fuel

Product code : G 001770A2

Other means of identification : No data available

Manufacturer or supplier's details

Company name of supplier : Volkswagen Canada, Inc.

Address : 777 Bayly Street West
Ajax Ontario Canada, L1S 7G7

Telephone : 248 754 4944

Telefax : 248 754 4943

Emergency telephone : 631 996 6666

Recommended use of the chemical and restrictions on use

Recommended use : Fuel additive

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Flammable liquids : Category 4

Skin irritation : Category 2

Specific target organ
systemic toxicity - repeated
exposure : Category 1 (Central nervous system)

GHS label elements

Hazard pictograms : 

Signal Word : Danger

Hazard Statements : H227 Combustible liquid.
H315 Causes skin irritation.
H372 Causes damage to organs (Central nervous system)
through prolonged or repeated exposure.

Precautionary Statements : **Prevention:**
P210 Keep away from heat, hot surfaces, sparks, open flames

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and other ignition sources. No smoking.
P260 Do not breathe mist or vapors.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of water.
P314 Get medical advice/ attention if you feel unwell.
P332 + P313 If skin irritation occurs: Get medical advice/ attention.
P362 + P364 Take off contaminated clothing and wash it before reuse.

Disposal:

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

Other hazards

Vapors may form explosive mixture with air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
1-Propene, 2-methyl-, homopolymer, hydroformylation products, reaction products with ammonia	337367-30-3	$\geq 30 - < 60$
Hydrocarbons, C10-C13, n-alkanes, < 2% aromatics	Not Assigned	$\geq 10 - < 30$
Hydrodesulfurized kerosene (petroleum)	64742-81-0	$\geq 1 - < 5$
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%)	64742-82-1	$\geq 1 - < 5$
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	64742-48-9	$\geq 1 - < 5$
Hydrocarbons, C10, aromatics, <1% naphthalene	64742-94-5	$\geq 1 - < 5$

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 if symptoms occur.

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- | | | |
|---|---|--|
| 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 | : | Flush eyes with water as a precaution.
Get medical attention if irritation develops and persists. |
| If swallowed | : | If swallowed, DO NOT induce vomiting.
Get medical attention if symptoms occur.
Rinse mouth thoroughly with water. |
| Most important symptoms and effects, both acute and delayed | : | Causes skin irritation.
Causes damage to organs through prolonged or repeated exposure. |
| 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. |
| Notes to physician | : | Treat symptomatically and supportively. |
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SECTION 5. FIRE-FIGHTING MEASURES

- | | | |
|--|---|---|
| Suitable extinguishing media | : | Water spray
Alcohol-resistant foam
Carbon dioxide (CO ₂)
Dry chemical |
| Unsuitable extinguishing media | : | High volume water jet |
| Specific hazards during fire fighting | : | Do not use a solid water stream as it may scatter and spread fire.
Flash back possible over considerable distance.
Vapors may form explosive mixtures with air.
Exposure to combustion products may be a hazard to health. |
| Hazardous combustion products | : | Carbon oxides
Nitrogen oxides (NO _x) |
| 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. |

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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 and personal protective equipment recommendations.
- Environmental precautions : Discharge into the environment must be avoided.
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 : Use with local exhaust ventilation.
- Advice on safe handling : Do not get on skin or clothing.
Avoid inhalation of vapor or mist.
Do not swallow.
Avoid contact with eyes.
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment
Keep container tightly closed.
Keep away from heat and sources of ignition.
Take precautionary measures against static discharges.
Take care to prevent spills, waste and minimize release to the environment.
- Conditions for safe storage : Keep in properly labeled containers.
Keep tightly closed.

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Keep in a cool, well-ventilated place.
 Store in accordance with the particular national regulations.
 Keep away from heat and sources of ignition.

