		Page: 1
SAFETY DATA SHEET		Revision Date: 06/25/2018
		Print Date: 6/26/2018
		SDS Number: 000000130059
Valvoline Professional Series COMPLETE FUEL SYSTEM CLEANER FUEL SYSTEM CLEANER		Version: 1.4
679741		

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline Professional Series COMPLETE FUEL SYSTEM CLEANER
FUEL SYSTEM CLEANER

Relevant identified uses of the substance or mixture and uses advised against

Recommended use : Industrial chemical

<p>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)</p>	<p>Emergency telephone number 1-800-VALVOLINE (1-800-825-8654)</p> <p>Regulatory Information Number 1-800-TEAMVAL (1-800-832-6825)</p> <p>Product Information 1-800-TEAMVAL (1-800-832-6825)</p>
--	---

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification


Flammable liquids : Category 3
Skin irritation : Category 2
Eye irritation : Category 2A
Carcinogenicity (Inhalation) : Category 2
Aspiration hazard : Category 1

GHS label elements

Hazard pictograms :   

Signal Word : Danger

Hazard Statements : Flammable liquid and vapor.

		Page: 2
SAFETY DATA SHEET		Revision Date: 06/25/2018
		Print Date: 6/26/2018
		SDS Number: 000000130059
Valvoline Professional Series COMPLETE FUEL SYSTEM CLEANER FUEL SYSTEM CLEANER		Version: 1.4
679741		

May be fatal if swallowed and enters airways.
 Causes skin irritation.
 Causes serious eye irritation.
 Suspected of causing cancer if inhaled.

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.
 Keep container tightly closed.
 Ground/bond container and receiving equipment.
 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Wash skin thoroughly after handling.
 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:

IF SWALLOWED: Immediately call a POISON CENTER/doctor.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 IF exposed or concerned: Get medical advice/ attention. Do NOT induce vomiting.
 If skin irritation occurs: Get medical advice/ attention.
 If eye irritation persists: 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 cool.
 Store locked up.

Disposal:

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

Other hazards

Static-accumulating flammable liquid.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

SAFETY DATA SHEET

Revision Date: 06/25/2018

Print Date: 6/26/2018

SDS Number: 000000130059

Valvoline Professional Series COMPLETE FUEL SYSTEM
CLEANER FUEL SYSTEM CLEANER

Version: 1.4

679741

Chemical nature : Static Accumulator

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics		Flam. Liq. 4; H227 Asp. Tox. 1; H304	42.2786
POLY[OXY(1,2-PROPANEDIYL)], ALPHA, -(3-AMINOPROPYL)-, OMEGA.-HYDROXY-, C12-C15 ALKYL ETHERS		Skin Irrit. 2; H315 Eye Dam. 1; H318	30.5928
Distillates (petroleum), hydrotreated middle	64742-46-7	Flam. Liq. 3; H226 Acute Tox. 4; H332 Skin Irrit. 2; H315 Asp. Tox. 1; H304	16.9114
NAPHTHA (PETROLEUM), HYDROTREATED HEAVY	64742-48-9	Flam. Liq. 3; H226 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335 Asp. Tox. 1; H304	15.4147
Poly[oxy(1,2-propanediyl)].alpha.-propyl-.omega.-hydroxy-C12-15 alkyl ethers		Skin Irrit. 2; H315 Eye Dam. 1; H318	2.5367
HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE		Flam. Liq. 4; H227 STOT SE 3; H336 Asp. Tox. 1; H304	2.1139
NAPHTHALENE	91-20-3	Acute Tox. 4; H302	0.1691



SAFETY DATA SHEET

Revision Date: 06/25/2018

Print Date: 6/26/2018

SDS Number: 000000130059

Version: 1.4

Valvoline Professional Series COMPLETE FUEL SYSTEM
CLEANER FUEL SYSTEM CLEANER

679741

		Carc. 2; H351	
--	--	---------------	--

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 breathed in, move person into fresh air.
If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- 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 : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Protect unharmed eye.
- 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 : Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include:
stomach or intestinal upset (nausea, vomiting, diarrhea)
irritation (nose, throat, airways)
Headache
Dizziness
May be fatal if swallowed and enters airways.
Causes skin irritation.
Causes serious eye irritation.
Suspected of causing cancer if inhaled.
- Notes to physician : No hazards which require special first aid measures.

**SAFETY DATA SHEET**

Revision Date: 06/25/2018

Print Date: 6/26/2018

SDS Number: 000000130059

Valvoline Professional Series COMPLETE FUEL SYSTEM
CLEANER FUEL SYSTEM CLEANER

Version: 1.4

679741

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
carbon
- 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 emergency procedures : Evacuate personnel to safe areas.
Remove all sources of ignition.
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.



SAFETY DATA SHEET

Revision Date: 06/25/2018

Print Date: 6/26/2018

SDS Number: 000000130059

Valvoline Professional Series COMPLETE FUEL SYSTEM
CLEANER FUEL SYSTEM CLEANER

Version: 1.4

679741

- 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).
- 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.
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.
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.
- 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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis

SAFETY DATA SHEET

Revision Date: 06/25/2018

Print Date: 6/26/2018

SDS Number: 000000130059

Valvoline Professional Series COMPLETE FUEL SYSTEM
CLEANER FUEL SYSTEM CLEANER

Version: 1.4

679741

Distillates (petroleum), hydrotreated middle	64742-46-7	REL	5 mg/m3 Mist.	NIOSH/GUID E
		STEL	10 mg/m3 Mist.	NIOSH/GUID E
				NIOSH/GUID E
		PEL	5 mg/m3 Mist.	OSHA_TRA NS
				OSHA_TRA NS
		TWA	5 mg/m3 Mist.	ACGIH
		STEL	10 mg/m3 Mist.	ACGIH
				ACGIH
		TWA	0.2 mg/m3 Inhalable fraction.	ACGIHLIS_P
				ACGIHLIS_P
				ACGIHLIS_P
				ACGIHLIS_P
NAPHTHA (PETROLEUM), HYDROTREATED HEAVY	64742-48-9	TWA	100 ppm	SUPLR EXP
HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE		TWA	200 mg/m3 (total hydrocarbon vapor)	ACGIH
NAPHTHALENE	91-20-3	TWA	10 ppm	ACGIH
		TWA	10 ppm 50 mg/m3	NIOSH REL
		ST	15 ppm 75 mg/m3	NIOSH REL
		TWA	10 ppm 50 mg/m3	OSHA Z-1
		TWA	10 ppm 50 mg/m3	OSHA P0
		STEL	15 ppm 75 mg/m3	OSHA P0
		PEL	0.1 ppm 0.5 mg/m3	CAL PEL

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.

