

EQUIVIS ZS 15

SDS no. 31511
:

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

1.1 Product identifier

Product name : EQUIVIS ZS 15

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

Identified uses
Hydraulic oil

1.3 Details of the supplier of the safety data sheet

TotalEnergies Lubrifiants
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92029 Nanterre Cedex FRANCE
Tél: +33 (0)1 41 35 40 00
Fax: +33 (0)1 41 35 84 71
rm.msds-lubs@totalenergies.com

TotalEnergies Marketing UK Limited
10 Upper Bank Street (19th floor)
Canary Wharf,
London E14 5BF
UNITED KINGDOM
Tel: +44 (0)20 7339 8000
Fax: +44 (0)20 7339 8033
rm.gb-msds@totalenergies.com

Contact

H.S.E

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number : For declared products :
National poisons information Centre (NPIC) : +353 1 8379964 or +353 1 809 2566.
The service is available from 8.00am until 10.00pm at night, seven (7) days a week,
365 days a year.

Supplier

Telephone number : Emergency telephone: +44 1235 239670

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]

Asp. Tox. 1, H304

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

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

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

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H304 - May be fatal if swallowed and enters airways.

Precautionary statements

Prevention : Not applicable.

Response : P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
P331 - Do NOT induce vomiting.

Storage : Not applicable.

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

Contains : Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics

Supplemental label elements : Not applicable.

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

Not available.

2.3 Other hazards

This mixture does not contain any substances that are assessed to be a PBT or a vPvB in a concentration $\geq 0,1$ %.

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACH Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

Other hazards which do not result in classification : None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures : Mixture

Product/substance	Identifiers	% (w/w)	Classification	Specific Conc. Limits, M-factors and ATEs	Type
Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics	REACH #: 01-2119826592-36 EC: 934-954-2 CAS: 64742-46-7*	≥25 - ≤50	Asp. Tox. 1, H304	-	[1]
Distillates (petroleum), hydrotreated light paraffinic	REACH #: 01-2119487077-29 EC: 265-158-7 CAS: 64742-55-8	≤3	Asp. Tox. 1, H304	-	[1] [2]
2,6-di-tert-butylphenol	REACH #: 01-2119490822-33 EC: 204-884-0 CAS: 128-39-2	<0.25	Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410	M [Acute] = 1 M [Chronic] = 1	[1]
methyl methacrylate	REACH #: 01-2119452498-28 EC: 201-297-1 CAS: 80-62-6 Index: 607-035-00-6	≤0.1	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Skin Sens. 1B, H317 STOT SE 3, H335	-	[1] [2]
2-ethylhexan-1-ol	REACH #: 01-2119487289-20 EC: 203-234-3 CAS: 104-76-7	≤0.1	Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335	ATE [Inhalation (dusts and mists)] = 1.5 mg/l	[1] [2]
ethyl acrylate	REACH #: 01-2119459301-46 EC: 205-438-8 CAS: 140-88-5 Index: 607-032-00-X	<0.1	Flam. Liq. 2, H225 Acute Tox. 4, H302 Acute Tox. 4, H312 Acute Tox. 3, H331 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 STOT SE 3, H335 Aquatic Chronic 3, H412 See Section 16 for the full text of the H statements declared above.	ATE [Oral] = 800 mg/kg ATE [Dermal] = 1100 mg/kg ATE [Inhalation (vapours)] = 3 mg/l Skin Irrit. 2, H315: C ≥ 5% Eye Irrit. 2, H319: C ≥ 5% STOT SE 3, H335: C ≥ 5%	[1] [2]

Additional information : Mineral oil of petroleum origin Product containing mineral oil with less than 3% DMSO extract as measured by IP 346

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Type

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

The EC substance definition and related classification & labelling have been developed in the framework of the Regulation (EC) No 1907/2006 (REACH). The related CAS number* is used for the purpose of the international inventories present in section 15 of the SDS.

