RADIANOL 1990

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	:	Substance (UVCB)
Trade name	:	RADIANOL 1990
IUPAC name	:	Fatty acids, C18-unsatd., dimers, di-Me esters, hydrogenated
EC no.	:	604-608-2
CAS No.	:	147853-32-5
REACH registration No.	:	01-2119976280-36
C&L notification reference no	:	02-2119692907-19-0000

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

Relevant identified uses

Main use category : Industrial use

Title	Life cycle stage	Use descriptors
General overview of Industrial uses of Dimer Diol	Industrial	SU0, SU8, SU9, SU12, PC9a, PC9b, PC18, PC24, PC32, PROC1, PROC2, PROC3, PROC4, PROC5, PROC6, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC12, PROC13, PROC14, PROC15, PROC21, PROC24
General overview of Professional uses of Dimer Diol	Professional	SU0, PC9a, PC9b, PC18, PC28, PC39, PROC3, PROC5, PROC8a, PROC8b, PROC9, PROC15, ERC8a, ERC8d
General overview of Consumer uses of Dimer Diol	Consumer	PC9a, PC9b, PC9c, PC24, PC32, PC39, ERC8a, ERC8c, ERC8f
General overview of Manufacturing uses of Dimer Diol		PROC1, PROC2, PROC3, PROC4, PROC5, PROC8b, PROC15, ERC1
General overview of Formulation uses of Dimer Diol		PC0, PC9a, PC9b, PC18, PC24, PC28, PC32, PC39, PROC3, PROC4, PROC5, PROC6, PROC7, PROC8a, PROC8b, PROC9, PROC10, PROC12, PROC13, PROC14, PROC15, ERC2, ERC3

Full text of use descriptors: see section 16

1.3. Details of the supplier of the safety data sheet

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Belgium
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sds@oleon.com, www.oleon.com

1.4. Emergency telephone number

Emergency number : 24/7 EMERGENCY NUMBER (SGS ERS; Oleon contract nr 76858)
+32 3 575 55 55 (worldwide); +1 888 765 6554 (USA tollfree)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : UVCB

Name	Product identifier	%
Dimer diol	CAS No.: 147853-32-5 EC no.: 604-608-2 REACH-no: 01-2119976280-36	≤ 100

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : If you feel unwell, seek medical advice.

First-aid measures after inhalation : Remove victim to fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact : Wash off immediately with soap and plenty of water. If irritation persists, consult a doctor.

First-aid measures after eye contact : Rinse immediately with plenty of water. Consult an ophthalmologist if irritation persists.

First-aid measures after ingestion : Rinse mouth out with water. Get medical advice/attention if you feel unwell. Call a poison center (www.who.int/ipcs/poisons/centre/directory/en).

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

Symptoms/effects : No supplementary information available.

Symptoms/effects after inhalation : No effects known.

Symptoms/effects after skin contact : Tingling/irritation of the skin.

Symptoms/effects after eye contact : No effects known.

Symptoms/effects after ingestion : No effects known.

Chronic symptoms : No effects known.

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

No supplementary information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : AFFF foam. BC-powder. Carbon dioxide. Dry sand. Dry chemical powder. Use the extinguishing media recommended for the burning materials and fire situation.

Unsuitable extinguishing media : Do not use water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard : DIRECT FIRE HAZARD: Combustible. INDIRECT FIRE HAZARD: Heating may cause a fire or explosion. Temperature above flashpoint: higher fire/explosion hazard.

Explosion hazard : No direct explosion hazard.

Reactivity in case of fire : Upon combustion CO and CO2 are formed.

5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions : No specific fire-fighting instructions required.

Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus (EN 136 + EN 137).

Other information : No supplementary information available.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Mark the danger area. Exposure to fire/heat: have neighbourhood close doors and windows. Exposure to fire/heat: consider evacuation. Wash contaminated clothing before reuse.

