

SAFETY DATA SHEET

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

Trade name: **Metabond Spirit engine oil additive**

Version: 3 Latest revision: 15. 12. 2022 Previous version: 10. 01. 2018 Page: 1/(14)

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

- 1.1 Product identifier:
Metabond Spirit engine oil additive
- 1.2 Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses: engine oil additive, mainly for passenger cars with "Start-Stop" system.
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: | Hazard statement: |
| Aquatic Chronic 3 | H412 Harmful to aquatic life with long lasting effects. |

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2.2 Label elements

Product identification: Trade name: **Metabond Spirit engine oil additive**

Hazardous components: -

GHS Pictogram: Not required.

Signal word: Not required.

Hazard statement:

H412 Harmful to aquatic life with long lasting effects.

Supplemental hazard information: -

Precautionary statements – General: -

Precautionary statements – Prevention:

P273 Avoid release to the environment.

Precautionary statements – Response: -

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 product contains an endocrine disrupting ingredient: Phenol, dodecyl-, branched (CAS: 121158-58-5)

Endocrine disrupting properties (Article 57(f) - human health);

Endocrine disrupting properties (Article 57(f) - environment).

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SECTION 3 Composition/information on ingredients

3.2 Mixtures

Chemical description: A mixture of mineral oil, synthetic oil and additives.

Component(s) / Hazardous component(s):

Name	EC number	CAS number	Hazard classes and cat.	Hazard statements	Conc. %(m/m)
Mineral oil * REACH Registr. Nr.: no data	-	-	Asp. Tox. 1	H304	max. 40
Reaction mass of isomers of: C7-9-alkyl 3-(3,5-di-tert-butyl-4-hydroxyphenyl) propionate REACH Registr. Nr.: 01-0000015551-76	406-040-9	125643-61-0	Aquatic Chronic 4	H413	max. 20
Distillates (petroleum), hydrotreated heavy paraffinic REACH Registr. Nr.: 01-2119484627-25	265-157-1	64742-54-7	Asp. Tox. 1 (Note L)	H304	max. 15
4,4'-methylene bis (dibutylidithiocarbamate) REACH Registr. Nr.: 01-2119708416-41	233-593-1	10254-57-6	Aquatic Chronic 4	H413	max. 15
Calcium branched alkyl phenate sulphide REACH Registr. Nr.: no data	-	polymer	Aquatic Chronic 4	H413	max. 7.0
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. 5.0
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)	max. 0.2

*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: Eye Dam. 1, H318: ≥ 10 %

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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.

SECTION 5 Fire-fighting measures

Fire hazards:

Combustible.

5.1 Extinguishing media

Suitable extinguishing media:

Foam, carbon dioxide, dry chemical powder, water spray.

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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. Contain spilled liquid with sand, earth or other suitable absorbents. Recover free liquid by pumping. 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.

SECTION 7 Handling and storage

7.1 Precautions for safe handling

Keep general measures applied for normal operations with lubricants.

Keep away from radiant heat and open flame.

Avoid contact with skin and eyes. Avoid prolonged breathing of oil vapours or mists.

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Wash hands before breaks and at end of work.
Take off contaminated clothing and wash it before reuse.
When using do not eat, drink or smoke. Avoid splashing the product.
Handling temperature: not known

- 7.2 Conditions for safe storage, including any incompatibilities
Storage facilities must comply with regulations for storing of flammable liquids.
Store in dry, well-ventilated place in original, closed containers.
Keep away from strong oxidizing agents.
Storage temperature: max. 40°C.
- 7.3 Specific end use(s)
Engine oil additive, mainly for passenger cars with "Start-Stop" system.

SECTION 8 Exposure controls / personal protection

8.1 Control parameters:

Mineral oil mist: TWA: **5 mg/m³**; STEL: 10 mg/m³, for oil mist, vapour excluded (ACGIH).
Method of testing, recommended: NIOSH 5026

8.2 Exposure controls

Engineering control measures:
Not required.