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

SECTION 4: First aid measures

4.1 Description of first aid measures

- | | |
|-----------------------------------|---|
| Eye contact | : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs. |
| Inhalation | : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. |
| Skin contact | : Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse. |
| Ingestion | : Wash out mouth with water. Remove dentures if any. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. The exposed person may need to be kept under medical surveillance for 48 hours. |
| 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

Over-exposure signs/symptoms

- | | |
|---------------------|--|
| Eye contact | : No specific data. |
| Inhalation | : No specific data. |
| Skin contact | : Adverse symptoms may include the following:
irritation
dryness
cracking |
| Ingestion | : Adverse symptoms may include the following:
nausea or vomiting |

4.3 Indication of any immediate medical attention and special treatment needed

- | | |
|----------------------------|---|
| Notes to physician | : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. |
| Specific treatments | : No specific treatment. |

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media : Use dry chemical, CO₂, water spray (fog) or foam.

Unsuitable extinguishing media : Do not use water jet.

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.

Hazardous combustion products : carbon monoxide
carbon dioxide
nitrogen oxides
phosphorus oxides
sulfur oxides
Hydrogen sulfide
Mercaptans
Zinc oxides

5.3 Advice for firefighters

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

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 : 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. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. 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).

6.3 Methods and material for containment and cleaning up

Small spill : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry 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. Wash spillages into an effluent treatment plant or proceed as follows. 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. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product.
- 6.4 Reference to other sections** : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
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 (see Section 8). Do not swallow. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. 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 original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. 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. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

7.3 Specific end use(s)

- Recommendations** : Not available.
- Industrial sector specific solutions** : Not available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

Product/substance	Exposure limit values
Distillates (petroleum), hydrotreated light paraffinic	NAOSH (Ireland, 5/2021). [Mineral oil, pure, highly & severely refined] Notes: Advisory Occupational Exposure Limit Values (OELVs) OELV-8hr: 5 ppm 8 hours. Form: inhalable dust
methyl methacrylate	NAOSH (Ireland, 5/2021). Skin sensitiser. Notes: EU derived Occupational Exposure Limit Values OELV-8hr: 50 ppm 8 hours. OELV-15min: 100 ppm 15 minutes.
2-ethylhexan-1-ol	NAOSH (Ireland, 5/2021). Notes: EU derived Occupational Exposure Limit Values OELV-8hr: 5.4 mg/m ³ 8 hours. OELV-8hr: 1 ppm 8 hours.

ethyl acrylate

NAOSH (Ireland, 5/2021). Absorbed through skin. Skin sensitiser. Notes: EU derived Occupational Exposure Limit Values

OELV-8hr: 5 ppm 8 hours.
OELV-8hr: 20 mg/m³ 8 hours.
OELV-15min: 10 ppm 15 minutes.
OELV-15min: 41 mg/m³ 15 minutes.

Reportable hazardous constituent(s) contained in UVCB- and/or multi-constituent substance(s) complying with the classification criteria and/or with an exposure limit (OEL)

No exposure limit value known.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. 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.

Advisory OEL : Mineral oil mist: USA: OSHA (PEL) TWA 5 mg/m³, NIOSH (REL) TWA 5 mg/m³, STEL 10 mg/m³, ACGIH (TLV) TWA 5 mg/m³ (highly refined)

DNELs/DMELs

Product/substance	Type	Exposure	Value	Population	Effects
Distillates (petroleum), hydrotreated light paraffinic	DNEL	Long term Inhalation	5.4 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	1.2 mg/m ³	General population	Local
	DNEL	Long term Oral	0.74 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	0.97 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	1.19 mg/m ³	General population	Local
	DNEL	Long term Inhalation	2.73 mg/m ³	Workers	Systemic
	DNEL	Long term Inhalation	5.58 mg/m ³	Workers	Local
2,6-di-tert-butylphenol	DNEL	Long term Oral	6.75 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	11.25 mg/kg bw/day	Workers	Systemic
	DNEL	Long term Inhalation	20.9 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	70.61 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	6.75 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	6.75 mg/kg bw/day	General population	Systemic
	DNEL	Long term Dermal	8.2 mg/kg	General	Systemic
methyl methacrylate	DNEL	Long term Dermal	8.2 mg/kg	General	Systemic

