



Lucas Deep Clean™ Fuel System Cleaner

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878
Reference number: LUK1606003
Issue date: 6/27/2016 Revision date: 5/18/2022 Version: 2.0

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

1.1. Product identifier

Product form : Mixture
Name : Lucas Deep Clean™ Fuel System Cleaner
Product code :

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

1.2.1. Relevant identified uses

Intended for general public
Main use category : Industrial use, Professional use, Consumer use
Use of the substance/mixture : Cleaner

1.2.2. Uses advised against

Restrictions on use : No data available

1.3. Details of the supplier of the safety data sheet

Supplier

Lucas Oil Products UK Ltd
Unit 4 Cunliffe Drive
Llangefni Industrial Estate
LL77 7JA Llangefni
Anglesey - UK
T 01248 723 666
Info@LucasOil.co.uk - www.lucasoil.co.uk

Supplier

Lucas Oil Products Europe Ltd
Block 3 Harcourt Centre
Harcourt Road
Dublin 2
Ireland
T +44 344 225 5400
info@lucasoil.eu.com www.lucasoil.eu.com

1.4. Emergency telephone number

Emergency number : ChemTel
1-800-255-3924 (USA, Canada, Puerto Rico, US V.I.)
+1-813-248-0585 (International)

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Cardiff Centre) University Hospital Llandough	Penlan Road CF64 2XX Llandough	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Edinburgh Centre) Royal Infirmary of Edinburgh	Little France Crescent EH16 4SA Edinburgh	0344 892 0111	Only for healthcare professionals
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	+44 20 7188 7188	
United Kingdom	National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre	16/17 Framlington Place Newcastle-upon-Tyne NE2 4AB Newcastle	0344 892 0111	Only for healthcare professionals
United Kingdom	National Poisons Information Service (Belfast Centre) Royal Victoria Hospital	Grosvenor Road BT12 6BA Belfast	0344 892 0111	Only for healthcare professionals

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008

Acute toxicity (oral), Category 4	H302
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Specific target organ toxicity – Single exposure, Category 3, Narcosis	H336
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No data available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008

Hazard pictograms (CLP: Classification, Labelling, Packaging.)



GHS05

GHS07

GHS09

Signal word (CLP)	: Danger
Contains	: Naphtha (petroleum), hydrotreated heavy (benzene <0.1%), Distillates (petroleum), hydrotreated light, Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich
Hazard statements (CLP)	: H302 - Harmful if swallowed. H315 - Causes skin irritation. H318 - Causes serious eye damage. H336 - May cause drowsiness or dizziness. H411 - Toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P101 - If medical advice is needed, have product container or label at hand. P102 - Keep out of reach of children. P103 - Read carefully and follow all instructions. P261 - Avoid breathing mist, spray, vapours. P264 - Wash hands, forearms and face thoroughly after handling. P270 - Do not eat, drink or smoke when using this product.
Child-resistant fastening	: Not applicable
Tactile warning	: Applicable

