SAFETY DATA SHEET

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

1.1 Product identifier

Product name Castrol Transmax Manual V 75W-80

Product code 469686-DE01

SDS # 469686

Product type Liquid.

Use of the substance/ mixture Manual transmission fluid.
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 Belgium BV,
Langerbuggerkaai 18,
9000 Gent

+32 (0)800 49312

E-mail address MSDSadvice@bp.com

1.4 Emergency telephone number

EMERGENCY TELEPHONE NUMBER Carechem: +44 (0) 1235 239 670 (24/7)

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]

Aquatic Chronic 2, H411

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

Hazard pictograms

Signal word No signal word.

Hazard statements H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

General P102 - Keep out of reach of children.
P101 - If medical advice is needed, have product container or label at hand.

Prevention P273 - Avoid release to the environment.

Response P391 - Collect spillage.

Storage Not applicable.

Disposal P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazardous ingredients Not applicable.

SECTION 2: Hazards identification

Supplemental label elements Contains Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl. May produce an allergic reaction.

EU Regulation (EC) No. 1907/2006 (REACH)

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles Not applicable.

Special packaging requirements

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.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Product definition Mixture

Synthetic base stock. Proprietary performance additives.

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
1-Decene, homopolymer, hydrogenated	REACH #: 01-2119486452-34 EC: 500-183-1 CAS: 68037-01-4	≥10 - ≤25	Asp. Tox. 1, H304	-	[1]
Dec-1-ene, trimers, hydrogenated	REACH #: 01-2119486452-34 EC: 500-393-3 CAS: 157707-86-3	≥10 - ≤25	Asp. Tox. 1, H304	-	[1]
Dec-1-ene, trimers, hydrogenated	REACH #: 01-2119493949-12 EC: 500-393-3 CAS: 157707-86-3	≥10 - ≤25	Asp. Tox. 1, H304	-	[1]
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl	REACH #: 01-2119493620-38 EC: 931-384-6 CAS: -	≤3	Acute Tox. 4, H302 Eye Irrit. 2, H319 Skin Sens. 1B, H317 Aquatic Chronic 2, H411	ATE [Oral] = 500 mg/kg Eye Irrit. 2, H319: C ≥ 50% Skin Sens. 1, H317: C ≥ 9.39%	[1]
Distillates (petroleum), hydrotreated light paraffinic	REACH #: 01-2119487077-29 EC: 265-158-7 CAS: 64742-55-8 Index: 649-468-00-3	≤3	Asp. Tox. 1, H304	-	[1]
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	REACH #: 01-2119473797-19 EC: 627-034-4 CAS: 1213789-63-9	≤0.3	Acute Tox. 4, H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 1, H400	ATE [Oral] = 500 mg/kg M [Acute] = 10 M [Chronic] = 10	[1]

SECTION 3: Composition/information on ingredients

			Aquatic Chronic 1, H410		
isodecyl methacrylate	REACH #: 01-2119894925-17 EC: 249-978-2 CAS: 29964-84-9 Index: 607-134-00-4	≤0.3	Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 Aquatic Chronic 1, H410	STOT SE 3, H335: C ≥ 10% M [Chronic] = 1	[1]
dec-1-ene	REACH #: 01-2119457739-21 EC: 212-819-2 CAS: 872-05-9	≤0.3	Flam. Liq. 3, H226 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410 EUH066	M [Acute] = 1 M [Chronic] = 1	[1]

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

Type

[1] Substance classified with a health or environmental hazard

Occupational exposure limits, if available, are listed in Section 8.

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. Get medical attention if irritation develops.

Inhalation If inhaled, remove to fresh air. 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.

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 Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.

Ingestion No known significant effects or critical hazards.

Skin contact Defatting to the skin. May cause skin dryness and irritation.

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.

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

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

SECTION 5: Firefighting measures

Hazardous combustion products

Combustion products may include the following:
carbon oxides (CO, CO_2) (carbon monoxide, carbon dioxide)

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 toxic 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. Collect spillage.

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

7.1 Precautions for safe handling

Protective measures

Put on appropriate personal protective equipment. Do not ingest. Avoid contact with eyes, skin and clothing. 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.

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.

SECTION 7: Handling and storage

Not suitable Prolonged exposure to elevated temperature

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/ingredient name	Exposure limit values

Europe

No exposure limit value known.

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.

Biological exposure indices

Product/ingredient name	Exposure indices

No exposure indices known.

Derived No Effect Level

No DNELs/DMELs available.

PNECs

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. 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.

SECTION 8: Exposure controls/personal protection

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 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

9.1 Information on basic physical and chemical properties

Appearance

Physical state Liquid.

Colour Amber.

Odour Not available.

Odour threshold Not available.

pH Not applicable.

Melting point/freezing point Not available.

Initial boiling point and boiling range Not available.

Pour point -60 °C

Flash point Open cup: >200°C (>392°F) [Cleveland DIN EN ISO 2592]

Evaporation rate Not available.

Flammability Not available.

Lower and upper explosion limit Not available.

