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	SDS Number: R0328421
Valvoline™ Heavy Duty Carb & Throttle Body Cleaner 602333	Version: 1.4

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline™ Heavy Duty Carb & Throttle Body Cleaner

Details of the supplier of the safety data sheet Valvoline LLC 100 Valvoline Way Lexington, KY 40509 United States of America (USA) 1-800-TEAMVAL (1-800-832-6825) SDS@valvoline.com	Emergency telephone number 1-800-VALVOLINE (1-800-825-8654) Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825) Product Information 1-800-TEAMVAL (1-800-832-6825)
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SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

Flammable aerosols	: Category 1
Acute toxicity (Oral)	: Category 4
Acute toxicity (Inhalation)	: Category 4
Acute toxicity (Dermal)	: Category 4
Skin irritation	: Category 2
Eye irritation	: Category 2A
Carcinogenicity	: Category 2
Specific target organ systemic toxicity - single exposure	: Category 1 (Central nervous system, Eyes)
Specific target organ systemic toxicity - single exposure	: Category 3 (Respiratory system, Central nervous system)
Specific target organ	: Category 2 (Auditory system)

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systemic toxicity - repeated exposure

Aspiration hazard : Category 1

GHS label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements :

- Extremely flammable aerosol.
- Harmful if swallowed, in contact with skin or if inhaled.
- May be fatal if swallowed and enters airways.
- Causes skin irritation.
- Causes serious eye irritation.
- May cause respiratory irritation.
- May cause drowsiness or dizziness.
- Suspected of causing cancer.
- Causes damage to organs (Central nervous system, Eyes).
- May cause damage to organs (Auditory system) through prolonged or repeated exposure.

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 spray on an open flame or other ignition source.
- Pressurized container: Do not pierce or burn, even after use.
- 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/doctor.
- IF ON SKIN: Wash with plenty of water. Call a POISON CENTER/doctor if you feel unwell.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- IF exposed: Call a POISON CENTER or doctor/ physician. Do NOT induce vomiting.

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If skin irritation occurs: Get medical advice/ attention.

If eye irritation persists: Get medical advice/ attention.

Take off contaminated clothing and wash before reuse.

Storage:

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Protect from sunlight. Do not expose to temperatures exceeding 50 °C/ 122 °F.

Disposal:

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

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Static Accumulator

Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
ACETONE	67-64-1	Flam. Liq. 2; H225 Eye Irrit. 2A; H319 STOT SE 3; H336	>=50.00 - < 60.00
METHANOL	67-56-1	Flam. Liq. 2; H225 Acute Tox. 3; H301 Acute Tox. 3; H331 Acute Tox. 3; H311 STOT SE 1; H370	>=20.00 - < 30.00
XYLENE	1330-20-7	Flam. Liq. 3; H226 Acute Tox. 4; H312 Skin Irrit. 2; H315	>=20.00 - < 30.00

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		Eye Irrit. 2A; H319 STOT SE 3; H335, H336 Asp. Tox. 1; H304	
ETHYL BENZENE	100-41-4	Flam. Liq. 2; H225 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 Carc. 2; H351 STOT RE 2; H373 Asp. Tox. 1; H304	>=5.00 - < 10.00
CARBON DIOXIDE	124-38-9	Press. Gas Liquefied gas; H280 SA	>=5.00 - < 10.00

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. Keep patient warm and at rest. 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.
In case of eye contact	: Immediately flush eye(s) with plenty of water.

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Remove contact lenses.
Protect unharmed eye.

If swallowed

: Obtain medical attention.
Do NOT induce vomiting.
Rinse mouth with water.
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

: This material (or a component) has produced hyperglycemia and ketosis following substantial ingestion.
This product contains methanol which can cause intoxication and central nervous system depression. Methanol is metabolized to formic acid and formaldehyde. These metabolites can cause metabolic acidosis, visual disturbances and blindness. Since metabolism is required for these toxic symptoms, their onset may be delayed from 6 to 30 hours following ingestion. Ethanol competes for the same metabolic pathway and has been used to prevent methanol metabolism. Ethanol administration is indicated in symptomatic patients or at blood methanol concentrations above 20 ug/dl. Methanol is effectively removed by hemodialysis.
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.
Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
redness of the skin
stomach or intestinal upset (nausea, vomiting, diarrhea)
irritation (nose, throat, airways)
discomfort in the chest
effects on memory
muscle cramps
pain in the abdomen and lower back
Blurred vision
Shortness of breath
confusion
irregular heartbeat
cyanosis (causes blue coloring of the skin and nails from lack of oxygen)
visual impairment (including blindness)
Harmful if swallowed, in contact with skin or if inhaled.
May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye irritation.
May cause respiratory irritation.
May cause drowsiness or dizziness.

