

Safety data sheet

Version 2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
 - **Product name: Motorvac Induction System Cleaner**
 - **Part number: 400-2425**
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

 - **Application of the substance / the mixture** engine system cleaner
- **1.3 Details of the supplier of the safety data sheet**
 - **Manufacturer/Supplier:**
Motorvac, division of, CPS Products Canada Ltd.

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
 - **Classification according to Regulation (EC) No 1272/2008**

Flam. Liq. 3	H226	Flammable liquid and vapour.
Acute Tox. 4	H302	Harmful if swallowed.
Acute Tox. 4	H312	Harmful in contact with skin.
Acute Tox. 4	H332	Harmful if inhaled.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
Skin Sens. 1	H317	May cause an allergic skin reaction.
Carc. 2	H351	Suspected of causing cancer.
Aquatic Acute 2	H401	Toxic to aquatic life.
Aquatic Chronic 2	H411	Toxic to aquatic life with long lasting effects.

- **2.2 Label elements**
 - **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

 - **Hazard pictograms**



GHS02 GHS07 GHS08 GHS09

- **Signal word** Warning
- **Hazard-determining components of labelling:**
xylene
(R)-p-mentha-1,8-diene
Ethanol, 2,2'-iminobis-, N-tallow alkylderivs.

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2-butoxyethanol

· **Hazard statements**

- H226 Flammable liquid and vapour.
H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H401+H411 Toxic to aquatic life and toxic to aquatic life with long lasting effects.

· **Precautionary statements**

- P201 Obtain special instructions before use.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P233 Keep container tightly closed.
P273 Avoid release to the environment.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
P312 Call a POISON CENTER/doctor if you feel unwell.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

- **Description:** Mixture: consisting of the following hazardous components.

· **Dangerous components:**

CAS: 1330-20-7 EINECS: 215-535-7	xylene Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	25-50%
CAS: 111-76-2 EINECS: 203-905-0	2-butoxyethanol Acute Tox. 4, H312; Acute Tox. 4, H332; Eye Irrit. 2, H319	10-<25%
CAS: 5989-27-5 EINECS: 227-813-5	(R)-p-mentha-1,8-diene Flam. Liq. 3, H226; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; Skin Sens. 1, H317	10-<25%
CAS: 108-11-2 EINECS: 203-551-7	4-methylpentan-2-ol Flam. Liq. 3, H226; STOT SE 3, H335	≤10%
CAS: 61791-44-4 EINECS: 263-177-5	Ethanol, 2,2'-iminobis-, N-tallow alkylderivs. Acute Tox. 4, H302	2.5-<3%

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CAS: 94-91-7 EINECS: 202-374-2	n,n'-Disalicylidene-1,2-propanediamine Flam. Liq. 3, H226; Aquatic Chronic 2, H411; Acute Tox. 4, H302; Eye Irrit. 2, H319; Skin Sens. 1, H317	1-≤2.5%
CAS: 64742-47-8 EINECS: 265-149-8	Distillates (petroleum), hydrotreated light Flam. Liq. 3, H226; Asp. Tox. 1, H304	0.1-≤2.5%
CAS: 91-20-3 EINECS: 202-049-5	naphthalene Carc. 2, H351; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Acute Tox. 4, H302	0.1-≤2.5%
CAS: 64742-94-5 EINECS: 265-198-5	Solvent naphtha (petroleum), heavy arom. Asp. Tox. 1, H304	0.1-≤2.5%
CAS: 95-63-6 EINECS: 202-436-9	1,2,4-trimethylbenzene Flam. Liq. 3, H226; Aquatic Chronic 2, H411; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	0.1-<2.5%

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· After inhalation:

Supply fresh air and to be sure call for a doctor.

In case of unconsciousness place patient stably in side position for transportation.

· After skin contact:

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. If skin irritation continues, consult a doctor.

· After eye contact:

Rinse cautiously with water. Remove contact lenses, if present and easy to do. Get medical attention if eye irritation develops or persists.

· After swallowing: DO NOT INDUCE VOMITING. Get immediate medical attention.

· 4.2 Most important symptoms and effects, both acute and delayed

May cause eye irritation. Symptoms may include discomfort or pain, excessive blinking and tear production, with possible redness and swelling.

Headache

Dizziness

Disorientation

Nausea

May cause skin irritation. Symptoms may include redness, drying, defatting and cracking of the skin. Repeated exposure to this material can result in absorption through skin causing significant health hazard.

Causes serious eye irritation. Symptoms may include discomfort or pain, excess blinking and tear production, with possible redness and swelling.

Harmful if swallowed. May be fatal if swallowed and enters airways. Swallowing a small quantity of this material will result in serious health hazard.

