

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

Product form : Mixture  
Trade name : Lucas Octane Booster 155 ml  
UFI : NM10-G0T4-E004-YCTX  
Product code : 40930

**1.2. Relevant identified uses of the substance or mixture and uses advised against****1.2.1. Relevant identified uses**

Use of the substance/mixture : Industrial use  
Professional uses  
Consumer use  
Fuel additives

**1.2.2. Uses advised against**

Restrictions on use : No additional information 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  
United Kingdom  
T 01248 723 666  
[Info@LucasOil.co.uk](mailto:Info@LucasOil.co.uk), [www.lucasoil.co.uk](http://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](mailto:info@lucasoil.eu.com), [www.lucasoil.eu.com](http://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/Area	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Acute toxicity (oral), Category 4 H302  
Specific target organ toxicity – single exposure, Category 1 H370  
Aspiration hazard, Category 1 H304  
Hazardous to the aquatic environment – Chronic Hazard, Category 1 H410

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

**Adverse physicochemical, human health and environmental effects**

Harmful if swallowed. Causes damage to organs. May be fatal if swallowed and enters airways. Very toxic to aquatic life with long lasting effects.

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according to Regulation (EU) 2020/878

### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



Signal word (CLP)

Contains

Hazard statements (CLP)

Precautionary statements (CLP)

- : Danger
- : Distillates (petroleum), hydro- treated light; Tricarbonyl(methylcyclopentadienyl)manganese; Solvent naphtha (petroleum), heavy arom.
- : H302 - Harmful if swallowed.  
H304 - May be fatal if swallowed and enters airways.  
H370 - Causes damage to organs.  
H410 - Very toxic to aquatic life with long lasting effects.
- : P102 - Keep out of reach of children.  
P264 - Wash hands thoroughly after handling.  
P301+P310+P331 - IF SWALLOWED: Immediately call a POISON CENTER, a doctor. Do NOT induce vomiting.  
P308+P311 - IF exposed or concerned: Call a POISON CENTER, doctor.  
P330 - Rinse mouth.  
P405 - Store locked up.  
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

### 2.3. Other hazards

Contains no PBT and/or vPvB substances  $\geq 0.1\%$  assessed in accordance with REACH 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 substance(s) are 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

### 3.2. Mixtures

Name	Product identifier	Conc.	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Distillates (petroleum), hydro- treated light	CAS-No.: 64742-47-8 EC-No.: 265-149-8 EC Index-No.: 649-422-00-2	$\geq 30 - \leq 60$	Asp. Tox. 1, H304
Tricarbonyl(methylcyclopentadienyl)manganese substance with national workplace exposure limit(s) (IE)	CAS-No.: 12108-13-3 EC-No.: 235-166-5	$\geq 5 - \leq 10$	Acute Tox. 3 (Oral), H301 Acute Tox. 1 (Dermal), H310 Acute Tox. 1 (Inhalation), H330 STOT SE 1, H370 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 (M=1)
Solvent naphtha (petroleum), heavy arom.	CAS-No.: 64742-94-5 EC-No.: 265-198-5 EC Index-No.: 649-424-00-3	$\geq 1 - \leq 5$	Asp. Tox. 1, H304

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Name	Product identifier	Conc.	Classification according to Regulation (EC) No. 1272/2008 [CLP]
1,2,4-trimethylbenzene substance with a Community workplace exposure limit	CAS-No.: 95-63-6 EC-No.: 202-436-9 EC Index-No.: 601-043-00-3	≥ 0.1 – ≤ 1	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332 Eye Irrit. 2, H319 STOT SE 3, H335 Skin Irrit. 2, H315 Aquatic Chronic 2, H411
Naphthalene substance with national workplace exposure limit(s) (IE); substance with a Community workplace exposure limit	CAS-No.: 91-20-3 EC-No.: 202-049-5 EC Index-No.: 601-052-00-2	< 0.1	Carc. 2, H351 Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Tricarbonyl(η-cyclopentadienyl)manganese substance with national workplace exposure limit(s) (IE)	CAS-No.: 12079-65-1 EC-No.: 235-142-4	< 0.1	Acute Tox. 2 (Oral), H300
1,3,5-trimethylbenzene substance with national workplace exposure limit(s) (IE); substance with a Community workplace exposure limit	CAS-No.: 108-67-8 EC-No.: 203-604-4 EC Index-No.: 601-025-00-5	< 0.1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 2, H411
Benzene substance with national workplace exposure limit(s) (IE); substance with a Community workplace exposure limit (Note E)	CAS-No.: 71-43-2 EC-No.: 200-753-7 EC Index-No.: 601-020-00-8	< 0.1	Flam. Liq. 2, H225 Carc. 1A, H350 Muta. 1B, H340 STOT RE 1, H372 Asp. Tox. 1, H304 Eye Irrit. 2, H319 Skin Irrit. 2, H315