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Suspected of causing cancer.
 Causes damage to organs.
 May cause damage to organs through prolonged or repeated exposure.

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
 Alcohol-resistant foam
 Carbon dioxide (CO₂)
 Dry chemical
- Unsuitable extinguishing media : High volume water jet
- Specific hazards during firefighting : Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.
 Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
 Do not allow run-off from fire fighting to enter drains or water courses.
- Hazardous combustion products : carbon dioxide and carbon monoxide
 Hydrocarbons
 Aldehydes
- Specific extinguishing methods :
- Product is compatible with standard fire-fighting agents.
- Further information : Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
 Use a water spray to cool fully closed containers.
- Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and : Evacuate personnel to safe areas.
 Remove all sources of ignition.

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- emergency procedures Use personal protective equipment.
 Ensure adequate ventilation.
 Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.
 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.
- 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 : Open drum carefully as content may be under pressure.
 Provide sufficient air exchange and/or exhaust in work rooms.
 Do not breathe vapours/dust.
 Do not smoke.
 Container hazardous when empty.
 Take precautionary measures against static discharges.
 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.
 Container may be opened only under exhaust ventilation hood.
- Conditions for safe storage : BEWARE: Aerosol is pressurized. Keep away from direct sun exposure and temperatures over 50 °C. Do not open by force or throw into fire even after use. Do not spray on flames or red-hot objects.
 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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ACETONE	67-64-1	TWA	250 ppm	ACGIH
		STEL	500 ppm	ACGIH
		TWA	250 ppm 590 mg/m3	NIOSH REL
		TWA	1,000 ppm 2,400 mg/m3	OSHA Z-1
		TWA	750 ppm 1,800 mg/m3	OSHA P0
		STEL	1,000 ppm 2,400 mg/m3	OSHA P0
		STEL	750 ppm 1,780 mg/m3	CAL PEL
		C	3,000 ppm	CAL PEL
		PEL	500 ppm 1,200 mg/m3	CAL PEL
METHANOL	67-56-1	TWA	200 ppm	ACGIH
		STEL	250 ppm	ACGIH
		TWA	200 ppm 260 mg/m3	NIOSH REL
		ST	250 ppm 325 mg/m3	NIOSH REL
		TWA	200 ppm 260 mg/m3	OSHA Z-1
		STEL	250 ppm 325 mg/m3	OSHA P0
		TWA	200 ppm 260 mg/m3	OSHA P0
		C	1,000 ppm	CAL PEL
		PEL	200 ppm 260 mg/m3	CAL PEL
		STEL	250 ppm 325 mg/m3	CAL PEL
XYLENE	1330-20-7	STEL	150 ppm 655 mg/m3	CAL PEL
		C	300 ppm	CAL PEL
		PEL	100 ppm 435 mg/m3	CAL PEL
		TWA	100 ppm 435 mg/m3	OSHA Z-1
		TWA	100 ppm	ACGIH
		STEL	150 ppm	ACGIH
		STEL	150 ppm 655 mg/m3	OSHA P0
		TWA	100 ppm	OSHA P0