Vapour pressure

Ingredient name	Vapour Pressure at 20˚C			Vapour pressure at 50˚C	
	mm Hg	kPa	Method	mm Hg	kPa
1-Decene, homopolymer, hydrogenated	<0.0041	<0.00055	ASTM E 1194-87		
Dec-1-ene, homopolymer, hydrogenated	<0.0041	<0.00055	ASTM E 1194-87		
Dec-1-ene, homopolymer, hydrogenated Dec-1-ene, oligomers, hydrogenated	<0.0041	<0.00055	ASTM E 1194-87		
Distillates (petroleum), hydrotreated light paraffinic	<0.07501	<0.01	ASTM D 5191		
Distillates (petroleum), hydrotreated heavy paraffinic	<0.07501	<0.01	ASTM D 5191		

Vapour density Not available.

Not available.

Density and/or Relative density <1000 kg/m³ (<1 g/cm³) at 15°C

Solubility(ies)

Media	Result
water	Not soluble

Partition coefficient n-octanol/water (log value) Not applicable.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Kinematic viscosity Kinematic: 40 mm^2/s (40 cSt) at 40°C
Kinematic: 7.5 to 8.5 mm^2/s (7.5 to 8.5 cSt) at 100°C

Explosive properties Not available.

Oxidising properties Not available.

9.2 Other information

No additional information.

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
Dec-1-ene, homopolymer, hydrogenated	**Rat - Oral - LD50** >5000 mg/kg OECD 423 **Rat - Dermal - LD50** >2000 mg/kg OECD 402 **Rat - Inhalation - LD50 Dusts and mists** >5.2 mg/l [4 hours] OECD 403
Dec-1-ene, trimers, hydrogenated	**Rat - Oral - LD50** >5000 mg/kg OECD 423 **Rat - Dermal - LD50** >2000 mg/kg OECD 402 **Rat - Inhalation - LD50 Dusts and mists** >5.2 mg/l [4 hours] OECD 403
Dec-1-ene, trimers, hydrogenated	**Rat - Oral - LD50** >5000 mg/kg OECD 423 **Rat - Dermal - LD50** >2000 mg/kg OECD 402 **Rat - Inhalation - LD50 Dusts and mists** >5.2 mg/l [4 hours] OECD 403
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl	**Rat - Oral - LD50** 2000 mg/kg OECD 401
Distillates (petroleum), hydrotreated light paraffinic	**Rat - Oral - LD50** >5000 mg/kg OECD 401 **Rabbit - Dermal - LD50** >5000 mg/kg OECD 402

SECTION 11: Toxicological information

	Rat - Inhalation - LC50 Dusts and mists >5.53 mg/l [4 hours] OECD 403
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	**Rat - Oral - LD50** 1689 mg/kg OECD 401
isodecyl methacrylate	**Rat - Oral - LD50** >5000 mg/kg OSHA **Rabbit - Dermal - LD50** >3000 mg/kg OSHA
dec-1-ene	**Rat - Oral - LD50** >5000 mg/kg OECD 401 **Rabbit - Dermal - LD50** >2000 mg/kg OECD 402 **Rat - Inhalation - LD50 Vapour** >20 mg/l [4 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 Transmax Manual V 75W-80	19904.2	N/A	N/A	N/A	N/A
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl	500	N/A	N/A	N/A	N/A
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	500	N/A	N/A	N/A	N/A

Skin corrosion/irritation

Product/ingredient name	Result
Dec-1-ene, homopolymer, hydrogenated	**Rabbit - Skin - Non-irritant to skin.** OECD 404
Dec-1-ene, trimers, hydrogenated	**Rabbit - Skin - Non-irritant to skin.** OECD 404
Dec-1-ene, trimers, hydrogenated	**Rabbit - Skin - Non-irritant to skin.** OECD 404
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl	**Rabbit - Skin - Non-irritant to skin.** OECD 404
Distillates (petroleum), hydrotreated light paraffinic	**Rabbit - Skin - Non-irritant to skin.**
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	**Rabbit - Skin - Visible necrosis** OECD 404
isodecyl methacrylate	**Rabbit - Skin - Irritant**
dec-1-ene	**Rabbit - Skin - Mild irritant** OECD 404

SECTION 11: Toxicological information

Serious eye damage/eye irritation

Product/ingredient name	Result
Dec-1-ene, homopolymer, hydrogenated	**Rabbit - Eyes - Non-irritating to the eyes.** OECD 405
Dec-1-ene, trimers, hydrogenated	**Rabbit - Eyes - Non-irritating to the eyes.** OECD 405
Dec-1-ene, trimers, hydrogenated	**Rabbit - Eyes - Non-irritating to the eyes.** OECD 405
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl	**Rabbit - Eyes - Irritant** FHSA 16CFR1500
Distillates (petroleum), hydrotreated light paraffinic	**Rabbit - Eyes - Non-irritating to the eyes.** OECD 405
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	**Rabbit - Eyes - Severe irritant** OECD 405
isodecyl methacrylate	**Rabbit - Eyes - Irritant**
dec-1-ene	**Rabbit - Eyes - Non-irritating to the eyes.** OECD 405

Respiratory corrosion/irritation

Not available.

