

SAFETY DATA SHEET

according to regulation (EC) No 1907/2006 (REACH) and 1272/2008/EC

Trade name: **Metabond ECO motor oil additive**

Version: 3 Latest revision: 14. 12. 2022 Previous version: 24. 06. 2018 Page: 1/(16)

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

1.1 Product identifier:

Metabond ECO motor oil additive

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

Relevant identified uses: engine oil additive for petrol-fuelled, diesel and gas-fuelled cars, commercial vehicles to improve lubrication and friction-reducing effect.

Uses advised against: application other than the above.

1.3 Details of the supplier of the safety data sheet:

Data of supplier:

Metabond Magyarország Kft.
9030 Győr, Szigligeti Ede u. 5.
Tel: +36 96 332738
Mobile: +36 70 2719575
www.metabond.hu

Responsible for SDS:

Metabond Magyarország Kft.
9030 Győr, Szigligeti Ede u. 5.
Tel: +36 96 332738
Mobile: +36 70 2719575
E-mail: metabond@metabond.hu
www.metabond.hu

1.4 Emergency telephone number

Emergency telephone (on workdays: 08-16 h (CET)): +36 96 332738

Health Toxicological Information Service (ETTSZ 1097 Budapest, Albert Flórián st. 2-6.)

Tel.: +36 80 201 199 (0-24 h, free number, can only be called from Hungary).

+36 1 476 6464 (0-24 h, can be called for a normal fee - also from abroad)

SECTION 2 Hazards identification

2.1 Classification of the substance or mixture

Hazard Class and Category:

Aquatic Chronic 3

Hazard statement:

H412

Harmful to aquatic life with long lasting effects.

2.2 Label elements

Product identification: Trade name: **Metabond ECO motor oil additive**

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Hazardous components: -

GHS Pictogram: Not required.

Signal word: Not required.

Hazard statement:

H412 Harmful to aquatic life with long lasting effects.

Supplemental hazard information:

EUH208 Contains Maleic anhydride. May produce an allergic reaction.

Precautionary statements – General: -

Precautionary statements – Prevention:

P273 Avoid release to the environment.

Precautionary statements – Response:

P391 Collect spillage.

Precautionary statements – Storage: -

Precautionary statements – Disposal:

P501 Dispose of contents/container in accordance with national regulation.

Other liabilities for labelling:

Tactile warning of danger: Not required.

Transport classification: see section 14.

2.3 Other hazards

The product does not contain any PBT or vPvB substance according to annex XIII of regulation (EC) 1907/2006, at a concentration of 0.1% or more.

The mixture does not contain any substance with endocrine disrupting properties, at a concentration of 0.1% or more.

SECTION 3 Composition/information on ingredients

3.2 Mixtures

Chemical description: A mixture of additives of petroleum origin and additives dissolved in synthetic base oils.

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Component(s) / Hazardous component(s):