2-ethylhexan-1-ol	DNEL	Long term Dermal	bw/day 13.67 mg/ kg bw/day	population Workers	Systemic
	DNEL	Long term Inhalation	74.3 mg/m ³	General population	Systemic
	DNEL	Long term Inhalation	104 mg/m ³	General population	Local
	DNEL	Long term Inhalation	208 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	208 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	1.5 mg/cm ²	Workers	Local
	DNEL	Short term Dermal	1.5 mg/cm ²	Workers	Local
	DNEL	Long term Dermal	1.5 mg/cm ²	General population	Local
	DNEL	Short term Dermal	1.5 mg/cm ²	General population	Local
	DNEL	Short term Dermal	1.5 mg/cm ²	General population	Local
	DNEL	Long term Dermal	1.5 mg/cm ²	General population	Local
	DNEL	Short term Dermal	1.5 mg/cm ²	Workers	Local
	DNEL	Long term Dermal	1.5 mg/cm ²	Workers	Local
	DNEL	Long term Oral	8.2 mg/kg bw/day	General population	Systemic
	DNEL	Short term Inhalation	208 mg/m ³	General population	Local
	DNEL	Short term Inhalation	416 mg/m ³	Workers	Local
	DNEL	Long term Oral	1.1 mg/kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	2.3 mg/m ³	General population	Systemic
	DNEL	Long term Dermal	11.4 mg/ kg bw/day	General population	Systemic
	DNEL	Long term Inhalation	12.8 mg/m ³	Workers	Systemic
	DNEL	Long term Dermal	23 mg/kg bw/day	Workers	Systemic
	DNEL	Short term Inhalation	26.6 mg/m ³	General population	Local
	DNEL	Long term Inhalation	26.6 mg/m ³	General population	Local
	DNEL	Short term Inhalation	53.2 mg/m ³	Workers	Local
	DNEL	Long term Inhalation	53.2 mg/m ³	Workers	Local
ethyl acrylate	DNEL	Long term Inhalation	2.5 mg/m ³	General population	Local
	DNEL	Long term Inhalation	21 mg/m ³	Workers	Local
	DNEL	Short term Dermal	0.92 mg/m ³	Workers	Local
	DNEL	Short term Dermal	0.92 mg/m ³	General population	Local
	DNEL	Short term Dermal	0.92 mg/ cm ²	General population	Local
	DNEL	Short term Dermal	0.92 mg/ cm ²	Workers	Local

PNECs

Product/ingredient name	Compartment Detail	Name	Method Detail
2,6-di-tert-butylphenol	Fresh water	700 ng/l	-
	Marine water	70 ng/l	-
	Fresh water sediment	317 µg/kg dwt	-
	Marine water sediment	31.7 µg/kg dwt	-
	Soil	697 µg/kg dwt	-
	Sewage Treatment Plant	10 mg/l	-
	Secondary Poisoning	60 mg/kg	-
methyl methacrylate	Fresh water	0.94 mg/l	-
	Marine water	0.94 mg/l	-
	Fresh water sediment	5.74 mg/kg dwt	-
	Soil	1.47 mg/kg dwt	-
	Sewage Treatment Plant	10 mg/l	-
	Fresh water	0.017 mg/l	-
	Marine water	0.0017 mg/l	-
2-ethylhexan-1-ol	Fresh water sediment	0.28 mg/kg dwt	-
	Marine water sediment	0.028 mg/kg dwt	-
	Soil	0.047 mg/kg dwt	-
	Sewage Treatment Plant	10 mg/l	-
	Fresh water	0.00272 mg/l	-
	Marine water	0.00027 mg/l	-
	Fresh water sediment	0.0213 mg/kg dwt	-
ethyl acrylate	Marine water sediment	0.0213 mg/kg dwt	-
	Soil	1 mg/kg dwt	-
	Sewage Treatment Plant	10 mg/l	-

8.2 Exposure controls

Appropriate engineering controls : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

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.

