
SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier
Trade name : Valvoline™ Multi-Purpose 2-Cycle TC-W3 MOTOR OIL

Recommended use of the chemical and restrictions on use

Details of the supplier of the safety data sheet
Ashland
P.O. Box 2219
Columbus, OH 43216
United States of America

EHS Customer Requests@ashland.com

Emergency telephone number
1-800-ASHLAND (1-800-274-5263)

Regulatory Information Number
1-800-325-3751

Product Information
614-790-3333

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification
Flammable liquids : Category 4
Skin irritation : Category 2
Carcinogenicity : Category 1B
Reproductive toxicity : Category 2
Specific target organ systemic toxicity - single exposure : Category 3 (Central nervous system)
Specific target organ systemic toxicity - repeated exposure (Dermal) : Category 1 (Adrenal gland, Bone marrow, Liver, Kidney, Immune system, thymus gland, Stomach)
Aspiration hazard : Category 1

GHS Label element
Hazard pictograms

Signal Word
: Danger

Hazard Statements
: Combustible liquid.
  May be fatal if swallowed and enters airways.
  Causes skin irritation.
  May cause drowsiness or dizziness.
  May cause cancer.
  Suspected of damaging fertility or the unborn child.
  Causes damage to organs (Adrenal gland, Bone marrow, Liver, Kidney, Immune system, thymus gland, Stomach) through prolonged or repeated exposure in contact with skin.

Precautionary Statements

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
Wash skin thoroughly after handling.
Do not eat, drink or smoke when using this product.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
IF exposed or concerned: Get medical advice/ attention.
Do NOT induce vomiting.
If skin irritation occurs: Get medical advice/ attention.
Take off contaminated clothing and wash before reuse.
In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.

Storage:
Store in a well-ventilated place. Keep container tightly closed.
Store in a well-ventilated place. Keep cool.
Store locked up.

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

Other hazards
Static Accumulating liquid
## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture
Chemical nature : Defatter
Chemical nature : Static Accumulator

### Hazardous components

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS-No.</th>
<th>Classification</th>
<th>Concentration (%)</th>
</tr>
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<tbody>
<tr>
<td>DISTILLATES (PETROLEUM), HYDROTREATED LIGHT</td>
<td>64742-47-8</td>
<td>Flam. Liq.; H227; Skin Irrit.; H315; STOT SE 3; H336</td>
<td>30.00</td>
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<tr>
<td>DISTILLATES, SOLVENT-REFINED HEAVY PARAFFINIC</td>
<td>64741-88-4</td>
<td>Carc. 1B; H350; Repr. 2; H361; STOT RE 1; H372; Asp. Tox. 1; H304</td>
<td>30.00</td>
</tr>
<tr>
<td>RESIDUAL OILS (PETROLEUM), SOLVENT-REFINED</td>
<td>64742-01-4</td>
<td>Acute Tox. 4; H332; Carc. 1B; H350; Repr. 2; H361; STOT RE 1; H372; Asp. Tox. 1; H304</td>
<td>20.00</td>
</tr>
<tr>
<td>SOLVENT NAPHTHA (PETROLEUM), HEAVY AROMATIC</td>
<td>64742-94-5</td>
<td>Flam. Liq.; H227; Asp. Tox. 1; H304</td>
<td>1.50</td>
</tr>
</tbody>
</table>
SECTION 4. FIRST AID MEASURES

General advice: Move out of dangerous area. Call a POISON CENTRE or doctor/physician if exposed or you feel unwell. Show this safety data sheet to the doctor in attendance. Symptoms of poisoning may appear several hours later. Do not leave the victim unattended.

If inhaled: Move to fresh air. If unconscious place in recovery position and seek medical advice. Consult a physician after significant exposure.

In case of skin contact: Remove contaminated clothing. If irritation develops, get medical attention. If on skin, rinse well with water. Wash contaminated clothing before re-use. If on clothes, remove clothes.

In case of eye contact: Flush eyes with water as a precaution. Remove contact lenses. Protect unharmed eye. If eye irritation persists, consult a specialist.

If swallowed: Obtain medical attention. Do NOT induce vomiting. Do not give milk or alcoholic beverages. Never give anything by mouth to an unconscious person. If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed: Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material.

