

ECOVACS DEEBOT Cleaning Solution

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 1/13/2022 Revision date: 12/2/2024 Version: 22.0

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

1.1. Product identifier

Product form : Mixture
Trade name : ECOVACS DEEBOT Cleaning Solution

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

1.2.1. Relevant identified uses

Main use category : The detergent solution is gentle and fragrant, with a good ability to clean the hard surfaces.
It can be applied to tiles, floors and so on

1.2.2. Uses advised against

Restrictions on use : No information available

1.3. Details of the supplier of the safety data sheet

Manufacturer Ecovacs Robotics Co.,Ltd. Address:No.518 Songwei Road,Wusongjiang industry Park,Guoxiang Street, Wuzhong District,Suzhou, Jiangsu,China.	Importer Ecovacs Europe GmbH Address:: Holzstrasse 2, 40221 Düsseldorf, German
Supplier: Beijing LeesonWell Fine Chemicals co.,LTD Address:: No.15 Nanquyang Road,Beishenshu Village, Taihu Town,Tongzhou District,Beijing	

1.4. Emergency telephone number

Emergency number +86-400-855-7500

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

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

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

Hazard pictograms (CLP)	: None
Signal word (CLP)	: None
Hazard statements (CLP)	: None.
Precautionary statements (CLP)	: None.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII
The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

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SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable.

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Water	CAS-No.: 7732-18-5 EC-No.: 231-791-2	> 90	Not classified
2,4-Pentanediol, 2-methyl-	CAS-No.: 107-41-5 EC-No.: 203-489-0 EC Index-No.: 603-053-00-3	$\geq 1 - \leq 5$	Skin Irrit. 2, H315 Eye Irrit. 2, H319
Dimethyldimethyl hydantoin (DMDMH)	CAS-No.: 6440-58-0 EC-No.: 229-222-8	0.5	Acute Tox. 4 (Oral), H302
Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy-, branched	CAS-No.: 69011-36-5 EC-No.: 500-241-6	$\geq 0.1 - \leq 0.2$	Aquatic Acute 1, H400 Aquatic Chronic 3, H412 M=1
Perfume	-	<0.1	Not classified
Pigment	-	<0.01	Not classified

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: No information available.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Non-flammable.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Absorb remaining liquid with sand or inert absorbent and remove to safe place.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

2,4-Pentanediol, 2-methyl- (107-41-5)	
Austria - Occupational Exposure Limits	
MAK (OEL TWA)	49 mg/m ³
MAK (OEL TWA) [ppm]	10 ppm
MAK (OEL STEL)	49 mg/m ³
MAK (OEL STEL) [ppm]	10 ppm
OEL C	49 mg/m ³
OEL C [ppm]	10 ppm
Croatia - Occupational Exposure Limits	
GVI (OEL TWA) [1]	123 mg/m ³
GVI (OEL TWA) [2]	25 ppm

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2,4-Pentanediol, 2-methyl- (107-41-5)	
KGVI (OEL STEL)	123 mg/m ³
KGVI (OEL STEL) [ppm]	25 ppm
OEL chemical category	Skin notation
Denmark - Occupational Exposure Limits	
OEL C	125 mg/m ³
OEL C [ppm]	25 ppm
Finland - Occupational Exposure Limits	
HTP (OEL TWA) [1]	120 mg/m ³
HTP (OEL TWA) [2]	25 ppm
HTP (OEL STEL)	200 mg/m ³
HTP (OEL STEL) [ppm]	40 ppm
France - Occupational Exposure Limits	
VLE (OEL C/STEL)	125 mg/m ³
VLE (OEL C/STEL) [ppm]	25 ppm
Greece - Occupational Exposure Limits	
OEL TWA	125 mg/m ³
OEL TWA [ppm]	25 ppm
OEL STEL	125 mg/m ³
OEL STEL [ppm]	25 ppm
Ireland - Occupational Exposure Limits	
OEL STEL	125 mg/m ³
OEL STEL [ppm]	25 ppm
Lithuania - Occupational Exposure Limits	
NRV (OEL C)	120 mg/m ³
NRV (OEL C) [ppm]	25 ppm
Poland - Occupational Exposure Limits	
NDS (OEL TWA)	50 mg/m ³ (vapor and inhalable fraction)
NDSch (OEL STEL)	100 mg/m ³ (vapor and inhalable fraction)
Portugal - Occupational Exposure Limits	
OEL C [ppm]	25 ppm
Spain - Occupational Exposure Limits	
VLA-EC (OEL STEL)	123 mg/m ³
VLA-EC (OEL STEL) [ppm]	25 ppm
Sweden - Occupational Exposure Limits	
KTV (OEL STEL)	120 mg/m ³
KTV (OEL STEL) [ppm]	25 ppm
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	123 mg/m ³
WEL TWA (OEL TWA) [2]	25 ppm