### Specific concentration limits:

Name	Product identifier	Specific concentration limits (Conc.)
1,3,5-trimethylbenzene	CAS-No.: 108-67-8 EC-No.: 203-604-4 EC Index-No.: 601-025-00-5	(25 ≤ C ≤ 100) STOT SE 3, H335

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'.

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 after inhalation	: If inhaled and if breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice.
First-aid measures after skin contact	: Wash skin thoroughly with mild soap and water. Take off contaminated clothing and wash it before reuse. Get medical attention if symptoms occur.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur.
First-aid measures after ingestion	: If swallowed, seek medical advice immediately and show this container or label. Do not induce vomiting/risk of damage to lungs exceeds poisoning risk. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person.

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

Symptoms/effects	: Causes damage to organs.
Symptoms/effects after inhalation	: At high concentrations, the vapours can be irritating to the respiratory system.
Symptoms/effects after skin contact	: Rednesses. Itching. Swelling.
Symptoms/effects after eye contact	: Blurred vision. Redness, itching, tears.
Symptoms/effects after ingestion	: Harmful if swallowed. May be fatal if swallowed and enters airways. Ingestion may cause nausea and vomiting. Swallowing the liquid may cause aspiration into the lungs with the risk of chemical pneumonitis.

### 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	: Dry powder. Carbon dioxide. Water spray. Foam. Use extinguishing agent suitable for surrounding fire.
Unsuitable extinguishing media	: Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard	: Presents no particular fire or explosion hazard. Burning produces stinking and toxic fumes. In case of fire and/or explosion do not breathe fumes.
Hazardous decomposition products in case of fire	: Toxic fumes may be released. Carbon dioxide. Carbon monoxide.

### 5.3. Advice for firefighters

Firefighting instructions	: Evacuate the danger area. Move containers from fire area if it can be done without personal risk. Use water spray or fog for cooling exposed containers. Fight fire from safe distance and protected location. Use extinguishing media appropriate for surrounding fire. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Wear a self contained breathing apparatus. Wear fire/flamm resistant/retardant clothing. Do not attempt to take action without suitable protective equipment.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Avoid all contact with skin, eyes, or clothing.
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#### 6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Evacuate unnecessary personnel. Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing vapours. Do not touch or walk on the spilled product. No action shall be taken without appropriate training or involving any personal risk.

#### 6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment.
Emergency procedures	: Evacuate unnecessary personnel. Ventilate area.

### 6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

For containment	: Stop leak without risks if possible. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Caution : this product can cause the floor to be slippery.
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- Methods for cleaning up : Move containers from spill area. Recover small spills with a suitable absorbent, like diatomaceous earth. For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal. Ventilate spillage area. Clean contaminated surfaces with an excess of water. Prevent entry to sewers and public waters.
- Other information : Dispose of via an authorised person/ licensed waste disposal contractor or by other suitable waste treatment techniques. Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13. For further information refer to section 8: "Exposure controls/personal protection".

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Precautions for safe handling : Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Ensure good ventilation of the work station. Provide local exhaust or general room ventilation. Do not breathe vapours. Wear personal protective equipment. Do not get in eyes, on skin, or on clothing.
- Hygiene measures : Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Do not eat, drink or smoke when using this product. Wash contaminated clothing before reuse.