· 4.3 Indication of any immediate medical attention and special treatment needed

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

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SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
 - **Suitable extinguishing agents:** CO₂, sand, extinguishing powder. Do not use water.
 - **For safety reasons unsuitable extinguishing agents:** Water
- **5.2 Special hazards arising from the substance or mixture** See section 10 for additional information.
- **5.3 Advice for firefighters**
 - **Protective equipment:**
Wear full protective firegear including self-containing breathing apparatus operated in the positive pressure mode with full facepiece, coat, pants, gloves and boots. Do not use a water jet.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.
Take precautions to avoid release to the environment. Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.
- **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
 - **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect from heat.
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
 - **Storage:**
 - **Requirements to be met by storerooms and receptacles:**
See section 10 for incompatible materials.
 - **Information about storage in one common storage facility:** Not required.
 - **Further information about storage conditions:**
Keep container tightly sealed.
Protect from heat and direct sunlight.

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· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical facilities:** No further data; see item 7.

· 8.1 Control parameters

· **Ingredients with limit values that require monitoring at the workplace:**

1330-20-7 xylene (25-50%)

WEL	Short-term value: 441 mg/m ³ , 100 ppm Long-term value: 220 mg/m ³ , 50 ppm Sk; BMGV
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111-76-2 2-butoxyethanol (10-<20%)

WEL	Short-term value: 246 mg/m ³ , 50 ppm Long-term value: 123 mg/m ³ , 25 ppm Sk, BMGV
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108-11-2 4-methylpentan-2-ol (≤10%)

WEL	Short-term value: 170 mg/m ³ , 40 ppm Long-term value: 106 mg/m ³ , 25 ppm Sk
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60-29-7 diethyl ether (15-<25%)

WEL	Short-term value: 620 mg/m ³ , 200 ppm Long-term value: 310 mg/m ³ , 100 ppm
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· **Ingredients with biological limit values:**

1330-20-7 xylene (25-50%)

BMGV	650 mmol/mol creatinine Octanol-Water: urine 0.1: post shift 7.3: methyl hippuric acid
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111-76-2 2-butoxyethanol (10-<20%)

BMGV	240 mmol/mol creatinine Octanol-Water: urine 0.1: post shift 7.3: butoxyacetic acid
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· **Additional information:** The lists valid during the making were used as basis.

· 8.2 Exposure controls

· **Personal protective equipment:**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Avoid contact with the eyes and skin.

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

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· Protection of hands:



Chemical resistant protective gloves (EN 374)

· Eye protection:



Safety glasses. If potential for splash or mist exists, wear chemical goggles or faceshield.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

- Form: Fluid
- Colour: Amber coloured

- Odour: Citrus
- Odour threshold: Not determined.

· pH-value: Not determined.

· Change in condition

- Melting point/Melting range: Undetermined.
- Boiling point/Boiling range: 131 °C

· Flash point: 28 °C

· Flammability (solid, gaseous): Not applicable.

· Ignition temperature: 240 °C

· Decomposition temperature: Not determined.

· Self-igniting: Product is not selfigniting.

· Danger of explosion: Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· Explosion limits:

- Lower: 0.7 Vol %
- Upper: 10.6 Vol %

· Vapour pressure at 20 °C: 7 hPa

· Density at 20 °C: 0.84 - 0.88 Specific Gravity

- Relative density: Not determined.
- Vapour density: Not determined.
- Evaporation rate: Not determined.

· Solubility in / Miscibility with

- water: Not miscible or difficult to mix.

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· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

· **Dynamic:** Not determined.

· **Kinematic:** Not determined.

· **Solvent content:**

· **Organic solvents:** 82.2 %

· **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.

· **10.2 Chemical stability**

· **Thermal decomposition / conditions to be avoided:**

Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

· **10.3 Possibility of hazardous reactions** No dangerous reactions known.

· **10.4 Conditions to avoid** Heat, open flames, sparks.

· **10.5 Incompatible materials:**

Strong Oxidizers

acids

· **10.6 Hazardous decomposition products:**

Nitrogen oxides

Ammonia

May include, and are not limited to: oxides of carbon.

aliphatic alcohols

polyalkylglycols

Propylamine

SECTION 11: Toxicological information

· **11.1 Information on toxicological effects**

· **Acute toxicity**

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

· **LD/LC50 values relevant for classification:**

Terraclean Induction System Cleaner

Oral	LD50	1623 mg/kg
Dermal	LD50	1409 mg/kg
Inhalative	LC50/4 h (vapor)	12.9 mg/L (rat)

1330-20-7 xylene

Oral	LD50	4300 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rabbit)
Inhalative	LC50/4 h (vapor)	6700 mg/L (rat)

111-76-2 2-butoxyethanol

Oral	LD50	470 mg/kg (rat)
Dermal	LD50	400 mg/kg (rab)