Acute aspiration of large amounts of oil-laden material may produce a serious aspiration pneumonia. Patients who aspirate these oils should be followed for the development of long-term sequelae. Repeated aspiration of small quantities of mineral oil can produce chronic inflammation of the lungs (i.e. lipoid pneumonia) that may progress to pulmonary fibrosis. Symptoms are often subtle and radiological changes appear worse than clinical abnormalities. Occasionally, persistent cough, irritation of the upper respiratory tract, shortness of breath with exertion, fever, and bloody sputum occur. Inhalation exposure to oil mists below current workplace exposure limits is unlikely to cause pulmonary abnormalities. Inhalation or ingestion of high levels of this material (or a component) may cause a hemolytic reaction. Complications
of acute intravascular hemolysis include anemia, leukocytosis, fever, hemoglobinuria, jaundice, renal insufficiency, and sometimes disturbances in liver function.

Fats, for example, baby oil on the skin or ingested oil, facilitate absorption of naphthalene.

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
- Acne
- Fever
- Stomach or intestinal upset (nausea, vomiting, diarrhea)
- Irritation (nose, throat, airways)
- Lung irritation
- Confusion
- Irregular heartbeat
- Convulsions
- Respiratory failure
- May be fatal if swallowed and enters airways.
- Causes skin irritation.
- May cause drowsiness or dizziness.
- May cause cancer.
- Suspected of damaging fertility or the unborn child.
- Causes damage to organs through prolonged or repeated exposure in contact with skin.

Notes to physician : No hazards which require special first aid measures.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
- Water spray
- Foam
- Carbon dioxide (CO2)
- Dry chemical

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : If product is heated above its flash point it will produce vapors sufficient to support combustion. Vapors are heavier than air and may travel along the ground and be ignited by heat, pilot lights, other flames and ignition sources at locations near the point of release.
- Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : carbon dioxide and carbon monoxide
- Nitrogen oxides (NOx)
- Hydrocarbons
- Nitrogen oxides (NOx)
SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:
- Remove all sources of ignition.
- Use personal protective equipment.
- Ensure adequate ventilation.
- Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

Environmental precautions:
- Prevent product from entering drains.
- 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).
- Keep in suitable, closed containers for disposal.

Other information:
- Comply with all applicable federal, state, and local regulations.
- Suppress (knock down) gases/vapours/mists with a water spray jet.

SECTION 7. HANDLING AND STORAGE

Advice on safe handling:
- Avoid formation of aerosol.
- Provide sufficient air exchange and/or exhaust in work rooms.
- Do not breathe vapours/dust.
- Do not smoke.
- Container hazardous when empty.
- Avoid exposure - obtain special instructions before use.
- Avoid contact with skin and eyes.
- Smoking, eating and drinking should be prohibited in the application area.
- For personal protection see section 8.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage:
- Keep container tightly closed in a dry and well-ventilated place.
- Containers which are opened must be carefully resealed and kept upright to prevent leakage.
- Observe label precautions.
- No smoking.
- Electrical installations / working materials must comply with the technological safety standards.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value type (Form of exposure)</th>
<th>Control parameters / Permissible concentration</th>
<th>Basis</th>
</tr>
</thead>
<tbody>
<tr>
<td>DISTILLATES (PETROLEUM), HYDROTREATED LIGHT</td>
<td>64742-47-8</td>
<td>TWA</td>
<td>200 mg/m3 Non-aerosol (as total hydrocarbon vapor)</td>
<td>ACGIH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>REL</td>
<td>100 mg/m3</td>
<td>NIOSH/GUIDE</td>
</tr>
<tr>
<td>DISTILLATES, SOLVENT-REFINED HEAVY PARAFFINIC</td>
<td>64741-88-4</td>
<td>PEL</td>
<td>500 ppm 2,000 mg/m3</td>
<td>OSHA_TRA NS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>REL</td>
<td>5 mg/m3 Mist.</td>
<td>NIOSH/GUIDE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>STEL</td>
<td>10 mg/m3 Mist.</td>
<td>NIOSH/GUIDE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEL</td>
<td>5 mg/m3 Mist.</td>
<td>OSHA_TRA NS</td>
</tr>
<tr>
<td></td>
<td></td>
<td>TWA</td>
<td>5 mg/m3 Inhalable fraction.</td>
<td>ACGIH</td>
</tr>
<tr>
<td>SOLVENT NAPHTHA (PETROLEUM), HEAVY AROMATIC</td>
<td>64742-94-5</td>
<td>REL</td>
<td>100 ppm 400 mg/m3</td>
<td>NIOSH/GUIDE</td>
</tr>
<tr>
<td></td>
<td></td>
<td>PEL</td>
<td>100 ppm 400 mg/m3</td>
<td>OSHA_TRA NS</td>
</tr>
</tbody>
</table>

Engineering measures:
- Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.
Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Not required under normal conditions of use. Wear splash-proof safety goggles if material could be misted or splashed into eyes.