Hand protection

**SAFETY DATA SHEET**

Revision Date: 06/25/2018

Print Date: 6/26/2018

SDS Number: 000000130059

Valvoline Professional Series COMPLETE FUEL SYSTEM
CLEANER FUEL SYSTEM CLEANER

Version: 1.4

679741

- 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.
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 : No data available
- Odour Threshold : No data available
- pH : No data available
- Melting point/freezing point : No data available
- Boiling point/boiling range : 365 °F / 185 °C
Calculated Phase Transition Liquid/Gas
- Flash point : 108.0 °F / 42.2 °C
Calculated Flash Point
- Evaporation rate : No data available
- Flammability (solid, gas) :
No data available
- Flammability (liquids) : Static-accumulating flammable liquid.
- Flammability (liquids) :
Upper explosion limit : No data available
- Lower explosion limit : No data available

**SAFETY DATA SHEET**

Revision Date: 06/25/2018

Print Date: 6/26/2018

SDS Number: 000000130059

Version: 1.4

Valvoline Professional Series COMPLETE FUEL SYSTEM
CLEANER FUEL SYSTEM CLEANER

679741

Vapour pressure : 1.131 hPa Calculated Vapor Pressure

Relative vapour density : No data available

Relative density : No data available

Density : 0.870 g/cm³ (20 °C)

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

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 heat

Incompatible materials : Strong oxidizing agents

Hazardous decomposition products : carbon dioxide and carbon monoxide

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of : Inhalation

SAFETY DATA SHEET

Revision Date: 06/25/2018

Print Date: 6/26/2018

SDS Number: 000000130059

Valvoline Professional Series COMPLETE FUEL SYSTEM
CLEANER FUEL SYSTEM CLEANER

Version: 1.4

679741

exposure Skin contact
 Eye Contact
 Ingestion

Acute toxicity

Not classified based on available information.

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

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

Acute inhalation toxicity : LC50 (Rat): > 5 mg/l
Exposure time: 8 h
Test atmosphere: vapour
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 5,000 mg/kg

Distillates (petroleum), hydrotreated middle:

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

Acute inhalation toxicity : LC50 : estimated 11 mg/l
Exposure time: 4 h
Test atmosphere: vapour

NAPHTHALENE:

Acute oral toxicity : LD50 (Mouse, male): 533 mg/kg
Method: OECD Test Guideline 401Acute inhalation toxicity : LC50 (Rat): > 0.4 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Assessment: Not classified as acutely toxic by inhalation
under GHS.Acute dermal toxicity : LD50 (Rabbit): > 2.0 g/kg

LD50 (Rat, male and female): > 2,500 mg/kg
Assessment: Not classified as acutely toxic by dermal
absorption under GHS.Acute toxicity (other routes of : LD50 (Mouse, female): 710 mg/kg
administration) Application Route: GavageLD50 (Mouse): 150 mg/kg
Application Route: IntraperitonealLD50 (Mouse, male): 533 mg/kg
Application Route: Gavage

**SAFETY DATA SHEET**

Revision Date: 06/25/2018

Print Date: 6/26/2018

SDS Number: 000000130059

Valvoline Professional Series COMPLETE FUEL SYSTEM
CLEANER FUEL SYSTEM CLEANER

Version: 1.4

679741

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:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Result: No skin irritation

POLY[OXY(1,2-PROPANEDIYL)], ALPHA, -(3-AMINOPROPYL)-, OMEGA.-HYDROXY-, C12-C15
ALKYL ETHERS:

Result: Irritating to skin.

Distillates (petroleum), hydrotreated middle:

Result: Irritating to skin.

NAPHTHA (PETROLEUM), HYDROTREATED HEAVY:

Result: Irritating to skin.

Poly[oxy(1,2-propanediyl)].alpha.-propyl.-omega.-hydroxy-C12-15 alkyl ethers:

Result: Irritating to skin.

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:

Result: Slight, transient irritation

NAPHTHALENE:

Result: Slight, transient irritation

Serious eye damage/eye irritation

Causes serious eye irritation.

Product:

Result: Irritating to eyes.

Remarks: Expected based on components.

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


Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics:

Result: Slight, transient irritation

POLY[OXY(1,2-PROPANEDIYL)], ALPHA, -(3-AMINOPROPYL)-, OMEGA.-HYDROXY-, C12-C15
ALKYL ETHERS:

Result: Risk of serious damage to eyes.

NAPHTHA (PETROLEUM), HYDROTREATED HEAVY:

	Page: 12
SAFETY DATA SHEET	Revision Date: 06/25/2018
	Print Date: 6/26/2018
	SDS Number: 000000130059
Valvoline Professional Series COMPLETE FUEL SYSTEM CLEANER FUEL SYSTEM CLEANER 679741	Version: 1.4

Result: Irritating to eyes.

Poly[oxy(1,2-propanediyl)].alpha.-propyl-.omega.-hydroxy-C12-15 alkyl ethers:
Result: Risk of serious damage to eyes.

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:
Result: Slight, transient irritation

NAPHTHALENE:
Result: Slight, transient irritation

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.
Respiratory sensitisation: Not classified based on available information.

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics:
Assessment: Did not cause sensitisation on laboratory animals.
Method: OECD Test Guideline 406

POLY[OXY(1,2-PROPANEDIYL)], ALPHA,-(3-AMINOPROPYL)-,OMEGA.-HYDROXY-,C12-C15
ALKYL ETHERS:
Assessment: Does not cause skin sensitisation.

Germ cell mutagenicity
Not classified based on available information.

Carcinogenicity

Suspected of causing cancer if inhaled.

Components:

NAPHTHALENE:

Carcinogenicity - : Limited evidence of carcinogenicity in inhalation studies with
Assessment animals.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

Components:

NAPHTHA (PETROLEUM), HYDROTREATED HEAVY:

Assessment: May cause respiratory irritation.

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:

Assessment: The substance or mixture is classified as specific target organ toxicant, single
exposure, category 3 with narcotic effects.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:

**SAFETY DATA SHEET**

Revision Date: 06/25/2018

Print Date: 6/26/2018

SDS Number: 000000130059

Valvoline Professional Series COMPLETE FUEL SYSTEM
CLEANER FUEL SYSTEM CLEANER

Version: 1.4

679741

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 2% aromatics:
May be fatal if swallowed and enters airways.

Distillates (petroleum), hydrotreated middle:
May be fatal if swallowed and enters airways.

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

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:
May be fatal if swallowed and enters airways.

Further information**Product:**

Remarks: Solvents may degrease the skin.

Carcinogenicity:**IARC**

Group 2B: Possibly carcinogenic to humans

NAPHTHALENE 91-20-3

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

Reasonably anticipated to be a human carcinogen

NAPHTHALENE 91-20-3

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment

Short-term (acute) aquatic hazard

: Acute aquatic toxicity Category 1; Very toxic to aquatic life.

Long-term (chronic) aquatic hazard

: Chronic aquatic toxicity Category 1; Very toxic to aquatic life with long lasting effects.

Components:

Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cyclics, < 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

SAFETY DATA SHEET

Revision Date: 06/25/2018

Print Date: 6/26/2018

SDS Number: 000000130059

Valvoline Professional Series COMPLETE FUEL SYSTEM
CLEANER FUEL SYSTEM CLEANER

Version: 1.4

679741

mg/l
Exposure time: 72 h

POLY[OXY(1,2-PROPANEDIYL)], ALPHA,-(3-AMINOPROPYL)-,OMEGA.-HYDROXY-,C12-C15 ALKYL ETHERS:

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Very toxic to aquatic life.

Long-term (chronic) aquatic hazard : Very toxic to aquatic life with long lasting effects.

Distillates (petroleum), hydrotreated middle:

Ecotoxicology Assessment

Long-term (chronic) aquatic hazard : Toxic to aquatic life with long lasting effects.

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:

Toxicity to fish : LL50 (Oncorhynchus mykiss (rainbow trout)): 2 - 5 mg/l
Exposure time: 96 h

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 (Daphnia magna (Water flea)): 10 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

End point: Growth inhibition
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.

Ecotoxicology Assessment

Short-term (acute) aquatic hazard : Toxic to aquatic life.

