

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

Product name Castrol Power 1 R 40
UFI: XF15-C0CA-A00S-2ART
Product code 469399-BE02
SDS # 469399
Product type Liquid.

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

Identified uses
General use of lubricants and greases in vehicles or machinery-Industrial General use of lubricants and greases in vehicles or machinery-Professional

**Use of the substance/
mixture** Motorcycle engine oil.
For specific application advice see appropriate Technical Data Sheet or consult our company representative.

1.3 Details of the supplier of the safety data sheet

Supplier Castrol Holdings Europe B.V.,
d'Arcyweg 76, 3198NA
Europoort
Rotterdam

Castrol Denmark A/S
Kampmannsgade 2
1604 København
Denmark

+45 70 80 70 54

E-mail address MSDSadvice@bp.com

1.4 Emergency telephone number

**EMERGENCY
TELEPHONE NUMBER** Carechem: +44 (0) 1235 239 670 (24/7)
Lithuania Poison Center (+370) 687 53378 ar (+370) 5 2362052, 112

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**

Product definition Mixture
Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Skin Sens. 1, H317
Aquatic Chronic 3, H412

See Section 16 for the full text of the H statements declared above.

See sections 11 and 12 for more detailed information on health effects and symptoms and environmental hazards.

2.2 Label elements

UFI: XF15-C0CA-A00S-2ART

Hazard pictograms

Signal word Warning

Hazard statements H317 - May cause an allergic skin reaction.
H412 - Harmful to aquatic life with long lasting effects.

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SECTION 2: Hazards identification

General	P102 - Keep out of reach of children. P101 - If medical advice is needed, have product container or label at hand.
Prevention	P280 - Wear protective gloves. P273 - Avoid release to the environment. P261 - Avoid breathing vapour.
Response	P302 + P352 - IF ON SKIN: Wash with plenty of soap and water. P333 + P313 - If skin irritation or rash occurs: Get medical attention. P362 + P364 - Take off contaminated clothing and wash it before reuse.
Storage	Not applicable.
Disposal	P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	Triphenyl phosphite
Supplemental label elements	Not applicable.
<u>EU Regulation (EC) No. 1907/2006 (REACH)</u>	
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	Not applicable.
<u>Special packaging requirements</u>	
Containers to be fitted with child-resistant fastenings	Not applicable.
Tactile warning of danger	Not applicable.
2.3 Other hazards	
Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	This mixture does not contain any substances that are assessed to be a PBT or a vPvB.
Product meets the criteria for endocrine disrupting properties according to Regulation (EC) No. 1907/2006.	This substance/mixture does not contain any components that are considered to have endocrine disrupting properties.
Other hazards which do not result in classification	Defatting to the skin. NOTE: Product diluted with petrol must be handled with the same precautions used for petrol. Before mixing, the Safety Data Sheet for petrol should be consulted for any precautionary measures necessary.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Product definition Mixture
Highly refined base oil (IP 346 DMSO extract < 3%). Proprietary performance additives.

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Castor oil	EC: 232-293-8 CAS: 8001-79-4	≥50 - ≤75	Not classified.	-	[2]
Distillates (petroleum), hydrotreated heavy paraffinic	REACH #: 01-2119484627-25 EC: 265-157-1 CAS: 64742-54-7 Index: 649-467-00-8	≤10	Not classified.	-	[2]
Distillates (petroleum), solvent-dewaxed heavy paraffinic	REACH #: 01-2119471299-27 EC: 265-169-7 CAS: 64742-65-0 Index: 649-474-00-6	≤10	Not classified.	-	[2]
N-[(1,1,3,3-tetramethylbutyl)phenyl]naphthalen-1-amine	REACH #: 01-2119972293-33 EC: 257-406-8	≤3	Aquatic Chronic 4, H413	-	[1]

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SECTION 3: Composition/information on ingredients

Triphenyl phosphite	CAS: 51772-35-1	<2.5	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	ATE [Oral] = 500 mg/ [1] kg Skin Irrit. 2, H315: C ≥ 5% Eye Irrit. 2, H319: C ≥ 5% M [Acute] = 1 M [Chronic] = 1
	REACH #:			
	01-2119511213-58			
	EC: 202-908-4			
	CAS: 101-02-0			
	Index: 015-105-00-7			

See Section 16 for the full text of the H statements declared above.