Skin and body protection : Wear as appropriate:
- impervious clothing
- Safety shoes
- Choose body protection according to the amount and concentration of the dangerous substance at the work place.
- Discard gloves that show tears, pinholes, or signs of wear.
- Wear resistant gloves (consult your safety equipment supplier).

Hygiene measures : Wash hands before breaks and at the end of workday.
- When using do not eat or drink.
- When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state : liquid

Odour : hydrocarbon-like

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : <38 °F / -39 ºC

Boiling point/boiling range : > 356 °F / 180 ºC
(1013 hPa)
Flash point : 151 °F / 66 °C  
   Method: Cleveland open cup

Evaporation rate : 0.1  
   butyl acetate=1

Flammability (solid, gas) : No data available

Flammability (liquids) : Static Accumulating liquid

Flammability (liquids) :  
   Upper explosion limit : 6.0 %(V)
   Lower explosion limit : 1.0 %(V)

Vapour pressure : 0.2 mmHg (20 °C)

Relative vapour density : No data available

Relative density : No data available

Density : Average 0.8550 g/cm3 (20 °C)

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

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

Thermal decomposition : No data available

Viscosity : 
   Viscosity, dynamic : No data available
   Viscosity, kinematic : 6.9 mm2/s

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

Possibility of hazardous : Vapours may form explosive mixture with air.
reactions

Conditions to avoid: Heat, flames and sparks.

Incompatible materials: Strong oxidizing agents
strong reducing agents

Hazardous decomposition products: carbon dioxide and carbon monoxide
Hydrocarbons

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:
Inhalation
Skin contact
Eye Contact
Ingestion

Acute toxicity:
Not classified based on available information.

Components:
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT:
Acute oral toxicity: LD 50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity:
LC 50 (Rat, male and female): > 5.28 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Method: OECD Test Guideline 403
Assessment: No adverse effect has been observed in acute inhalation toxicity tests.

Acute dermal toxicity: LD 50 (Rabbit): > 2,000 mg/kg
Assessment: No adverse effect has been observed in acute dermal toxicity tests.

DISTILLATES, SOLVENT-REFINED HEAVY PARAFFINIC:
Acute oral toxicity: LD 50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity: LC50 (Rat): > 5.58 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: Not classified as acutely toxic by inhalation under GHS.
Remarks: No mortality observed at this dose.

Acute dermal toxicity: LD 50 (Rabbit): > 5,000 mg/kg
Remarks: No mortality observed at this dose.

RESIDUAL OILS (PETROLEUM), SOLVENT-REFINED:
Acute oral toxicity: LD50 (Rat): > 5,000 mg/kg
Remarks: Information given is based on data obtained from
Acute inhalation toxicity: LC50 (Rat): 2.18 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

Acute dermal toxicity: LD50 (Rat): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: No adverse effect has been observed in acute dermal toxicity tests.

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROMATIC:
Acute oral toxicity: LD 50 (Rat): > 5,000 mg/kg

Acute inhalation toxicity: LC 50 (Rat): > 3,800 mg/m3
Exposure time: 4 h
Assessment: Not classified as acutely toxic by inhalation under GHS.

Acute dermal toxicity: LD 50 (Rabbit): > 2,000 mg/kg
Assessment: No adverse effect has been observed in acute dermal toxicity tests.

Skin corrosion/irritation
Causes skin irritation.
**Product:**
Remarks: May cause skin irritation and/or dermatitis.

Result: Repeated exposure may cause skin dryness or cracking.

**Components:**
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT:
Result: Irritating to skin

DISTILLATES, SOLVENT-REFINED HEAVY PARAFFINIC:
Species: Rabbit
Result: Not irritating to skin

RESIDUAL OILS (PETROLEUM), SOLVENT-REFINED:
Species: Rabbit
Result: Not irritating to skin

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROMATIC:
Result: Mildly irritating to skin

**Serious eye damage/eye irritation**
Not classified based on available information.
**Product:**
Remarks: Vapours may cause irritation to the eyes, respiratory system and the skin.