Respiratory or skin sensitization

Product/ingredient name	Result
Dec-1-ene, homopolymer, hydrogenated	**Guinea pig - skin** OECD 406 Result: Not sensitising
Dec-1-ene, trimers, hydrogenated	**Guinea pig - skin** OECD 406 Result: Not sensitising
Dec-1-ene, trimers, hydrogenated	**Guinea pig - skin** OECD 406 Result: Not sensitising
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl	**Mouse - skin** OECD 429 Result: Sensitising
Distillates (petroleum), hydrotreated light paraffinic	**Guinea pig - skin** OECD 406 Result: Not sensitising
isodecyl methacrylate	**Mouse - skin** OECD 429 Result: Not sensitising
dec-1-ene	**Guinea pig - skin** OECD 406 Result: Not sensitising

SECTION 11: Toxicological information

Germ cell mutagenicity

Product/ingredient name	Result
Dec-1-ene, homopolymer, hydrogenated	**In vitro - Bacteria** OECD [Bacterial Reverse Mutation Test] Result: Negative **In vitro - Mammal - species unspecified** OECD [In vitro Mammalian Chromosomal Aberration Test] Result: Negative **In vivo - Mammal - species unspecified** OECD [Mammalian Erythrocyte Micronucleus Test] Result: Negative
Dec-1-ene, trimers, hydrogenated	**In vitro - Bacteria** OECD [Bacterial Reverse Mutation Test] Result: Negative **In vitro - Mammal - species unspecified** OECD [In vitro Mammalian Chromosomal Aberration Test] Result: Negative **In vivo - Mammal - species unspecified** OECD [Mammalian Erythrocyte Micronucleus Test] Result: Negative
Dec-1-ene, trimers, hydrogenated	**In vitro - Bacteria** OECD [Bacterial Reverse Mutation Test] Result: Negative **In vitro - Mammal - species unspecified** OECD [In vitro Mammalian Chromosomal Aberration Test] Result: Negative **In vivo - Mammal - species unspecified** OECD [Mammalian Erythrocyte Micronucleus Test] Result: Negative
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl	**In vitro - Bacteria** OECD 471 Result: Negative **In vitro - Mammal - species unspecified** OECD 476 Result: Negative **In vitro - Unspecified - Somatic** OECD 474 Result: Negative
Distillates (petroleum), hydrotreated light paraffinic	**In vitro - Bacteria** OECD [Bacterial Reverse Mutation Test] Result: Negative **In vitro - Mammal - species unspecified** OECD [In vitro Mammalian Chromosomal Aberration Test] Result: Negative
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	**In vitro - Bacteria** OECD 471 Result: Negative **In vitro - Unspecified** OECD 473 Result: Negative **In vitro - Mammal - species unspecified** OECD 476 Result: Negative

SECTION 11: Toxicological information

isodecyl methacrylate	**In vitro - Bacteria** OECD 471 Result: Negative **In vitro - Unspecified** OECD 473 Result: Negative **In vitro - Mammal - species unspecified** Equivalent to OECD 476 Result: Negative
dec-1-ene	**In vitro - Bacteria** OECD 471 Result: Negative **In vitro - Mammalian-Animal** OECD 473 Result: Negative **In vivo - Mammalian-Animal** OECD 474 Result: Negative

Carcinogenicity

Not available.

Reproductive toxicity

Product/ingredient name	Result
Dec-1-ene, homopolymer, hydrogenated	**Rat - Oral** OECD 415 Maternal toxicity: Negative Fertility effects: Negative Developmental: Negative
Dec-1-ene, trimers, hydrogenated	**Rat - Oral** OECD 415 Maternal toxicity: Negative Fertility effects: Negative Developmental: Negative
Dec-1-ene, trimers, hydrogenated	**Rat - Oral** OECD 415 Maternal toxicity: Negative Fertility effects: Negative Developmental: Negative
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl	**Rat - Oral** OECD 421 Maternal toxicity: Positive Fertility effects: Negative Developmental: Negative
Distillates (petroleum), hydrotreated light paraffinic	**Rat - Oral** OECD 421 Maternal toxicity: Negative Fertility effects: Negative Developmental: Negative
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	**Rat - Oral** OECD 421 Maternal toxicity: Positive Fertility effects: Negative Developmental: Negative
isodecyl methacrylate	**Rat - Oral** OECD 422

SECTION 11: Toxicological information

	Maternal toxicity: Negative Fertility effects: Negative Developmental: Negative
dec-1-ene	**Rat - Oral** OECD 422 Maternal toxicity: Negative Fertility effects: Negative Developmental: Negative

Specific target organ toxicity (single exposure)

Product/ingredient name	Result
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	STOT SE 3, H335 (Respiratory tract irritation)
isodecyl methacrylate	STOT SE 3, H335 (Respiratory tract irritation)

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Result
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	STOT RE 2, H373

Aspiration hazard

Product/ingredient name	Result
Dec-1-ene, homopolymer, hydrogenated	ASPIRATION HAZARD - Category 1
Dec-1-ene, trimers, hydrogenated	ASPIRATION HAZARD - Category 1
Dec-1-ene, trimers, hydrogenated	ASPIRATION HAZARD - Category 1
Distillates (petroleum), hydrotreated light paraffinic	ASPIRATION HAZARD - Category 1
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	ASPIRATION HAZARD - Category 1
dec-1-ene	ASPIRATION HAZARD - Category 1

Information on likely routes of exposure Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Inhalation Vapour inhalation under ambient conditions is not normally a problem due to low vapour pressure.