2.3. Other hazards

PBT: not yet assessed

vPvB: not yet assessed

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
Distillates (petroleum), hydrotreated heavy paraffinic (DMSO < 3%) (64742-54-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Toluene (108-88-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Benzene (71-43-2)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Naphtha (petroleum), hydrotreated heavy (benzene <0.1%) (Note P)	CAS-No.: 64742-48-9 EC-No.: 265-150-3 EC Index-No.: 649-327-00-6	0 – 60	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. Not classified Carc. Not classified STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Distillates (petroleum), hydrotreated light	CAS-No.: 64742-47-8 EC-No.: 265-149-8 EC Index-No.: 649-422-00-2	0 – 60	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H336 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich	CAS-No.: HMIRA 10440 EC-No.: polymer	16 – 36	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318 Aquatic Chronic 2, H411
Distillates (petroleum), hydrotreated heavy paraffinic (DMSO < 3%) substance with a Community workplace exposure limit (Note L)	CAS-No.: 64742-54-7 EC-No.: 265-157-1 EC Index-No.: 649-467-00-8 REACH-no: 01-2119484627-0018, 01-2119484627-25	0 – 15	Carc. Not classified Asp. Tox. 1, H304
Polyether	CAS-No.: HMIRA 10440 EC-No.: polymer	4 – 12	Eye Irrit. 2, H319
Toluene substance with national workplace exposure limit(s) (IE, GB); substance with a Community workplace exposure limit	CAS-No.: 108-88-3 EC-No.: 203-625-9 EC Index-No.: 601-021-00-3	0.004 – 0.006	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 3, H412
cumene substance with national workplace exposure limit(s) (IE, GB); substance with a Community workplace exposure limit (Note C)	CAS-No.: 98-82-8 EC-No.: 202-704-5 EC Index-No.: 601-024-00-X	0.004 – 0.006	Flam. Liq. 3, H226 Carc. 2, H351 STOT SE 3, H335 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Benzene substance with national workplace exposure limit(s) (IE, GB); substance with a Community workplace exposure limit (Note E (obsolete))	CAS-No.: 71-43-2 EC-No.: 200-753-7 EC Index-No.: 601-020-00-8	0.004 – 0.006	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 1B, H340 Carc. 1A, H350 STOT RE 1, H372 Asp. Tox. 1, H304
ethylbenzene substance with national workplace exposure limit(s) (IE, GB); substance with a Community workplace exposure limit	CAS-No.: 100-41-4 EC-No.: 202-849-4 EC Index-No.: 601-023-00-4	0.004 – 0.006	Flam. Liq. 2, H225 Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373 Asp. Tox. 1, H304
Naphthalene substance with national workplace exposure limit(s) (IE, GB); substance with a Community workplace exposure limit	CAS-No.: 91-20-3 EC-No.: 202-049-5 EC Index-No.: 601-052-00-2	0.004 – 0.006	Acute Tox. 4 (Oral), H302 Carc. 2, H351 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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Note C : Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Note E : Substances with specific effects on human health (see Chapter 4 of Annex VI to Directive 67/548/EEC) that are classified as carcinogenic, mutagenic and/or toxic for reproduction in categories 1 or 2 are ascribed Note E if they are also classified as very toxic (T+), toxic (T) or harmful (Xn). For these substances, the risk phrases R20, R21, R22, R23, R24, R25, R26, R27, R28, R39, R68 (harmful), R48 and R65 and all combinations of these risk phrases shall be preceded by the word 'Also'. (obsolete)

Note L: The harmonised classification as a carcinogen applies unless it can be shown that the substance contains less than 3 % of dimethyl sulphoxide extract as measured by IP 346 ("Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions – Dimethyl sulphoxide extraction refractive index method" Institute of Petroleum, London), in which case a classification in accordance with Title II of this Regulation shall be performed also for that hazard class.

Note P: The harmonised classification as a carcinogen or mutagen applies unless it can be shown that the substance contains less than 0,1 % w/w benzene (Einecs No 200-753-7), in which case a classification in accordance with Title II of this Regulation shall be performed also for those hazard classes. Where the substance is not classified as a carcinogen or mutagen, at least the precautionary statements (P102)-P260-P262-P301 + P310-P331 shall apply.

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : If you feel unwell, seek medical advice (show the label where possible). Never give anything by mouth to an unconscious person.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. Artificial respiration and/or oxygen if necessary.
- First-aid measures after skin contact : Wash with plenty of water. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
- First-aid measures after ingestion : Rinse mouth. Call a POISON CENTER/doctor if you feel unwell. Do NOT induce vomiting.

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

- Symptoms/effects after inhalation : May cause drowsiness or dizziness.
- Symptoms/effects after skin contact : Causes skin irritation.
- Symptoms/effects after eye contact : Causes serious eye damage.
- Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard. Harmful if swallowed.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Carbon dioxide. Dry chemical. Foam.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Fire hazard : Burning produces irritating, toxic and noxious fumes. Combustible liquid.
- Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.

5.3. Advice for firefighters

- Precautionary measures fire : Keep away from ignition sources.
- Firefighting instructions : Cool adjacent structures and containers with water spray to protect and prevent ignition. Do not allow run-off from fire fighting to enter drains or water courses.
- Protection during firefighting : Wear a self contained breathing apparatus. Wear fire/flame resistant/retardant clothing. EN469.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Avoid all eye and skin contact and do not breathe vapour and mist. Eliminate every possible source of ignition.

6.1.1. For non-emergency personnel

- Protective equipment : Use personal protective equipment as required. Refer to section 8.2.
- Emergency procedures : Evacuate unnecessary personnel.

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6.1.2. For emergency responders

Protective equipment : Use personal protective equipment as required. Refer to section 8.2.
Emergency procedures : Stop leak if safe to do so. Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Do not discharge into drains or the environment.

