Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878 Issue date: 2/19/2021 Revision date: 4/29/2021 Version: 1.0

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

1.1. Product identifier

Product form	:	Mixture
Name	:	KUMHO 1712
UFI	:	9X20-D07Y-W00E-AVC1

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

1.2.1.	Relevant	identified	uses
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Main use category	: Industrial use
Use of the substance/mixture	: Manufacture of tyres and general rubber articles, including processing of raw (uncured)
	rubber, handling and mixing of rubber additives, vulcanising, cooling and finishing

1.2.2. Uses advised against

Restrictions on use

: Not available

1.3. Details of the supplier of the safety data sheet

Manufacturer

Kumho Petrochemical Co. Ltd 64, Sanggae-ro, Nam-gu, Ulsan, 44786, Republic of Korea T +82-52-259-6051~7 - F +82-52-259-6053 Supplier TsafeE GmbH Landwehrpl 6, 66111, Saarbruecken, Germany T +49 177 9166175 shkim@tsafeg.com

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Germany	Giftinformationszentrum-Nord der Länder Bremen, Hamburg, Niedersachsen und Schleswig- Holstein (GIZ-Nord) Universitätsmedizin Göttingen - Georg-August-Universität	Robert-Koch Straße 40 37075 Göttingen	+49 (0) 551 19240	(English only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture	
Classification according to Regulation (EC) No. 1272/2008 [CLP]	
Carcinogenicity, Category 1B	H350
Hazardous to the aquatic environment — Chronic Hazard, Category 3	H412
Full text of H statements : see section 16	

Adverse physicochemical, human health and environmental effects

May cause cancer. Harmful to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (I	EC) No. 1272/2008 [CLP]
Hazard pictograms (CLP)	
	GHS08
Signal word (CLP)	: Danger
Contains	: Extracts (petroleum),

: Extracts (petroleum), heavy paraffinic distillate solvent

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Hazard statements (CLP)	 H350 - May cause cancer. H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP)	 P201 - Obtain special instructions before use. P202 - Do not handle until all safety precautions have been read and understood.
	P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
	P308+P313 - IF exposed or concerned: Get medical advice/attention. P405 - Store locked up.
	P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
EUH-statements	: EUH208 - Contains N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine. May produce an allergic reaction.

2.3. Other hazards

Mixture does not contain substance (s) classified as PBT or vPvB in concentrations above 0,1%.

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]
STYRENE/BUTADIENE COPOLYMER	(CAS-No.) 9003-55-8	66 – 70	Not classified
Extracts (petroleum), heavy paraffinic distillate solvent	(CAS-No.) 64742-04-7 (EC-No.) 265-103-7	26 – 28	Carc. 1B, H350
Rosin, potassium salts	(CAS-No.) 61790-50-9 (EC-No.) 263-142-4	1 – 5	Eye Irrit. 2, H319
Fatty acids, C14-18 and C16-18-unsatd	(CAS-No.) 67701-06-8 (EC-No.) 266-930-6	1 – 5	Not classified
N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine	(CAS-No.) 793-24-8 (EC-No.) 212-344-0	< 0.2	Acute Tox. 4 (Oral), H302 (ATE=893 mg/kg bodyweight) Skin Sens. 1, H317 Repr. 1B, H360 Aquatic Acute 1, H400 (M=10) Aquatic Chronic 1, H410 (M=10)

Full text of H-statements: see section 16

SECTION 4: First aid measures	
4.1. Description of first aid measures	
First-aid measures general	: IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Move the affected person away from the contaminated area and into the fresh air. Do not give mouth-to-mouth resuscitation if victim ingested or inhaled the substance. If breathing is difficult, trained personnel should give oxygen. Get medical attention immediately if irritation persists.
First-aid measures after skin contact	: Remove contaminated clothing. Immediately rinse with plenty of water (for at least 15 minutes). Get medical attention immediately if irritation persists. Wash skin with plenty of water. Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

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First-aid measures after eye contact	: Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Rinse eyes with water as a precaution.	
First-aid measures after ingestion	: Rinse mouth. 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. Call a poison center or a doctor if you feel unwell.	
4.2. Most important symptoms and e	ffects, both acute and delayed	
Symptoms/effects after inhalation Symptoms/effects after skin contact	 HARMFUL IF INHALED. Fumes are irritating to the respiratory system. Prolonged or repeated contact may dry skin and cause irritation. 	