For non-emergency personnel

Protective equipment : See "Material-Handling" to select protective clothing.

Emergency procedures : Mark the danger area. No naked flames. Wash contaminated clothing before reuse.

For emergency responders

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

6.2. Environmental precautions

Prevent soil and water pollution.

6.3. Methods and material for containment and cleaning up

For containment : Contain released product, collect/pump into suitable containers. Plug the leak, cut off the supply.

Methods for cleaning up : Clean contaminated surfaces with a soap solution. Flush/dilute with water. Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite or powdered limestone.

Other information : No supplementary information available.

6.4. Reference to other sections

Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Keep away from naked flames/heat. In finely divided state: use spark-/explosionproof appliances. Finely divided: keep away from ignition sources/sparks. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with applicable regulations. Wash contaminated clothing before reuse. Keep container tightly closed.
Handling temperature	:	≥ 10 °C above melting point

7.2. Conditions for safe storage, including any incompatibilities

Heat and ignition sources	:	KEEP AWAY FROM: heat sources.
Information on mixed storage	:	KEEP AWAY FROM: Acids. strong acids. bases. strong bases.
Storage area	:	Keep container in a well-ventilated place. Store at ambient temperature. Keep out of direct sunlight. Meet the legal requirements.
Special rules on packaging	:	Store in a closed container. Suitably labelled. Meet the legal requirements.
Packaging materials	:	No supplementary information available.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Personal protection equipment

Personal protective equipment:

Gloves. Protective clothing. Safety glasses.

Personal protective equipment symbol(s):

Eye and face protection

Eye protection:

Eye protection not required in normal conditions

Skin protection

Skin and body protection:

Protective clothing (EN 14605 or EN 13034)

Hand protection:

Protective gloves against chemicals (EN 374)

Other skin protection

Materials for protective clothing:

Good resistance: Nitrile rubber

Respiratory protection

Respiratory protection:

Respiratory protection not required in normal conditions

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Colour	:	Colourless to yellow.
Appearance (room temperature)	:	Viscous. Liquid.
Odour	:	Mild odor.
Odour threshold	:	Not available
Melting point	:	< -10 °C
Freezing point	:	Not available
Softening point	:	-62 °C (Test data)
Boiling point	:	ca. 430 °C (1013 hPa; DSC)
HMIS Flammability	:	Not available
Explosive properties	:	Product is not explosive.
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	≈ 287 °C (ASTM D92)
Auto-ignition temperature	:	> 300 °C
Decomposition temperature	:	Flash point
pH	:	Not available
Viscosity, kinematic	:	ca. 850 mm^2/s (40°C)
Viscosity, dynamic	:	ca. 3800 mPa·s (20°C)
Solubility	:	Poorly soluble in water. Water: < 0.1 mg/l (pH 6.7; column elution method)
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Partition coefficient n-octanol/water (Log Pow)	:	> 6 (30°C; HPLC method)
Vapour pressure	:	< 0.01 Pa (20°C)
Vapour pressure at 50 °C	:	Not available
Density	:	ca. 904 kg/m^3 (20°C) ca. 888 kg/m^3 (40°C)
Relative density	:	0.9 (20 °C, ASTM D4052: Density, Relative Density, and API Gravity of Liquids by Digital Density Meter)
Relative vapour density at 20°C	:	Not available
Particle characteristics	:	Not applicable

9.2. Other information

Other safety characteristics

Miscibility	:	soluble in most organic solvents
VOC content	:	< 0.1 % (1999/13/EC; 2004/42/EC; 2010/75/EU)
Other properties	:	Gas/vapour heavier than air at 20°C,Slightly volatile

SECTION 10: Stability and reactivity

10.1. Reactivity

On burning: release of carbon monoxide/carbon dioxide.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No supplementary information available.

10.5. Incompatible materials

No supplementary information available.