Personal protection:

- | | |
|----------------------------|--|
| (a) Eye/face protection | Protective goggles, if splashes may occur (EN 166). |
| (b) Skin protection | |
| (i) Hand protection | Oil resistant gloves (EN 374, Breakthrough time > 480 min, PK power level: 6; PR flow rate: 0).
Note: Manufacturer's directions for use and the conditions of application should be observed. |
| (ii) Other | Protective clothing (oil resistant). |
| (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.

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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:	157°C (estimated value)
i) Auto-ignition temperature:	not available
j) Decomposition temperature:	not available
k) pH:	not applicable
l) Kinematic viscosity (EN ISO 3104)	
at 40°C:	typ. 449.8 mm ² /s
at 100°C:	typ. 37.36 mm ² /s
m) Solubility	
Solubility in water:	practically insoluble in water
Solubility in other solvents:	not available
n) Partition coefficient n-octanol/water (log value):	not available
o) Vapour pressure at 20°C:	negligible
p) Density and/or relative density at 15°C (EN ISO 12185):	0.9526 g/cm ³
q) Relative vapour density:	not available
r) Particle characteristics:	not available
9.2 Other information	
Oxidizing properties:	not oxidize
Total Acid Number (TAN):	7.45 mg KOH/g (ASTM D 664-11a)
Total Base Number (TBN):	22.70 mg KOH/g (ASTM D 4739-11)

SECTION 10 Stability and reactivity

10.1 Reactivity:	Dangerous reactivity not known.
10.2 Chemical stability:	No decomposition if stored and handled properly.
10.3 Possibility of hazardous reactions:	Not known.
10.4 Conditions to avoid:	Direct heat or ignition sources.
10.5 Incompatible materials:	Strong oxidizing agents.

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10.6 Hazardous decomposition products: No dangerous decomposition products are formed under normal conditions. Hazardous combustion products: See Section 5.

SECTION 11 Toxicological information

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

Acute toxicity: Based on available data, the classification criteria are not met.

Components:

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

Oral:	LD ₅₀ (rat)	16 000 mg/kg	OECD 401
Dermal:	LD ₅₀ (rabbit)	> 2 000 mg/kg	OECD 402

Skin corrosion/irritation:	Based on available data, the classification criteria are not met.
Serious eye damage/irritation:	Based on available data, the classification criteria are not met.
Respiratory or skin sensitisation:	Based on available data, the classification criteria are not met.
Germ cell mutagenicity:	Based on available data, the classification criteria are not met.
Carcinogenicity:	Based on available data, the classification criteria are not met.
Reproductive toxicity:	Based on available data, the classification criteria are not met.
STOT-single exposure:	Based on available data, the classification criteria are not met.
STOT-repeated exposure:	Based on available data, the classification criteria are not met.
Aspiration hazard:	Based on available data, the classification criteria are not met.

11.2 Information on other hazards

The product contains an endocrine disrupting ingredient: Phenol, dodecyl-, branched (CAS: 121158-58-5)

Endocrine disrupting properties (Article 57(f) - human health)

SECTION 12 Ecological information

12.1 Toxicity Harmful to aquatic life with long lasting effects.

Components:

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 (<i>Scenedesmus quadricauda</i>):	EC ₅₀	> 100 mg/l	72 h

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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

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

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

Fish (Oncorhynchus mykiss):	LC ₅₀	4.5	mg/l	96 h
Fish (Cyprinus carpio):	LC ₅₀	46	mg/l	96 h
Daphnia (Daphnia magna):	EC ₅₀	23	mg/l	48 h
Daphnia (Daphnia magna):	NOEC	0.4	mg/l	21 days
Algae (Scenedesmus quadricauda):	EC ₅₀	21	mg/l	72 h
Microorganisms:	EC ₅₀	> 10 000	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 (Scenedesmus quadricauda):	EC ₅₀	0.36	mg/l	72 h
Microorganisms:	EC ₅₀	> 1 000	mg/l	0.1 days

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

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 (Pseudokirchneriella subcapitata):	EC ₅₀	> 100	mg/l	72 h
Algae (Pseudokirchneriella subcapitata):	EC ₅₀	≥ 100	mg/l	72 h

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12.2 Persistence and degradability

Biodegradability: Hydrocarbons are inherently degradable.