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.EN 166

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

	Hydrocarbon-proof gloves nitrile rubber Fluorinated rubber Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time. In case of prolonged contact with the product, it is recommended to wear gloves complying with ISO 21420 and EN 374 standards, protecting at least for 480 minutes and having a thickness of 0,38 mm at least. These values are indicative only. The level of protection is provided by the material of the glove, its technical characteristics, its resistance to the chemicals to be handled, the appropriateness of its use and its replacement frequency
Body protection	: 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.
Other skin protection	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	: Ensure adequate ventilation and check that a safe, breathable atmosphere is present before entry into confined spaces In case of inadequate ventilation wear respiratory protection: Type A/P1 Warning ! filters have a limited use duration The use of breathing apparatus must comply strictly with the manufacturer's instructions and the regulations governing their choices and uses
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 (20°C / 68°F) and pressure (1013 hPa) unless otherwise indicated

9.1 Information on basic physical and chemical properties

Appearance

Physical state	: Liquid. [Clear]
Colour	: Yellow.
Odour	: Characteristic.
Odour threshold	: Not available.
pH	: Not applicable. Product is non-soluble (in water).
Melting point/freezing point	: Technically not possible to measure
Initial boiling point and boiling range	: >300°C [EN ISO 3405]
Flash point	: Open cup: 174°C [ISO 2592]
Evaporation rate	: Not available.
Flammability	: Not applicable.
Lower and upper explosion limit	: Lower: 0.9% Upper: 7%
Vapour pressure	: <0.013 kPa [room temperature] [ASTM D 5191] Not applicable. [50°C]
Vapour density	: >2 [Air = 1]
Relative density	: 0.846 [ISO 12185]

Density : 0.846 g/cm³ [15°C] [ISO 12185]

Solubility(ies) :

Media	Result
water	Not soluble

Solubility in water : 0.893 g/l

Miscible with water : No.

Partition coefficient: n-octanol/
water : Not applicable.

Auto-ignition temperature : Not applicable.

Decomposition temperature : Not applicable.

Viscosity : Kinematic (40°C): 15 mm²/s [ISO 3104]

Particle characteristics

Median particle size : Not applicable.

9.2 Other information

Pour point : -42°C (-43.6°F)

SECTION 10: Stability and reactivity

10.1 Reactivity : No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability : Stable under recommended storage and handling conditions (see Section 7).

10.3 Possibility of
hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.

10.5 Incompatible materials : No specific data.

10.6 Hazardous
decomposition products : carbon monoxide
carbon dioxide
nitrogen oxides
phosphorus oxides
sulfur oxides
Hydrogen sulfide
Mercaptans
Zinc oxides

SECTION 11: Toxicological information

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

Acute toxicity



TotalEnergies

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Product/substance	Result	Species	Dose	Exposure	Test
Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics	LC50 Inhalation Dusts and mists	Rat - Male, Female	>5266 mg/m ³	4 hours	OECD 403 Read across
	LD50 Dermal	Rabbit - Male, Female	>3160 mg/kg	-	OECD 402 Read across
	LD50 Oral	Rat - Male, Female	>5000 mg/kg	-	OECD 401 Read across
Distillates (petroleum), hydrotreated light paraffinic	LC50 Inhalation Dusts and mists	Rat	>5 mg/l	4 hours	OECD 403
2,6-di-tert-butylphenol	LD50 Dermal	Rabbit	>5000 mg/kg	-	OECD 402
	LD50 Oral	Rat	>5000 mg/kg	-	OECD 420
	LD50 Dermal	Rabbit	>5000 mg/kg	-	-
	LD50 Oral	Rat - Male, Female	>5000 mg/kg Single dose	-	OECD 401 401
methyl methacrylate	LC50 Inhalation Vapour	Rat	29.8 mg/l	4 hours	-
2-ethylhexan-1-ol	LD50 Dermal	Rabbit	>5 g/kg	-	OECD 402
	LD50 Oral	Rat	7872 mg/kg	-	-
	LC50 Inhalation Dusts and mists	Rat	1.5 mg/l ATE value Category 4	4 hours	OECD 403
ethyl acrylate	LD50 Dermal	Rat	>3000 mg/kg	-	OECD 402
	LD50 Oral	Rat - Male	2047 mg/kg	-	OECD 401
	LC50 Inhalation Vapour	Rat	6 mg/l	1 hours	-
	LC50 Inhalation Vapour	Rat	3 mg/l	4 hours	-
	LC50 Inhalation Vapour	Rat	0.5 mg/l	4 hours	-
	LD50 Dermal	Rat	3049 mg/kg	-	-
	LD50 Oral	Rat	800 mg/kg	-	-
	LD50 Oral	Rat	1120 mg/kg	-	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Acute toxicity estimates