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

SECTION 4: First aid measures**4.1 Description of first aid measures**

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.
Skin contact	Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. In the event of any complaints or symptoms, avoid further exposure. Get medical attention.
Inhalation	If inhaled, remove to fresh air. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Get medical attention if symptoms occur.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Get medical attention if symptoms occur.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

Potential acute health effects

Inhalation	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Ingestion	No known significant effects or critical hazards.
Skin contact	Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.
Eye contact	See: Section 11. Toxicological Information - Potential acute health effects: Eye contact

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Inhalation	Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.
Ingestion	Ingestion of large quantities may cause nausea and diarrhoea.
Skin contact	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
Eye contact	Potential risk of transient stinging or redness if accidental eye contact occurs.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	Treatment should in general be symptomatic and directed to relieving any effects. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
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SECTION 5: Firefighting measures**5.1 Extinguishing media**

Suitable extinguishing media	Use foam or all-purpose dry chemical to extinguish.
Unsuitable extinguishing media	Do not use water jet. The use of a water jet may cause the fire to spread by splashing the burning product.

5.2 Special hazards arising from the substance or mixture

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SECTION 5: Firefighting measures

Hazards from the substance or mixture

In a fire or if heated, a pressure increase will occur and the container may burst.

Hazardous combustion products

Combustion products may include the following:
carbon oxides (CO, CO₂) (carbon monoxide, carbon dioxide)
nitrogen oxides (NO, NO₂ etc.)
phosphorus oxides

5.3 Advice for firefighters

Special precautions for fire-fighters

No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. This material is harmful to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Special protective equipment for fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Floors may be slippery; use care to avoid falling. Avoid breathing vapour or mist. Provide adequate ventilation. Put on appropriate personal protective equipment.

For emergency responders

Entry into a confined space or poorly ventilated area contaminated with vapour, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities.

6.3 Methods and material for containment and cleaning up

Small spill

Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

Large spill

Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Contaminated absorbent material may pose the same hazard as the spilt product. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections

See Section 1 for emergency contact information.
See Section 5 for firefighting measures.
See Section 8 for information on appropriate personal protective equipment.
See Section 12 for environmental precautions.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

7.1 Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid breathing vapour or mist. Avoid contact of spilt material and runoff with soil and surface waterways. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Empty containers retain product residue and can be hazardous. NOTE: Product diluted with petrol must be handled with the same precautions used for petrol. Before mixing, the Safety Data Sheet for petrol should be consulted for any precautionary measures necessary.

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SECTION 7: Handling and storage

Advice on general occupational hygiene	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
7.2 Conditions for safe storage, including any incompatibilities	Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Keep away from heat and direct sunlight. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store and use only in equipment/containers designed for use with this product. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.
Not suitable	Prolonged exposure to elevated temperature.
7.3 Specific end use(s)	
Recommendations	See section 1.2 and Exposure scenarios in annex, if applicable.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values
Castor oil	Lithuanian Hygiene Standard HN 23 (Lithuania) [tepalo rūkas, įskaitant dūmus] TWA 8 hours: 1 mg/m³. Form: Mist. Issued/Revised: 12/2001. STEL 15 minutes: 3 mg/m³. Form: Mist. Issued/Revised: 12/2001.
Distillates (petroleum), hydrotreated heavy paraffinic	Lithuanian Hygiene Standard HN 23 (Lithuania) [tepalo rūkas, įskaitant dūmus] TWA 8 hours: 1 mg/m³. Form: Mist. Issued/Revised: 12/2001. STEL 15 minutes: 3 mg/m³. Form: Mist. Issued/Revised: 12/2001.
Distillates (petroleum), solvent-dewaxed heavy paraffinic	Lithuanian Hygiene Standard HN 23 (Lithuania) [tepalo rūkas, įskaitant dūmus] TWA 8 hours: 1 mg/m³. Form: Mist. Issued/Revised: 12/2001. STEL 15 minutes: 3 mg/m³. Form: Mist. Issued/Revised: 12/2001.

Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Recommended monitoring procedures	Reference should be made to monitoring standards, such as the following: European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.
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Biological exposure indices

Product/ingredient name	Exposure indices
No exposure indices known.	