Long-term (chronic) aquatic hazard : Toxic to aquatic life with long lasting effects.

SAFETY DATA SHEET

Revision Date: 06/25/2018

Print Date: 6/26/2018

SDS Number: 000000130059

Valvoline Professional Series COMPLETE FUEL SYSTEM
CLEANER FUEL SYSTEM CLEANER

Version: 1.4

679741

NAPHTHALENE:

Toxicity to fish : LC50 (Oncorhynchus mykiss (rainbow trout)): 0.91 - 2.82 mg/l
Exposure time: 96 h
Test Type: static test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 1.09 - 3.4 mg/l
Exposure time: 48 h
Test Type: static test

Persistence and degradability

Components:

NAPHTHA (PETROLEUM), HYDROTREATED HEAVY:

Biodegradability : Remarks: Not readily biodegradable.

HYDROCARBONS, C10, AROMATICS, >1% NAPHTHALENE:

Biodegradability : Result: Inherently biodegradable

NAPHTHALENE:

Biodegradability : Result: Not readily biodegradable.

No data available

Bioaccumulative potential

Components:

NAPHTHALENE:

Partition coefficient: n-octanol/water : log Pow: 3.30

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., Very 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.



SAFETY DATA SHEET

Revision Date: 06/25/2018

Print Date: 6/26/2018

SDS Number: 000000130059

Valvoline Professional Series COMPLETE FUEL SYSTEM
CLEANER FUEL SYSTEM CLEANER

Version: 1.4

679741

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

REGULATION

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

U.S. DOT - ROAD

Not dangerous goods

CFR_RAIL_C

Not dangerous goods

U.S. DOT - INLAND WATERWAYS

Not dangerous goods

TDG_ROAD_C

Not dangerous goods

TDG_RAIL_C

Not dangerous goods

TDG_INWT_C

Not dangerous goods

INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1993	FLAMMABLE LIQUID, N.O.S. (HYDROTREATED HEAVY NAPHTHA)	3	III	LIMITED QUANTITY
----	------	--	---	-----	------------------



SAFETY DATA SHEET

Revision Date: 06/25/2018

Print Date: 6/26/2018

SDS Number: 000000130059

Valvoline Professional Series COMPLETE FUEL SYSTEM
CLEANER FUEL SYSTEM CLEANER

Version: 1.4

679741

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1993	Flammable liquid, n.o.s. (HYDROTREATED HEAVY NAPHTHA)	3	III
----	------	---	---	-----

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1993	Flammable liquid, n.o.s. (HYDROTREATED HEAVY NAPHTHA)	3	III
----	------	---	---	-----

MX_DG

UN	1993	LIQUIDO INFLAMABLE, N.E.P. (HYDROTREATED HEAVY NAPHTHA)	3	III
----	------	---	---	-----

*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

**EPCRA - Emergency Planning and Community Right-to-Know Act
CERCLA Reportable Quantity**

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
NAPHTHALENE	91-20-3	100	59137

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

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

SARA 313

NAPHTHALENE 91-20-3 0.16 %

California Prop 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other

SAFETY DATA SHEET	Revision Date: 06/25/2018
	Print Date: 6/26/2018
	SDS Number: 000000130059
Valvoline Professional Series COMPLETE FUEL SYSTEM CLEANER FUEL SYSTEM CLEANER	Version: 1.4
679741	

reproductive harm.

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 : Not 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
- TSCA : On TSCA Inventory

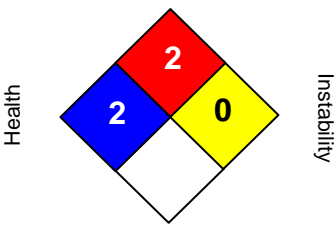
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

Revision Date: 06/25/2018

<p>NFPA:</p>  <p style="text-align: center;">Special hazard.</p>	<p>HMIS III:</p> <table border="1" style="width: 100%;"> <tr> <td style="background-color: blue; color: white;">HEALTH</td> <td style="text-align: center;">3*</td> </tr> <tr> <td style="background-color: red; color: white;">FLAMMABILITY</td> <td style="text-align: center;">2</td> </tr> <tr> <td style="background-color: yellow; color: black;">PHYSICAL HAZARD</td> <td style="text-align: center;">0</td> </tr> </table> <p>0 = not significant, 1 =Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	HEALTH	3*	FLAMMABILITY	2	PHYSICAL HAZARD	0
HEALTH	3*						
FLAMMABILITY	2						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class II

Full text of H-Statements

- H226 Flammable liquid and vapor.
- H227 Combustible liquid.
- H302 Harmful if swallowed.

**SAFETY DATA SHEET**

Revision Date: 06/25/2018

Print Date: 6/26/2018

SDS Number: 000000130059

Valvoline Professional Series COMPLETE FUEL SYSTEM
CLEANER FUEL SYSTEM CLEANER

Version: 1.4

679741

H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer if inhaled.

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

	Page: 20
SAFETY DATA SHEET	Revision Date: 06/25/2018
	Print Date: 6/26/2018
	SDS Number: 000000130059
Valvoline Professional Series COMPLETE FUEL SYSTEM CLEANER FUEL SYSTEM CLEANER 679741	Version: 1.4

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

		Page: 1
SAFETY DATA SHEET		Revision Date: 05/19/2017
		Print Date: 5/15/2018
		SDS Number: 000000263723
Valvoline Professional Series REMOVE Intake Cleaner 871951		Version: 1.4

29 CFR 1910.1200 (OSHA HazCom 2012)

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product identifier

Trade name : Valvoline Professional Series REMOVE Intake Cleaner

Relevant identified uses of the substance or mixture and uses advised against


Recommended use : Cleaner.

<p>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</p>	<p>Emergency telephone number 1-800-VALVOLINE (1-800-825-8654)</p> <p>Regulatory Information Number 1-800-TEAMVAL</p> <p>Product Information 1-800-TEAMVAL</p>
--	--

SECTION 2. HAZARDS IDENTIFICATION

GHS Classification

- Flammable liquids : Category 2
- Acute toxicity (Inhalation) : Category 4
- Skin corrosion : Category 1
- Serious eye damage : Category 1
- Reproductive toxicity : Category 1B
- Specific target organ systemic toxicity - single exposure : Category 3 (Respiratory system, Central nervous system)
- Specific target organ systemic toxicity - repeated exposure : Category 2 (Auditory system, Gastro-intestinal system, Liver, Immune system)
- Specific target organ systemic toxicity - repeated exposure (Inhalation) : Category 2 (Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision))
- Aspiration hazard : Category 1

		Page: 2
SAFETY DATA SHEET		Revision Date: 05/19/2017
		Print Date: 5/15/2018
		SDS Number: 000000263723
Valvoline Professional Series REMOVE Intake Cleaner		Version: 1.4
871951		

GHS label elements

Hazard pictograms :    

Signal Word : Danger

Hazard Statements : Highly flammable liquid and vapor.
 May be fatal if swallowed and enters airways.
 Causes severe skin burns and eye damage.
 Harmful if inhaled.
 May cause respiratory irritation.
 May cause drowsiness or dizziness.
 May damage fertility or the unborn child.
 May cause damage to organs (Auditory system, Gastro-intestinal system, Liver, Immune system) through prolonged or repeated exposure.
 May cause damage to organs (Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision)) through prolonged or repeated exposure if inhaled.