Product/substance	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
methyl methacrylate	7872	N/A	N/A	29.8	N/A
2-ethylhexan-1-ol	2047	N/A	N/A	N/A	1.5
ethyl acrylate	800	1100	N/A	3	N/A

Irritation/Corrosion

Product/substance	Result	Species	Score	Exposure	Test
Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics	Eyes - Oedema of the conjunctivae	Rabbit	0.3	24 hours	OECD 405 Read across
	Skin - Erythema/Eschar	Rabbit	0.3	-	404 Read across
2,6-di-tert-butylphenol	Eyes - Cornea opacity	Rabbit	0	-	OECD 405 405
	Skin - Moderate irritant	Rat	-	4 hours 0.5 MI	OECD 404 404
methyl methacrylate	Skin - Irritant	Rabbit	-	4 hours	-
2-ethylhexan-1-ol	Eyes - Cornea opacity	Rabbit	1.44	-	OECD 405
	Skin - Erythema/Eschar	Rabbit	3.33	4 hours	OECD 404
ethyl acrylate	Eyes - Mild irritant	Rabbit	-	45 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 10 mg	-

	Skin - Mild irritant	Rabbit	-	500 mg	-
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Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.
Eyes : Based on available data, the classification criteria are not met.
Respiratory : Based on available data, the classification criteria are not met.

Sensitisation

Product/substance	Route of exposure	Species	Result
Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics	skin	Guinea pig	Not sensitizing
2,6-di-tert-butylphenol	skin	Guinea pig	Not sensitizing
methyl methacrylate	skin	Mouse	Sensitising
ethyl acrylate	skin	Mouse	Sensitising

Conclusion/Summary

Skin : Based on available data, the classification criteria are not met.
Respiratory : Based on available data, the classification criteria are not met.

Mutagenicity

Product/substance	Test	Experiment	Result
Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics	OECD 471 Read across	Experiment: In vitro Subject: Bacteria	Negative
	OECD 473 Read across	Experiment: In vitro Subject: Mammalian-Animal	Negative
	OECD 476 Read across	Experiment: In vitro Subject: Mammalian-Animal	Negative
	OECD 474 Read across	Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic	Negative
	OECD 475 Read across	Experiment: In vivo Subject: Mammalian-Animal Cell: Somatic	Negative
	OECD 483 Read across	Experiment: In vivo Subject: Mammalian-Animal Cell: Germ	Negative
2,6-di-tert-butylphenol	OECD 471 471	Experiment: In vitro Subject: Bacteria	Negative
	OECD 473	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic	Negative
	OECD 476	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic	Negative

Conclusion/Summary : Based on available data, the classification criteria are not met.

Carcinogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Reproductive toxicity

Product/substance	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
2,6-di-tert-butylphenol	-	Negative	Negative	Rat - Male, Female	Oral	-

Conclusion/Summary : Based on available data, the classification criteria are not met.

Teratogenicity

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (single exposure)

Product/substance	Category	Route of exposure	Target organs
methyl methacrylate	Category 3	-	Respiratory tract irritation
2-ethylhexan-1-ol	Category 3	-	Respiratory tract irritation
ethyl acrylate	Category 3	-	Respiratory tract irritation

Conclusion/Summary : Based on available data, the classification criteria are not met.

Specific target organ toxicity (repeated exposure)

Conclusion/Summary : Based on available data, the classification criteria are not met.

Aspiration hazard

Product/substance	Result
Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics	ASPIRATION HAZARD - Category 1
Distillates (petroleum), hydrotreated light paraffinic	ASPIRATION HAZARD - Category 1

Conclusion/Summary : Based on available data, the classification criteria are met.

Information on likely routes of exposure : Not available.