DNELs/DMELs

Product/ingredient name	Result
phenyl phosphite	DNEL - Workers - Long term - Inhalation 0.53 mg/m³ Effects: Systemic DNEL - Workers - Long term - Dermal 0.15 mg/kg bw/day Effects: Systemic DNEL - Workers - Long term - Dermal 11.7 µg/cm² Effects: Local

PNECs

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Not available.

8.2 Exposure controls

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the relevant airborne concentrations below their respective occupational exposure limits.

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.

Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment.

The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Eye/face protection

Safety glasses with side shields.

Skin protection

Hand protection

General Information:

Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. The correct choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Most gloves provide protection for only a limited time before they must be discarded and replaced (even the best chemically resistant gloves will break down after repeated chemical exposures).

Gloves should be chosen in consultation with the supplier / manufacturer and taking account of a full assessment of the working conditions.

Recommended: Nitrile gloves.

Breakthrough time:

Breakthrough time data are generated by glove manufacturers under laboratory test conditions and represent how long a glove can be expected to provide effective permeation resistance. It is important when following breakthrough time recommendations that actual workplace conditions are taken into account. Always consult with your glove supplier for up-to-date technical information on breakthrough times for the recommended glove type.

Our recommendations on the selection of gloves are as follows:

Continuous contact:

Gloves with a minimum breakthrough time of 240 minutes, or >480 minutes if suitable gloves can be obtained.

If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes are determined and adhered to.

Short-term / splash protection:

Recommended breakthrough times as above.

It is recognised that for short-term, transient exposures, gloves with shorter breakthrough times may commonly be used. Therefore, appropriate maintenance and replacement regimes must be determined and rigorously followed.

Glove Thickness:

For general applications, we recommend gloves with a thickness typically greater than 0.35 mm.

It should be emphasised that glove thickness is not necessarily a good predictor of glove

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SECTION 8: Exposure controls/personal protection

resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times. Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.

- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential.

Skin and body

Use of protective clothing is good industrial practice. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

Refer to standards:

Respiratory protection: EN 529
Gloves: EN 420, EN 374
Eye protection: EN 166
Filtering half-mask: EN 149
Filtering half-mask with valve: EN 405
Half-mask: EN 140 plus filter
Full-face mask: EN 136 plus filter
Particulate filters: EN 143
Gas/combined filters: EN 14387

Environmental exposure controls

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

Physical state Liquid.
Colour Amber. [Light]
Odour Unfragranced
Odour threshold Not available.
Melting point/freezing point Not available.
Initial boiling point and boiling range Not available.
Flammability Not available.
Lower and upper explosion limit Not available.
Flash point Closed cup: 200°C (392°F) [Pensky-Martens ASTM D 93]
Auto-ignition temperature

Ingredient name	°C	°F	Method
Castor oil	448	838.4	
Propane-1,2-diol, propoxylated	305	581	EU A.15
Triphenyl phosphite	>400	>752	EU A.15

Decomposition temperature Not available.
pH Not applicable.
Kinematic viscosity Kinematic: 146 mm²/s (146 cSt) at 40°C
Kinematic: 14.7 to 15.7 mm²/s (14.7 to 15.7 cSt) at 100°C