6.3. Methods and material for containment and cleaning up

For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.
Methods for cleaning up : Absorb and/or contain spill with inert material, then place in suitable container.

6.4. Reference to other sections

Section 13: disposal information. Section 7: safe handling. Section 8: personal protective equipment.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Use only outdoors or in a well-ventilated area. Avoid all eye and skin contact and do not breathe vapour and mist. Ensure good ventilation of the work station. Keep away from sources of ignition - No smoking.
Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed. Do not store near food, foodstuffs, drugs, or potable water supplies.
Incompatible products : Strong acids. Strong bases. Strong oxidizers.
Heat and ignition sources : Keep away from heat, sparks and flame.
Prohibitions on mixed storage : Incompatible materials.
Storage area : Store in dry, cool, well-ventilated area.

7.3. Specific end use(s)

Cleaner.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

Naphtha (petroleum), hydrotreated heavy (benzene <0.1%) (64742-48-9)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	White spirit Type 3
IOEL TWA [ppm]	20 ppm
IOELV STEL (mg/m ³)	290 mg/m ³
IOELV STEL (ppm)	50 ppm
Notes	Skin. (Year of adoption 2007)
Regulatory reference	SCOEL Recommendations
Toluene (108-88-3)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Toluene
IOEL TWA	192 mg/m ³
IOEL TWA [ppm]	50 ppm
IOELV STEL (mg/m ³)	384 mg/m ³
IOELV STEL (ppm)	100 ppm
Notes	Skin

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Toluene (108-88-3)	
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
Ireland - Occupational Exposure Limits	
OEL (8 hours ref) (mg/m ³)	192 mg/m ³
OEL (8 hours ref) (ppm)	50 ppm
OEL (15 min ref) (mg/m ³)	384 mg/m ³
OEL (15 min ref) (ppm)	100 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m ³)	191 mg/m ³
WEL TWA (ppm)	50 ppm
WEL STEL (mg/m ³)	384 mg/m ³
WEL STEL (OEL STEL) [ppm]	100 ppm
Remark	(Sk)
cumene (98-82-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	2-Phenylpropane (Cumene)
IOEL TWA	100 mg/m ³
IOEL TWA [ppm]	10 ppm
IOELV STEL (mg/m ³)	250 mg/m ³
IOELV STEL (ppm)	50 ppm
Notes	Skin. During exposure monitoring, account should be taken of relevant biological monitoring values as suggested by the Scientific Committee on Occupational Exposure Limits for Chemicals Agents (SCOEL)
Regulatory reference	COMMISSION DIRECTIVE (EU) 2019/1831
Ireland - Occupational Exposure Limits	
OEL (8 hours ref) (mg/m ³)	100 mg/m ³
OEL (8 hours ref) (ppm)	20 ppm
OEL (15 min ref) (mg/m ³)	250 mg/m ³
OEL (15 min ref) (ppm)	50 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m ³)	125 mg/m ³
WEL TWA (ppm)	25 ppm
WEL STEL (mg/m ³)	250 mg/m ³
WEL STEL (OEL STEL) [ppm]	50 ppm
Remark	(Sk)
Benzene (71-43-2)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Benzene
IOEL TWA	3.25 mg/m ³
IOEL TWA [ppm]	1 ppm