Potential acute health effects

Eye contact : No known significant effects or critical hazards.
Inhalation : No known significant effects or critical hazards.
Skin contact : Defatting to the skin. May cause skin dryness and irritation.
Ingestion : May be fatal if swallowed and enters airways.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : No specific data.
Inhalation : No specific data.
Skin contact : Adverse symptoms may include the following:
irritation
dryness
cracking
Ingestion : Adverse symptoms may include the following:
nausea or vomiting

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

Short term exposure

Potential immediate effects : Not available.
Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Product/substance	Result	Species	Dose	Exposure
Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics	Sub-chronic NOAEL Oral	Rat - Male, Female	>5000 mg/kg	13 weeks; 7 days per week
2,6-di-tert-butylphenol	Sub-acute NOAEL Inhalation Vapour Sub-chronic NOAEL Oral	Rat - Male, Female Rat - Male, Female	>10400 mg/m ³ 100 mg/kg NOAEL	90 days; 5 days per week days

Conclusion/Summary : 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.

Reproductive toxicity : No known significant effects or critical hazards.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACH Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

11.2.2 Other information

SECTION 12: Ecological information

12.1 Toxicity

Product/substance	Result	Species	Exposure	Test
Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics	Acute EC50 10000 mg/l	Algae - Skeletonema costatum	72 hours	ISO 10253
	Acute EC50 3193 mg/l	Daphnia - Acartia tonsa	48 hours	ISO 14669
	Acute LC50 1028 mg/l	Fish	96 hours	-
	Chronic NOELR >1000 mg/l	Daphnia - Daphnia Magna	21 days	OECD 211
	Chronic NOELR >1000 mg/l	Fish - Oncorhynchus mykiss	28 days	-
Distillates (petroleum), hydrotreated light paraffinic	Acute EC50 >100 mg/l	Algae - Pseudokirchnerella subcapitata	48 hours	OECD 201
	Acute EC50 >10000 mg/l	Daphnia - Daphnia magna	48 hours	OECD 202
	Chronic NOEL 10 mg/l	Daphnia - Daphnia magna	21 days	OECD 211
	Chronic NOEL >1000 mg/l	Fish - Oncorhynchus mykiss	21 days	-
2,6-di-tert-butylphenol	Acute EC50 1.2 mg/l	Algae	72 hours	-
	Acute EC50 0.45 mg/l	Daphnia - Daphnia magna	48 hours	-
	Acute LC50 1 mg/l	Fish	96 hours	-
	Chronic NOEC 0.035 mg/l	Daphnia - Daphnia magna	21 days	-
	Chronic NOEC 0.3 mg/l	Fish	28 days	-
methyl methacrylate	Acute EC50 110 mg/l	Algae - Selenastrum capricornutum	72 hours	-
	Acute EC50 69 mg/l	Daphnia - Daphnia magna	48 hours	-
	Acute LC50 79 mg/l	Fish	96 hours	-

2-ethylhexan-1-ol	Chronic NOEC 37 mg/l Acute EC50 16.6 mg/l	Daphnia - Daphnia magna Algae - Desmodesmus subspicatus	21 days 72 hours	- OECD 201
	Acute EC50 39 mg/l	Crustaceans - Daphnia magna	48 hours	OECD 202
ethyl acrylate	Acute LC50 17.1 mg/l Chronic EC10 5.3 mg/l	Fish - Leuciscus idus Algae - Desmodesmus subspicatus	96 hours 72 hours	OECD 203 OECD 201
	Acute EC50 48 mg/l	Algae - Desmodesmus subspicatus	72 hours	-
	Acute EC50 7.9 mg/l Acute LC50 4784 µg/l Fresh water	Daphnia - Daphnia magna Crustaceans - Gammarus pulex	48 hours 48 hours	- -
	Acute LC50 2.31 mg/l Acute NOEC <1.8 mg/l	Fish Algae - Pseudokirchnerella subcapitata	96 hours 96 hours	- OECD 201
	Acute NOEC <3.8 mg/l	Algae - Pseudokirchnerella subcapitata	96 hours	OECD 201
	Acute NOEC 0.62 mg/l	Fish - Cyprinodon variegatus	96 hours	-
	Chronic NOEC 0.19 mg/l	Daphnia - Daphnia magna	21 days	-

12.2 Persistence and degradability

Product/substance	Test	Result	Dose	Inoculum
Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics 2-ethylhexan-1-ol	OECD 306	74 % - Readily - 28 days	-	-
	OECD 301C	100 % - Readily - 14 days	-	-

Conclusion/Summary : Not available.