SECTION 9: Physical and chemical properties

Solubility	<table><tr><th>Media</th><th>Result</th></tr><tr><td>water</td><td>Not soluble</td></tr></table>	Media	Result	water	Not soluble																																											
Media	Result																																															
water	Not soluble																																															
Partition coefficient n-octanol/ water (log value)	Not applicable.																																															
Vapour pressure	<table><tr><th rowspan="2">Ingredient name</th><th colspan="2">Vapour Pressure at 20°C</th><th colspan="3">Vapour pressure at 50°C</th></tr><tr><th>mm Hg</th><th>kPa</th><th>Method</th><th>mm Hg</th><th>kPa</th><th>Method</th></tr><tr><td>Propane-1,2-diol, propoxylated</td><td>0.00063</td><td>0.000084</td><td>OECD 104</td><td></td><td></td><td></td></tr><tr><td>Distillates (petroleum), hydrotreated heavy paraffinic</td><td><0.07501</td><td><0.01</td><td>ASTM D 5191</td><td></td><td></td><td></td></tr><tr><td>Distillates (petroleum), solvent-dewaxed heavy paraffinic</td><td><0.07501</td><td><0.01</td><td>ASTM D 5191</td><td></td><td></td><td></td></tr><tr><td>diisodecyl adipate</td><td>0.00000011</td><td>0.000000015</td><td>OECD 104</td><td></td><td></td><td></td></tr><tr><td>Triphenyl phosphite</td><td>0.00052</td><td>0.000069</td><td>EU A.4</td><td></td><td></td><td></td></tr></table>	Ingredient name	Vapour Pressure at 20°C		Vapour pressure at 50°C			mm Hg	kPa	Method	mm Hg	kPa	Method	Propane-1,2-diol, propoxylated	0.00063	0.000084	OECD 104				Distillates (petroleum), hydrotreated heavy paraffinic	<0.07501	<0.01	ASTM D 5191				Distillates (petroleum), solvent-dewaxed heavy paraffinic	<0.07501	<0.01	ASTM D 5191				diisodecyl adipate	0.00000011	0.000000015	OECD 104				Triphenyl phosphite	0.00052	0.000069	EU A.4			
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diisodecyl adipate	0.00000011	0.000000015	OECD 104																																													
Triphenyl phosphite	0.00052	0.000069	EU A.4																																													
Density and/or Relative density	<1000 kg/m³ (<1 g/cm³) at 15°C																																															
Relative vapour density	Not available.																																															
Particle characteristics																																																
Median particle size	Not applicable.																																															
9.2 Other information																																																
Evaporation rate	Not available.																																															
Explosive properties	Not available.																																															
Oxidising properties	Not available.																																															

SECTION 10: Stability and reactivity

10.1 Reactivity	No specific test data available for this product. Refer to Conditions to avoid and Incompatible materials for additional information.
10.2 Chemical stability	The product is stable.
10.3 Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur. Under normal conditions of storage and use, hazardous polymerisation will not occur.
10.4 Conditions to avoid	Avoid all possible sources of ignition (spark or flame).
10.5 Incompatible materials	Reactive or incompatible with the following materials: oxidising materials.
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		
Product/ingredient name	Result	
✓-[(1,1,3,3-tetramethylbutyl)phenyl]naphthalen-1-amine	Rat - Oral - LD50 >2000 mg/kg OECD 423	
	Rat - Dermal - LD50 >2000 mg/kg OECD 402	
triphenyl phosphite	Rat - Oral - LD50 1590 mg/kg OECD 401	
	Rabbit - Dermal - LD50 >2000 mg/kg	

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OECD 402

Rat - Inhalation - LC50 Dusts and mists
>6.7 mg/l [1 hours]
OECD 403

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
Castrol Power 1 R 40 triphenyl phosphite	50019.3500	N/AN/A	N/AN/A	N/AN/A	N/AN/A

Skin corrosion/irritation

Product/ingredient name

☒-[(1,1,3,3-tetramethylbutyl)phenyl]naphthalen-1-amine

triphenyl phosphite

Result

RhE - Skin - Non-irritant to skin.
OECD 439

Rabbit - Skin - Irritant

Serious eye damage/eye irritation

Product/ingredient name

☒-[(1,1,3,3-tetramethylbutyl)phenyl]naphthalen-1-amine

triphenyl phosphite

Result

RhCE - Eyes - Non-irritating to the eyes.
OECD 492

BCOP - Eyes - Non-irritating to the eyes.
OECD 437

Rabbit - Eyes - Irritant
OECD 405

Respiratory corrosion/irritation

Not available.

Respiratory or skin sensitization

Product/ingredient name

☒-[(1,1,3,3-tetramethylbutyl)phenyl]naphthalen-1-amine

triphenyl phosphite

Result

Guinea pig - skin
OECD 406
Result: Not sensitising

Guinea pig - skin
OECD 429
Result: Sensitising

Germ cell mutagenicity

Product/ingredient name

☒-[(1,1,3,3-tetramethylbutyl)phenyl]naphthalen-1-amine

Result

In vitro - Bacteria
OECD [Bacterial Reverse Mutation Test]
Result: Negative

In vitro - Mammal - species unspecified
OECD [In vitro Mammalian Cell Gene Mutation Test]
Result: Negative

In vitro - Mammal - species unspecified
OECD [In vitro Mammalian Chromosomal Aberration Test]
Result: Negative