### 7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Direct sunlight, Strong oxidizers, Store in a dry place. Keep away from food, drink and animal feedingstuffs. Keep container tightly closed. Containers which are opened should be properly resealed and kept upright to prevent leakage. Store in accordance with local, regional, national or international regulation.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### 8.1.1 National occupational exposure and biological limit values

Tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
Ireland - Occupational Exposure Limits	
Local name	Tricarbonyl (methylcyclo-pentadienyl) manganese (as Mn) [Methylcyclopentadienyl manganese, tricarbonyl (as Mn)]
OEL TWA	0.2 mg/m <sup>3</sup>
Remark	Advisory OELV (Advisory Occupational Exposure Limit Values), Skin (Substances which have the capacity to penetrate intact skin when they come in contact with it and be absorbed into the body. A substantial contribution to the total body burden via dermal exposure is possible)
Regulatory reference	Chemical Agents Code of Practice 2024
1,2,4-trimethylbenzene (95-63-6)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	1,2,4-Trimethylbenzene
IOEL TWA	100 mg/m <sup>3</sup> 20 ppm

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<b>1,2,4-trimethylbenzene (95-63-6)</b>	
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
<b>Ireland - Occupational Exposure Limits</b>	
Local name	1,2,4-Trimethylbenzene
OEL TWA	8h
	8h
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2024
<b>Naphthalene (91-20-3)</b>	
<b>EU - Indicative Occupational Exposure Limit (IOEL)</b>	
Local name	Naphthalene
IOEL TWA	50 mg/m <sup>3</sup>
	10 ppm
Remark	(Year of adoption 2010)
Regulatory reference	COMMISSION DIRECTIVE 91/322/EEC; SCOEL Recommendations
<b>Ireland - Occupational Exposure Limits</b>	
Local name	Naphthalene
OEL TWA	50 mg/m <sup>3</sup>
	10 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2024
<b>Tricarbonyl(η-cyclopentadienyl)manganese (12079-65-1)</b>	
<b>Ireland - Occupational Exposure Limits</b>	
Local name	Manganese cyclopentadienyl tricarbonyl [Tricarbonyl (etacyclopenta-dienyl) manganese]
OEL TWA	0.1 mg/m <sup>3</sup>
OEL STEL	0.3 mg/m <sup>3</sup>
Remark	Advisory OELV (Advisory Occupational Exposure Limit Values), Skin (Substances which have the capacity to penetrate intact skin when they come in contact with it and be absorbed into the body. A substantial contribution to the total body burden via dermal exposure is possible)
Regulatory reference	Chemical Agents Code of Practice 2024
<b>1,3,5-trimethylbenzene (108-67-8)</b>	
<b>EU - Indicative Occupational Exposure Limit (IOEL)</b>	
Local name	Mesitylene (Trimethylbenzenes)
IOEL TWA	100 mg/m <sup>3</sup>
	20 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
<b>Ireland - Occupational Exposure Limits</b>	
Local name	Mesitylene (Trimethylbenzene)
OEL TWA	100 mg/m <sup>3</sup>

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<b>1,3,5-trimethylbenzene (108-67-8)</b>	
	20 ppm
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2024
<b>Benzene (71-43-2)</b>	
<b>EU - Binding Occupational Exposure Limit (BOEL)</b>	
Local name	Benzene
BOEL TWA	0.66 mg/m <sup>3</sup> (Limit value from 5 April 2026) 1.65 mg/m <sup>3</sup> (Limit value until 5 April 2026) 0.2 ppm (Limit value from 5 April 2026) 0.5 ppm (Limit value until 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)
<b>EU - Biological Limit Value (BLV)</b>	
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
<b>Ireland - Occupational Exposure Limits</b>	
Local name	Benzene
OEL TWA	0.66 mg/m <sup>3</sup> Llimit value from 5th April 2026 1.65 mg/m <sup>3</sup> Limit value until 5th April 2026 0.2 ppm Llimit value from 5th April 2026 0.5 ppm Limit value until 5th April 2026
Remark	BOELV (Binding Occupational Exposure Limit Values), Skin (Substances which have the capacity to penetrate intact skin when they come in contact with it and be absorbed into the body. A substantial contribution to the total body burden via dermal exposure is possible), Carc.1A (Substances known to have carcinogenic potential for humans), Muta.1B (Substances which should be regarded as if they induce heritable mutations in the germ cells of humans)
Regulatory reference	Chemical Agents Code of Practice 2024
<b>Ireland - Biological limit values</b>	
Local name	Benzene
Ireland - BMGV	25 µg/g creatinine Parameter: S-Phenylmercapturic acid - Medium: urine - Sampling time: End of shift - Notations: B (Background) 50 µg/g creatinine Parameter: t,t-Muconic acid - Medium: urine - Sampling time: End of shift - Notations: B (Background)
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)