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 Unsuitable extinguishing media	Dry chemical. dry sand. Water spray. Dry powder. Foam.Do not use a water jet since it may cause the fire to spread.	
5.2. Special hazards arising from the subst	tance or mixture	
Fire hazard Hazardous decomposition products in case of fire	 release of irritant gases/vapours. Could be ignited by friction, heat, sparks or flames. Contains gas under pressure; may explode if heated. Toxic fumes may be released. Thermal decomposition generates : Carbon oxides (CO, CO2). Toxic gases are released. Toxic vapours are released. 	
5.3. Advice for firefighters		
Firefighting instructions	: Keep upwind. For massive fires use unmanned hose holders or monitor nozzles, or withdraw from the area and allow fire to burn. Cool containers with flooding quantities of water until well after fire is out. Fight fire from safe distance and protected location.	
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.	

SECTION 6: Accidental release measures		
6.1. Personal precautions, protective equipm	ent and emergency procedures	
6.1.1. For non-emergency personnel		
Emergency procedures :	Only qualified personnel equipped with suitable protective equipment may intervene. Ventilation.	
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". Avoid ignition sources. Keep upwind. Keep unnecessary and unprotected personnel away from the spillage. Avoid contact with skin and eyes.	

6.2. Environmental precautions

Avoid release to the environment. Avoid the spillage or runoff entering drains, sewers or watercourses. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up		
Methods for cleaning up	Mechanically recover the product. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. In case of large spillages: Keep upwind. Collect all waste in suitable and labelled containers and dispose according to local legislation. Notify authorities if product enters sewers or public waters.	
Other information	: Dispose of materials or solid residues at an authorized site.	

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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. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Take all necessary technical measures to avoid or minimize the release of the product on the workplace. Limit quantities of product at the minimum necessary for handling and limit the number of exposed workers. Provide local exhaust or general room ventilation. Wear personal protective equipment. Floors, walls and other surfaces in the hazard area must be cleaned regularly.		
Hygiene measures :	Separate working clothes from town clothes. Launder separately. 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 :	Protect from heat and direct sunlight. Keep cool. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store locked up. Keep container tightly closed. Store in a well-ventilated place.		

7.3. Specific end use(s)

Not available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine (793-24-8)		
Germany - Occupational Exposure Limits (TRGS 900)		
Local name	N-1,3-Dimethylbutyl-N'-phenyl-p-phenylendiamin	
AGW (OEL TWA) [1]	2 mg/m³ (E)	
Peak exposure limitation factor	2(II)	
Remark	DFG;Y;Sh	
Regulatory reference	TRGS900	

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.

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8.2.2. Personal protection equipment

Personal protective equipment:

Gloves.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:	
Safety glasses. Splash goggles. EN 166	

8.2.2.2. Skin protection

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

Respiratory protective device with a particle filter. In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

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		Solid
Physical state	-	
Colour	-	dark brown.
Odour	:	mild.
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	Not applicable
Boiling point	:	Not available
Flammability	:	Non flammable.
Explosive limits	:	Not applicable
Lower explosive limit (LEL)	:	Not applicable
Upper explosive limit (UEL)	:	Not applicable
Flash point	:	≈ 246 °C
Auto-ignition temperature	:	> 388 °C
Decomposition temperature	:	Not available
рН	:	Not available
pH solution	:	Not available
Viscosity, kinematic	:	Not applicable
Solubility	:	insoluble in water.
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50 °C	:	Not available
Density	:	Not available
Relative density	:	Not available
Relative vapour density at 20 °C	:	Not applicable

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Particle size	:	Not available
Particle size distribution	:	Not available
Particle shape	:	Not available
Particle aspect ratio	:	Not available
Particle aggregation state	:	Not available
Particle agglomeration state	:	Not available
Particle specific surface area	:	Not available
Particle dustiness	:	Not available

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

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SECT	ION 10:	Stability a	nd 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

Direct sunlight. No flames, no sparks. Eliminate all sources of ignition. Heat.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Carbon oxides (CO, CO2). Hydrocarbons. Toxic gases are released. Toxic vapours are released.