Ingestion No known significant effects or critical hazards.

Skin contact Defatting to the skin. May cause skin dryness and irritation.

Eye contact

Symptoms related to the physical, chemical and toxicological characteristics

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
dryness
cracking

Eye contact No specific data.

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.

Potential chronic health effects

Not available.

Conclusion/Summary [Product] Not available.

General No known significant effects or critical hazards.

SECTION 11: Toxicological information

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

Not available.

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

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result
Dec-1-ene, homopolymer, hydrogenated	**Acute - EL50** Equivalent to OECD 201 Algae >1000 mg/l [72 hours] **Acute - EL50** OECD 202 Daphnia >1000 mg/l [48 hours] **Chronic - NOELR** OECD 211 Daphnia 125 mg/l [21 days] **Acute - LL50** OECD 203 Fish >1000 mg/l [96 hours]
Dec-1-ene, trimers, hydrogenated	**Acute - EL50** Equivalent to OECD 201 Algae >1000 mg/l [72 hours] **Acute - EL50** OECD 202 Daphnia >1000 mg/l [48 hours] **Chronic - NOELR** OECD 211 Daphnia 125 mg/l [21 days] **Acute - LL50** OECD 203 Fish >1000 mg/l [96 hours]
Dec-1-ene, trimers, hydrogenated	**Acute - EL50** OECD 201 Algae >1000 mg/l [72 hours] **Acute - EL50** OECD 202 Daphnia >1000 mg/l [48 hours] **Chronic - NOELR** OECD 211

SECTION 12: Ecological information

	Daphnia 125 mg/l [21 days] **Acute - LL50** OECD 203 Fish >1000 mg/l [96 hours]
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl	**Acute - ErC50** OECD 201 Algae 6.4 mg/l [96 hours] **Chronic - NOEC** OECD 201 Algae 1.7 mg/l [96 hours] **Acute - EC50** OECD 202 Daphnia 91.4 mg/l [48 hours] **Chronic - EC50** OECD 211 Daphnia 0.66 mg/l [21 days] **Chronic - NOEC** OECD 211 Daphnia 0.12 mg/l [21 days] **Acute - LC50** OECD 203 Fish 24 mg/l [96 hours]
Distillates (petroleum), hydrotreated light paraffinic	**Acute - EL50** OECD 201 Algae >100 mg/l [72 hours] **Acute - EL50** OECD 202 Daphnia >10000 mg/l [48 hours] **Acute - LL50** OECD 203 Fish >100 mg/l [96 hours] **Chronic - NOEL** OECD 201 Algae ≥100 mg/l [72 hours] **Chronic - NOEL** OECD 211 Daphnia 10 mg/l [21 days]
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	**Acute - ErC50** OECD 201 Algae 0.04 mg/l [96 hours] **Chronic - NOEC** OECD 201 Algae 0.01 mg/l [96 hours]

SECTION 12: Ecological information

	Chronic - NOEC OECD 211 Daphnia 0.013 mg/l [21 days] **Acute - LC50** EPA OPPTS 850.1085 Fish 0.06 mg/l [96 hours]
isodecyl methacrylate	**Acute - ErC50** Algae >0.0169 mg/l [72 hours] **Chronic - NOEC** Algae 0.012 mg/l [72 hours] **Chronic - NOEC** Daphnia 0.0542 mg/l [21 days] **Acute - LC50** DIN 38412 Fish 100 mg/l [48 hours]
dec-1-ene	**Acute - ErC50** OECD 201 Algae 1 to 1.8 mg/l [72 hours] **Acute - EC50** OECD 202 Daphnia 0.56 to 1 mg/l [48 hours] **Chronic - NOEC** OECD 211 Daphnia 19.4 mg/l [21 days] **Acute - LC50** Fish >1.5 mg/l [96 hours]

Environmental hazards Toxic to aquatic life with long lasting effects.
Based on data available for this or related materials.

12.2 Persistence and degradability

Not expected to be rapidly degradable.