SECTION 11: Toxicological information

triphenyl phosphite		In vitro - Bacteria OECD 471 <u>Result:</u> Negative
		In vitro - Mammalian-Animal OECD 487 <u>Result:</u> Negative
		In vivo - Mammalian-Animal OECD 474 <u>Result:</u> Negative
<u>Carcinogenicity</u>		
Not available.		
<u>Reproductive toxicity</u>		
Product/ingredient name	Result	
☒ -[(1,1,3,3-tetramethylbutyl)phenyl]naphthalen-1-amine	Rat - Oral OECD 422 <u>Maternal toxicity:</u> Negative <u>Fertility effects:</u> Negative <u>Developmental:</u> Negative	
triphenyl phosphite	Rat - Oral OECD 422 <u>Maternal toxicity:</u> Negative <u>Fertility effects:</u> Negative <u>Developmental:</u> Negative	
<u>Specific target organ toxicity (single exposure)</u>		
Not available.		
<u>Specific target organ toxicity (repeated exposure)</u>		
Product/ingredient name	Result	
☒ triphenyl phosphite	STOT RE 2, H373	
<u>Aspiration hazard</u>		
Not available.		
Information on likely routes of exposure	Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.	
<u>Potential acute health effects</u>		
Inhalation	Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.	
Ingestion	No known significant effects or critical hazards.	
Skin contact	Defatting to the skin. May cause skin dryness and irritation. May cause an allergic skin reaction.	
Eye contact	☒ No known significant effects or critical hazards.	
<u>Symptoms related to the physical, chemical and toxicological characteristics</u>		
Inhalation	May be harmful by inhalation if exposure to vapour, mists or fumes resulting from thermal decomposition products occurs.	
Ingestion	No specific data.	
Skin contact	Adverse symptoms may include the following: irritation redness dryness cracking	
Eye contact	No specific data.	
<u>Delayed and immediate effects as well as chronic effects from short and long-term exposure</u>		
Inhalation	Overexposure to the inhalation of airborne droplets or aerosols may cause irritation of the respiratory tract.	

SECTION 11: Toxicological information

Ingestion	Ingestion of large quantities may cause nausea and diarrhoea.
Skin contact	Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.
Eye contact	Potential risk of transient stinging or redness if accidental eye contact occurs.
<u>Potential chronic health effects</u>	
Not available.	
Conclusion/Summary [Product]	Not available.
General	No known significant effects or critical hazards.
Carcinogenicity	No known significant effects or critical hazards.
Mutagenicity	No known significant effects or critical hazards.
Developmental effects	No known significant effects or critical hazards.
Fertility effects	No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Conclusion/Summary [Product]	 This substance/mixture does not contain any components that are considered to have endocrine disrupting properties.
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11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result
 [(1,1,3,3-tetramethylbutyl)phenyl]naphthalen-1-amine	Acute - ErC50 OECD 201 Algae >100 mg/l [72 hours] Acute - EC50 OECD 202 Daphnia >100 mg/l [48 hours] Acute - LC50 OECD 203 Fish >100 mg/l [96 hours] Chronic - NOEC OECD 201 Algae 100 mg/l [72 hours]
triphenyl phosphite	Acute - EC50 OECD 202 Daphnia 0.94 mg/l [48 hours] Acute - EC50 OECD 203 Fish 0.7 mg/l [96 hours]

Environmental hazards	Harmful to aquatic life with long lasting effects.
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12.2 Persistence and degradability

Expected to be biodegradable.

Product/ingredient name	Result
 [(1,1,3,3-tetramethylbutyl)phenyl]naphthalen-1-amine	OECD 301B 0% [28 days] - Not readily
triphenyl phosphite	OECD 301D 84% [28 days] - Readily

12.3 Bioaccumulative potential

This product is not expected to bioaccumulate through food chains in the environment.

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SECTION 12: Ecological information

Product/ingredient name	LogP _{ow}	BCF	Potential
N-[(1,1,3,3-tetramethylbutyl) phenyl]naphthalen-1-amine triphenyl phosphite	>8	-	High
	6.62	-	High

12.4 Mobility in soil

Soil/water partition coefficient

Product/ingredient name	logK _{oc}	K _{oc}
triphenyl phosphite	4.49	30865.5

Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
N-[(1,1,3,3-tetramethylbutyl) phenyl]naphthalen-1-amine triphenyl phosphite	No	No	No	No	No	No	No
	No	No	No	No	No	No	No

Mobility Spillages may penetrate the soil causing ground water contamination.