Name	EC number	CAS number	Hazard classes and cat.	Hazard statements	Conc. %(m/m)
4,4'-methylene bis (dibutyldithiocarbamate) REACH Registr. Nr.: 01-2119708416-41	233-593-1	10254-57-6	Aquatic Chronic 4	H413	max. 30
Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based REACH Registr. Nr.: 01-2119474889-13	276-738-4	72623-87-1	Asp. Tox. 1 (Note L)	H304	max. 20
Mineral oil * REACH Registr. Nr.: no data	-	-	Asp. Tox. 1	H304	max. 20
Calcium branched alkyl phenate sulphide (overbased) REACH Registr. Nr.: no data	-	polymer	Aquatic Chronic 4	H413	max. 4.0
Distillates (petroleum), hydrotreated heavy paraffinic REACH Registr. Nr.: 01-2119484627-25	265-157-1	64742-54-7	Asp. Tox. 1 (Note L)	H304	max. 4.0
Zinc dialkyl dithiophosphate** REACH Registr. Nr.: 01-2119953275-34	218-679-9	2215-35-2	Skin Irrit. 2 Eye Dam. 1 Aquatic Chronic 2	H315 H318 H411	max. 2.0
Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr) esters, zinc salts*** REACH Registr. Nr.: 01-2119493626-26	283-392-8	84605-29-8	Skin Irrit. 2 Eye Dam. 1 Aquatic Chronic 2	H315 H318 H411	max. 1.0
2,6-di-tert-butylphenol REACH Registr. Nr.: 01-2119490822-33	204-884-0	128-39-2	Skin Irrit. 2 Aquatic Acute 1 Aquatic Chronic 1	H315 H400 (M=1) H410 (M=1)	max. 0.4
Phenol, dodecyl-, branched REACH Registr. Nr.: 01-2119513207-49	310-154-3	-	Eye Dam. 1 Skin Corr. 1C Repr. 1B Aquatic Acute 1 Aquatic Chronic 1	H318 H314 H360F H400 (M=10) H410 (M=10)	<0.1
Maleic acid anhydride**** REACH Registr. Nr.: 01-2119472428-31	203-571-6	108-31-6	Acute Tox. 4 Skin Corr. 1B Skin Sens. 1A Eye Dam. 1 Resp. Sens. 1 STOT RE 1	H302 H314 H317 H318 H334 H372	max. 0.0004

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*Contains one or more of the following:

EC number: 265-157-1, REACH Registr. Nr.: 01-2119484627-25;

EC number: 265-169-7, REACH Registr. Nr.: 01-2119471299-27;

EC number: 265-158-7, REACH Registr. Nr.: 01-2119487077-29;

EC number: 265-159-2, REACH Registr. Nr.: 01-2119480132-48.

** Specific concentration limit: Eye Dam. 1, H318: $\geq 10\%$

*** Specific concentration limit: Eye Dam. 1; H318: $C > 12.5\%$; Skin Irrit. 2; H315: $C > 6.25\%$

**** Specific concentration limit: Skin Sens. 1A; H317: $C \geq 0.001\%$

Note L: The harmonised classification as a carcinogen applies unless it can be shown that the substance contains less than 3 % of dimethyl sulphoxide extract as measured by IP 346 ("Determination of polycyclic aromatics in unused lubricating base oils and asphaltene free petroleum fractions – Dimethyl sulphoxide extraction refractive index method" Institute of Petroleum, London), in which case a classification in accordance with Title II of this Regulation shall be performed also for that hazard class.

The full text of each relevant H- phrase and Hazard classes and cat. see in Section 16.

SECTION 4 First aid measures

4.1 Description of first aid measures

General information: Never give anything by mouth to an unconscious person, or never induce vomiting.

Inhalation: Remove the affected person to fresh air. If rapid recovery does not occur, obtain medical attention.

Skin contact: Remove contaminated clothing. Wash skin with large amounts of water, use soap. In case of persistent irritation, get medical attention.

Eye contact: In case of contact, immediately flush eyes with plenty of water for at least 10-15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. In case of a complaint, seek medical advice.

Ingestion: If swallowed, give water. **Do not** induce vomiting. Get medical attention.

Protection of first-aid person: No individual specifications.

4.2 Most important symptoms and effects, both acute and delayed

Prolonged and/or repeated contact may cause irritation on skin or in eyes depending on individual sensitivity.

4.3 Indication of any immediate medical attention and special treatment needed

Not required.

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SECTION 5 Fire-fighting measures

Fire hazards:

Combustible.

5.1 Extinguishing media

Suitable extinguishing media:

Foam, carbon dioxide, dry chemical powder, water fog (trained personnel only).

Unsuitable extinguishing media:

Full water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products:

On burning, carbon monoxide, carbon dioxide, various hydrocarbons and soot can be formed.

5.3 Advice for fire-fighters

Special protective equipment:

According to the existing fire-fighting regulations. Respiratory protection.