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Benzene (71-43-2)	
Notes	Skin
Regulatory reference	DIRECTIVE (EU) 2019/130 (amending Directive 2004/37/EC)
EU - Binding Occupational Exposure Limit (BOEL)	
Local name	Benzene
BOEL TWA	3.25 mg/m ³ (Limit value until 5 April 2024) 1.65 mg/m ³ (Limit value from 5 April 2024 until 5 April 2026) 0.66 mg/m ³ (Limit value from 5 April 2026)
BOEL TWA [ppm]	1 ppm (Limit value until 5 April 2024) 0.5 ppm (Limit value from 5 April 2024 until 5 April 2026) 0.2 ppm (Limit value from 5 April 2026)
Notes	Skin (Substantial contribution to the total body burden via dermal exposure possible)
Regulatory reference	DIRECTIVE (EU) 2022/431 (amending Directive 2004/37/EC)
EU - Biological Limit Value (BLV)	
Local name	Benzene
BLV	28 µg/l Parameter: benzene - Medium: blood - Sampling time: immediately end of shift 46 µg/g creatinine Parameter: phenylmercapturic - Medium: urine - Sampling time: end of exposure/shift
Regulatory reference	SCOEL List of recommended health-based BLVs and BGVs
Ireland - Occupational Exposure Limits	
OEL (8 hours ref) (mg/m ³)	3 mg/m ³
OEL (8 hours ref) (ppm)	1 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m ³)	3.25 mg/m ³
WEL TWA (ppm)	1 ppm
Remark	Carc, Sk
ethylbenzene (100-41-4)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Ethylbenzene
IOEL TWA	442 mg/m ³
IOEL TWA [ppm]	100 ppm
IOELV STEL (mg/m ³)	884 mg/m ³
IOELV STEL (ppm)	200 ppm
Notes	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Ireland - Occupational Exposure Limits	
OEL (8 hours ref) (mg/m ³)	442 mg/m ³
OEL (8 hours ref) (ppm)	100 ppm
OEL (15 min ref) (mg/m ³)	884 mg/m ³
OEL (15 min ref) (ppm)	200 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m ³)	441 mg/m ³

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ethylbenzene (100-41-4)	
WEL TWA (ppm)	100 ppm
WEL STEL (mg/m ³)	552 mg/m ³
WEL STEL (OEL STEL) [ppm]	125 ppm
Remark	(Sk)
Naphthalene (91-20-3)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Naphthalene
IOEL TWA	50 mg/m ³
IOEL TWA [ppm]	10 ppm
Notes	(Year of adoption 2010)
Regulatory reference	COMMISSION DIRECTIVE 91/322/EEC; SCOEL Recommendations
Ireland - Occupational Exposure Limits	
OEL (8 hours ref) (mg/m ³)	50 mg/m ³
OEL (8 hours ref) (ppm)	10 ppm
OEL (15 min ref) (mg/m ³)	75 mg/m ³
OEL (15 min ref) (ppm)	15 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (mg/m ³)	53 mg/m ³
WEL TWA (ppm)	10 ppm
WEL STEL (mg/m ³)	80 mg/m ³
WEL STEL (OEL STEL) [ppm]	15 ppm
Remark	The UK Advisory Committee on Toxic Substances has expressed concern that, for these OELs, health may not be adequately protected because of doubts that the limit was not soundly-based. These OELs were included in the published UK 2002 list and its 2003 supplement, but are omitted from the published 2005 list.
Distillates (petroleum), hydrotreated heavy paraffinic (DMSO < 3%) (64742-54-7)	
EU - Indicative Occupational Exposure Limit (IOEL)	
IOEL TWA	5 mg/m ³ 8-h (inhalable)

8.1.2. Recommended monitoring procedures

No data available

8.1.3. Air contaminants formed

No data available

8.1.4. DNEL and PNEC

No data available

8.1.5. Control banding

No data available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Avoid splashing. Emergency safety showers should be available in the immediate vicinity of any potential exposure. Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

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Personal protective equipment:

Avoid all unnecessary exposure.

8.2.2.1. Eye and face protection

Eye protection:

Chemical goggles or safety glasses. EN166

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing. Long sleeved protective clothing

Hand protection:

Wear suitable gloves resistant to chemical penetration. nitrile rubber gloves. EN374

8.2.2.3. Respiratory protection

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. EN 12083. Use an approved respirator equipped with oil/mist cartridges.

8.2.2.4. Thermal hazards

No data available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Prevent contaminated water run-off. Prevent leakage or spillage.

Other information:

Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: amber.
Odour	: petroleum.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosive limit (UEL)	: Not available
Flash point	: 68.3 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: > 22 mm ² /s @ 40 °C
Solubility	: Not available
Log Kow	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: 7.21 lb/gal
Relative density	: 0.866
Relative vapour density at 20 °C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

9.2. Other information

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9.2.1. Information with regard to physical hazard classes

No data available

9.2.2. Other safety characteristics

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reactions known.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizers.