Product/ingredient name	Result
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl	OECD 301B 7.4% [28 days] - Not readily
Distillates (petroleum), hydrotreated light paraffinic	OECD 301F 31% [28 days] - Not readily
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	OECD 301B 66% [28 days] - Readily
isodecyl methacrylate	OECD 310 62% [28 days] - Not readily
dec-1-ene	OECD 301F >80% [28 days] - Readily

SECTION 12: Ecological information

12.3 Bioaccumulative potential

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

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Dec-1-ene, homopolymer, hydrogenated	>10	-	High
Dec-1-ene, trimers, hydrogenated	>6.5	-	High
Dec-1-ene, trimers, hydrogenated	>10	-	High
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	4.33	-	High
isodecyl methacrylate	6.45 to 7.44	37	Low
dec-1-ene	5.12	-	High

12.4 Mobility in soil

Soil/water partition coefficient

Product/ingredient name	logKoc	Koc
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	3.43	2699.8
dec-1-ene	2.4	251.256

Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
Dec-1-ene, homopolymer, hydrogenated	No	No	No	No	No	No	No
Dec-1-ene, trimers, hydrogenated	No	No	No	No	No	No	No
Dec-1-ene, trimers, hydrogenated	No	No	No	No	No	No	No
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl	No	No	No	No	No	No	No
Distillates (petroleum), hydrotreated light paraffinic	No	No	No	No	No	No	No
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	No	No	No	No	No	No	No
isodecyl methacrylate	No	No	No	No	No	No	No
dec-1-ene	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	
Dec-1-ene, homopolymer, hydrogenated	No	N/A	N/A	No	N/A	N/A	N/A
Dec-1-ene, trimers, hydrogenated	No	N/A	N/A	No	N/A	N/A	N/A
Dec-1-ene, trimers, hydrogenated	No	N/A	N/A	No	N/A	N/A	N/A
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines,	No	N/A	N/A	No	N/A	N/A	N/A

SECTION 12: Ecological information

C12-14- tert-alkyl Distillates (petroleum), hydrotreated light paraffinic	No	N/A	N/A	No	N/A	N/A	N/A
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	N/A	N/A	N/A	Yes	N/A	N/A	N/A
isodecyl methacrylate	No	N/A	No	No	No	N/A	No
dec-1-ene	No	N/A	N/A	No	N/A	N/A	N/A

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

Product/ingredient name	PBT	P	B	T	vPvB	vP	
Dec-1-ene, homopolymer, hydrogenated	No	No	No	No	No	No	No
Dec-1-ene, trimers, hydrogenated	No	No	No	No	No	No	No
Dec-1-ene, trimers, hydrogenated	No	No	No	No	No	No	No
Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl	No	No	No	No	No	No	No
Distillates (petroleum), hydrotreated light paraffinic	No	No	No	No	No	No	No
(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines	No	No	No	No	No	No	No
isodecyl methacrylate	No	No	No	No	No	No	No
dec-1-ene	No	No	No	No	No	No	No

Conclusion/Summary Regulation (EC) No. 1272/2008 [CLP] The product does not meet the criteria to be considered as a PBT or vPvB.

12.6 Endocrine disrupting properties

Not available.

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

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	UN3082	UN3082	UN3082	UN3082
14.2 UN proper shipping name	Environmentally hazardous substance, liquid, n.o.s. ((Z)-octadec-9-enylamine)	Environmentally hazardous substance, liquid, n.o.s. ((Z)-octadec-9-enylamine)	Environmentally hazardous substance, liquid, n.o.s.. Marine pollutant ((Z)-octadec-9-enylamine)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. ((Z)-octadec-9-enylamine)
14.3 Transport hazard class(es)	9 	9 	9 	9 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes.
Additional information	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. **Hazard identification number** 90 **Tunnel code** -	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. **Emergency schedules** F-A, S-F	This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

14.6 Special precautions for user

Not available.

UK Emergency Action Code: •3Z

ADR/RID Classification code: M6

ADN Classification code: M6

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

SECTION 15: Regulatory information

Product/ingredient name	%	Designation [Usage]
Castrol Transmax Manual V 75W-80	≥90	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 (AIIC) 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.

Philippines inventory (PICCS) At least one component is not listed.

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.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
P2

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]

SECTION 16: Other information

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 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
Aquatic Chronic 2, H411	Calculation method

Full text of classifications [CLP/GHS]

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2
STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

Europe

Full text of abbreviated H statements

H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H335	May cause respiratory 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.
H411	Toxic to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Full text of classifications [CLP/GHS]

Acute Tox. 4	ACUTE TOXICITY - Category 4
Aquatic Acute 1	SHORT-TERM (ACUTE) AQUATIC HAZARD - Category 1
Aquatic Chronic 1	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 1
Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
Asp. Tox. 1	ASPIRATION HAZARD - Category 1
Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
Eye Irrit. 2	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 2
Flam. Liq. 3	FLAMMABLE LIQUIDS - Category 3
Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
Skin Sens. 1B	SKIN SENSITISATION - Category 1B
STOT RE 2	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 2

SECTION 16: Other information

STOT SE 3	SPECIFIC TARGET ORGAN TOXICITY - SINGLE EXPOSURE - Category 3

History

Date of issue/ Date of revision	03/10/2025.
Date of previous issue	10/07/2025.
Prepared by	Product Stewardship

Indicates information that has changed from previously issued version.

Notice to reader

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SECTION 16: Other information

SECTION 16: Other information

PNECs

Not available.