Materials to avoid : Do not store with the following product types:
 Strong oxidizing agents
 Organic peroxides
 Explosives
 Gases

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Hydrocarbons, C10-C13, n-alkanes, < 2% aromatics	Not Assigned	TWA (Mist)	5 mg/m ³	CA AB OEL
		STEL (Mist)	10 mg/m ³	CA AB OEL
		TWAEV (Mist)	5 mg/m ³	CA QC OEL
		STEV (Mist)	10 mg/m ³	CA QC OEL
		TWA (Mist)	1 mg/m ³	CA BC OEL
Hydrodesulfurized kerosene (petroleum)	64742-81-0	TWA (Inhalable fraction)	5 mg/m ³	ACGIH
		TWA	200 mg/m ³ (total hydrocarbon vapor)	CA AB OEL
		TWA	525 mg/m ³	CA ON OEL
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics	64742-48-9	TWA	525 mg/m ³	CA ON OEL
		TWA (Mist)	5 mg/m ³	CA AB OEL
		STEL (Mist)	10 mg/m ³	CA AB OEL
		TWAEV (Mist)	5 mg/m ³	CA QC OEL
		STEV (Mist)	10 mg/m ³	CA QC OEL
Hydrocarbons, C10, aromatics, <1% naphthalene	64742-94-5	TWA (Mist)	1 mg/m ³	CA BC OEL
		TWA (Inhalable fraction)	5 mg/m ³	ACGIH
		TWA	200 mg/m ³ (total hydrocarbon vapor)	CA AB OEL

Engineering measures : Ensure adequate ventilation, especially in confined areas.
 Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust

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ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines.

Filter type : Combined particulates and organic vapor type

Hand protection

Material : Fluorinated rubber
Break through time : > 480 min
Glove thickness : 0.7 mm
Directive : DIN EN 374
Protective index : Class 6

Material : Polyethylene
Break through time : > 480 min
Glove thickness : 0.1 mm
Directive : DIN EN 374
Protective index : Class 6

Material : Nitrile rubber
Break through time : > 30 min
Glove thickness : 0.1 mm
Directive : DIN EN 374
Protective index : Class 2

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 glasses

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:
Flame retardant antistatic protective clothing, unless assessment demonstrates that the risk of explosive atmospheres or flash fires is low
Skin contact must be avoided by using impervious protective clothing (gloves, aprons, boots, etc).

Hygiene measures : Ensure that eye flushing systems and safety showers are located close to the working place.
When using do not eat, drink or smoke.
Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

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Color	:	yellow
Odor	:	slight
Odor Threshold	:	No data available
pH	:	No data available
Melting point/freezing point	:	No data available
Solidification / Setting point	:	< -30 °C
Initial boiling point and boiling range	:	> 100 - < 200 °C
Flash point	:	> 60 - < 70 °C Method: ISO 2719
Evaporation rate	:	No data available
Flammability (solid, gas)	:	Not applicable
Flammability (liquids)	:	No data available
Upper explosion limit / Upper flammability limit	:	ca. 4.1 %(V) (20 °C) Method: DIN 51649
Lower explosion limit / Lower flammability limit	:	ca. 0.7 %(V) (20 °C) Method: DIN 51649
Vapor pressure	:	< 1 mbar (20 °C) ca. 4 mbar (50 °C)
Relative vapor density	:	No data available
Density	:	0.8759 g/cm ³ (20 °C)
Solubility(ies) Water solubility	:	insoluble (15 °C)
Partition coefficient: n-octanol/water	:	Not applicable
Autoignition temperature	:	> 200 °C Method: DIN 51794
Decomposition temperature	:	No data available
Viscosity Viscosity, kinematic	:	ca. 70 mm ² /s (20 °C) Method: DIN 51562

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Explosive properties	:	Not explosive
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
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	:	Combustible liquid. Vapors may form explosive mixture with air. 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.