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### 8.1.2. Recommended monitoring procedures

#### Monitoring methods

Monitoring methods

Refer to all applicable national, international and local regulations or provisions. Workplace exposure - General requirements for the performance of procedures for the measurement of chemical agents. Workplace atmospheres. Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy. Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

### 8.1.3. Air contaminants formed

No additional information available

### 8.1.4. DNEL and PNEC

No additional information available

### 8.1.5. Control banding

No additional information available

## 8.2. Exposure controls

### 8.2.1. Appropriate engineering controls

#### Appropriate engineering controls:

Provide local exhaust or general room ventilation. Ensure exposure is below occupational exposure limits (where available). Handle in accordance with good industrial hygiene and safety procedures. Avoid all unnecessary exposure.

### 8.2.2. Personal protection equipment

#### Personal protective equipment:

Wear recommended personal protective equipment. Personal protective equipment should be chosen according to the CEN standards and in discussion with the supplier of the protective equipment.

#### 8.2.2.1. Eye and face protection

##### Eye protection:

Even though no specific eye irritation data are available, wear eye protection appropriate to conditions of use when handling this material. ISO 16321-1

#### 8.2.2.2. Skin protection

##### Skin and body protection:

Wear suitable protective clothing. Skin protection appropriate to the conditions of use should be provided

##### Hand protection:

Chemical resistant gloves (according to European standard ISO 374-1 or equivalent). Please follow the instructions related to the permeability and the penetration time provided by the manufacturer

#### 8.2.2.3. Respiratory protection

##### Respiratory protection:

No respiratory protection needed under normal use conditions. Where excessive vapour, mist, or dust may result, use approved respiratory protection equipment. EN 149

#### 8.2.2.4. Thermal hazards

No additional information available

### 8.2.3. Environmental exposure controls

#### Environmental exposure controls:

Avoid release to the environment. Technical onsite conditions and measures to reduce or limit discharges, air emissions and releases to soil.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid



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Colour	: Gold. Amber.
Appearance	: clear.
Odour	: petroleum.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not applicable
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 73.89 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: > 15 mm <sup>2</sup> /s (40°C; estimated); 4,1 mm <sup>2</sup> /s (100°C)
Solubility	: immiscible. in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
Relative density	: 0.8532
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

### 9.2. Other information

#### 9.2.1. Information with regard to physical hazard classes

No additional information available

#### 9.2.2. Other safety characteristics

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport. No dangerous reactions known.

### 10.2. Chemical stability

Stable under normal conditions of use.

### 10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use. Hazardous polymerisation: Will not occur.

### 10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Protect from sunlight. Overheating. Extremely high or low temperatures.

### 10.5. Incompatible materials

Oxidising agents.

### 10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 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 (Based on available data, the classification criteria are not met)

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Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

<b>Lucas Octane Booster 155 ml</b>	
ATE CLP (oral)	518 mg/kg bodyweight
<b>Distillates (petroleum), hydro- treated light (64742-47-8)</b>	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat	> 5.28 mg/l/4h
<b>Tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)</b>	
LD50 oral rat	51.8 mg/kg
LD50 oral	58 mg/kg
LD50 dermal rabbit	140 mg/kg
LD50 dermal	795 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	0.076 mg/l/4h male
<b>Solvent naphtha (petroleum), heavy arom. (64742-94-5)</b>	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
LC50 Inhalation - Rat	> 5.28 mg/l/4h
LC50 Inhalation - Rat (Dust/Mist)	> 5000 mg/l/4h
<b>1,2,4-trimethylbenzene (95-63-6)</b>	
LD50 oral rat	3415 mg/kg
LD50 dermal rat	3440 mg/kg
LC50 Inhalation - Rat [ppm]	954 ppm
<b>Naphthalene (91-20-3)</b>	
LD50 oral rat	490 mg/kg
LD50 dermal rabbit	20 g/kg
LC50 Inhalation - Rat	> 340 mg/m <sup>3</sup> 1h
<b>1,3,5-trimethylbenzene (108-67-8)</b>	
LD50 oral rat	5000 mg/kg
LD50 dermal rat	> 4 ml/kg
LC50 Inhalation - Rat	24000 mg/m <sup>3</sup>
<b>Benzene (71-43-2)</b>	
LD50 oral rat	5970 mg/kg OECD 401
LD50 dermal rabbit	> 9.4 mg/kg OECD 402
LC50 Inhalation - Rat	43.7 mg/l/4h OECD 403

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)  
Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)  
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)  
Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)  
STOT-single exposure : Causes damage to organs.