Further information:

Collect contaminated firefighting water separately. It must not enter the sewage system.

Contaminated extinguishing water must be disposed of in accordance with official regulations.

SECTION 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: see Section 8.

Danger of slipping on leaked out/spilled product.

6.2 Environmental precautions:

Confine spills to prevent material from entering sewers, watercourses, drains and into soil

Notify relevant authority.

6.3 Methods and material for containment and cleaning up

On soil: All kind of ignition sources should be removed. Recover free liquid by pumping. Contain spilled liquid with sand, earth or other suitable absorbents. Dispose of according to local regulations.

On water: Confine the spillage. Remove from surface by skimming or suitable absorbents. Notify local authorities according to regulations.

6.4 Reference to other sections

Personal precautions: see section 8.

Waste treatment methods: see section 13.

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(c) Respiratory protection Under normal conditions not required. In case of vapor formation respiratory protection with particle-filter is recommended.

(d) Thermal hazards No data.

Environmental exposure controls:

Do not discharge into drains/surface waters/groundwater.

SECTION 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

- | | |
|--|---|
| a) Physical state: | liquid |
| b) Colour: | brown, bright |
| c) Odour: | characteristic, not unpleasant |
| d) Melting point/freezing point (Pour point): | not available |
| e) Boiling point or initial boiling point and boiling range: | not available |
| f) Flammability: | combustible |
| g) Lower and upper explosion limit: | not explosive |
| h) Flash point (COC) (EN ISO 2592): | typ. 170°C |
| i) Auto-ignition temperature: | not available |
| j) Decomposition temperature: | not available |
| k) pH: | not applicable |
| l) Kinematic viscosity | |
| | at 40°C: typ. 267.3 mm ² /s (DIN 51562) |
| | at 100°C: not available |
| m) Solubility | |
| Solubility in water: | practically insoluble in water |
| Solubility in other solvents: | gasoline, kerosene, toluene, etc. |
| n) Partition coefficient n-octanol/water (log value): | not available |
| o) Vapour pressure at 20°C: | negligible |
| p) Density and/or relative density at 20°C (DIN 51757): | 0.954 g/cm ³ |
| q) Relative vapour density: | not available |
| r) Particle characteristics: | not available |

9.2 Other information
 not available

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SECTION 12 Ecological information

12.1 Toxicity Harmful to aquatic life with long lasting effects.

Components:

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (CAS: 72623-87-1)

Fish:	LL ₅₀	> 100 mg/l	96 h (OECD 203)
Crustaceans:	EL ₅₀	> 10 000 mg/l	48 h (OECD 202)
Crustaceans:	NOEL	> 10 000 mg/l	96 h (OECD 202)
Crustaceans:	LL ₅₀	> 10 000 mg/l	96 h (OECD 202)
Crustaceans:	NOEL	10 mg/l	21 days (OECD 211)
Algae:	NOEL	> 100 mg/l	72 h (OECD 201)
Microorganisms (sewage sludge):	NOEL	> 1.93 mg/l	0,1 h (DIN 38412)

4,4'-methylene bis (dibutyldithiocarbamate) (CAS: 10254-57-6):

Algae:	EC ₅₀	> 0.0325 mg/l	72 h
Daphnia:	EC ₅₀	> 0.052 mg/l	48 h
Microorganisms:	EC ₅₀	> 1 000 mg/l	3 h
Fish:	LC ₅₀	> 0.06 mg/l	96 h
Algae:	NOEC	0.0325 mg/l	72 h
Daphnia:	NOEC	0.052 mg/l	48 h
Fish:	NOEC	0.06 mg/l	96 h
Microorganisms:	NOEC	1 000 mg/l	3 h
Daphnia:	NOEC	0.247 mg/l	21 days

Mineral oil (CAS: -):