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			435 mg/m3	
ETHYL BENZENE	100-41-4	TWA	20 ppm	ACGIH
		TWA	100 ppm 435 mg/m3	NIOSH REL
		ST	125 ppm 545 mg/m3	NIOSH REL
		TWA	100 ppm 435 mg/m3	OSHA Z-1
		TWA	100 ppm 435 mg/m3	OSHA P0
		STEL	125 ppm 545 mg/m3	OSHA P0
		PEL	5 ppm 22 mg/m3	CAL PEL
		STEL	30 ppm 130 mg/m3	CAL PEL
CARBON DIOXIDE	124-38-9	TWA	5,000 ppm	ACGIH
		STEL	30,000 ppm	ACGIH
		TWA	5,000 ppm 9,000 mg/m3	NIOSH REL
		ST	30,000 ppm 54,000 mg/m3	NIOSH REL
		TWA	5,000 ppm 9,000 mg/m3	OSHA Z-1
		TWA	10,000 ppm 18,000 mg/m3	OSHA P0
		STEL	30,000 ppm 54,000 mg/m3	OSHA P0
		PEL	5,000 ppm 9,000 mg/m3	CAL PEL
		STEL	30,000 ppm 54,000 mg/m3	CAL PEL

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
ACETONE	67-64-1	Acetone	Urine	End of shift (As soon as possible after exposure ceases)	25 mg/l	ZUS_A CGIHB
METHANOL	67-56-1	Methanol	Urine	End of shift (As soon as possible after exposure)	15 mg/l	ZUS_A CGIHB

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XYLENE	1330-20-7	Methylhippuric acids	Urine	End of shift (As soon as possible after exposure ceases)	1.5 g/g creatinine	ZUS_A CGIHB
ETHYL BENZENE	100-41-4	Sum of mandelic acid and phenyl glyoxylic acid	Urine	End of shift (As soon as possible after exposure ceases)	0.15 g/g creatinine	ZUS_A CGIHB

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.
In the case of dust or aerosol formation use 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 : Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

Skin and body protection : Wear as appropriate:
Impervious clothing
Safety shoes
Flame-resistant clothing
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

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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 : aerosol

Odour : No data available

Odour Threshold : No data available

pH : No data available

Melting point/freezing point : No data available

Boiling point/boiling range : 133 °F / 56 °C
(1,013.232 hPa)
Calculated Phase Transition Liquid/Gas

Flash point : -4 °F / -20 °C

Evaporation rate : No data available

Flammability (solid, gas) :

No data available

No data available

Flammability (liquids) : Static-accumulating flammable liquid.

Flammability (liquids) :
Flammability (liquids) :
Upper explosion limit : 36 %(V)
Calculated Explosive Limit

Lower explosion limit : 1 %(V)
Calculated Explosive Limit

Vapour pressure : 307.9692 hPa (25 °C)
Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : No data available

Density : 0.8132 g/cm3 (15.56 °C)

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Solubility(ies)

Water solubility : No data available

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 : No data available

Oxidizing properties : No data available

Heat of combustion : Estimated 30.0 kJ/g

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No decomposition if stored and applied as directed.

Chemical stability : Stable under recommended storage conditions.

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

Conditions to avoid : Heat, flames and sparks.
excessive heatIncompatible materials : Acids
alkalis
aluminum
Amines
Ammonia
halogens
Lead
peroxides
Reducing agents
sodium
strong bases
Strong oxidizing agents
Zinc
Peroxides

Hazardous decomposition products : carbon dioxide and carbon monoxide

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formaldehyde-like
Hydrocarbons**SECTION 11. TOXICOLOGICAL INFORMATION****Information on likely routes of exposure**

Inhalation

Skin contact

Eye Contact

Ingestion

Acute toxicity

Harmful if swallowed, in contact with skin or if inhaled.

Product:Acute oral toxicity : Acute toxicity estimate: 433.88 mg/kg
Method: Calculation methodAcute inhalation toxicity : Acute toxicity estimate: 2.08 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: Calculation methodAcute dermal toxicity : Acute toxicity estimate: 1,171 mg/kg
Method: Calculation method**Components:****ACETONE:**

Acute oral toxicity : LD50 (Rat, female): 5,800 mg/kg

Acute inhalation toxicity : LC50 (Rat, female): 76 mg/l
Exposure time: 4 h
Test atmosphere: vapour

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

METHANOL:Acute oral toxicity : LDLo (Human): 300 mg/kg
Assessment: The component/mixture is classified as acute oral toxicity, category 3.Acute inhalation toxicity : Test atmosphere: vapour
Assessment: The component/mixture is classified as acute inhalation toxicity, category 3.

Acute dermal toxicity : Assessment: The component/mixture is classified as acute dermal toxicity, category 3.