Conclusion/Summary The product does not meet the criteria to be considered as a PMT or vPvM.

12.5 Results of PBT and vPvB assessment

Regulation (EC) No. 1907/2006 [REACH]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
N-[(1,1,3,3-tetramethylbutyl) phenyl]naphthalen-1-amine triphenyl phosphite	No	N/A	N/A	No	N/A	N/A	N/A
	N/A	N/A	N/A	Yes	N/A	N/A	N/A

Regulation (EC) No. 1272/2008 [CLP]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
N-[(1,1,3,3-tetramethylbutyl) phenyl]naphthalen-1-amine triphenyl phosphite	No	No	No	No	No	No	No
	No	No	No	No	No	No	No

Conclusion/Summary The product does not meet the criteria to be considered as a PBT or vPvB.

Regulation (EC) No. 1272/2008 [CLP]

12.6 Endocrine disrupting properties

Conclusion/Summary [Product] This substance/mixture does not contain any components that are considered to have endocrine disrupting properties.

Other ecological information Spills may form a film on water surfaces causing physical damage to organisms. Oxygen transfer could also be impaired.

12.7 Other adverse effects No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

13.1 Waste treatment methods

Product

Methods of disposal Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.

Hazardous waste Yes.

European waste catalogue (EWC)

Waste code	Waste designation
13 02 08*	other engine, gear and lubricating oils

However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

Packaging

Methods of disposal Where possible, arrange for product to be recycled. Dispose of via an authorised person/ licensed waste disposal contractor in accordance with local regulations.

SECTION 13: Disposal considerations

Special precautions	This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Empty containers represent a fire hazard as they may contain flammable product residues and vapour. Never weld, solder or braze empty containers. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.
References	Commission 2014/955/EU Directive 2008/98/EC

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.2 UN proper shipping name	-	-	-	-
14.3 Transport hazard class(es)	-	-	-	-
14.4 Packing group	-	-	-	-
14.5 Environmental hazards	No.	No.	No.	No.
Additional information	-	-	-	-

14.6 Special precautions for user Not available.

14.7 Maritime transport in bulk according to IMO instruments Not available.

SECTION 15: Regulatory information

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

EU Regulation (EC) No. 1907/2006 (REACH)
Annex XIV - List of substances subject to authorisation
Annex XIV

None of the components are listed.

Substances of very high concern
None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
Castrol Power 1 R 40	95-100	3

Labelling Not applicable.

Other regulations

REACH Status	The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.
United States inventory (TSCA 8b)	All components are active or exempted.
Australia inventory (AIC)	All components are listed or exempted.
Canada inventory	All components are listed or exempted.
China inventory (IECSC)	All components are listed or exempted.
Japan inventory (CSCL)	All components are listed or exempted.
Korea inventory (KECI)	All components are listed or exempted.

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SECTION 15: Regulatory information

Philippines inventory (PICCS)	All components are listed or exempted.
Taiwan Chemical Substances Inventory (TCSI)	All components are listed or exempted.
Explosive precursors	Not applicable.
Ozone depleting substances (EU 2024/590)	Not listed.
Prior Informed Consent (PIC) (649/2012/EU)	Not listed.
Persistent Organic Pollutants	Not listed.
EU - Water framework directive - Priority substances	None of the components are listed.
Seveso Directive	This product is not controlled under the Seveso Directive.
15.2 Chemical safety assessment	A Chemical Safety Assessment has been carried out for one or more of the substances within this mixture. A Chemical Safety Assessment has not been carried out for the mixture itself.