Fish (Fat-headed carp):	LC ₅₀	> 100 mg/l	96 h
Daphnia magna:	EC ₅₀	> 10 000 mg/l	48 h
Daphnia magna:	EC ₅₀	> 10 mg/l	21 days
Daphnia magna:	NOEC	> 10 mg/l	21 days
Algae (Scenedesmus quadricauda):	EC ₅₀	> 100 mg/l	72 h

Calcium branched-chain alkylphenate sulphide (CAS: -):

Fish (Fat-headed carp):	LC ₅₀	> 1 000 mg/l	96 h
Daphnia magna:	EC ₅₀	> 1 000 mg/l	48 h
Algae (Selenastrum capricornutum):	EC ₅₀	> 1 000 mg/l	96 h
Microorganisms:	EC ₅₀	> 1 000 mg/l	0,1 days

Distillates (petroleum), hydrotreated heavy paraffinic (CAS: 64742-54-7):

Fish (Cyprinus carpio):	LC ₅₀	> 100 mg/l	96 h
Daphnia (Daphnia magna):	EC ₅₀	> 10 000 mg/l	48 h
Daphnia (Daphnia magna):	EC ₅₀	> 10 mg/l	21 days

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Daphnia (<i>Daphnia magna</i>):	NOEC	10 mg/l	21 days
Algae (<i>Pseudokirchneriella subcapitata</i>):	EC ₅₀	> 100 mg/l	72 h
Algae (<i>Pseudokirchneriella subcapitata</i>):	NOEC	≥ 100 mg/l	72 óra

Zinc dialkyl dithiophosphate (CAS: 2215-35-2):

Fish (<i>Oncorhynchus mykiss</i>):	LC ₅₀	4.5 mg/l	96 h
Fish (<i>Cyprinus carpio</i>):	LC ₅₀	46 mg/l	96 h
Daphnia (<i>Daphnia magna</i>):	EC ₅₀	23 mg/l	48 h
Daphnia (<i>Daphnia magna</i>):	NOEC	0.4 mg/l	21 days
Algae (<i>Scenedesmus quadricauda</i>):	EC ₅₀	21 mg/l	72 h
Microorganisms:	EC ₅₀	> 10 000 mg/l	0.1 days

Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr)esters, zinc salts (CAS: 84605-29-8):

Fish (<i>Oncorhynchus mykiss</i>):	LC ₅₀	4.5 mg/l	96 h
Fish (<i>Cyprinus carpio</i>):	LC ₅₀	46 mg/l	96 h
Daphnia (<i>Daphnia magna</i>):	EC ₅₀	23 mg/l	48 h
Daphnia (<i>Daphnia magna</i>):	EC ₅₀	> 0.8 mg/l	21 days
Daphnia (<i>Daphnia magna</i>):	NOEC	0.4 mg/l	21 days
Algae (<i>Scenedesmus quadricauda</i>):	EC ₅₀	21 mg/l	72 h
Algae (<i>Scenedesmus quadricauda</i>):	NOEC	10 mg/l	72 h

2,6-di-tert-butylphenol (CAS: 128-39-2):

Fish (<i>Oncorhynchus mykiss</i>):	LC ₅₀	13 mg/l	96 h
Fish (<i>Cyprinus carpio</i>):	LC ₅₀	1.4 mg/l	96 h
Daphnia (<i>Daphnia magna</i>):	EC ₅₀	0.45 mg/l	48 h
Daphnia (<i>Daphnia magna</i>):	EC ₅₀	0.8 mg/l	48 h
Algae (<i>Selenastrum capricornutum</i>):	EC ₅₀	3.6 mg/l	72 h
Microorganisms:	EC ₅₀	> 1 000 mg/l	0.1 days

Phenol, dodecyl-, branched (EC: 310-154-3):