10.6. Hazardous decomposition products

None under normal use.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral)	: Harmful if swallowed.
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

Lucas Deep Clean™ Fuel System Cleaner	
ATE (oral)	1388.889 mg/kg bodyweight
Naphtha (petroleum), hydrotreated heavy (benzene <0.1%) (64742-48-9)	
LD50 Oral rat	> 5000 mg/kg
LD50 Dermal rabbit	> 2000 mg/kg
LC50 Inhalation rat	> 5610 mg/m ³
LC50 Inhalation rat (dust/mist)	5.61 mg/l/4h
Distillates (petroleum), hydrotreated light (64742-47-8)	
LD50 Oral rat	> 5000 mg/kg
LD50 Dermal rabbit	> 2000 mg/kg
LC50 Inhalation rat (dust/mist)	> 5.28 mg/l/4h
Toluene (108-88-3)	
LD50 Oral rat	5580 mg/kg EU Method B.
LD50 Dermal rabbit	> 5000 mg/kg Source: ECHA
LC50 Inhalation rat	> 20 mg/l/4h OECD Guideline 403
LC50 Inhalation rat (vapours)	> 20 mg/l Source: ECHA
cumene (98-82-8)	
LD50 Oral rat	4000 mg/kg
LD50 Dermal rabbit	10600 mg/kg
LC50 Inhalation rat	22.1 mg/l
LC50 Inhalation rat [ppm]	4510 ppm/4h

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Benzene (71-43-2)	
LD50 Oral rat	5970 mg/kg OECD Guideline 401 (Acute Oral Toxicity)
LD50 Dermal rabbit	> 9.4 mg/kg OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation rat	43.7 mg/l/4h OECD Guideline 403 (Acute Inhalation Toxicity)
ethylbenzene (100-41-4)	
LD50 Oral rat	3500 mg/kg
LD50 Dermal rabbit	17.8 ml/kg
LC50 Inhalation rat [ppm]	< 1500 ppm
Naphthalene (91-20-3)	
LD50 Oral rat	490 mg/kg
LD50 Dermal rabbit	20 g/kg
LC50 Inhalation rat	> 340 mg/m ³ 1 hour
Distillates (petroleum), hydrotreated heavy paraffinic (DMSO < 3%) (64742-54-7)	
LD50 Oral rat	> 5000 mg/kg
LD50 Dermal rabbit	> 2000 mg/kg
LC50 Inhalation rat	> 5.53 mg/l/4h
Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Toluene (108-88-3)	
IARC group	3 - Not classifiable
cumene (98-82-8)	
IARC group	2B - Possibly carcinogenic to humans
Benzene (71-43-2)	
IARC group	1 - Carcinogenic to humans
ethylbenzene (100-41-4)	
IARC group	2B - Possibly carcinogenic to humans
Naphthalene (91-20-3)	
IARC group	2B - Possibly carcinogenic to humans
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: May cause drowsiness or dizziness.
Naphtha (petroleum), hydrotreated heavy (benzene <0.1%) (64742-48-9)	
STOT-single exposure	May cause drowsiness or dizziness.
Distillates (petroleum), hydrotreated light (64742-47-8)	
STOT-single exposure	May cause drowsiness or dizziness.
Toluene (108-88-3)	
STOT-single exposure	May cause drowsiness or dizziness.
cumene (98-82-8)	
STOT-single exposure	May cause respiratory irritation.

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STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

Toluene (108-88-3)	
LOAEC (inhalation, rat, gas, 90 days)	1250 ppmv/6h/day
NOAEL (oral, rat, 90 days)	625 mg/kg bodyweight/day EU Method B.26.
NOAEC (inhalation, rat, gas, 90 days)	300 ppmv/6h/day OECD Guideline 453
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Benzene (71-43-2)	
LOAEL (oral, rat, 90 days)	25 mg/kg bodyweight/day OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEL (oral, rat, 90 days)	100 mg/kg bodyweight/day OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEC (inhalation, rat, gas, 90 days)	30 ppmv/6h/day OECD Guideline 412 / 413
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

ethylbenzene (100-41-4)	
NOAEL (oral, rat, 90 days)	75 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)
STOT-repeated exposure	May cause damage to organs (hearing organs) through prolonged or repeated exposure.

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

Lucas Deep Clean™ Fuel System Cleaner	
Viscosity, kinematic	> 22 mm ² /s @ 40 °C

11.2. Information on other hazards

No data available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Toxic to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Toxic to aquatic life with long lasting effects.