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Tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
STOT-single exposure	Causes damage to organs.
1,2,4-trimethylbenzene (95-63-6)	
STOT-single exposure	May cause respiratory irritation.
1,3,5-trimethylbenzene (108-67-8)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Benzene (71-43-2)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.
Aspiration hazard	: May be fatal if swallowed and enters airways.
Lucas Octane Booster 155 ml	
Viscosity, kinematic	> 15 mm <sup>2</sup> /s (40°C; estimated); 4,1 mm <sup>2</sup> /s (100°C)

## 11.2. Information on other hazards

### 11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : 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 substance(s) are 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 %

### 11.2.2. Other information

Other information : No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation

## SECTION 12: Ecological information

### 12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified (Based on available data, the classification criteria are not met)

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

Additional information : No experimental study on the product is available. The information given is based on our knowledge of the components and the classification of the product is determined by calculation.

Distillates (petroleum), hydro- treated light (64742-47-8)	
LC50 - Fish [1]	> 1 mg/l 96h
NOEC chronic fish	0.01 – 0.1 mg/l
NOEC chronic crustacea	0.01 – 0.1 mg/l
Tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)	
LC50 - Fish [1]	0.21 mg/l 96h
EC50 - Crustacea [1]	0.83 mg/l 48h
1,2,4-trimethylbenzene (95-63-6)	
LC50 - Fish [1]	7.72 mg/l
LC50 - Other aquatic organisms [1]	3.6 mg/l

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<b>1,2,4-trimethylbenzene (95-63-6)</b>	
EC50 - Other aquatic organisms [1]	2.356 mg/l
<b>Naphthalene (91-20-3)</b>	
LC50 - Fish [1]	0.91 (0.91 – 2.82) mg/l <i>Oncornhynchus mykiss</i>
LC50 - Fish [2]	1 (1 – 6.5) mg/l <i>Pimpephales promelas</i>
EC50 - Crustacea [1]	1.96 mg/l
EC50 - Other aquatic organisms [1]	33 mg/l
LOEC (acute)	3.2 mg/l
<b>1,3,5-trimethylbenzene (108-67-8)</b>	
LC50 - Fish [1]	12.52 mg/l
LC50 - Other aquatic organisms [1]	6 mg/l
EC50 - Other aquatic organisms [1]	25 mg/l
<b>Benzene (71-43-2)</b>	
LC50 - Fish [1]	5.3 mg/l OECD 203
EC50 - Crustacea [1]	10 mg/l <i>Daphnia</i> sp. OECD 202
ErC50 algae	100 mg/l OECD 201
LOEC (chronic)	1.6 mg/l
NOEC chronic crustacea	3 mg/l
<b>12.2. Persistence and degradability</b>	
<b>Lucas Octane Booster 155 ml</b>	
Persistence and degradability	Biodegradability in water: no data available.
<b>1,3,5-trimethylbenzene (108-67-8)</b>	
Persistence and degradability	Not readily biodegradable.
<b>Benzene (71-43-2)</b>	
Persistence and degradability	Readily biodegradable.
<b>12.3. Bioaccumulative potential</b>	
<b>Lucas Octane Booster 155 ml</b>	
Bioaccumulative potential	No data available concerning bioaccumulation.
<b>Distillates (petroleum), hydro- treated light (64742-47-8)</b>	
Partition coefficient n-octanol/water (Log Kow)	2.1 – 5
<b>Tricarbonyl(methylcyclopentadienyl)manganese (12108-13-3)</b>	
Partition coefficient n-octanol/water (Log Pow)	3.4
<b>Naphthalene (91-20-3)</b>	
BCF - Fish [1]	≥ 427 (427 – 1158)
<b>1,3,5-trimethylbenzene (108-67-8)</b>	
BCF - Fish [1]	23 – 382 (150 ppb)
BCF - Fish [2]	42 – 328 (15 ppb)

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### 1,3,5-trimethylbenzene (108-67-8)

Partition coefficient n-octanol/water (Log Pow) 3.42

### Benzene (71-43-2)

BCF - Fish [1] 3.5 – 4.4

Bioconcentration factor (BCF REACH) 0

Partition coefficient n-octanol/water (Log Pow) 1.83

### 12.4. Mobility in soil

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Ecology - soil No additional information available.