SECTION 16: Other information

Abbreviations and acronyms	ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor CAS = Chemical Abstracts Service CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008] CSA = Chemical Safety Assessment CSR = Chemical Safety Report DMEL = Derived Minimal Effect Level DNEL = Derived No Effect Level EINECS = European Inventory of Existing Commercial chemical Substances ES = Exposure Scenario EUH statement = CLP-specific Hazard statement EWC = European Waste Catalogue GHS = Globally Harmonized System of Classification and Labelling of Chemicals IATA = International Air Transport Association IBC = Intermediate Bulk Container IMDG = International Maritime Dangerous Goods LogPow = logarithm of the octanol/water partition coefficient MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution) OECD = Organisation for Economic Co-operation and Development PBT = Persistent, Bioaccumulative and Toxic PNEC = Predicted No Effect Concentration REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation [Regulation (EC) No. 1907/2006] RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail RRN = REACH Registration Number SADT = Self-Accelerating Decomposition Temperature SVHC = Substances of Very High Concern STOT-RE = Specific Target Organ Toxicity - Repeated Exposure STOT-SE = Specific Target Organ Toxicity - Single Exposure TWA = Time weighted average UN = United Nations UVCB = Complex hydrocarbon substance VOC = Volatile Organic Compound vPvB = Very Persistent and Very Bioaccumulative Varies = may contain one or more of the following 64741-88-4 / RRN 01-2119488706-23, 64741-89-5 / RRN 01-2119487067-30, 64741-95-3 / RRN 01-2119487081-40, 64741-96-4/ RRN 01-2119483621-38, 64742-01-4 / RRN 01-2119488707-21, 64742-44-5 / RRN 01-2119985177-24, 64742-45-6, 64742-52-5 / RRN 01-2119467170-45, 64742-53-6 / RRN
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SECTION 16: Other information

01-2119480375-34, 64742-54-7 / RRN 01-2119484627-25, 64742-55-8 / RRN 01-2119487077-29, 64742-56-9 / RRN 01-2119480132-48, 64742-57-0 / RRN 01-2119489287-22, 64742-58-1, 64742-62-7 / RRN 01-2119480472-38, 64742-63-8, 64742-65-0 / RRN 01-2119471299-27, 64742-70-7 / RRN 01-2119487080-42, 72623-85-9 / RRN 01-2119555262-43, 72623-86-0 / RRN 01-2119474878-16, 72623-87-1 / RRN 01-2119474889-13

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification		Justification
Skin Sens. 1, H317		Calculation method
Aquatic Chronic 3, H412		Calculation method
Full text of abbreviated H statements	H302	Harmful if swallowed.
	H315	Causes skin irritation.
	H317	May cause an allergic skin reaction.
	H319	Causes serious eye irritation.
	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.
	H413	May cause long lasting harmful effects to aquatic life.
	Acute Tox. 4	ACUTE TOXICITY - Category 4
	Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Full text of classifications [CLP/GHS]	Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
	Aquatic Chronic 4	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 4
	Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
	Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
	Skin Sens. 1	SKIN SENSITISATION - Category 1
	STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

History

Date of issue/ Date of revision	07/11/2025.
Date of previous issue	09/06/2025.
Prepared by	Product Stewardship

Indicates information that has changed from previously issued version.

Notice to reader

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Annex to the extended Safety Data Sheet (eSDS)

Industrial

Identification of the substance or mixture

Product definition	Mixture
Code	469399-BE02
Product name	Castrol Power 1 R 40

Section 1: Title

Short title of the exposure scenario	General use of lubricants and greases in vehicles or machinery - Industrial
List of use descriptors	Identified use name: General use of lubricants and greases in vehicles or machinery-Industrial Process Category: PROC01, PROC08b, PROC09, PROC02 Sector of end use: SU03 Subsequent service life relevant for that use: No. Environmental Release Category: ERC04, ERC07 Specific Environmental Release Category: ATIEL-ATC SPERC 4.Biv1

Processes and activities covered by the exposure scenario	Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.
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Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

No exposure scenario is presented because the product is not classified for Human Health

Contributing scenarios: Operational conditions and risk management measures

Section 2.2: Control of environmental exposure

Amounts used:

EU tonnage of risk determining substance per year:	2.63E+3 Tonnes/year
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Frequency and duration of use:

Emission days	300
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Environment factors not influenced by risk management:

Local freshwater dilution factor	10
Local marine water dilution factor	100

Other operational conditions of use affecting environmental exposure:

Negligible wastewater emissions as process operates without water contact.