Naphtha (petroleum), hydrotreated heavy (benzene <0.1%) (64742-48-9)	
LC50 fish 1	10 mg/l 96 h
EC50 crustacea	1.4 mg/l 48 h

Distillates (petroleum), hydrotreated light (64742-47-8)	
LC50 fish 1	> 1 mg/l 96 h
NOEC chronic fish	> 0.01 <= 0.1 mg/l
NOEC chronic crustacea	> 0.01 <= 0.1 mg/l

Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich (HMIRA 10440)	
LC50 fish 1	3.8 mg/l Fathead minnow 96 h
LC50 - Fish [2]	3.3 mg/l Rainbow trout 96 h
EC50 72h - Algae [1]	39 mg/l 96 h

Polyether (HMIRA 10440)	
EC50 72h - Algae [1]	39 mg/l 96 h

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Toluene (108-88-3)	
LC50 fish 1	5.5 mg/l
EC50 crustacea	3.78 mg/l Source: ECHA
EC50 - Crustacea [2]	3.78 mg/l
ErC50 algae	134 mg/l
LOEC (chronic)	2.77 mg/l
NOEC chronic fish	1.39 mg/l
NOEC chronic crustacea	0.74 mg/l
cumene (98-82-8)	
LC50 fish 1	4.8 mg/l
LC50 - Fish [2]	4.8 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 crustacea	2.14 mg/l Test organisms (species): Daphnia magna
EC50 other aquatic organisms 1	2.14 mg/l
EC50 72h - Algae [1]	2.01 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	1.29 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
NOEC (acute)	1.9 mg/l
NOEC (chronic)	0.35 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	0.38 mg/l Test organisms (species): other: Duration: '28 d'
Benzene (71-43-2)	
LC50 fish 1	5.3 mg/l OECD Guideline 203 (Fish, Acute Toxicity Test)
EC50 crustacea	10 mg/l OECD Guideline 202 (Daphnia sp. Acute Immobilisation Test)
EC50 72h - Algae [1]	29 mg/l Source: NITE
ErC50 algae	100 mg/l OECD Guideline 201 (Alga, Growth Inhibition Test)
LOEC (chronic)	1.6 mg/l 32 d
NOEC chronic crustacea	3 mg/l
ethylbenzene (100-41-4)	
LC50 fish 1	5.1 mg/l
EC50 other aquatic organisms 1	7.7 mg/l
EC50 72h - Algae [1]	5.4 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	4.9 mg/l Test organisms (species): Skeletonema costatum
EC50 96h - Algae [1]	3.6 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [2]	7.7 mg/l Test organisms (species): Skeletonema costatum
LOEC (chronic)	1.7 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'
NOEC (acute)	3.3 mg/l
NOEC (chronic)	0.96 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'

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Naphthalene (91-20-3)	
LC50 fish 1	0.91 (0.91 – 2.82) mg/l Oncornhynchus mykiss
LC50 - Fish [2]	1 (1 – 6.5) mg/l Pimpephales promelas
EC50 crustacea	1.96 mg/l
EC50 other aquatic organisms 1	33 mg/l
LOEC (acute)	3.2 mg/l
NOEC (acute)	1.8 mg/l
Distillates (petroleum), hydrotreated heavy paraffinic (DMSO < 3%) (64742-54-7)	
EC50 crustacea	> 10000 mg/l

12.2. Persistence and degradability

Lucas Deep Clean™ Fuel System Cleaner	
Persistence and degradability	May cause long-term adverse effects in the environment.
Naphtha (petroleum), hydrotreated heavy (benzene <0.1%) (64742-48-9)	
Biodegradation	61 % 28 d
Toluene (108-88-3)	
Persistence and degradability	Readily biodegradable.
cumene (98-82-8)	
Persistence and degradability	May cause long-term adverse effects in the environment.
Benzene (71-43-2)	
Persistence and degradability	Readily biodegradable.
ethylbenzene (100-41-4)	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Lucas Deep Clean™ Fuel System Cleaner	
Bioaccumulative potential	Not established.
Distillates (petroleum), hydrotreated light (64742-47-8)	
Log Kow	2.1 – 5
Bioaccumulative potential	Bioaccumulative potential.
Toluene (108-88-3)	
Bioconcentration factor (BCF REACH)	90
Log Pow	2.73 Source: HSDB
Log Kow	2.73
cumene (98-82-8)	
Bioaccumulative potential	Not established.
Benzene (71-43-2)	
BCF fish 1	3.5 – 4.4
Bioconcentration factor (BCF REACH)	0
Log Pow	1.83

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ethylbenzene (100-41-4)	
Bioaccumulative potential	Not established.
Naphthalene (91-20-3)	
BCF fish 1	≥ 427 (427 – 1158)

12.4. Mobility in soil

Lucas Deep Clean™ Fuel System Cleaner	
Ecology - soil	No data available.