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.
 Keep container tightly closed.
 Ground/bond container and receiving equipment.
 Use explosion-proof electrical/ ventilating/ lighting/ equipment.
 Use only non-sparking tools.
 Take precautionary measures against static discharge.
 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
 Wash skin thoroughly after handling.
 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 SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

SAFETY DATA SHEET

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

IF exposed or concerned: Get medical advice/ attention.
 Wash contaminated clothing 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 flammable liquid.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Defatter

Hazardous components

Chemical name	CAS-No.	Classification	Concentration (%)
ISOPROPANOL	67-63-0	Flam. Liq. 2; H225 Eye Irrit. 2A; H319 STOT SE 3; H336	29.3556
XYLENE	1330-20-7	Flam. Liq. 3; H226 Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT SE 3; H335, H336 Asp. Tox. 1; H304	18.9254
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2	Flam. Liq. 4; H227 Acute Tox. 4; H302	15.7395

SAFETY DATA SHEET

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

		Acute Tox. 4; H332 Acute Tox. 4; H312 Skin Irrit. 2; H315 Eye Irrit. 2A; H319	
POLY[OXY(1,2-PROPANEDIYL)], ALPHA, -(3-AMINOPROPYL)- ,OMEGA.-HYDROXY-,C12-C15 ALKYL ETHERS		Skin Irrit. 2; H315 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410	14.2363
TOLUENE	108-88-3	Flam. Liq. 2; H225 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 Repr. 2; H361d STOT SE 3; H336 STOT RE 2; H373 Asp. Tox. 1; H304	9.9941
ETHYL BENZENE	100-41-4	Flam. Liq. 2; H225 Acute Tox. 4; H332 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 STOT RE 2; H373 Asp. Tox. 1; H304	5.6845
MORPHOLINE	110-91-8	Flam. Liq. 3; H226 Acute Tox. 4; H302	3.9349

SAFETY DATA SHEET

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

		Acute Tox. 3; H331 Acute Tox. 3; H311 Skin Corr. 1A; H314 Eye Dam. 1; H318	
METHYL-N 2-PYRROLIDONE	872-50-4	Flam. Liq. 4; H227 Skin Irrit. 2; H315 Eye Irrit. 2A; H319 Repr. 1B; H360 STOT SE 3; H335	3.9349
TRIETHANOLAMINE	102-71-6	Eye Irrit. 2A; H319	3.9349
OLEYLAMINE	112-90-3	Acute Tox. 4; H302 Skin Corr. 1; H314 Eye Dam. 1; H318 STOT RE 2; H373 Asp. Tox. 1; H304	3.9348
Poly[oxy(1,2-propanediyl)].alpha.-propyl-.omega.-hydroxy-C12-15 alkyl ethers		Skin Irrit. 2; H315 Eye Dam. 1; H318	1.1804

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Symptoms of poisoning may appear several hours later.
Do not leave the victim unattended.



SAFETY DATA SHEET

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

- 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 : If on skin, rinse well with water.
 Wash contaminated clothing before re-use.
 If on clothes, remove clothes.
- In case of eye contact : In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 Continue rinsing eyes during transport to hospital.
 Remove contact lenses.
 Protect unharmed eye.
- If swallowed : Get medical attention immediately.
 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 : Administration of high doses of isopropanol in combination with known hepatotoxic chemicals resulted in enhanced liver toxicity in experimental animals.
 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)
 Cough
 discomfort in the chest
 temporary changes in mood and behavior
 effects on memory
 Shortness of breath
 confusion
 irregular heartbeat
 Bloody urine
 lung edema (fluid buildup in the lung tissue)
 Difficulty in breathing
 May be fatal if swallowed and enters airways.
 Causes serious eye damage.
 Harmful if inhaled.
 May cause respiratory irritation.

SAFETY DATA SHEET

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

May cause drowsiness or dizziness.
 May damage fertility or the unborn child.
 Causes severe burns.

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
 Ketones
 Organic acids
 formaldehyde
 Ammonia
 Nitrogen oxides (NO_x)

carbon dioxide and carbon monoxide
 Hydrocarbons
 Aldehydes
 Ketones
 Organic acids
 formaldehyde
 nitrogen compounds
 Ammonia
 Nitrogen oxides (NO_x)
 nitrogen oxides (NO_x)

Specific extinguishing methods : Product is compatible with standard fire-fighting agents.

**SAFETY DATA SHEET**

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

- 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 emergency procedures : Evacuate personnel to safe areas.
Remove all sources of ignition.
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.
- 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).
- 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.
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.
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.

SAFETY DATA SHEET

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

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.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
ISOPROPANOL	67-63-0	TWA	200 ppm	ACGIH
		STEL	400 ppm	ACGIH
		TWA	400 ppm 980 mg/m3	NIOSH REL
		ST	500 ppm 1,225 mg/m3	NIOSH REL
		TWA	400 ppm 980 mg/m3	OSHA Z-1
		TWA	400 ppm 980 mg/m3	OSHA P0
		STEL	500 ppm 1,225 mg/m3	OSHA P0
		PEL	400 ppm 980 mg/m3	CAL PEL
		STEL	500 ppm 1,225 mg/m3	CAL PEL
		XYLENE	1330-20-7	STEL
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 435 mg/m3			OSHA P0

SAFETY DATA SHEET

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2	TWA	20 ppm	ACGIH
		TWA	5 ppm 24 mg/m3	NIOSH REL
		TWA	50 ppm 240 mg/m3	OSHA Z-1
		TWA	25 ppm 120 mg/m3	OSHA P0
		PEL	20 ppm 97 mg/m3	CAL PEL
TOLUENE	108-88-3	TWA	20 ppm	ACGIH
		TWA	100 ppm 375 mg/m3	NIOSH REL
		ST	150 ppm 560 mg/m3	NIOSH REL
		TWA	200 ppm	OSHA Z-2
		CEIL	300 ppm	OSHA Z-2
		Peak	500 ppm	OSHA Z-2
		TWA	100 ppm 375 mg/m3	OSHA P0
		STEL	150 ppm 560 mg/m3	OSHA P0
		PEL	10 ppm 37 mg/m3	CAL PEL
		C	500 ppm	CAL PEL
		STEL	150 ppm 560 mg/m3	CAL PEL
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
MORPHOLINE	110-91-8	TWA	20 ppm	ACGIH
		TWA	20 ppm 70 mg/m3	NIOSH REL
		ST	30 ppm 105 mg/m3	NIOSH REL
		TWA	20 ppm 70 mg/m3	OSHA Z-1

SAFETY DATA SHEET

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

		TWA	20 ppm 70 mg/m3	OSHA P0
		STEL	30 ppm 105 mg/m3	OSHA P0
		STEL	30 ppm 105 mg/m3	CAL PEL
		PEL	20 ppm 70 mg/m3	CAL PEL
METHYL-N 2-PYRROLIDONE	872-50-4	TWA	10 ppm	US WEEL
		PEL	1 ppm 4 mg/m3	CAL PEL
TRIETHANOLAMINE	102-71-6	TWA	5 mg/m3	ACGIH
		PEL	5 mg/m3	CAL PEL

Hazardous components without workplace control parameters

Components	CAS-No.
POLY[OXY(1,2-PROPANEDIYL)], ALPHA,-(3-AMINOPROPYL)-,OMEGA.-HYDROXY-,C12-C15 ALKYL ETHERS	
OLEYLAMINE	112-90-3
Poly[oxy(1,2-propanediyl)].alpha.-propyl-.omega.-hydroxy-C12-15 alkyl ethers	

Biological occupational exposure limits

Components	CAS-No.	Control parameters	Biological specimen	Sampling time	Permissible concentration	Basis
ISOPROPANOL	67-63-0	Acetone	Urine	End of shift at end of workweek	40 mg/l	ZUS_A CGIHB
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
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2	Butoxyacetic acid (BAA)	Urine	End of shift (As soon as possible after exposure ceases)	200 mg/g Creatinine	ZUS_A CGIHB
TOLUENE	108-88-3	Toluene	In blood	Prior to last shift	0.02 mg/l	ZUS_A CGIHB

SAFETY DATA SHEET

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

				of workweek		
		Toluene	Urine	End of shift (As soon as possible after exposure ceases)	0.03 mg/l	ZUS_A CGIHB
		o-Cresol	Urine	End of shift (As soon as possible after exposure ceases)	0.3 mg/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
METHYL-N 2-PYRROLIDONE	872-50-4	5-Hydroxy-N-methyl-2-pyrrolidone	Urine	End of shift (As soon as possible after exposure ceases)	100 mg/l	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.