XYLENE:

Acute oral toxicity : LD50 (Rat): 3,523 - 8,600 mg/kg

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Acute inhalation toxicity : LC50 (Rat): 6700 ppm
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): 1,700 mg/kg

ETHYL BENZENE:

Acute oral toxicity : LD50 (Rat): ca. 3,500 mg/kg

Acute inhalation toxicity : LC50 (Rat): 4000 ppm
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): 17,800 mg/kg

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:
ACETONE:

Result : Slight, transient irritation

Result : Repeated exposure may cause skin dryness or cracking.

METHANOL:

Species : Rabbit

Result : No skin irritation

XYLENE:

Assessment : Irritating to skin.

Result : Irritating to skin.

ETHYL BENZENE:

Result : Irritating to skin.

CARBON DIOXIDE:

Assessment : No skin irritation

Result : No skin irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Remarks : Vapours may cause irritation to the eyes, respiratory system and the skin.
Causes serious eye irritation.

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Components:**ACETONE:**

Result : Irritating to eyes.
Assessment : Irritating to eyes.

METHANOL:

Species : Rabbit
Result : Slight, transient irritation

XYLENE:

Result : Irritating to eyes.

ETHYL BENZENE:

Result : Irritating to eyes.

CARBON DIOXIDE:

Result : No eye irritation

Respiratory or skin sensitisation**Skin sensitisation**

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:**METHANOL:**

Test Type : Maximisation 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

Suspected of causing cancer.

IARC Group 2B: Possibly carcinogenic to humans
Ethylbenzene Not Assigned

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

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

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

May cause respiratory irritation.
May cause drowsiness or dizziness.
Causes damage to organs (Central nervous system, Eyes).

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Components:

ACETONE:

Exposure routes : Inhalation
 Target Organs : Nervous system
 Assessment : May cause drowsiness or dizziness.

METHANOL:

Target Organs : Central nervous system, Eyes
 Assessment : The substance or mixture is classified as specific target organ toxicant, single exposure, category 1.

XYLENE:

Assessment : May cause respiratory irritation.

Assessment : May cause drowsiness or dizziness.

STOT - repeated exposure

May cause damage to organs (Auditory system) through prolonged or repeated exposure.

Components:

ETHYL BENZENE:

Target Organs : Auditory system
 Assessment : May cause damage to organs through prolonged or repeated exposure.

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

ACETONE:

May be harmful if swallowed and enters airways.

XYLENE:

May be fatal if swallowed and enters airways.

ETHYL BENZENE:

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.

Components:

METHANOL:

Remarks : Central nervous system

ETHYL BENZENE:

Remarks : Central nervous system

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SECTION 12. ECOLOGICAL INFORMATION
Ecotoxicity
Product:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Acute aquatic toxicity Category 3; Harmful to aquatic life.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Components:
ACETONE:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 4,740 - 6,330 mg/l
Exposure time: 96 h
Test Type: static test

LC50 (Pimephales promelas (fathead minnow)): 8,733 - 9,482 mg/l
Exposure time: 96 h
Test Type: flow-through test

Toxicity to algae : NOEC (Microcystis aeruginosa (blue-green algae)): 530 mg/l
Exposure time: 8 d
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 2,112 mg/l
Exposure time: 28 d
Test Type: flow-through test

METHANOL:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 18,000 - 20,000 mg/l
Exposure time: 96 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 10,000 mg/l
Exposure time: 48 h
Test Type: static test

XYLENE:

Toxicity to daphnia and other aquatic invertebrates : LC50 (Daphnia magna (Water flea)): > 100 - < 1,000 mg/l
Exposure time: 24 h
Test Type: static test

ETHYL BENZENE:

Toxicity to fish : LC50 (Pimephales promelas (fathead minnow)): 9.1 - 15.6 mg/l

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Exposure time: 96 h

Test Type: static test

LC50 (Oncorhynchus mykiss (rainbow trout)): 4.2 mg/l

Exposure time: 96 h

Test Type: Renewal

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.37 - 4.4 mg/l
Exposure time: 48 h
Test Type: static test

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (green algae)): 3.6 mg/l
End point: Growth inhibition
Exposure time: 96 h

Ecotoxicology Assessment Short-term (acute) aquatic hazard : Acute aquatic toxicity Category 2; Toxic to aquatic life.