12.5. Results of PBT and vPvB assessment

Lucas Deep Clean™ Fuel System Cleaner	
PBT: not yet assessed	
vPvB: not yet assessed	
Component	
Distillates (petroleum), hydrotreated heavy paraffinic (DMSO < 3%) (64742-54-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Toluene (108-88-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Benzene (71-43-2)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

Additional information : No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.
European List of Waste (LoW) code : For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.
HP Code : HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment
HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.
HP5 - "Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:" waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

14.1. UN number or ID number

UN-No. (ADR) : UN 3082
UN-No. (IMDG) : UN 3082
UN-No. (IATA) : UN 3082
UN-No. (ADN) : UN 3082
UN-No. (RID) : UN 3082

14.2. UN proper shipping name

Proper Shipping Name (ADR) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Petroleum distillates; Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich)
Proper Shipping Name (IMDG) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Petroleum distillates; Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich)
Proper Shipping Name (IATA) : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Petroleum distillates; Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich)

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Proper Shipping Name (ADN)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Petroleum distillates; Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich)
Proper Shipping Name (RID)	: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Petroleum distillates; Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich)
Transport document description (ADR)	: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Petroleum distillates; Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich), 9, III, (E)
Transport document description (IMDG)	: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Petroleum distillates; Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich), 9, III, MARINE POLLUTANT
Transport document description (IATA)	: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Petroleum distillates; Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich), 9, III
Transport document description (ADN)	: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Petroleum distillates; Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich), 9, III
Transport document description (RID)	: UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Petroleum distillates; Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich), 9, III

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR)	: 9
Danger labels (ADR)	: 9



IMDG

Transport hazard class(es) (IMDG)	: 9
Danger labels (IMDG)	: 9



IATA

Transport hazard class(es) (IATA)	: 9
Danger labels (IATA)	: 9



ADN

Transport hazard class(es) (ADN)	: 9
Danger labels (ADN)	: 9



RID

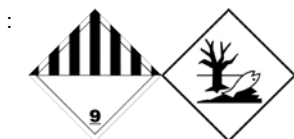
Transport hazard class(es) (RID)	: 9
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Danger labels (RID) : 9



14.4. Packing group

Packing group (ADR) : III
Packing group (IMDG) : III
Packing group (IATA) : III
Packing group (ADN) : III
Packing group (RID) : III

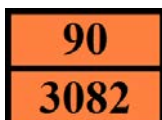
14.5. Environmental hazards

Dangerous for the environment : Yes
Marine pollutant : Yes
Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Classification code (ADR) : M6
Special provisions (ADR) : 274, 335, 601, 375
Limited quantities (ADR) : 5I
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P001, IBC03, LP01, R001
Special packing provisions (ADR) : PP1
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T4
Portable tank and bulk container special provisions (ADR) : TP1, TP29
Tank code (ADR) : LGBV
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V12
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13
Hazard identification number (Kemler No.) : 90
Orange plates :



Tunnel restriction code (ADR) : E
EAC code : •3Z

Transport by sea

Special provisions (IMDG) : 274, 335, 969
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P001, LP01
Special packing provisions (IMDG) : PP1
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP2, TP29
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-F
Stowage category (IMDG) : A

Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y964
PCA limited quantity max net quantity (IATA) : 30kgG
PCA packing instructions (IATA) : 964

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PCA max net quantity (IATA) : 450L
CAO packing instructions (IATA) : 964
CAO max net quantity (IATA) : 450L
Special provisions (IATA) : A97, A158, A197
ERG code (IATA) : 9L

Inland waterway transport

Classification code (ADN) : M6
Special provisions (ADN) : 274, 335, 375, 601
Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E1
Carriage permitted (ADN) : T
Equipment required (ADN) : PP
Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : M6
Special provisions (RID) : 274, 335, 375, 601
Limited quantities (RID) : 5L
Excepted quantities (RID) : E1
Packing instructions (RID) : P001, IBC03, LP01, R001
Special packing provisions (RID) : PP1
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4
Portable tank and bulk container special provisions (RID) : TP1, TP29
Tank codes for RID tanks (RID) : LGBV
Transport category (RID) : 3
Special provisions for carriage – Packages (RID) : W12
Special provisions for carriage - Loading, unloading and handling (RID) : CW13, CW31
Colis express (express parcels) (RID) : CE8
Hazard identification number (RID) : 90