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.

**SAFETY DATA SHEET**

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

- 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 and face shield when there is potential for exposure of the eyes or face to liquid, vapor or mist.
Maintain eye wash station in immediate work area.
- Skin and body protection : Wear resistant gloves (consult your safety equipment supplier).
Wear as appropriate:
Impervious clothing
Chemical resistant apron
Safety shoes
Flame-resistant clothing
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.
- Hygiene measures : Wash hands before breaks and at the end of workday.
When using do not eat or drink.
Ensure that eyewash stations and safety showers are close to the workstation location.
When using do not smoke.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Physical state : liquid
- Odour : No data available
- Odour Threshold : No data available
- pH : No data available
- Melting point/freezing point : No data available
- Boiling point/boiling range : 231.1 °F / 110.6 °C
Calculated Phase Transition Liquid/Gas
- Flash point : 39.99 °F / 4.44 °C
Calculated Flash Point
- Evaporation rate : No data available
- Flammability (solid, gas) :
No data available
- Flammability (liquids) : Static-accumulating flammable liquid.

**SAFETY DATA SHEET**

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

Flammability (liquids)	:	
Upper explosion limit	:	No data available
Lower explosion limit	:	No data available
Vapour pressure	:	44 hPa (20 °C) Calculated Vapor Pressure
Relative vapour density	:	No data available
Relative density	:	No data available
Density	:	0.852 g/cm ³
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

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.

This product should not be heated above 140 degrees F (60 degrees C) in the presence of aluminum due to excessive corrosion and potential chemical reaction releasing flammable hydrogen gas.
excessive heat
Do not allow evaporation to dryness.
Exposure to air.



SAFETY DATA SHEET

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

Exposure to moisture
Exposure to light.

Incompatible materials

- : Acids
- acrylates
- Alcohols
- Aldehydes
- Amines
- Ammonia
- Bases
- chlorates
- Chlorine
- Ethylene oxide
- glycols
- halogenated hydrocarbons
- halogens
- isocyanates
- Ketones
- nitrites and other nitrosating agents
- organic anhydrides
- organic halides
- phenols
- Reducing agents
- salts of strong bases
- strong alkalis
- Strong oxidizing agents
- Do not use with aluminum equipment at temperatures above 49C or 120 degrees F.

Hazardous decomposition products

- Aldehydes
- carbon dioxide and carbon monoxide
- formaldehyde-like
- Hydrocarbons
- nitrogen compounds
- Nitrogen oxides (NOx)
- Organic acids
- Ammonia
- ketones

SECTION 11. TOXICOLOGICAL INFORMATION

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

Acute toxicity

Harmful if inhaled.

**SAFETY DATA SHEET**

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

Components:**ISOPROPANOL:**

Acute oral toxicity : LD50 (Rat): 5.84 g/kg

Acute inhalation toxicity : LC50 (Rat): 16000 ppm
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): 12,800 mg/kg

XYLENE:

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

Acute inhalation toxicity : LCLo (Rat): 8,000 mg/l
Exposure time: 4 hLC50 (Rat): 6700 ppm
Exposure time: 4 h
Test atmosphere: vapour

Assessment: The component/mixture is classified as acute inhalation toxicity, category 4.

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

ETHYLENE GLYCOL MONOBUTYL ETHER:

Acute oral toxicity : LD50 (Guinea pig): 1,200 mg/kg

Acute inhalation toxicity : LC50 (Rat): 2.17 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: The component/mixture is classified as acute inhalation toxicity, category 4.

Acute dermal toxicity : Assessment: The component/mixture is classified as acute dermal toxicity, category 4.

LD50 (Rabbit): 400 - 500 mg/kg

TOLUENE:

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

Acute inhalation toxicity : LC50 (Rat): 8000 ppm
Exposure time: 4 h
Test atmosphere: vapour

Acute dermal toxicity : LD50 (Rabbit): 12,124 mg/kg

SAFETY DATA SHEET

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

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

MORPHOLINE:

Acute oral toxicity : LD50 (Rat): ca. 1,900 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : Test atmosphere: vapour
Assessment: The component/mixture is classified as acute inhalation toxicity, category 3.

Acute dermal toxicity : LD50 (Rabbit): ca. 500 mg/kg

METHYL-N 2-PYRROLIDONE:

Acute oral toxicity : LD50 (Rat): 4,150 mg/kg

Acute inhalation toxicity : LC50 (Rat): > 5.1 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Assessment: Not classified as acutely toxic by inhalation under GHS.

Acute dermal toxicity : LD50 (Rabbit): 8,000 mg/kg

TRIETHANOLAMINE:

Acute oral toxicity : LD50 (Rat): 6,400 mg/kg

Acute dermal toxicity : LD50 (Rabbit): > 2,000 mg/kg
Method: OECD Test Guideline 402
Assessment: Not classified as acutely toxic by dermal absorption under GHS.
Remarks: No mortality observed at this dose.

Acute toxicity (other routes of administration) : LD50 (Mouse): 1,450 mg/kg
Application Route: Intraperitoneal

OLEYLAMINE:

Acute oral toxicity : LD50 (Rat): 1,950 mg/kg
Remarks: Information given is based on data obtained from similar substances.

**SAFETY DATA SHEET**

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

Skin corrosion/irritation

Causes severe burns.

Product:

Result: Repeated exposure may cause skin dryness or cracking.

Remarks: Causes severe skin burns and eye damage.

Components:**ISOPROPANOL:**

Result: Slight, transient irritation

XYLENE:

Result: Irritating to skin.

ETHYLENE GLYCOL MONOBUTYL ETHER:

Species: Rabbit

Result: Irritating to skin.

POLY[OXY(1,2-PROPANEDIYL)], ALPHA, -(3-AMINOPROPYL)-, OMEGA.-HYDROXY-, C12-C15 ALKYL ETHERS:

Result: Irritating to skin.

TOLUENE:

Result: Irritating to skin.

ETHYL BENZENE:

Result: Irritating to skin.

MORPHOLINE:

Species: Rabbit

Method: OECD Test Guideline 404

Result: Corrosive after 3 minutes or less of exposure

METHYL-N 2-PYRROLIDONE:

Result: irritating

TRIETHANOLAMINE:

Result: Slight, transient irritation

OLEYLAMINE:

Result: Corrosive to skin

Poly[oxy(1,2-propanediyl)].alpha.-propyl-.omega.-hydroxy-C12-15 alkyl ethers:

Result: Irritating to skin.