Components:**Hydrocarbons, C10-C13, n-alkanes, < 2% aromatics:**

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	:	LC50 (Rat): > 5.6 mg/l Exposure time: 4 h Test atmosphere: dust/mist Assessment: The substance or mixture has no acute inhalation toxicity
	:	LC50 (Rat): > 4.95 mg/l Exposure time: 4 h Test atmosphere: vapor Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	LD50 (Rat): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

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Hydrodesulfurized kerosene (petroleum):

Acute oral toxicity	: LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	: LC50 (Rat): > 5.28 mg/l Exposure time: 4 h Test atmosphere: vapor
Acute dermal toxicity	: LD50 (Rabbit): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Acute oral toxicity	: LD50 (Rat): > 5,000 mg/kg
Acute inhalation toxicity	: LC50 (Rat): > 13.1 mg/l Exposure time: 4 h Test atmosphere: vapor Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	: LD50 (Rat): > 3,500 mg/kg Assessment: The substance or mixture has no acute dermal toxicity

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Acute oral toxicity	: LD50 (Rat): > 5,000 mg/kg Remarks: Based on data from similar materials
Acute inhalation toxicity	: LC50 (Rat): > 4,951 mg/m ³ Exposure time: 4 h Test atmosphere: vapor Assessment: The substance or mixture has no acute inhalation toxicity Remarks: Based on data from similar materials
Acute dermal toxicity	: LD50 (Rabbit): >= 3,160 mg/kg Assessment: The substance or mixture has no acute dermal toxicity Remarks: Based on data from similar materials

Hydrocarbons, C10, aromatics, <1% naphthalene:

Acute oral toxicity	: LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 420 Remarks: Based on data from similar materials
Acute inhalation toxicity	: LC50 (Rat): > 4.778 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Remarks: Based on data from similar materials

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Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: The substance or mixture has no acute dermal toxicity
Remarks: Based on data from similar materials

Skin corrosion/irritation

Causes skin irritation.

Components:

1-Propene, 2-methyl-, homopolymer, hydroformylation products, reaction products with ammonia:

Result : Skin irritation

Hydrocarbons, C10-C13, n-alkanes, < 2% aromatics:

Assessment : Repeated exposure may cause skin dryness or cracking.

Hydrodesulfurized kerosene (petroleum):

Species : Rabbit

Result : Skin irritation

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Species : Rabbit

Method : OECD Test Guideline 404

Result : No skin irritation

Assessment : Repeated exposure may cause skin dryness or cracking.

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Species : Rabbit

Result : Mild skin irritation

Assessment : Repeated exposure may cause skin dryness or cracking.

Hydrocarbons, C10, aromatics, <1% naphthalene:

Assessment : Repeated exposure may cause skin dryness or cracking.

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Hydrocarbons, C10-C13, n-alkanes, < 2% aromatics:

Species : Rabbit

Result : No eye irritation

Method : OECD Test Guideline 405

Hydrodesulfurized kerosene (petroleum):

Species : Rabbit

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Result : No eye irritation

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

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

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics ,<2% aromatics:

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

Hydrocarbons, C10, aromatics, <1% naphthalene :

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

Respiratory or skin sensitization**Skin sensitization**

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Components:**Hydrocarbons, C10-C13, n-alkanes, < 2% aromatics:**

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

Hydrosulfurized kerosene (petroleum):

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

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

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

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics ,<2% aromatics:

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

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Result	: negative
Remarks	: Based on data from similar materials

Hydrocarbons, C10, aromatics, <1% naphthalene:

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

Germ cell mutagenicity

Not classified based on available information.

Components:**Hydrocarbons, C10-C13, n-alkanes, < 2% aromatics:**

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: Ingestion Method: OECD Test Guideline 474 Result: negative

Hydrodesulfurized kerosene (petroleum):

Genotoxicity in vitro	: Test Type: In vitro mammalian cell gene mutation test Result: negative Test Type: Bacterial reverse mutation assay (AMES) Result: negative
Genotoxicity in vivo	: Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis) Species: Rat Application Route: Intraperitoneal injection Result: negative

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Genotoxicity in vitro	: 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

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Genotoxicity in vitro	: Test Type: In vitro mammalian cell gene mutation test
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	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
	Result: negative

Hydrocarbons, C10, aromatics, <1% naphthalene:

Genotoxicity in vitro	: Test Type: In vitro sister chromatid exchange assay in mammalian cells
	Result: negative
	Remarks: Based on data from similar materials
Genotoxicity in vivo	: Test Type: Mutagenicity (in vivo mammalian bone-marrow cytogenetic test, chromosomal analysis)
	Species: Rat
	Application Route: inhalation (vapor)
	Result: negative
	Remarks: Based on data from similar materials

Carcinogenicity

Not classified based on available information.