Rat - Dermal - LD50
>2000 mg/kg
OECD 402

Rat - Inhalation - LD50 Dusts and mists
>5.2 mg/l [4 hours]
OECD 403

Flammability
Density and/or Relative density
Density and/or Relative density
Partition coefficient n-octanol/ water (log value)
Kinematic viscosity

Rat - Oral - LD50
>5000 mg/kg
OECD 423

Dec-1-ene, trimers, hydrogenated

Rat - Dermal - LD50
>2000 mg/kg
OECD 402

Rat - Inhalation - LD50 Dusts and mists
>5.2 mg/l [4 hours]
OECD 403

Rat - Oral - LD50
>5000 mg/kg
OECD 423

Dec-1-ene, trimers, hydrogenated

Rat - Dermal - LD50
>2000 mg/kg
OECD 402

Rat - Inhalation - LD50 Dusts and mists
>5.2 mg/l [4 hours]
OECD 403

Rat - Oral - LD50
2000 mg/kg
OECD 401

Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl

Rat - Oral - LD50
>5000 mg/kg
OECD 401

Distillates (petroleum), hydrotreated light paraffinic

Rabbit - Dermal - LD50
>5000 mg/kg
OECD 402

Rat - Inhalation - LC50 Dusts and mists
>5.53 mg/l [4 hours]
OECD 403

Rat - Oral - LD50
1689 mg/kg
OECD 401

(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines

Rat - Oral - LD50
>5000 mg/kg
OSHA

isodecyl methacrylate

Rabbit - Dermal - LD50
>3000 mg/kg
OSHA

Rat - Oral - LD50
>5000 mg/kg
OECD 401

dec-1-ene

Rabbit - Dermal - LD50
>2000 mg/kg
OECD 402

Rat - Inhalation - LD50 Vapour
>20 mg/l [4 hours]
OECD 403

Skin corrosion/irritation

Result	Product/ingredient name
Rabbit - Skin - Non-irritant to skin. OECD 404	Dec-1-ene, homopolymer, hydrogenated
Rabbit - Skin - Non-irritant to skin. OECD 404	Dec-1-ene, trimers, hydrogenated
Rabbit - Skin - Non-irritant to skin. OECD 404	Dec-1-ene, trimers, hydrogenated
Rabbit - Skin - Non-irritant to skin. OECD 404	Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl
Rabbit - Skin - Non-irritant to skin.	Distillates (petroleum), hydrotreated light paraffinic
Rabbit - Skin - Visible necrosis OECD 404	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines
Rabbit - Skin - Irritant	isodecyl methacrylate
Rabbit - Skin - Mild irritant OECD 404	dec-1-ene

Not available.

Conclusion/Summary [Product]

Serious eye damage/eye irritation

Result	Product/ingredient name
Rabbit - Eyes - Non-irritating to the eyes. OECD 405	Dec-1-ene, homopolymer, hydrogenated
Rabbit - Eyes - Non-irritating to the eyes. OECD 405	Dec-1-ene, trimers, hydrogenated
Rabbit - Eyes - Non-irritating to the eyes. OECD 405	Dec-1-ene, trimers, hydrogenated
Rabbit - Eyes - Irritant FHSA 16CFR1500	Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl
Rabbit - Eyes - Non-irritating to the eyes. OECD 405	Distillates (petroleum), hydrotreated light paraffinic
Rabbit - Eyes - Severe irritant OECD 405	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines
Rabbit - Eyes - Irritant	isodecyl methacrylate
Rabbit - Eyes - Non-irritating to the eyes. OECD 405	dec-1-ene

Conclusion/Summary [Product] Not available.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] Not available.

Respiratory or skin sensitization

Result	Product/ingredient name

Guinea pig - skin
OECD 406
Result: Not sensitising

Dec-1-ene, homopolymer, hydrogenated

Guinea pig - skin
OECD 406
Result: Not sensitising

Dec-1-ene, trimers, hydrogenated

Guinea pig - skin
OECD 406
Result: Not sensitising

Dec-1-ene, trimers, hydrogenated

Mouse - skin
OECD 429
Result: Sensitising

Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl

Guinea pig - skin
OECD 406
Result: Not sensitising

Distillates (petroleum), hydrotreated light paraffinic

Mouse - skin
OECD 429
Result: Not sensitising

isodecyl methacrylate

Guinea pig - skin
OECD 406
Result: Not sensitising

dec-1-ene

Skin

Conclusion/Summary [Product] Not available.

Respiratory

Conclusion/Summary [Product] Not available.

Germ cell mutagenicity

Result	Product/ingredient name
In vitro - Bacteria OECD [Bacterial Reverse Mutation Test] Result: Negative	Dec-1-ene, homopolymer, hydrogenated
In vitro - Mammal - species unspecified OECD [In vitro Mammalian Chromosomal Aberration Test] Result: Negative	
In vivo - Mammal - species unspecified OECD [Mammalian Erythrocyte Micronucleus Test] Result: Negative	
In vitro - Bacteria OECD [Bacterial Reverse Mutation Test] Result: Negative	Dec-1-ene, trimers, hydrogenated
In vitro - Mammal - species unspecified OECD [In vitro Mammalian Chromosomal Aberration Test] Result: Negative	
In vivo - Mammal - species unspecified OECD [Mammalian Erythrocyte Micronucleus Test] Result: Negative	
In vitro - Bacteria OECD [Bacterial Reverse Mutation Test] Result: Negative	Dec-1-ene, trimers, hydrogenated
In vitro - Mammal - species unspecified OECD [In vitro Mammalian Chromosomal Aberration Test]	