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

Remarks: May cause irreversible eye damage.

**SAFETY DATA SHEET**

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

Components:

ISOPROPANOL:

Result: Irritating to eyes.

XYLENE:

Result: Eye irritation

ETHYLENE GLYCOL MONOBUTYL ETHER:

Species: Rabbit

Result: Irritating to eyes.

POLY[OXY(1,2-PROPANEDIYL)], ALPHA, -(3-AMINOPROPYL)-, OMEGA.-HYDROXY-, C12-C15
ALKYL ETHERS:

Result: Risk of serious damage to eyes.

TOLUENE:

Result: Irritating to eyes.

ETHYL BENZENE:

Result: Irritating to eyes.

MORPHOLINE:

Species: Rabbit

Result: Corrosive

Method: OECD Test Guideline 405

METHYL-N 2-PYRROLIDONE:

Result: Irritation to eyes, reversing after 7 to 21 days

TRIETHANOLAMINE:

Species: Rabbit

Result: Irritating to eyes.

OLEYLAMINE:

Result: Corrosive

Poly[oxy(1,2-propanediyl)].alpha.-propyl.-omega.-hydroxy-C12-15 alkyl ethers:

Result: Risk of serious damage to eyes.

Respiratory or skin sensitisation

Skin sensitisation: Not classified based on available information.

Respiratory sensitisation: Not classified based on available information.

Components:

ETHYLENE GLYCOL MONOBUTYL ETHER:

Test Type: Maximisation Test

Species: Guinea pig

Assessment: Does not cause skin sensitisation.

Method: OECD Test Guideline 406

SAFETY DATA SHEET	Revision Date: 05/19/2017
	Print Date: 5/15/2018
	SDS Number: 000000263723
Valvoline Professional Series REMOVE Intake Cleaner 871951	Version: 1.4

POLY[OXY(1,2-PROPANEDIYL)], ALPHA,-(3-AMINOPROPYL)-,OMEGA.-HYDROXY-,C12-C15
ALKYL ETHERS:

Assessment: Does not cause skin sensitisation.

METHYL-N 2-PYRROLIDONE:

Assessment: Does not cause skin sensitisation.

Result: Did not cause sensitisation on laboratory animals.

TRIETHANOLAMINE:

Test Type: Maximisation Test

Assessment: Does not cause skin sensitisation.

Germ cell mutagenicity

Not classified based on available information.

Components:

ETHYLENE GLYCOL MONOBUTYL ETHER:

Genotoxicity in vitro : Test Type: Ames test
 Test species: Salmonella typhimurium
 Metabolic activation: with and without metabolic activation
 Result: negative

MORPHOLINE:

Genotoxicity in vitro : Test Type: unscheduled DNA synthesis assay
 Test species: rat hepatocytes
 Metabolic activation: without metabolic activation
 Method: OECD Test Guideline 482
 Result: negative

: Test Type: In vitro mammalian cell gene mutation test
 Test species: mouse lymphoma cells
 Metabolic activation: without metabolic activation
 Method: OECD Test Guideline 476
 Result: positive

METHYL-N 2-PYRROLIDONE:

Genotoxicity in vitro : Remarks: In vitro tests did not show mutagenic effects

Genotoxicity in vivo : Test Type: Micronucleus test
 Test species: Mouse
 Application Route: Oral
 Result: negative

Test Type: chromosome aberration assay
 Test species: Chinese hamster
 Application Route: Oral
 Result: negative

Carcinogenicity

Not classified based on available information.

SAFETY DATA SHEET	Revision Date: 05/19/2017
	Print Date: 5/15/2018
	SDS Number: 000000263723
Valvoline Professional Series REMOVE Intake Cleaner 871951	Version: 1.4

Components:

METHYL-N 2-PYRROLIDONE:

Species: Rat

Application Route: Oral

NOAEL: No observed adverse effect level: 678 mg/kg body weight

Species: Rat

Application Route: inhalation (dust/mist/fume)

NOAEL: No observed adverse effect level: 0.4 mg/l

Reproductive toxicity

May damage fertility or the unborn child.

Components:

TOLUENE:

Reproductive toxicity - Assessment : Some evidence of adverse effects on development, based on animal experiments.

METHYL-N 2-PYRROLIDONE:

Effects on fertility : Species: Rat
Application Route: Ingestion
Fertility: No observed adverse effect level Parent: 350
Result: Animal testing did not show any effects on fertility.

Effects on foetal development : Species: Rat
Application Route: inhalation (dust/mist/fume)
Dose: 0,12, 0,25, 0,49 milligram per liter
General Toxicity Maternal: No observed adverse effect concentration: 123 mg/m³
Teratogenicity: No observed adverse effect concentration F1: 494 mg/m³
Developmental Toxicity: No observed adverse effect concentration: 247 mg/m³

Species: Rat
Application Route: Oral
Dose: 0, 125, 250, 500, 750 milligram per kilogram
General Toxicity Maternal: No observed adverse effect level: 250 mg/kg body weight
Developmental Toxicity: No observed adverse effect level F1: 125 mg/kg body weight

Species: Rat
Application Route: Dermal
Dose: 0, 75, 237, 750 milligram per kilogram
General Toxicity Maternal: No observed adverse effect level: 237 mg/kg body weight
Teratogenicity: No observed adverse effect level F1: 237 mg/kg body weight
Developmental Toxicity: No observed adverse effect level F1: 237 mg/kg body weight

**SAFETY DATA SHEET**

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

Reproductive toxicity - Assessment : Clear evidence of adverse effects on sexual function and fertility, and/or on development, based on animal experiments

STOT - single exposure

May cause respiratory irritation.

May cause drowsiness or dizziness.

Components:**ISOPROPANOL:**

Assessment: May cause drowsiness or dizziness.

XYLENE:

Assessment: May cause respiratory irritation.

Assessment: May cause drowsiness or dizziness.

TOLUENE:

Exposure routes: Inhalation

Target Organs: Central nervous system

Assessment: May cause drowsiness or dizziness.

METHYL-N 2-PYRROLIDONE:

Exposure routes: Inhalation

Target Organs: Nose

Assessment: May cause respiratory irritation.

STOT - repeated exposure

Not classified based on available information.

Components:**TOLUENE:**

Exposure routes: Inhalation

Target Organs: Neurologic: other (neuropsychological effects, auditory dysfunction and effects on colour vision)

Assessment: May cause damage to organs through prolonged or repeated exposure.

ETHYL BENZENE:

Target Organs: Auditory system

Assessment: May cause damage to organs through prolonged or repeated exposure.

OLEYLAMINE:

Target Organs: Gastro-intestinal system, Liver, Immune system

Assessment: The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

Repeated dose toxicity**Components:****METHYL-N 2-PYRROLIDONE:**

Species: Rat

No observed adverse effect level: 169 mg/kg

Application Route: Ingestion

Exposure time: 90-day

**SAFETY DATA SHEET**

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

Species: Rat
No observed adverse effect level: 0.5 mg/l
Application Route: Inhalation
Test atmosphere: dust/mist
Exposure time: 90-day

Species: Rabbit
No observed adverse effect level: 826 mg/kg
Application Route: Skin contact
Exposure time: 28-day

Aspiration toxicity

May be fatal if swallowed and enters airways.

Components:**XYLENE:**

May be fatal if swallowed and enters airways.

TOLUENE:

May be fatal if swallowed and enters airways.

ETHYL BENZENE:

May be fatal if swallowed and enters airways.