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2,4-Pentanediol, 2-methyl- (107-41-5)	
WEL STEL (OEL STEL)	123 mg/m ³
WEL STEL (OEL STEL) [ppm]	25 ppm
Norway - Occupational Exposure Limits	
Takverdi (OEL C) [1]	100 mg/m ³
Takverdi (OEL C) [2]	20 ppm
Switzerland - Occupational Exposure Limits	
MAK (OEL TWA) [1]	49 mg/m ³ (aerosol, vapour)
MAK (OEL TWA) [2]	10 ppm (aerosol, vapour)
KZGW (OEL STEL)	98 mg/m ³ (aerosol, vapour)
KZGW (OEL STEL) [ppm]	20 ppm (aerosol, vapour)
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA [ppm]	25 ppm (vapor fraction)
ACGIH OEL STEL	10 mg/m ³ (inhalable particulate matter, aerosol only)
ACGIH OEL STEL [ppm]	50 ppm (vapor fraction)

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

No respiratory protection needed under normal use conditions

8.2.2.4. Thermal hazards

No additional information available

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8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: light blue.
Appearance	: light blue.
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not applicable.
Freezing point	: Not available
Boiling point	: 100 °C
Flammability	: Not applicable.
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: 6 – 8
Viscosity, kinematic	: Not available
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: 1 g/cm ³
Relative density	: Not available
Relative vapour density at 20 °C	: Not available
Particle characteristics	: Not applicable.

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No information available.

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10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

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

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

2,4-Pentanediol, 2-methyl- (107-41-5)	
LD50 oral rat	3700 mg/kg
LD50 dermal rabbit	12300 mg/kg
LC50 Inhalation - Rat	> 310 mg/m ³ (Exposure time: 1 h)

Dimethyldimethyl hydantoin (DMDMH) (6440-58-0)	
LD50 oral rat	1572 mg/kg
LD50 dermal rabbit	> 2000 mg/kg

Poly(oxy-1,2-ethanediyl), .alpha.-tridecyl-.omega.-hydroxy-, branched (69011-36-5)	
LD50 oral rat	> 2000 mg/kg
LD50 dermal rabbit	5960 mg/kg
LC50 Inhalation - Rat	> 1.6 mg/l/4h

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

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

11.2.2. Other information

Potential adverse human health effects and symptoms : 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.
Hazardous to the aquatic environment, short-term (acute) : Not classified

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Hazardous to the aquatic environment, long—term : Not classified
(chronic)

2,4-Pentanediol, 2-methyl- (107-41-5)

LC50 - Fish [1]	8510 – 9910 mg/l (Exposure time: 96 h - Species: Gambusia affinis [flow-through])
EC50 - Crustacea [1]	2800 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

2,4-Pentanediol, 2-methyl- (107-41-5)

Partition coefficient n-octanol/water (Log Pow)	< 0.14
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

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This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

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	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated

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ADR	IMDG	IATA	ADN	RID
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental hazards				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable.

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	Agreement concerning the International Carriage of Dangerous Goods by Road

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Abbreviations and acronyms:	
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Data sources

: ECHA reference.

Training advice

: Normal use of this product shall imply use in accordance with the instructions on the packaging.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4

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Full text of H- and EUH-statements:

Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.
Skin Irrit. 2	Skin corrosion/irritation, Category 2

Safety Data Sheet (SDS), EU

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