Long-term (chronic) aquatic hazard : Not classified based on available information.

Persistence and degradability
Components:
ACETONE:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 90.9 %
Exposure time: 28 d
Method: OECD Test Guideline 301B

METHANOL:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 99 %
Exposure time: 28 d
Method: OECD Test Guideline 301D

XYLENE:

Physico-chemical removability : Remarks: The product evaporates readily.

ETHYL BENZENE:

Biodegradability : Result: Readily biodegradable.
Biodegradation: 70 - 80 %
Exposure time: 28 d

No data available

Bioaccumulative potential
Components:
ACETONE:

Partition coefficient: n- : log Pow: -0.24

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octanol/water

METHANOL:

Partition coefficient: n-octanol/water : log Pow: -0.77

XYLENE:

Partition coefficient: n-octanol/water : log Pow: 3.16

ETHYL BENZENE:

Partition coefficient: n-octanol/water : log Pow: 3.15

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., Harmful to aquatic life.

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.
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****REGULATION**

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ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
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U.S. DOT - ROAD

UN	1950	Aerosols	2.1		LIMITED QUANTITY
----	------	----------	-----	--	------------------

CFR_RAIL_C

UN	1950	Aerosols	2.1		LIMITED QUANTITY
----	------	----------	-----	--	------------------

U.S. DOT - INLAND WATERWAYS

UN	1950	Aerosols	2.1		LIMITED QUANTITY
----	------	----------	-----	--	------------------

TDG_ROAD_C

UN	1950	AEROSOLS	2.1		LIMITED QUANTITY
----	------	----------	-----	--	------------------

TDG_RAIL_C

UN	1950	AEROSOLS	2.1		LIMITED QUANTITY
----	------	----------	-----	--	------------------

TDG_INWT_C

UN	1950	AEROSOLS	2.1		LIMITED QUANTITY
----	------	----------	-----	--	------------------

INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1950	AEROSOLS	2.1		LIMITED QUANTITY
----	------	----------	-----	--	------------------

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1950	Aerosols, flammable	2.1		
----	------	---------------------	-----	--	--

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1950	Aerosols, flammable	2.1		
----	------	---------------------	-----	--	--

MX_DG

UN	1950	AEROSOLS	2		
----	------	----------	---	--	--

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*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Marine pollutant	no
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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

EPCRA - Emergency Planning and Community Right-to-Know Act

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
XYLENE	1330-20-7	100	497

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Flammable (gases, aerosols, liquids, or solids)
 Acute toxicity (any route of exposure)
 Skin corrosion or irritation
 Serious eye damage or eye irritation
 Specific target organ toxicity (single or repeated exposure)
 Aspiration hazard

California Prop. 65

 **WARNING:** Cancer - www.P65Warnings.ca.gov.

 **WARNING:** Reproductive Harm - www.P65Warnings.ca.gov.

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

DSL : All components of this product are on the Canadian DSL

AICS : On the inventory, or in compliance with the inventory

ENCS : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

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TSCA : On TSCA Inventory

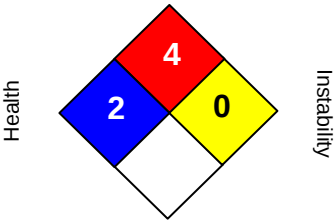
TSCA list

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

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NFPA:	HMIS III:						
Flammability Health Instability  Special hazard.	<table border="1"> <tr> <td>HEALTH</td><td>4*</td></tr> <tr> <td>FLAMMABILITY</td><td>4</td></tr> <tr> <td>PHYSICAL HAZARD</td><td>0</td></tr> </table> 0 = not significant, 1 = Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic	HEALTH	4*	FLAMMABILITY	4	PHYSICAL HAZARD	0
HEALTH	4*						
FLAMMABILITY	4						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Not applicable

Full text of H-Statements

H225	Highly flammable liquid and vapor.
H226	Flammable liquid and vapor.
H280	Contains gas under pressure; may explode if heated.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H311	Toxic in contact with skin.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H370	Causes damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.

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Sources of key data used to compile the Safety Data Sheet
Valvoline 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 Valvoline's Environmental Health and Safety Department (1-800-VALVOLINE).

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

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