Components:**Hydrocarbons, C10-C13, n-alkanes, < 2% aromatics:**

Species	: Rat
Application Route	: inhalation (vapor)
Result	: negative

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Species	: Rat
Application Route	: inhalation (vapor)
Exposure time	: 13 weeks
Result	: negative
Remarks	: Based on data from similar materials

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Species	: Rat
Application Route	: inhalation (vapor)
Exposure time	: 105 weeks
Result	: negative
Remarks	: Based on data from similar materials

Reproductive toxicity

Not classified based on available information.

Components:**Hydrocarbons, C10-C13, n-alkanes, < 2% aromatics:**

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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

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test
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, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Effects on fertility : Test Type: Reproduction/Developmental toxicity screening test
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, C10, aromatics, <1% naphthalene:

Effects on fertility : Test Type: Three-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: Embryo-fetal development
Species: Rat
Application Route: Ingestion
Result: negative
Remarks: Based on data from similar materials

STOT-single exposure

Not classified based on available information.

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Components:**Hydrosulfurized kerosene (petroleum):**

Assessment	: May cause drowsiness or dizziness.
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Hydrocarbons, C10, aromatics, <1% naphthalene:

Assessment	: May cause drowsiness or dizziness.
Remarks	: Based on data from similar materials

STOT-repeated exposure

Causes damage to organs (Central nervous system) through prolonged or repeated exposure.

Components:**Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):**

Target Organs	: Central nervous system
Assessment	: Causes damage to organs through prolonged or repeated exposure.

Repeated dose toxicity**Components:****Hydrocarbons, C10-C13, n-alkanes, < 2% aromatics:**

Species	: Rat
NOAEL	: 1,000 mg/kg
Application Route	: Ingestion

Hydrosulfurized kerosene (petroleum):

Species	: Rat
NOAEL	: >= 375 mg/kg
Application Route	: Skin contact
Exposure time	: 28 Days
Method	: OECD Test Guideline 410

Species	: Rat
NOAEL	: 750 mg/kg
LOAEL	: 1,500 mg/kg
Application Route	: Ingestion
Exposure time	: 90 Days

Species	: Mouse
NOAEL	: >= 1 mg/l
Application Route	: inhalation (vapor)
Exposure time	: 90 Days

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Species	: Rat
NOAEL	: 2.34 mg/l
LOAEL	: 4.67 mg/l
Application Route	: inhalation (vapor)
Exposure time	: 6 Months

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Remarks : Based on data from similar materials

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics ,<2% aromatics:

Species	: Rat
NOAEL	: >= 1,000 mg/kg
Application Route	: Ingestion
Exposure time	: 54 Days
Remarks	: Based on data from similar materials

Hydrocarbons, C10, aromatics, <1% naphthalene:

Species	: Rat
NOAEL	: 300 mg/kg
Application Route	: Ingestion
Exposure time	: 13 Weeks
Remarks	: Based on data from similar materials

Aspiration toxicity

Not classified based on available information.

Components:**Hydrocarbons, C10-C13, n-alkanes, < 2% aromatics:**

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.

Hydrodesulfurized kerosene (petroleum):

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, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

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, C10-C13, n-alkanes, isoalkanes, cyclics ,<2% aromatics:

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, C10, aromatics, <1% naphthalene:

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.

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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

1-Propene, 2-methyl-, homopolymer, hydroformylation products, reaction products with ammonia:

Ecotoxicology Assessment

Acute aquatic toxicity : Harmful to aquatic life.