OLEYLAMINE:

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:**ISOPROPANOL:**

Remarks: Central nervous system

ETHYL BENZENE:

Remarks: Central nervous system

TRIETHANOLAMINE:

Remarks: Liver

Remarks: Kidney

Carcinogenicity:**IARC**

Group 2B: Possibly carcinogenic to humans

ETHYL BENZENE

100-41-4

OSHA

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

**SAFETY DATA SHEET**

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

carcinogen by OSHA.

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.

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Product:**

Ecotoxicology Assessment

Acute aquatic toxicity : Acute aquatic toxicity Category 1; Very toxic to aquatic life.

Chronic aquatic toxicity : Chronic aquatic toxicity Category 1; Very toxic to aquatic life with long lasting effects.

Components:**ISOPROPANOL:**Toxicity to fish : LC50 (Fathead minnow (*Pimephales promelas*)): 5,770 - 7,450 mg/l
Exposure time: 96 h
Test Type: flow-through testToxicity to daphnia and other aquatic invertebrates : LC50 (Water flea (*Daphnia magna*)): > 10,000 mg/l
Exposure time: 24 h
Test Type: static test**XYLENE:**Toxicity to daphnia and other aquatic invertebrates : LC50 (Water flea (*Daphnia magna*)): > 100 - < 1,000 mg/l
Exposure time: 24 h
Test Type: static test**ETHYLENE GLYCOL MONOBUTYL ETHER:**Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): 1,474 mg/l
Exposure time: 96 h
Test Type: static test
Method: OECD Test Guideline 203Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (*Daphnia magna*)): 1,550 mg/l
Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202Toxicity to algae : EC50 (*Pseudokirchneriella subcapitata* (green algae)): 911 mg/l
End point: Growth inhibition
Exposure time: 72 h
Test Type: static test
Method: OECD Test Guideline 201

SAFETY DATA SHEET

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

Toxicity to fish (Chronic toxicity) : NOEC (Danio rerio (zebra fish)): > 100 mg/l
 Exposure time: 21 d
 Test Type: semi-static test
 Method: OECD Test Guideline 204

POLY[OXY(1,2-PROPANEDIYL)], ALPHA, -(3-AMINOPROPYL)-, OMEGA.-HYDROXY-, C12-C15 ALKYL ETHERS:

Ecotoxicology Assessment

Acute aquatic toxicity : Very toxic to aquatic life.

Chronic aquatic toxicity : Very toxic to aquatic life with long lasting effects.

TOLUENE:

Toxicity to fish : LC50 (Oncorhynchus kisutch (coho salmon)): 5.5 mg/l
 Exposure time: 96 h
 Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (Ceriodaphnia dubia)): 3.78 mg/l
 Exposure time: 48 h
 Remarks: Mortality

Toxicity to algae : EC50 (Pseudokirchneriella subcapitata (microalgae)): > 433 mg/l
 End point: Growth inhibition
 Exposure time: 96 h
 NOEC (Scenedesmus quadricauda (Green algae)): > 400 mg/l
 End point: Growth inhibition
 Exposure time: 7 d

Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 1.39 mg/l
 Exposure time: 40 d
 Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Water flea (Ceriodaphnia dubia)): 0.74 mg/l
 Exposure time: 7 d

ETHYL BENZENE:

Toxicity to fish : LC50 (Fathead minnow (Pimephales promelas)): 9.1 - 15.6 mg/l
 Exposure time: 96 h
 Test Type: static test
 LC50 (Rainbow trout, donaldson trout (Oncorhynchus mykiss)): 4.2 mg/l
 Exposure time: 96 h
 Test Type: Renewal

SAFETY DATA SHEET

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

- Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (*Daphnia magna*)): 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

MORPHOLINE:

- Toxicity to fish : LC50 (*Oncorhynchus mykiss* (rainbow trout)): 380 mg/l
Exposure time: 96 h
Test Type: static test

- Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (*Daphnia magna*)): 45 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202

- Toxicity to algae : ErC50 (*Pseudokirchneriella subcapitata* (green algae)): 28 mg/l
Exposure time: 96 h
Test Type: static test

- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Water flea (*Daphnia magna*)): 5 mg/l
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211

METHYL-N 2-PYRROLIDONE:

- Toxicity to fish : LC50 (*Lepomis macrochirus* (Bluegill sunfish)): 832 mg/l
Exposure time: 96 h

- Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (*Daphnia magna*)): > 1,000 mg/l
Exposure time: 24 h

- Toxicity to algae : EC50 (*Desmodesmus subspicatus* (green algae)): 600 mg/l
Exposure time: 72 h
Test Type: Growth inhibition
- NOEC (*Desmodesmus subspicatus* (green algae)): 125 mg/l
Exposure time: 72 h
Test Type: Growth inhibition

- Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (*Daphnia magna* (Water flea)): 12.5 mg/l
Exposure time: 21 d
End point: Reproduction Test
Test Type: semi-static test
Method: OECD Test Guideline 211

- Toxicity to bacteria : EC10 (activated sludge): 100 mg/l

SAFETY DATA SHEET	Revision Date: 05/19/2017
	Print Date: 5/15/2018
	SDS Number: 000000263723
Valvoline Professional Series REMOVE Intake Cleaner 871951	Version: 1.4

TRIETHANOLAMINE:

Toxicity to fish : LC50 (Fathead minnow (*Pimephales promelas*)): 11,800 mg/l
 Exposure time: 96 h
 Test Type: flow-through test

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (*Ceriodaphnia dubia*)): 609.88 mg/l
 Exposure time: 48 h
 Test Type: static test

Toxicity to algae : EC50 (*Desmodesmus subspicatus* (green algae)): 216 - 512 mg/l
 Exposure time: 72 h
 Test Type: Growth inhibition

OLEYLAMINE:

Toxicity to fish : LC50 (*Pimephales promelas* (fathead minnow)): 0.11 mg/l
 Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Water flea (*Daphnia magna*)): 0.011 mg/l
 Exposure time: 48 h

Toxicity to algae : EC50 (*Desmodesmus subspicatus* (green algae)): 0.083 mg/l
 Exposure time: 72 h
 Remarks: Information given is based on data obtained from similar substances.
 NOEC (*Pseudokirchneriella subcapitata* (green algae)): 0.01 mg/l
 Exposure time: 96 h

M-Factor (Acute aquatic toxicity) : 10

M-Factor (Chronic aquatic toxicity) : 10

Persistence and degradability

Components:

XYLENE:

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

ETHYLENE GLYCOL MONOBUTYL ETHER:

Biodegradability : Result: Readily biodegradable.
 Biodegradation: 90.4 %
 Exposure time: 28 d
 Method: OECD Test Guideline 301B

TOLUENE:

Biodegradability : Result: Readily biodegradable.