**Components:**
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT:  
Result: Mildly irritating to eyes

DISTILLATES, SOLVENT-REFINED HEAVY PARAFFINIC:  
Species: Rabbit  
Result: Not irritating to eyes

RESIDUAL OILS (PETROLEUM), SOLVENT-REFINED:  
Species: Rabbit  
Result: Mildly irritating to eyes

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROMATIC:  
Result: Mildly irritating to eyes

Respiratory or skin sensitisation
Skin sensitisation: Not classified based on available information.  
Respiratory sensitisation: Not classified based on available information.  
**Components:**
DISTILLATES, SOLVENT-REFINED HEAVY PARAFFINIC:  
Test Type: Buehler Test  
Species: Guinea pig  
Assessment: Does not cause skin sensitisation.

RESIDUAL OILS (PETROLEUM), SOLVENT-REFINED:  
Test Type: Buehler Test  
Species: Guinea pig  
Assessment: Does not cause skin sensitisation.  
Method: OECD Test Guideline 406

Germ cell mutagenicity  
Not classified based on available information.

**Carcinogenicity**  
May cause cancer.  
**Components:**
DISTILLATES, SOLVENT-REFINED HEAVY PARAFFINIC:  
Carcinogenicity - Assessment: Sufficient evidence of carcinogenicity in animal experiments

RESIDUAL OILS (PETROLEUM), SOLVENT-REFINED:  
Carcinogenicity - Assessment: Possible human carcinogen

**Reproductive toxicity**  
Suspected of damaging fertility or the unborn child.  
**Components:**
DISTILLATES, SOLVENT-REFINED HEAVY PARAFFINIC:  
Reproductive toxicity - Assessment: Some evidence of adverse effects on development, based on animal experiments.

RESIDUAL OILS (PETROLEUM), SOLVENT-REFINED:  
Reproductive toxicity - Assessment: Some evidence of adverse effects on development, based on animal experiments.
**STOT - single exposure**
May cause drowsiness or dizziness.

**Components:**
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT:
Assessment: May cause drowsiness or dizziness.

**STOT - repeated exposure**
Causes damage to organs (Adrenal gland, Bone marrow, Liver, Kidney, Immune system, thymus gland, Stomach) through prolonged or repeated exposure in contact with skin.

**Components:**
DISTILLATES, SOLVENT-REFINED HEAVY PARAFFINIC:
Exposure routes: Skin contact
Target Organs: Adrenal gland
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Exposure routes: Skin contact
Target Organs: Bone marrow
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Exposure routes: Skin contact
Target Organs: Liver
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Exposure routes: Skin contact
Target Organs: Kidney
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Exposure routes: Skin contact
Target Organs: Immune system
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Exposure routes: Skin contact
Target Organs: thymus gland
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Exposure routes: Skin contact
Target Organs: Stomach
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

**RESIDUAL OILS (PETROLEUM), SOLVENT-REFINED:**
Exposure routes: Skin contact
Target Organs: Adrenal gland
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Exposure routes: Skin contact
Target Organs: Bone marrow  
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Exposure routes: Skin contact  
Target Organs: Liver  
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Exposure routes: Skin contact  
Target Organs: Kidney  
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Exposure routes: Skin contact  
Target Organs: Immune system  
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Exposure routes: Skin contact  
Target Organs: thymus gland  
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Exposure routes: Skin contact  
Target Organs: Stomach  
Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.

Aspiration toxicity  
May be fatal if swallowed and enters airways.

Product:  
May be fatal if swallowed and enters airways.

Components:  
DISTILLATES, SOLVENT-REFINED HEAVY PARAFFINIC:  
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.

RESIDUAL OILS (PETROLEUM), SOLVENT-REFINED:  
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.

SOLVENT NAPHTHA (PETROLEUM), HEAVY AROMATIC:  
May be fatal if swallowed and enters airways.

Further information  
Product:  
Remarks: Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting., Concentrations substantially above the TLV value may cause narcotic effects., Solvents may degrease the skin.

Carcinogenicity:
IARC

Group 1: Carcinogenic to humans

DISTILLATES, SOLVENT-REFINED HEAVY PARAFFINIC 64741-88-4

OSHA

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

NTP

Known to be human carcinogen

DISTILLATES, SOLVENT-REFINED HEAVY PARAFFINIC 64741-88-4

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

**Components:** DISTILLATES (PETROLEUM), HYDROTREATED LIGHT:

**Toxicity to fish**

LC50 (Oncorhynchus mykiss (rainbow trout)): 2 - 5 mg/l

Test Type: semi-static test

Test substance: WAF

Method: OECD Test Guideline 203

Remarks: Information given is based on data obtained from similar substances.