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : 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 substance(s) are 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 %.

### 12.7. Other adverse effects

Other adverse effects : No additional information available.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.  
Sewage disposal recommendations : Do not dispose of waste into sewer.  
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
Ecological information : Avoid release to the environment.  
European List of Waste (LoW, EC 2000/532) : Disposal must be carried out using appropriate EWC code

## SECTION 14: Transport information






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

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number or ID number</b>				
UN 3082	UN 3082	UN 3082	UN 3082	UN 3082
<b>14.2. UN proper shipping name</b>				
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tricarbonyl(methylcyclo pentadienyl)manganese)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tricarbonyl(methylcyclo pentadienyl)manganese)	Environmentally hazardous substance, liquid, n.o.s. (Tricarbonyl(methylcyclo pentadienyl)manganese)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tricarbonyl(methylcyclo pentadienyl)manganese)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tricarbonyl(methylcyclo pentadienyl)manganese)

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ADR	IMDG	IATA	ADN	RID
<b>Transport document description</b>				
UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tricarbonyl(methylcyclope ntadienyl)manganese), 9, III, (-)	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tricarbonyl(methylcyclope ntadienyl)manganese), 9, III, MARINE POLLUTANT	UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Tricarbonyl(methylcyclope ntadienyl)manganese), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tricarbonyl(methylcyclope ntadienyl)manganese), 9, III	UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Tricarbonyl(methylcyclope ntadienyl)manganese), 9, III
<b>14.3. Transport hazard class(es)</b>				
9	9	9	9	9
				
<b>14.4. Packing group</b>				
III	III	III	III	III
<b>14.5. Environmental hazards</b>				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

### 14.6. Special precautions for user

#### Overland transport

Classification code (ADR)	: M6
Special provisions (ADR)	: 274, 335, 375, 601
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) : -

#### Transport by sea

Special provisions (IMDG)	: 274, 335, 969
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP01, P001
Special packing provisions (IMDG)	: PP1

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IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1, 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
PCA max net quantity (IATA)	: 450L
CAO packing instructions (IATA)	: 964
CAO max net quantity (IATA)	: 450L
Special provisions (IATA)	: A97, A158, A197, A215
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

##### REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

##### REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

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### REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

### PIC Regulation (Prior Informed Consent)

Contains substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals): Benzene (71-43-2)

### POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

### Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

### Dual-Use Regulation (428/2009)

Contains no substance subject to the COUNCIL REGULATION (EC) No 428/2009 of 5 May 2009 setting up a Community regime for the control of exports, transfer, brokering and transit of dual-use items.

### Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

### Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

#### 15.1.2. National regulations

No additional information available

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BLV	Biological limit value
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level



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Abbreviations and acronyms:	
NOEC	No-Observed Effect Concentration
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Data sources : ECHA (European Chemicals Agency). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 and all its amendments and modifications. Supplier's safety documents.

Training advice : Training staff on good practice.

Full text of H- and EUH-statements:	
Acute Tox. 1 (Dermal)	Acute toxicity (dermal), Category 1
Acute Tox. 1 (Inhalation)	Acute toxicity (inhal.), Category 1
Acute Tox. 2 (Oral)	Acute toxicity (oral), Category 2
Acute Tox. 3 (Oral)	Acute toxicity (oral), Category 3
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
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 1A	Carcinogenicity, Category 1A
Carc. 2	Carcinogenicity, Category 2
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.
H300	Fatal if swallowed.
H301	Toxic if swallowed.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H310	Fatal in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.

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Full text of H- and EUH-statements:	
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H340	May cause genetic defects.
H350	May cause cancer.
H351	Suspected of causing cancer.
H370	Causes damage to organs.
H372	Causes 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.
Muta. 1B	Germ cell mutagenicity, Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT RE 1	Specific target organ toxicity – Repeated exposure, Category 1
STOT SE 1	Specific target organ toxicity – single exposure, Category 1
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
Acute Tox. 4 (Oral)	H302	Calculation method
STOT SE 1	H370	Calculation method
Asp. Tox. 1	H304	Weight of evidence
Aquatic Chronic 1	H410	Supplier information

Safety Data Sheet (SDS), EU

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.