Release fraction to air (after typical onsite RMMs)	5.00E-05
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Release fraction to soil from process (after typical onsite RMMs)	0
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Release fraction to wastewater from process (after typical onsite RMMs and before sewage treatment plan)	Not available.
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Technical conditions and measures at process level (source) to prevent release:	Common practices vary across sites thus conservative process release estimates used.
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Castrol Power 1 R 40

General use of lubricants and greases in vehicles or machinery - Industrial

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:	Prevent discharge of undissolved substance to or recover from onsite wastewater. User sites are assumed to be provided with oil/water separators and waste water to be discharged via a sewage treatment plant
Organisational measures to prevent/limit release from site:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	Not available.
Assumed domestic sewage treatment plant flow rate (m ³ /d)	2.00E+3
Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal as product:	Not available.
Conditions and measures related to external treatment of waste for disposal:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Used ECETOC TRA model (May 2010 release).
Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	No exposure scenario is presented because the product is not classified for Human Health

Section 4: Guidance to check compliance with the exposure scenario

Environment	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SPERC factsheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see www.ATIEL.org/REACH_GES
Health	No exposure scenario is presented because the product is not classified for Human Health

Annex to the extended Safety Data Sheet (eSDS)

Professional

Identification of the substance or mixture

Product definition	Mixture
Code	469399-BE02
Product name	Castrol Power 1 R 40

Section 1: Title

Short title of the exposure scenario	General use of lubricants and greases in vehicles or machinery - Professional
List of use descriptors	Identified use name: General use of lubricants and greases in vehicles or machinery-Professional Process Category: PROC01, PROC02, PROC08a, PROC08b, PROC20 Sector of end use: SU22 Subsequent service life relevant for that use: No. Environmental Release Category: ERC09a, ERC09b Specific Environmental Release Category: ATIEL-ATC SPERC 9.Bp.v1

Processes and activities covered by the exposure scenario	Covers general use of lubricants and greases in vehicles or machinery in closed systems. Includes filling and draining of containers and operation of enclosed machinery (including engines) and associated maintenance and storage activities.
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Section 2 Operational conditions and risk management measures

Section 2.1 Control of worker exposure

No exposure scenario is presented because the product is not classified for Human Health

Contributing scenarios: Operational conditions and risk management measures

Section 2.2: Control of environmental exposure

Amounts used:

EU tonnage of risk determining substance per year:	5.39 Tonnes/year
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Frequency and duration of use:

Emission days	365
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Environment factors not influenced by risk management:

Local freshwater dilution factor	10
Local marine water dilution factor	100

Other operational conditions of use affecting environmental exposure:

Negligible wastewater emissions as process operates without water contact.

Release fraction to air (after typical onsite RMMs)	1.00E-04
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Release fraction to soil from process (after typical onsite RMMs)	1E-03
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Release fraction to wastewater from process (after typical onsite RMMs and before sewage treatment plan)	Not available.
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Technical conditions and measures at process level (source) to prevent release:

Common practices vary across sites thus conservative process release estimates used.

Castrol Power 1 R 40

General use of lubricants and greases in vehicles or machinery - Professional

Technical on-site conditions and measures to reduce or limit discharges, air emissions and releases to soil:	Prevent discharge of undissolved substance to or recover from onsite wastewater. User sites are assumed to be provided with oil/water separators and waste water to be discharged via a sewage treatment plant
Organisational measures to prevent/limit release from site:	Do not apply industrial sludge to natural soils. Sludge should be incinerated, contained or reclaimed.
Conditions and measures related to municipal sewage treatment plant:	
Estimated substance removal from wastewater via on-site sewage treatment	No data available yet
Assumed domestic sewage treatment plant flow rate (m3/d)	2.00E+3
Maximum allowable site tonnage (M _{Safe}) based on release following total wastewater treatment removal as product:	No data available yet
Conditions and measures related to external treatment of waste for disposal:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and measures related to external recovery of waste:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Section 3: Exposure estimation and reference to its source

Exposure estimation and reference to its source - Environment	
Exposure assessment (environment):	Used ECETOC TRA model (May 2010 release).
Exposure estimation and reference to its source - Workers	
Exposure assessment (human):	No exposure scenario is presented because the product is not classified for Human Health

Section 4: Guidance to check compliance with the exposure scenario

Environment	Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SPERC factsheet. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For further information see www.ATIEL.org/REACH_GES
Health	No exposure scenario is presented because the product is not classified for Human Health