**Toxicity to daphnia and other aquatic invertebrates**

EL50 (Water flea (Daphnia magna)): 1.4 mg/l

Exposure time: 48 h

Test Type: static test

Test substance: WAF

Method: OECD Test Guideline 202

Remarks: Information given is based on data obtained from similar substances.

**Toxicity to algae**

EL50 (Pseudokirchneriella subcapitata (green algae)): > 1 - 3 mg/l

Exposure time: 72 h

Test Type: static test

Test substance: WAF

Method: OECD Test Guideline 201

Remarks: Information given is based on data obtained from similar substances.

**Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)**

NOEL (Water flea (Daphnia magna)): 0.48 mg/l

Exposure time: 21 d

Test Type: semi-static test
Test substance: WAF
Method: OECD Test Guideline 211
Remarks: Information given is based on data obtained from similar substances.

DISTILLATES, SOLVENT-REFINED HEAVY PARAFFINIC:

Toxicity to fish
- LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
  Exposure time: 96 h
  Test Type: static test
  Test substance: WAF
  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)): > 10,000 mg/l
  Exposure time: 48 h
  Test Type: static test
  Test substance: WAF
  Method: OECD Test Guideline 202

Toxicity to algae
- NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
  End point: Growth inhibition
  Exposure time: 72 h
  Test Type: static test
  Test substance: WAF
  Method: OECD Test Guideline 201

Toxicity to fish (Chronic toxicity)
- NOELR (Oncorhynchus mykiss (rainbow trout)): Calculated >= 1,000 mg/l
  Exposure time: 14 d

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)
- NOEL (Daphnia (water flea)): 10 mg/l
  Exposure time: 21 d
  Test substance: WAF
  Method: OECD Test Guideline 211

RESIDUAL OILS (PETROLEUM), SOLVENT-REFINED:

Toxicity to fish
- LL50 (Pimephales promelas (fathead minnow)): > 100 mg/l
  Exposure time: 96 h
  Test Type: static test
  Test substance: WAF
  Method: OECD Test Guideline 203

Toxicity to daphnia and other aquatic invertebrates
- EL50 (Scud (Gammarus pulex)): > 10,000 mg/l
  Exposure time: 48 h
  Test Type: semi-static test
  Method: OECD Test Guideline 202

Toxicity to algae
- NOEL (Pseudokirchneriella subcapitata (green algae)): >= 100 mg/l
  End point: Growth inhibition
  Exposure time: 72 h
Test Type: static test
Test substance: WAF
Method: OECD Test Guideline 201

Persistence and degradability
Components:
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT:
Biodegradability : Result: Inherently biodegradable
Biodegradation: 58.6 %
Exposure time: 28 d
Method: OECD Test Guideline 301F

DISTILLATES, SOLVENT-REFINED HEAVY PARAFFINIC:
Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

RESIDUAL OILS (PETROLEUM), SOLVENT-REFINED:
Biodegradability : Result: Not readily biodegradable.
Biodegradation: 2 - 4 %
Exposure time: 28 d
Method: OECD Test Guideline 301B
Remarks: Information given is based on data obtained from similar substances.

Bioaccumulative potential
Components:
No data available

Mobility in soil
Components:
No data available

Other adverse effects
No data available

Product:
Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal., Toxic to aquatic life with long lasting effects.

Components:

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods
General advice : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container. Send to a licensed waste management company.

Dispose of in accordance with all applicable local, state and federal regulations.

Contaminated packaging : Empty remaining contents. Dispose of as unused product. Empty containers should be taken to an approved waste handling site for recycling or disposal. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum.

SECTION 14. TRANSPORT INFORMATION

International transport regulations

<table>
<thead>
<tr>
<th>ID NUMBER</th>
<th>PROPER SHIPPING NAME</th>
<th>*HAZARD CLASS</th>
<th>SUBSIDIARY HAZARDS</th>
<th>PACKING GROUP</th>
<th>MARINE POLLUTANT / LTD. QTY.</th>
</tr>
</thead>
<tbody>
<tr>
<td>U.S. DOT - ROAD</td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. DOT - RAIL</td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>U.S. DOT - INLAND WATERWAYS</td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRANSPORT CANADA - ROAD</td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRANSPORT CANADA - RAIL</td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TRANSPORT CANADA - INLAND WATERWAYS</td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTERNATIONAL MARITIME DANGEROUS GOODS</td>
<td>Not dangerous goods</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO
Not dangerous goods

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER
Not dangerous goods

MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES
Not dangerous goods

*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

| Marine pollutant | yes |

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

SECTION 15. REGULATORY INFORMATION

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Chronic Health Hazard

SARA 313 Component(s) SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

California Prop 65 : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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