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
5.	Benzene	Benzene
28.	Benzene	Substances which are classified as carcinogen category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 1 or Appendix 2, respectively.
29.	Benzene	Substances which are classified as germ cell mutagen category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 3 or Appendix 4, respectively.
3(a)	Naphtha (petroleum), hydrotreated heavy (benzene <0.1%) ; Distillates (petroleum), hydrotreated light ; Toluene ; cumene ; Benzene ; ethylbenzene	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 2.1 to 2.4, 2.6 and 2.7, 2.8 types A and B, 2.9, 2.10, 2.12, 2.13 categories 1 and 2, 2.14 categories 1 and 2, 2.15 types A to F

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EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	Lucas Deep Clean™ Fuel System Cleaner ; Naphtha (petroleum), hydrotreated heavy (benzene <0.1%) ; Distillates (petroleum), hydrotreated light ; Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich ; Polyether ; Toluene ; cumene ; Benzene ; ethylbenzene ; Distillates (petroleum), hydrotreated heavy paraffinic (DMSO < 3%)	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	Lucas Deep Clean™ Fuel System Cleaner ; Naphtha (petroleum), hydrotreated heavy (benzene <0.1%) ; Distillates (petroleum), hydrotreated light ; Oxirane, 2-ethyl-, homopolymer, 3-aminopropyl C11-14-isoalkyl ethers, C13-rich ; Toluene ; cumene	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1
40.	Naphtha (petroleum), hydrotreated heavy (benzene <0.1%) ; Distillates (petroleum), hydrotreated light ; Toluene ; cumene ; Benzene ; ethylbenzene	Substances classified as flammable gases category 1 or 2, flammable liquids categories 1, 2 or 3, flammable solids category 1 or 2, substances and mixtures which, in contact with water, emit flammable gases, category 1, 2 or 3, pyrophoric liquids category 1 or pyrophoric solids category 1, regardless of whether they appear in Part 3 of Annex VI to Regulation (EC) No 1272/2008 or not.
48.	Toluene	Toluene
72.	Benzene	The substances listed in column 1 of the Table in Appendix 12

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Substances subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals: Benzene (71-43-2)

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

All ingredients are listed on the Canadian Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL).

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	SDS EU format	Modified	
2	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
4.2	Symptoms/effects after inhalation	Modified	
8.1	Exposure limit values	Modified	
11.1	Toxicological information	Modified	
15	Other information, restriction and prohibition regulations	Added	

Abbreviations and acronyms

	ATE: Acute Toxicity Estimate
	CAS (Chemical Abstracts Service) number

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Abbreviations and acronyms	
	CLP: Classification, Labelling, Packaging.
	EC50: Environmental Concentration associated with a response by 50% of the test population.
	European List of Waste (LoW) code
	LD50: Lethal Dose for 50% of the test population
	PBT: Persistent, Bioaccumulative, Toxic
	STEL: Short Term Exposure Limits
	TWA: Time Weighted Average
	vPvB Very Persistent and Very Bioaccumulative

Data sources : European Chemicals Agency (ECHA) C&L Inventory database. Accessed at <http://echa.europa.eu/web/guest/information-on-chemicals/cl-inventory-database>. Krister Forsberg and S.Z. Mansdorf, "Quick Selection Guide to Chemical Protective Clothing", Fifth Edition. National Fire Protection Association. Fire Protection Guide to Hazardous Materials; 10th edition. REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment – Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 1A	Carcinogenicity, Category 1A
Carc. 2	Carcinogenicity, Category 2
Carc. Not classified	Carcinogenicity Not classified
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
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.

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Full text of H- and EUH-statements	
H336	May cause drowsiness or dizziness.
H340	May cause genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
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.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Muta. 1B	Germ cell mutagenicity, Category 1B
Muta. Not classified	Germ cell mutagenicity Not classified
Repr. 2	Reproductive toxicity, Category 2
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]		
Acute Tox. 4 (Oral)	H302	Calculation method
Skin Irrit. 2	H315	Calculation method
Eye Dam. 1	H318	Calculation method
STOT SE 3	H336	Calculation method
Aquatic Chronic 2	H411	Calculation method

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.