Result: Negative

In vivo - Mammal - species unspecified
OECD [Mammalian Erythrocyte Micronucleus Test]
Result: Negative

In vitro - Bacteria
OECD 471
Result: Negative

Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl

In vitro - Mammal - species unspecified
OECD 476
Result: Negative

In vitro - Unspecified - Somatic
OECD 474
Result: Negative

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

Distillates (petroleum), hydrotreated light paraffinic

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

In vitro - Bacteria
OECD 471
Result: Negative

(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines

In vitro - Unspecified
OECD 473
Result: Negative

In vitro - Mammal - species unspecified
OECD 476
Result: Negative

In vitro - Bacteria
OECD 471
Result: Negative

isodecyl methacrylate

In vitro - Unspecified
OECD 473
Result: Negative

In vitro - Mammal - species unspecified
Equivalent to OECD 476
Result: Negative

In vitro - Bacteria
OECD 471
Result: Negative

dec-1-ene

In vitro - Mammalian-Animal
OECD 473
Result: Negative

In vivo - Mammalian-Animal
OECD 474
Result: Negative

Conclusion/Summary [Product] Not available.

Carcinogenicity

Not available.

Conclusion/Summary [Product] Not available.

Reproductive toxicity

Result	Product/ingredient name
Rat - Oral OECD 415 Maternal toxicity: Negative Fertility effects: Negative Developmental: Negative	Dec-1-ene, homopolymer, hydrogenated
Rat - Oral OECD 415 Maternal toxicity: Negative Fertility effects: Negative Developmental: Negative	Dec-1-ene, trimers, hydrogenated
Rat - Oral OECD 415 Maternal toxicity: Negative Fertility effects: Negative Developmental: Negative	Dec-1-ene, trimers, hydrogenated
Rat - Oral OECD 421 Maternal toxicity: Positive Fertility effects: Negative Developmental: Negative	Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl
Rat - Oral OECD 421 Maternal toxicity: Negative Fertility effects: Negative Developmental: Negative	Distillates (petroleum), hydrotreated light paraffinic
Rat - Oral OECD 421 Maternal toxicity: Positive Fertility effects: Negative Developmental: Negative	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines
Rat - Oral OECD 422 Maternal toxicity: Negative Fertility effects: Negative Developmental: Negative	isodecyl methacrylate
Rat - Oral OECD 422 Maternal toxicity: Negative Fertility effects: Negative Developmental: Negative	dec-1-ene

Conclusion/Summary [Product] Not available.

Specific target organ toxicity (single exposure)

Result	Product/ingredient name
STOT SE 3, H335 (Respiratory tract irritation)	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines
STOT SE 3, H335 (Respiratory tract irritation)	isodecyl methacrylate

Specific target organ toxicity (repeated exposure)

Result	Product/ingredient name
STOT RE 2, H373	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines

Aspiration hazard

Result	Product/ingredient name

ASPIRATION HAZARD - Category 1	Dec-1-ene, homopolymer, hydrogenated
ASPIRATION HAZARD - Category 1	Dec-1-ene, trimers, hydrogenated
ASPIRATION HAZARD - Category 1	Dec-1-ene, trimers, hydrogenated
ASPIRATION HAZARD - Category 1	Distillates (petroleum), hydrotreated light paraffinic
ASPIRATION HAZARD - Category 1	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines
ASPIRATION HAZARD - Category 1	dec-1-ene

Information on likely routes of exposure Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Result	Product/ingredient name
Acute - EL50 Equivalent to OECD 201 Algae >1000 mg/l [72 hours]	Dec-1-ene, homopolymer, hydrogenated
Acute - EL50 OECD 202 Daphnia >1000 mg/l [48 hours]	
Chronic - NOELR OECD 211 Daphnia 125 mg/l [21 days]	
Acute - LL50 OECD 203 Fish >1000 mg/l [96 hours]	
Acute - EL50 Equivalent to OECD 201 Algae >1000 mg/l [72 hours]	Dec-1-ene, trimers, hydrogenated
Acute - EL50 OECD 202 Daphnia >1000 mg/l [48 hours]	
Chronic - NOELR OECD 211 Daphnia 125 mg/l [21 days]	
Acute - LL50 OECD 203 Fish >1000 mg/l [96 hours]	
Acute - EL50 OECD 201 Algae >1000 mg/l [72 hours]	Dec-1-ene, trimers, hydrogenated
Acute - EL50 OECD 202 Daphnia >1000 mg/l [48 hours]	
Chronic - NOELR OECD 211 Daphnia 125 mg/l [21 days]	
Acute - LL50 OECD 203 Fish >1000 mg/l [96 hours]	
Acute - ErC50 OECD 201	Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide,

Algae
6.4 mg/l [96 hours]

Chronic - NOEC
OECD 201
Algae
1.7 mg/l [96 hours]

Acute - EC50
OECD 202
Daphnia
91.4 mg/l [48 hours]

Chronic - EC50
OECD 211
Daphnia
0.66 mg/l [21 days]