Fish (Fat-headed carp):	LC ₅₀	40 mg/l	96 h
Daphnia magna:	EC ₅₀	0.037 mg/l	48 h
Mysidopsis Bahia:	EC ₅₀	> 0.58 mg/l	96 h
Daphnia magna:	EC ₅₀	0.0079 mg/l	21 days
Daphnia magna:	NOEC	0.0037 mg/l	21 days
Algae (<i>Scenedesmus quadricauda</i>):	EC ₅₀	0.36 mg/l	72 h
Microorganisms:	EC ₅₀	> 1 000 mg/l	0,1 days

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Maleic acid anhydride (CAS: 108-31-6):

Fish (Cyprinus carpio):	LC ₅₀	75 mg/l	96 h
Daphnia (Daphnia magna):	EC ₅₀	42.81 mg/l	48 h
Algae (Selenastrum capricornutum):	EC ₅₀	74.35 mg/l	72 h

12.2 Persistence and degradability

Biodegradability: Hydrocarbons are inherently degradable.

4,4'-methylene bis (dibutyldithiocarbamate) 21% (28 days, OECD 301 B)

(CAS: 10254-57-6): Not easily degradable.

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (CAS: 72623-87-1) not easily biodegradable. (OECD 301 B)

Mineral oil (CAS: -): 31% (28 days, OECD TG 301 B)

Not easily degradable.

Calcium branched alkyl phenate sulphide (overbased) (CAS: -): 4.7 – 10.8% (28 days, OECD TG 301 B).
Not easily degradable.

Inherent sedimentation: 38.8% (28 days)

Distillates (petroleum), hydrotreated heavy 31% (28 days, OECD TG 301 F)

paraffinic (CAS: 64742-54-7): Not easily degradable.

Zinc dialkyl dithiophosphate (CAS: 2215-35-2): 1.5% (28 days, OECD TG 301 B)

Not easily degradable.

Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr)esters, zinc salts (CAS: 84605-29-8): 1.5% (28 days, OECD TG 301 B)

Not easily degradable.

2,6-di-tert-butylphenol (CAS: 128-39-2): 5% (28 days, OECD TG 301 B)

24% (28 days, OECD TG 302 B)

Not easily degradable.

Phenol, dodecyl-, branched (EC: 310-154-3): Mixed: 10% (56 days, OECD TG 301 B)

Not easily degradable.

25% (28 days, OECD TG 301 B)

Not easily degradable.

Maleic acid anhydride (CAS: 108-31-6): > 90% (28 days, OECD TG 301 E)

61% (28 days, OECD TG 302 B)

Easily degradable.

12.3 Bioaccumulative potential

No data available.

4,4'-methylene bis (dibutyldithiocarbamate) Log Pow: 8.42

(CAS: 10254-57-6): BCF: 10,86 (low potential)

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Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (CAS: 72623-87-1)

Calcium branched alkyl phenate sulphide (overbased) (CAS: -):

Zinc dialkyl dithiophosphate (CAS: 2215-35-2):

Phosphorodithioic acid, mixed O,O-bis(1,3-dimethylbutyl and iso-Pr)esters, zinc salts (CAS: 84605-29-8):

2,6-di-tert-butylphenol (CAS: 128-39-2):

Phenol, dodecyl-, branched (EC: 310-154-3):

Maleic acid anhydride (CAS: 108-31-6):

12.4 Mobility in soil

Lubricating oils (petroleum), C20-50, hydrotreated neutral oil-based (CAS: 72623-87-1)

Mobility in water:

12.5 Results of PBT and vPvB assessment

12.6 Endocrine disrupting properties

12.7 Other adverse effects

Heavy metal content:

PCT, PCB and other chlorinated hydrocarbons:

Environmental effects:

Water hazard class (German):

Bioaccumulation is possible.

BCF: 2.2

Log Kow: 11.08 (measured value)

Log Kow: 2.21 (measured value, 20 °C)

Log Kow: 0.56 (measured value)

BCF: 794.33 (measured value)

Log Kow: 7.14 (measured value)

BCF: 794.33 (measured value)

Log Kow: 7.14 (measured value)

Log Kow: -0.048 (literature data)

Absorbs in soil.