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Inhalative	LC50/4 h (vapor)	2.2 mg/L (rat)
5989-27-5 (R)-p-mentha-1,8-diene		
Oral	LD50	4400 mg/kg (rat)
Dermal	LD50	>5 g/Kg (rabbit)
108-11-2 4-methylpentan-2-ol		
Oral	LD50	2590 mg/kg (rat)
Dermal	LD50	3560 mg/kg (rabbit)
61791-44-4 Ethanol, 2,2'-iminobis-, N-tallow alkylderivs.		
Oral	LD50	500 mg/kg (ATE)
94-91-7 n,n'-Disalicylidene-1,2-propanediamine		
Oral	LD50	1350 mg/kg (rat)
Dermal	LD50	>2000 mg/kg (rat)
91-20-3 naphthalene		
Oral	LD50	490 mg/kg (rat)
Dermal	LD50	5000 mg/kg (rat)
95-63-6 1,2,4-trimethylbenzene		
Oral	LD50	5000 mg/kg (rat)
Inhalative	LC50/4 h (vapor)	18 mg/L (rat)

- **Primary irritant effect:**
 - **Skin corrosion/irritation**
Causes skin irritation.
 - **Serious eye damage/irritation**
Causes serious eye irritation.
 - **Inhalation:** May cause respiratory tract irritation.
 - **Ingestion:** May be fatal if swallowed and enter airways.
- **Respiratory or skin sensitisation**
May produce an allergic reaction.
May cause an allergic skin reaction.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
 - **Carcinogenicity**
Suspected of causing cancer.
 - **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

111-76-2 2-butoxyethanol

EC50 (48 h)	>1000 mg/L (daphnia)
LC50 (96 h) (static)	1490 mg/L (Lepomis macrochirus)

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5989-27-5 (R)-p-mentha-1,8-diene

LC50 (96 h) 0.619-0.796 mg/L (Pimephales promelas)

- **12.2 Persistence and degradability** No further relevant information available.

- **12.3 Bioaccumulative potential**

108-11-2 4-methylpentan-2-ol

Bioaccumulation LogPow 1.43 (-) (potential low)

- **12.4 Mobility in soil** No further relevant information available.
 - **Ecotoxicological effects:**
 - **Remark:** Toxic for fish
 - **Additional ecological information:**
 - **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
- **12.5 Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.
- **12.6 Other adverse effects** Avoid release to the environment.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
 - **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
 - **Uncleaned packaging:**
 - **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

- **14.1 UN-Number**
 - **ADR, IMDG, IATA** UN1993
- **14.2 UN proper shipping name**
 - **ADR** UN1993 FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER(ETHYL ETHER), XYLENES), ENVIRONMENTALLY HAZARDOUS
 - **IMDG** FLAMMABLE LIQUID, N.O.S. (XYLENES, DIPENTENE, METHYL ISOBUTYL CARBINOL), MARINE POLLUTANT
 - **IATA** FLAMMABLE LIQUID, N.O.S. (XYLENES, DIPENTENE, METHYL ISOBUTYL CARBINOL)

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· 14.3 Transport hazard class(es)

· ADR



· Class 3 (F1) Flammable liquids. Flammable liquids.
· Label 3

· IMDG, IATA



· Class 3 Flammable liquids.
· Label 3

· 14.4 Packing group

· ADR, IMDG, IATA III

· 14.5 Environmental hazards:

Product contains environmentally hazardous substances: (R)-p-mentha-1,8-diene

· Marine pollutant: Symbol (fish and tree)

· Special marking (ADR): Symbol (fish and tree)

· 14.6 Special precautions for user

Warning: Flammable liquids.

· Danger code (Kemler): 30

· EMS Number: F-E,S-E

· Stowage Category A

· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

· Transport/Additional information:

· ADR

· Limited quantities (LQ) 5L
· Transport category 3
· Tunnel restriction code D/E

· IMDG

· Limited quantities (LQ) 5L
· Excepted quantities (EQ) Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

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· UN "Model Regulation":	UN 1993 FLAMMABLE LIQUID, N.O.S. (DIETHYL ETHER (ETHYL ETHER), XYLENES) 3, II, ENVIRONMENTALLY HAZARDOUS
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SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

No REACH Annex XVII restrictions
Contains no REACH candidate substance

· Directive 2012/18/EU

- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 200 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 500 t

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Issue Date: 2015/10/13

· Relevant phrases

- H226 Flammable liquid and vapour.
- H290 May be corrosive to metals.
- H302 Harmful if swallowed.
- H304 May be fatal if swallowed and enters airways.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H332 Harmful if inhaled.
- H335 May cause respiratory irritation.
- H351 Suspected of causing cancer.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H411 Toxic to aquatic life with long lasting effects.

· Contact: Engineering Department

· Revision Changes:

- v 1.0 - original SDS release (2015/10/13)
- v 2.0 - revised (2016/08/02)

· Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances

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ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 2: Carcinogenicity – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

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