Chronic - NOEC
OECD 211
Daphnia
0.12 mg/l [21 days]

Acute - LC50
OECD 203
Fish
24 mg/l [96 hours]

and salted by amines, C12-14- tert-alkyl

Acute - EL50
OECD 201
Algae
>100 mg/l [72 hours]

Acute - EL50
OECD 202
Daphnia
>10000 mg/l [48 hours]

Acute - LL50
OECD 203
Fish
>100 mg/l [96 hours]

Chronic - NOEL
OECD 201
Algae
≥100 mg/l [72 hours]

Chronic - NOEL
OECD 211
Daphnia
10 mg/l [21 days]

Distillates (petroleum), hydrotreated light paraffinic

Acute - ErC50
OECD 201
Algae
0.04 mg/l [96 hours]

Chronic - NOEC
OECD 201
Algae
0.01 mg/l [96 hours]

Chronic - NOEC
OECD 211
Daphnia
0.013 mg/l [21 days]

Acute - LC50
EPA OPPTS 850.1085
Fish
0.06 mg/l [96 hours]

(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines

Acute - ErC50

isodecyl methacrylate

Algae
>0.0169 mg/l [72 hours]

Chronic - NOEC
Algae
0.012 mg/l [72 hours]

Chronic - NOEC
Daphnia
0.0542 mg/l [21 days]

Acute - LC50
DIN 38412
Fish
100 mg/l [48 hours]

Acute - ErC50
OECD 201
Algae
1 to 1.8 mg/l [72 hours]

dec-1-ene

Acute - EC50
OECD 202
Daphnia
0.56 to 1 mg/l [48 hours]

Chronic - NOEC
OECD 211
Daphnia
19.4 mg/l [21 days]

Acute - LC50
Fish
>1.5 mg/l [96 hours]

Result	Product/ingredient name
☒OECD 301B 7.4% [28 days] - Not readily	Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl
OECD 301F 31% [28 days] - Not readily	Distillates (petroleum), hydrotreated light paraffinic
OECD 301B 66% [28 days] - Readily	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines
OECD 310 62% [28 days] - Not readily	isodecyl methacrylate
OECD 301F >80% [28 days] - Readily	dec-1-ene

Soil/water partition coefficient

Koc	logKoc	Product/ingredient name
☒2699.8	3.43	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines
251.256	2.4	dec-1-ene

Results of PMT and vPvM assessment

vM	vP	vPvM	T	M	P	PMT	Product/ingredient name
☒No	No	No	No	No	No	No	Dec-1-ene, homopolymer, hydrogenated
No	No	No	No	No	No	No	Dec-1-ene, trimers, hydrogenated
No	No	No	No	No	No	No	Dec-1-ene, trimers, hydrogenated
No	No	No	No	No	No	No	Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by

							amines, C12-14- tert-alkyl
No	No	No	No	No	No	No	Distillates (petroleum), hydrotreated light paraffinic
No	No	No	No	No	No	No	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines
No	No	No	No	No	No	No	isodecyl methacrylate
No	No	No	No	No	No	No	dec-1-ene

Spillages may penetrate the soil causing ground water contamination. **Mobility**

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

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

	vP	vPvB	T	B	P	PBT	Product/ingredient name
☒ N/A	N/A	N/A	No	N/A	N/A	No	Dec-1-ene, homopolymer, hydrogenated
N/A	N/A	N/A	No	N/A	N/A	No	Dec-1-ene, trimers, hydrogenated
N/A	N/A	N/A	No	N/A	N/A	No	Dec-1-ene, trimers, hydrogenated
N/A	N/A	N/A	No	N/A	N/A	No	Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl
N/A	N/A	N/A	No	N/A	N/A	No	Distillates (petroleum), hydrotreated light paraffinic
N/A	N/A	N/A	Yes	N/A	N/A	N/A	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines
No	N/A	No	No	No	N/A	No	isodecyl methacrylate
N/A	N/A	N/A	No	N/A	N/A	No	dec-1-ene

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

	vP	vPvB	T	B	P	PBT	Product/ingredient name
☒ No	No	No	No	No	No	No	Dec-1-ene, homopolymer, hydrogenated
No	No	No	No	No	No	No	Dec-1-ene, trimers, hydrogenated
No	No	No	No	No	No	No	Dec-1-ene, trimers, hydrogenated
No	No	No	No	No	No	No	Reaction products of 4-methyl-2-pentanol and diphosphorus pentasulfide, propoxylated, esterified with diphosphorus pentaoxide, and salted by amines, C12-14- tert-alkyl
No	No	No	No	No	No	No	Distillates (petroleum), hydrotreated light paraffinic
No	No	No	No	No	No	No	(Z)-octadec-9-enylamine, C16-18-(even numbered, saturated and unsaturated)-alkylamines
No	No	No	No	No	No	No	isodecyl methacrylate
No	No	No	No	No	No	No	dec-1-ene

☒ The product does not meet the criteria to be considered as a PBT or vPvB. **Conclusion/Summary Regulation (EC) No. 1272/2008 [CLP]**

Not available.

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

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