Product/substance	Aquatic half-life	Photolysis	Biodegradability
Hydrocarbons, C13-C16, n-alkanes, isoalkanes, cyclics, < 0.03% aromatics	-	-	Readily
2,6-di-tert-butylphenol	-	-	Not readily
methyl methacrylate	-	-	Readily
2-ethylhexan-1-ol	-	-	Readily
ethyl acrylate	-	-	Readily

12.3 Bioaccumulative potential

Product/substance	LogK _{ow}	BCF	Potential
2,6-di-tert-butylphenol	4.48	660	high
methyl methacrylate	1.38	2.97	low
2-ethylhexan-1-ol	2.9	25.33	low
ethyl acrylate	1.18	2.072	low

12.4 Mobility in soil

Soil/water partition coefficient (K_{oc}) : Not available.

Mobility : Not available.

Mobility in soil : Given its physical and chemical characteristics, the product generally shows low soil mobility. The product is insoluble and floats on water. Loss by evaporation is limited.

12.5 Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

12.6 Endocrine disrupting properties

This product does not contain any substance present at a concentration equal to or greater than 0.1% by mass, included in the list drawn up in accordance with article 59, paragraph 1 of the REACH Regulation, due to its endocrine disrupting properties, or a substance known to have endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation 2018/605.

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 : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.
According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Waste codes should be assigned by the user based on the application for which the product was used. The following Waste Codes are only suggestions: 13 01 10*

Packaging

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible.

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. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	ICAO/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.

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

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 : Not applicable.

Other EU regulations

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work.

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

Industrial emissions (integrated pollution prevention and control) - Water : Not listed

Ozone depleting substances (1005/2009/EU)

Not listed.

Prior Informed Consent (PIC) (649/2012/EU)

Not listed.

Persistent Organic Pollutants

Not listed.

Seveso Directive

This product is not controlled under the Seveso Directive.

National regulations

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

LU - Luxembourg prohibited chemicals in the workplace

Not listed.

Inventory list

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.
Europe inventory	: All components are listed or exempted.
Japan inventory	: Japan inventory (CSCL) : All components are listed or exempted. Japan inventory (ISHL) : Not determined.
New Zealand Inventory of Chemicals (NZIoC)	: All components are listed or exempted.
Philippines inventory (PICCS)	: All components are listed or exempted.
Korea inventory (KECI)	: All components are listed or exempted.
Taiwan Chemical Substances Inventory (TCSI)	: All components are listed or exempted.
Thailand inventory	: Not determined.
Turkey inventory	: Not determined.
United States inventory (TSCA 8b)	: All components are listed or exempted.
Vietnam inventory	: Not determined.

The information stated in this section relates solely to the conformity of the chemical product with the countries Inventories. The information used to confirm the inventory status of this product may be based on additional data to the chemical composition shown in Section 3. Other regulations may apply for importation or marketing authorizations.

15.2 Chemical safety assessment

: This product is classified as H304 «May be fatal if swallowed and enters airways». The risk relates to potential for aspiration. The risk arising from aspiration hazard is solely related to the physico-chemical properties of the substance. The risk can therefore be controlled by implementing risk management measures tailored to this specific hazard. An exposure scenario is not required.

SECTION 16: Other information

Indicates information that has changed from previously issued version.

Abbreviations and acronyms

: ATE = Acute Toxicity Estimate
 CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
 DNEL = Derived No Effect Level
 DMEL = Derived Minimal Effect Level
 EUH statement = CLP-specific Hazard statement
 N/A = Not available
 PBT = Persistent, Bioaccumulative and Toxic
 vPvB = Very Persistent and Very Bioaccumulative
 PNEC = Predicted No Effect Concentration
 LC50 = Median lethal concentration
 LD50 = Median lethal dose
 OEL = Occupational Exposure Limit
 VOC = Volatile Organic Compound
 UVCB Substance of unknown or Variable composition, Complex reaction products or Biological material
 NOEC No Observed Effect Concentration
 QSAR = Quantitative Structure–Activity Relationship

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

Classification	Justification
Asp. Tox. 1, H304	Calculation method

Full text of abbreviated H statements

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]

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

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