<table>
<thead>
<tr>
<th>Inventory</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>TSCA</td>
<td>On TSCA Inventory</td>
</tr>
<tr>
<td>DSL</td>
<td>All components of this product are on the Canadian DSL.</td>
</tr>
<tr>
<td>AUSTR</td>
<td>On the inventory, or in compliance with the inventory</td>
</tr>
<tr>
<td>IECSC</td>
<td>Not in compliance with the inventory</td>
</tr>
<tr>
<td>NZIOC</td>
<td>Not in compliance with the inventory</td>
</tr>
<tr>
<td>ENCS</td>
<td>Not in compliance with the inventory</td>
</tr>
</tbody>
</table>
SECTION 16. OTHER INFORMATION

Further information
Revision Date: 05/22/2015

<table>
<thead>
<tr>
<th>NFPA:</th>
<th>HMIS III:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Flammability</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Special hazard.

0 = not significant, 1 = Slight, 2 = Moderate, 3 = High, 4 = Extreme, * = Chronic

NFPA Flammable and Combustible Liquids Classification
Combustible Liquid Class IIIA

Full text of H-Statements referred to under sections 2 and 3.

H227 Combustible liquid.
H304 May be fatal if swallowed and enters airways.
H315 Causes skin irritation.
H332 Harmful if inhaled.
H336 May cause drowsiness or dizziness.
H350 May cause cancer.
H361 Suspected of damaging fertility or the unborn child.
H372 Causes damage to organs through prolonged or repeated exposure in contact with skin.

Sources of key data used to compile the Safety Data Sheet
Ashland internal data including own and sponsored test reports
The UNECE administers regional agreements implementing harmonised classification for labelling (GHS) and transport.

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This SDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).

List of abbreviations and acronyms that could be, but not necessarily are, used in this safety data sheet:
- ACGIH: American Conference of Industrial Hygienists
- BEI: Biological Exposure Index
- CAS: Chemical Abstracts Service (Division of the American Chemical Society)
- CMR: Carcinogenic, Mutagenic or Toxic for Reproduction
- FG: Food grade
- GHS: Globally Harmonized System of Classification and Labeling of Chemicals
- H-statement: Hazard Statement
- IATA: International Air Transport Association
- IATA-DGR: Dangerous Goods Regulation by the “International Air Transport Association” (IATA).

- ICAO: International Civil Aviation Organization
- ICAO-TI (ICAO): Technical Instructions by the “International Civil Aviation Organization”
- IMDG: International Maritime Code for Dangerous Goods
- ISO: International Organization for Standardization
- logPow: octanol-water partition coefficient
- LCxx: Lethal Concentration, for xx percent of test population
- LDxx: Lethal Dose, for xx percent of test population
- ICxx: Inhibitory Concentration for xx of a substance
- Ecxx: Effective Concentration of xx
- N.O.S.: Not Otherwise Specified
- OECD: Organization for Economic Co-operation and Development
- OEL: Occupational Exposure Limit
- P-Statement: Precautionary Statement
- PBT: Persistent, Bioaccumulative and Toxic
- PPE: Personal Protective Equipment
- STEL: Short-term exposure limit
- STOT: Specific Target Organ Toxicity
- TLV: Threshold Limit Value
- TWA: Time-weighted average
- vPvB: Very Persistent and Very Bioaccumulative
- WEL: Workplace Exposure Level

- CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act
- DOT: Department of Transportation
- FIFRA: Federal Insecticide, Fungicide, and Rodenticide Act
- HMIRC: Hazardous Materials Information Review Commission
- HMIS: Hazardous Materials Identification System
- NFPA: National Fire Protection Association
- NIOSH: National Institute for Occupational Safety and Health
- OSHA: Occupational Safety and Health Administration
- PMRA: Health Canada Pest Management Regulatory Agency
<table>
<thead>
<tr>
<th>SAFETY DATA SHEET</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision Date:</td>
<td>05/22/2015</td>
</tr>
<tr>
<td>Print Date:</td>
<td>9/23/2015</td>
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<tr>
<td>SDS Number:</td>
<td>R0172415</td>
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<tr>
<td>Valvoline™ Multi-Purpose 2-Cycle TC-W3 MOTOR OIL</td>
<td>Version: 1.0</td>
</tr>
<tr>
<td>822384</td>
<td></td>
</tr>
</tbody>
</table>

RTK: Right to Know  
WHMIS: Workplace Hazardous Materials Information System