The product is insoluble in water, not volatile.

Absorbs in soil.

Floats on water.

Does not contain PBT and vPvB substances, at a concentration of 0.1% or more.

The mixture does not contain any substance with endocrine disrupting properties, at a concentration of 0.1% or more.

None.

None.

Large spills may be hazardous to the environment.

WGK 2 (Classification by AwSV)

SECTION 13 Disposal considerations

13.1 Waste treatment methods

Product disposal:

Wastes of the product or used oil should be treated as hazardous waste.

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15.2 Chemical safety assessment.
not available

SECTION 16 Other information

The information given in this data sheet is based on our best knowledge at the time of publication. The information is related only to this product and is intended to assist its safe transport, handling and use. The given physical and chemical parameters describe the product only for the purpose of safety requirements and therefore should not be construed as guaranteeing any specific property of the product or as being part of a product specification or any contract.

The manufacturer or supplier shall not take responsibility for any damages from the use other than recommended or other misuse of the product. It is the responsibility of the user to keep regulatory precautions and observe recommendations for safe use of the product.

Classification for mixtures and used evaluation method according to regulation 1272/2008/EC (CLP)

Aquatic Chronic 3 H412 calculation method

The full text of each relevant H- phrase and Hazard classes and cat. in Section 3.:

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.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H360F	May damage fertility.
H372	Causes damage to organs through prolonged or repeated exposure through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
Acute Tox. 4	Acute toxicity Category 4
Asp. Tox. 1	Aspiration hazard Category 1
Skin Corr. 1C, 1B	Skin corrosion/irritation Category 1C, 1B

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Skin Irrit. 2	Skin corrosion/irritation Category 2
Skin Sens. 1A	Respiratory/skin sensitization Category 1A,
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Resp. Sens. 1	Respiratory sensitization Category 1
Repr. 1B	Reproductive toxicity Category 1B
STOT RE 1	Specific target organ toxicity — repeated exposure Category 1
Aquatic Acute 1	Hazardous to the aquatic environment, Acute Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, Chronic Category 1
Aquatic Chronic 4	Hazardous to the aquatic environment, Chronic Category 4

Legend:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration Factor
BOD	Biological Oxygen Demand
Bw	Body Weight
C&L	Classification and Labelling
CAS	Chemical Abstracts Service
CLP	Classification, Labelling and Packaging
CMR	Carcinogenic, Mutagenic or toxic to Reproduction
COD	Chemical Oxygen Demand
CSA	Chemical Safety Assessment
CSR	Chemical Safety Report
DMEL	Derived Minimal Effect Level
DNEL	Derived No Effect Level
ECHA	European Chemicals Agency
Ex	Effective Concentration x%
ErC50	EC50 in terms of reduction of growth rate
Edx	Effective Dose x%
EC	European Community
EC number	European Community number
ELINCS	European List of Notified Chemical Substances
ES	Exposure Scenario
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LCx	Lethal Concentration x%
LDx	Lethal Dose x%
LOAEC	Lowest Observed Adverse Effect Concentration
LOAEL	Lowest Observed Adverse Effect Level
LOEC	Lowest Observed Effect Concentration

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LOEL	Lowest Observed Effect Level
NOEC	No observed effect concentration
NOEL	No observed effect level
NLP	No-Longer Polymer
NOAEL	No Observed Adverse Effect Level
OECD	Organisation for Economic Cooperation and Development
PBT	Persistent Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	parts/million
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Regulations concerning the International carriage of Dangerous Goods by Rail
SVHC	Substance of Very High Concern
UVCB	substance of unknown or variable composition, complex reaction products or biological materials
VOC	Volatile organic compounds
vPvB	Very Persistent and very Bio-accumulative

Revision Indicators:

Section	Subject of change	Date	Version
1-16	Revision modification according to 2020/878/EU Full revision due to composition change	14. 12. 2022	3