10.6. Hazardous decomposition products

No supplementary information available.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

RADIANOL 1990 (147853-32-5)	
LD50 oral rat	> 2000 mg/kg Non-toxic

Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

RADIANOL 1990 (147853-32-5)	
Viscosity, kinematic	ca. 850 mm^2/s (40°C)

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Ecology - air	:	Not included in the list of substances which may contribute to the greenhouse effect (IPCC). Not included in the list of fluorinated greenhouse gases (Regulation (EU) No 2024/573). Not classified as dangerous for the ozone layer (Regulation (EC) No 2024/590).
Ecology - water	:	No data available concerning bioaccumulation
Ecology - water	:	Not harmful to crustacea (Daphnia). Slightly harmful to fishes. Not harmful to algae. Not harmful to bacteria.
Hazardous to the aquatic environment, short–term (acute)	:	Not classified
Hazardous to the aquatic environment, long–term (chronic)	:	Not classified

RADIANOL 1990 (147853-32-5)	
LC50 - Fish [1]	> 350 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Read-across, Nominal concentration)
EC50 - Other aquatic organisms [1]	> 100 mg/l

12.2. Persistence and degradability

RADIANOL 1990 (147853-32-5)	
Persistence and degradability	Not readily biodegradable in water.
Biodegradation	ca. 17 % (28d.; OECD 301B)

12.3. Bioaccumulative potential

RADIANOL 1990 (147853-32-5)	
Partition coefficient n-octanol/water (Log Pow)	> 6 (30°C; HPLC method)
Bioaccumulative potential	High potential for bioaccumulation (Log Kow > 5).

12.4. Mobility in soil

RADIANOL 1990 (147853-32-5)	
Ecology - soil	Biodegradability in soil: no data available.

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

RADIANOL 1990 (147853-32-5)	
Other information	No supplementary information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal : Take up liquid spill into absorbent material,Scoop absorbed substance into closing containers,Carefully collect the spill/leftovers,Clean contaminated surfaces with an excess of water,Wash clothing and equipment after handling

Regional waste regulation : No supplementary information available.

Product/Packaging disposal recommendations : Do not discharge into drains or the environment. Dispose of at authorized waste collection point. Remove waste in accordance with local and/or national regulations.

Additional information : Can be considered as non hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

Ecological waste information : Remove to an authorized incinerator equipped with an. afterburner and a flue gas scrubber. plastic packaging. wooden packaging. glass packaging.

European List of Waste (LoW, EC 2000/532) : No supplementary information available

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated for transport				
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
III	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

Transport regulations (ADR) : Not subject

Transport by sea

Transport regulations (IMDG) : Not subject

Air transport

Transport regulations (IATA) : Not subject

Inland waterway transport

No data available

Rail transport

Transport regulations (RID) : Not subject

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (2024/590)

Not listed on the Ozone Depletion list (Regulation EU 2024/590)

Council Regulation (EC) for the control of dual-use items

Not listed on the COUNCIL REGULATION (EC) of dual-use items.

VOC Directive (2004/42)

VOC content : < 0.1 % (1999/13/EC; 2004/42/EC; 2010/75/EU)

Explosives Precursors Regulation (EU 2019/1148)

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

Drug Precursors Regulation (EC 273/2004)

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

National regulations

Chemical inventories : Compliant with DSL, EU REACh, IECSC, Japan ISHL, KECL, NCI, NZIoC, TCSI, TECI_DIW, TR EAEU, TSCA

KKDIK number (Turkey) : not preregistered

K-REACh (Korea) : preregistered

UK-REACh (Great Britain) : DUIN submitted

Swiss ChemO (SR 813.11) : This substance is not subject to the obligation to notify volumes below 1tpa pursuant to art.26 item 'c' of the Chemicals Ordinance (ChemO)

Germany

Water hazard class (WGK)	:	WGK 1, Slightly hazardous to water (Classification according to AwSV; ID No. 3759).
VOC content	:	< 0.1 % (1999/13/EC; 2004/42/EC; 2010/75/EU)