**SAFETY DATA SHEET**

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

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

MORPHOLINE:
Biodegradability : Result: Readily biodegradable.
Biodegradation: 92.6 %
Exposure time: 22 d
Method: OECD Test Guideline 301E

METHYL-N 2-PYRROLIDONE:
Biodegradability : Biodegradation: 73 %
Exposure time: 28 d
Method: OECD Test Guideline 301C
Remarks: Readily biodegradable

Photodegradation :

TRIETHANOLAMINE:
Biodegradability : Result: Readily biodegradable.
Biodegradation: 97 %
Exposure time: 28 d

OLEYLAMINE:
Biodegradability : Result: Not readily biodegradable.
Biodegradation: 44 %
Exposure time: 28 d

No data available

Bioaccumulative potential**Components:**

ISOPROPANOL:
Partition coefficient: n- : log Pow: 0.05
octanol/water

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

ETHYLENE GLYCOL MONOBUTYL ETHER:
Partition coefficient: n- : log Pow: 0.83
octanol/water

TOLUENE:
Bioaccumulation : Species: Ide, silver or golden orfe (Leuciscus idus)
Bioconcentration factor (BCF): 94
Exposure time: 3 d
Concentration: 0.05 mg/l
Method: Not reported

**SAFETY DATA SHEET**

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

Partition coefficient: n-octanol/water : log Pow: 2.73

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

MORPHOLINE:
Partition coefficient: n-octanol/water : log Pow: -0.86

METHYL-N 2-PYRROLIDONE:
Bioaccumulation : Remarks: No bioaccumulation is to be expected (log Pow <= 3).

Partition coefficient: n-octanol/water : log Pow: -0.46 (25 °C)

TRIETHANOLAMINE:
Partition coefficient: n-octanol/water : log Pow: -1.00

OLEYLAMINE:
Bioaccumulation : Species: Fish
Bioconcentration factor (BCF): > 500

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

No data available

Mobility in soil**Components:**

No data available

Other adverse effects**Product:**

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

Components:**METHYL-N 2-PYRROLIDONE:**

Results of PBT and vPvB assessment : This substance is not considered to be persistent, bioaccumulating and toxic (PBT). This substance is considered to be very persistent and very bioaccumulating (vPvB).

SECTION 13. DISPOSAL CONSIDERATIONS**Disposal methods**

General advice : The product should not be allowed to enter drains, water



SAFETY DATA SHEET		Revision Date: 05/19/2017
		Print Date: 5/15/2018
		SDS Number: 000000263723
Valvoline Professional Series REMOVE Intake Cleaner		Version: 1.4
871951		

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

REGULATION

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

U.S. DOT - ROAD

UN	1993	FLAMMABLE LIQUID, N.O.S. (TOLUENE, ISOPROPANOL)	3	II	LIMITED QUANTITY
----	------	---	---	----	------------------

CFR_RAIL_C

UN	1993	FLAMMABLE LIQUID, N.O.S. (TOLUENE, ISOPROPANOL)	3	II	LIMITED QUANTITY
----	------	---	---	----	------------------

U.S. DOT - INLAND WATERWAYS

UN	1993	FLAMMABLE LIQUID, N.O.S. (TOLUENE, ISOPROPANOL)	3	II	LIMITED QUANTITY
----	------	---	---	----	------------------

TDG_ROAD_C

UN	1993	FLAMMABLE LIQUID, N.O.S. (TOLUENE, ISOPROPANOL)	3	II	LIMITED QUANTITY
----	------	---	---	----	------------------

TDG_RAIL_C

UN	1993	FLAMMABLE LIQUID, N.O.S. (TOLUENE, ISOPROPANOL)	3	II	LIMITED QUANTITY
----	------	---	---	----	------------------



SAFETY DATA SHEET

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

TDG INWT_C

UN	1993	FLAMMABLE LIQUID, N.O.S. (TOLUENE, ISOPROPANOL)	3	II	LIMITED QUANTITY
----	------	--	---	----	------------------

INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1993	FLAMMABLE LIQUID, N.O.S. (TOLUENE, ISOPROPANOL)	3	II	MARINE POLLUTANT:(POLYETHER AMINE, OLEYLAMINE) LIMITED QUANTITY
----	------	--	---	----	---

INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1993	FLAMMABLE LIQUID, N.O.S. (TOLUENE, ISOPROPANOL)	3	II	
----	------	--	---	----	--

INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1993	FLAMMABLE LIQUID, N.O.S. (TOLUENE, ISOPROPANOL)	3	II	
----	------	--	---	----	--

MX_DG

UN	1993	FLAMMABLE LIQUID, N.O.S. (TOLUENE, ISOPROPANOL)	3	II	LIMITED QUANTITY
----	------	--	---	----	------------------

*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

**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	528

SARA 304 Extremely Hazardous Substances Reportable Quantity

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

SARA 311/312 Hazards : Fire Hazard



SAFETY DATA SHEET		Revision Date: 05/19/2017
		Print Date: 5/15/2018
		SDS Number: 000000263723
Valvoline Professional Series REMOVE Intake Cleaner		Version: 1.4
871951		

Acute Health Hazard
Chronic Health Hazard

SARA 313

XYLENE	1330-20-7	18.92 %
ETHYLENE GLYCOL MONOBUTYL ETHER	111-76-2	15.73 %
TOLUENE	108-88-3	9.99 %
ETHYL BENZENE	100-41-4	5.68 %
METHYL-N 2- PYRROLIDONE	872-50-4	3.93 %

California Prop 65

WARNING! This product contains a chemical known to the State of California to cause cancer.

ETHYL BENZENE	100-41-4
DIETHANOLAMINE	111-42-2
BENZENE	71-43-2
NAPHTHALENE	91-20-3

WARNING: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

TOLUENE	108-88-3
METHYL-N 2- PYRROLIDONE	872-50-4
ETHYLENE GLYCOL MONOMETHYL ETHER	109-86-4
BENZENE	71-43-2

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 : Not 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

SAFETY DATA SHEET	Revision Date: 05/19/2017
	Print Date: 5/15/2018
	SDS Number: 000000263723
Valvoline Professional Series REMOVE Intake Cleaner 871951	Version: 1.4

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

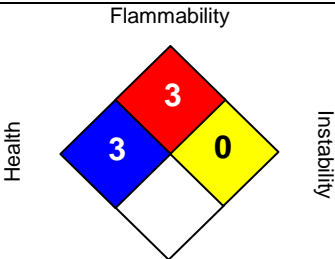
Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

SECTION 16. OTHER INFORMATION

Further information

Revision Date: 05/19/2017

<p>NFPA:</p>  <p>Special hazard.</p>	<p>HMIS III:</p> <table border="1"> <tr> <td style="background-color: blue; color: white;">HEALTH</td> <td style="text-align: center;">3*</td> </tr> <tr> <td style="background-color: red; color: white;">FLAMMABILITY</td> <td style="text-align: center;">3</td> </tr> <tr> <td style="background-color: yellow;">PHYSICAL HAZARD</td> <td style="text-align: center;">0</td> </tr> </table> <p>0 = not significant, 1 =Slight, 2 = Moderate, 3 = High 4 = Extreme, * = Chronic</p>	HEALTH	3*	FLAMMABILITY	3	PHYSICAL HAZARD	0
HEALTH	3*						
FLAMMABILITY	3						
PHYSICAL HAZARD	0						

NFPA Flammable and Combustible Liquids Classification
Flammable Liquid Class IB

Full text of H-Statements

- H225 Highly flammable liquid and vapor.
- H226 Flammable liquid and vapor.
- H227 Combustible liquid.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H311 Toxic in contact with skin.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.

**SAFETY DATA SHEET**

Revision Date: 05/19/2017

Print Date: 5/15/2018

SDS Number: 000000263723

Valvoline Professional Series REMOVE Intake Cleaner

Version: 1.4

871951

H360	May damage fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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

	Page: 35
SAFETY DATA SHEET	Revision Date: 05/19/2017
	Print Date: 5/15/2018
	SDS Number: 000000263723
Valvoline Professional Series REMOVE Intake Cleaner 871951	Version: 1.4

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