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

Hydrocarbons, C10-C13, n-alkanes, < 2% aromatics:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): > 1,000 mg/l
Exposure time: 48 h

Toxicity to algae : EL50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 mg/l
Exposure time:
Method: OECD Test Guideline 201

NOELR (Pseudokirchneriella subcapitata (green algae)):
1,000 mg/l
Exposure time:
Method: OECD Test Guideline 201

Hydrodesulfurized kerosene (petroleum):

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): > 2 - 5 mg/l
Exposure time: 96 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates : EL50 (Daphnia magna (Water flea)): 1.4 mg/l
Exposure time: 48 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 202

Toxicity to algae : EL50 (Pseudokirchneriella subcapitata (green algae)): > 1 - 3 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia magna (Water flea)): 0.48 mg/l
Exposure time: 21 d
Test substance: Water Accommodated Fraction

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

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Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): > 10 - 100 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): 100 - 200 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 202
Toxicity to algae	:	EL50 (Pseudokirchneriella subcapitata (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 (Pseudokirchneriella subcapitata (green algae)): 3 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)	:	NOELR (Daphnia magna (Water flea)): 0.28 mg/l Exposure time: 21 d Test substance: Water Accommodated Fraction Method: OECD Test Guideline 211 Remarks: Based on data from similar materials

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics ,<2% aromatics:

Toxicity to fish	:	LL50 (Oncorhynchus mykiss (rainbow trout)): > 1,000 mg/l Exposure time: 96 h Test substance: Water Accommodated Fraction Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	:	EL50 (Daphnia magna (Water flea)): > 1,000 mg/l Exposure time: 48 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 202
Toxicity to algae	:	EL50 (Pseudokirchneriella subcapitata (green algae)): > 1,000 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)): 1,000 mg/l Exposure time: 72 h Test substance: Water Accommodated Fraction Method: OECD Test Guideline 201 Remarks: Based on data from similar materials

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Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOELR (Daphnia magna (Water flea)): > 1 mg/l
Exposure time: 21 d
Method: OECD Test Guideline 211
Remarks: Based on data from similar materials

Hydrocarbons, C10, aromatics, <1% naphthalene:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 2 - 5 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)): 3 - 10 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 : EL50 (Pseudokirchneriella subcapitata (green algae)): > 1 - 3 mg/l
Exposure time: 72 h
Test substance: Water Accommodated Fraction
Method: OECD Test Guideline 201
Remarks: Based on data from similar materials

Persistence and degradability**Components:****Hydrocarbons, C10-C13, n-alkanes, < 2% aromatics:**

Biodegradability : Result: Readily biodegradable.
Biodegradation: 83.1 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Hydrodesulfurized kerosene (petroleum):

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 58.6 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

Biodegradability : Result: Readily biodegradable.
Biodegradation: 74.7 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, <2% aromatics:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 80 %
Exposure time: 28 d

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Method: OECD Test Guideline 301F
Remarks: Based on data from similar materials

Hydrocarbons, C10, aromatics, <1% naphthalene:

Biodegradability : Result: Not readily biodegradable.
Biodegradation: 49.56 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

Bioaccumulative potential**Components:****Hydrocarbons, C10-C13, n-alkanes, < 2% aromatics:**

Partition coefficient: n-octanol/water : log Pow: 5.9 - 10.2
Remarks: Based on data from similar materials

Hydrodesulfurized kerosene (petroleum):

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

Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, aromatics (2-25%):

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

Mobility in soil

No data available

Other adverse effects

No data available

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

Waste from residues : Dispose of in accordance with local regulations.

Contaminated packaging : 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

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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.

Domestic regulation

TDG

Not regulated as a dangerous good

SECTION 15. REGULATORY INFORMATION

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

DSL : This product contains one or several components that are not on the Canadian DSL nor NDSL.

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 ON OEL	:	Ontario Table of Occupational Exposure Limits made under the Occupational Health and Safety Act.
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 ON OEL / TWA	:	Time-Weighted Average Limit (TWA)
CA QC OEL / TWAEV	:	Time-weighted average exposure value
CA QC OEL / STEV	:	Short-term exposure value

AICS - Australian Inventory of Chemical Substances; 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; CPR - Controlled Products Regulations; 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; IECS - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dan-

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gerous 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; 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/
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Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

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.

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