Netherlands

ABM category	:	A(4) - low hazard for aquatic organisms, may have longterm hazardous effects in aquatic environment
SZW List of Carcinogenic Substances	:	The substance is not listed
SZW List of Mutagenic Substances	:	The substance is not listed
SZW List of Reprotoxic Substances – Breastfeeding	:	The substance is not listed
SZW List of Reprotoxic Substances – Fertility	:	The substance is not listed
SZW List of Reprotoxic Substances – Development	:	The substance is not listed

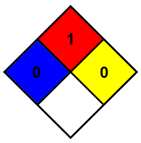
Denmark

Classification remarks	:	Emergency management guidelines for the storage of flammable liquids must be followed

15.2. Chemical safety assessment

The chemical safety assessment has been carried out, an exposure scenario is not applicable (substance is not classified).

SECTION 16: Other information

Training advice	:	No supplementary information available.
Chemical inventories legend	:	DSL = Canadian Domestic Sustances List EU REACh = European Union REACH Regulation 1907/2006 IECSC = Inventory of Existing Chemicals Substances in China Japan ISHL = Japanese Existing and New Chemical Substances (CSCL) KECL = Korean Existing Chemical List NCI = Vietnam National Chemical Inventory NZIoC = New Zealand Inventory of Chemicals TCSI = Taiwan Chemical Substance Inventory TECI_DIW = Thailand Existing Chemicals Inventory - Department of Industrial Works List TR EAEU = Eurasian Economic Union Unified list of chemicals TSCA = USA Toxic Substances Control Act
SDS changed sections	:	15 - Regulatory information
SDS Reason for revision	:	No supplementary information available
NFPA health hazard	:	0 - Materials that, under emergency conditions, would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	:	1 - Materials that must be preheated before ignition can occur.
NFPA reactivity	:	0 - Material that in themselves are normally stable, even under fire conditions.
NFPA image	:	
Other information	:	No supplementary information available.

Full text of use descriptors	
ERC1	Manufacture of the substance
ERC2	Formulation into mixture
ERC3	Formulation into solid matrix
ERC8a	Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)

Full text of use descriptors	
ERC8c	Widespread use leading to inclusion into/onto article (indoor)
ERC8d	Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
ERC8f	Widespread use leading to inclusion into/onto article (outdoor)
PC0	Other
PC18	Ink and Toners
PC24	Lubricants, greases, release products
PC28	Perfumes, fragrances
PC32	Polymer preparations and compounds
PC39	Cosmetics, personal care products
PC9a	Coatings and paints, thinners, paint removers
PC9b	Fillers, putties, plasters, modelling clay
PC9c	Finger paints
PROC1	Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
PROC10	Roller application or brushing
PROC11	Non industrial spraying
PROC12	Use of blowing agents in manufacture of foam
PROC13	Treatment of articles by dipping and pouring
PROC14	Tabletting, compression, extrusion, pelettisation, granulation
PROC15	Use as laboratory reagent
PROC2	Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
PROC21	Low energy manipulation and handling of substances bound in/on materials or articles
PROC24	High (mechanical) energy work-up of substances bound in /on materials and/or articles
PROC3	Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
PROC4	Chemical production where opportunity for exposure arises
PROC5	Mixing or blending in batch processes
PROC6	Calendering operations
PROC7	Industrial spraying
PROC8a	Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC8b	Transfer of substance or mixture (charging and discharging) at dedicated facilities
PROC9	Transfer of substance or preparation into small containers (dedicated filling line, including weighing)
SU0	Other
SU12	Manufacture of plastics products, including compounding and conversion

Full text of use descriptors	
SU8	Manufacture of bulk, large scale chemicals (including petroleum products)
SU9	Manufacture of fine chemicals

The classification complies with : ATP 12

SDS EU Oleon Annex II

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