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

21% (28 days, OECD 301 B)

Not easily degradable.

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.

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

Inherent sedimentation: 38.8% (28 days)

1.5% (28 days, OECD TG 301 B)

Not easily degradable.

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

Mixed: 10% (56 days, OECD TG 301 B)

Not easily degradable.

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

25% (28 days, OECD TG 301 B)

Not easily degradable.

31% (28 days, OECD TG 301 F)

Not easily degradable.

12.3 Bioaccumulative potential

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

No data available.

Log Pow: 8.42

BCF: 10.86 (low potential)

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

BCF: 2.2; Log Kow: 11.08 (measured value)

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

Log Kow: 2.21 (measured value, 20°C)

BCF: 794.33 (measured value)

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

Log Kow: 7.14 (measured value)

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

BCF: 794.33 (measured value)

Log Kow: 7.14 (measured value)

12.4 Mobility in soil

Absorbs in soil.

Mobility in water:

Floats on water.

12.5 Results of PBT and vPvB assessment

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

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12.6 Endocrine disrupting properties	The product contains an endocrine disrupting ingredient: Phenol, dodecyl-, branched (CAS: 121158-58-5) Endocrine disrupting properties (Article 57(f) - environment).
12.7 Other adverse effects	
Heavy metal content:	None.
PCT, PCB and other chlorinated hydrocarbons:	None.
Environmental effects:	Large spills may be hazardous to the environment.
Water hazard class (German):	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.

Waste Identification Code: 13 02 05*

Mineral-based non-chlorinated engine, gear and lubricating oils.

Recommended waste treatment method: incineration

Disposal must be in compliance with national and local regulations.

Packaging disposal:

Containers with product residue should also be treated as hazardous waste according to national and local disposal regulations.

Waste Identification Code: 15 01 10*

Packaging containing residues of or contaminated by dangerous substances.

Wastewater:

Quality of wastewater emitted to natural water must comply with national and local regulations.

Care should be taken in any case to ensure compliance with EC, national and local regulations. It is the responsibility of the user to know all relevant national and local regulations.

SECTION 14 Transport information

Land transport:

Road/ Railway

ADR/RID:

Not classified.

14.1. UN number or ID number:

Not classified.

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14.2.	UN proper shipping name:	Not classified.
14.3.	Transport hazard class(es):	Not classified.
14.4.	Packing group:	Not classified.
14.5.	Environmental hazards:	Not classified.
14.6.	Special precautions for user:	Not classified.
Waterways:		
	Inland waterways/ Sea transport ADN/IMDG:	Not apply to the product.
	Air transport: ICAO / IATA:	Not apply to the product.

SECTION 15 Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety data sheet has been prepared according to Regulation (EC) No 1907/2006 (mod.: 2020/878/EU) and to Regulation (EC) 1272/2008.
Seveso category: not classified.
- 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 calculated method

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

H304 May be fatal if swallowed and enters airways.

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H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H360F	May damage fertility.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.
Asp. Tox. 1	Aspiration hazard Category 1
Skin Corr. 1C	Skin corrosion/irritation Category 1C
Skin Irrit. 2	Skin corrosion/irritation Category 2
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Repr. 1B	Reproductive toxicity Category 1B
Aquatic Acute 1	Hazardous to the aquatic environment, Acute Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, Chronic Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, Chronic Category 2
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

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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
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	15. 12. 2022	3