SECTION 11: Toxicological information		
11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008		
Acute toxicity (oral) Acute toxicity (dermal) Acute toxicity (inhalation)	 Not available Not available Not available 	
Extracts (petroleum), heavy paraffinic distillate solvent (64742-04-7)		
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)	
LD50 dermal rabbit	> 3000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)	
LC50 Inhalation - Rat	> 5 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)	

Rosin, potassium salts (61790-50-9)	
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

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Fatty acids, C14-18 and C16-18-unsatd (67701-06-8)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Guideline: EU Method B.1 (Acute Toxicity (Oral)), Guideline: other:Bewertung Wassergefährdender Stoffe, II Bestimmung der akuten, oralen Säugetiertoxizität, Ad-hoc- Arbeitsguppe I (Obmann Dr. Niemits), LTwS, nr. 10, September 1979
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 434 (Acute Dermal Toxicity - Fixed Dose Procedure)
LC50 Inhalation - Rat	> 0.1621 mg/l air Animal: rat

N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine (793-24-8)	
LD50 oral rat	1005 mg/kg bodyweight male
LD50 oral	893 mg/kg bodyweight female rat
LD50 dermal rabbit	> 7940 mg/kg bodyweight Animal: rabbit
Skin corrosion/irritation	: Not available
Serious eye damage/irritation	: Not available
Respiratory or skin sensitisation	: Not available
Germ cell mutagenicity	: Not available
Carcinogenicity	: May cause cancer.

N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine (793-24-8)	
NOAEL (male/female, rat)	84.8-109.5 mg/kg bw/day

Reproductive toxicity	:	Not available
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N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine (793-24-8)	
NOAEL (animal/male, F0/P)	60 mg/kg
NOAEL (animal/female, F0/P)	7 mg/kg
NOAEL (neonatal, F1)	20 mg/kg/day (rat)
NOAEL (adult, F1)	60 mg/kg/day (rat)
STOT-single exposure : Not available	

STOT-repeated exposure	:	Not available
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Extracts (petroleum), heavy paraffinic distillate solvent (64742-04-7)	
LOAEL (oral, rat, 90 days)	125 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
NOAEL (dermal, rat/rabbit, 90 days)	< 30 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 411 (Subchronic Dermal Toxicity: 90-Day Study)

Fatty acids, C14-18 and C16-18-unsatd (67701-06-8)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine (793-24-8)	
	100 mg/kg bodyweight Animal: rat, Guideline: other:Guideline for 28-day Repeat Dose Toxicity Testing of Chemicals (Japan)

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NOAEL (oral, rat, 90 days)	20 mg/kg bodyweight Animal: rat, Guideline: other:Guideline for 28-day Repeat Dose Toxicity Testing of Chemicals (Japan)
Aspiration hazard :	Not available
КИМНО 1712	
Viscosity, kinematic	Not applicable
11.2. Information on other hazards	

No additional information available

SECTION 12: Ecological information	
12.1. Toxicity	
Ecology - general	: Harmful to aquatic life with long lasting effects. Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Not available
Hazardous to the aquatic environment, long-term (chronic) Not rapidly degradable	: Harmful to aquatic life with long lasting effects.

Rosin, potassium salts (61790-50-9)	
LC50 - Fish [1]	1.7 mg/l Pimephales promelas

Fatty acids, C14-18 and C16-18-unsatd (67701-06-8)	
ErC50 algae	205.42 mg/l Skeletonema costatum (marine diatom)
LC50, aquatic invertebrates	357.5 mg/l (copepod Acartia tonsa)

N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine (793-24-8)	
LC50 - Fish [1]	0.028 mg/l Test organisms (species): Oryzias latipes
EC50 - Crustacea [1]	0.23 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	0.335 mg/l Pseudokirchneriella subcapitata
LOEC (chronic)	0.087 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	0.028 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	0.0037 mg/l Test organisms (species): Oryzias latipes Duration: '30 d'
NOEC chronic algae	0.23 mg/l Desmodesmus subspicatus

12.2. Persistence and degradability

N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine (793-24-8)		
Biodegradation	2 % 4 weeks	
DT50	1.7 Hours	
Hydrolysis	8 Hours (@ 26°C)	
12.3. Bioaccumulative potential		
N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine (793-24-8)		

BCF - Fish [1]

1.2 – 23 Cyprinus carpio (Common carp)

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Bioconcentration factor (BCF REACH)	568.7	
12.4. Mobility in soil		
No additional information available		
12.5. Results of PBT and vPvB assessment		
КИМНО 1712		
Mixture does not contain substance (s) classified as PB	T or vPvB in concentrations above 0,1%.	
12.6. Endocrine disrupting properties		
No additional information available		
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. External treatment and disposal of waste should comply with applicable local and/or national regulations. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Depending on the local regulations it may be disposed of as solid waste or incinerated in a suitable installation. Wastes from incineration or pyrolysis of waste. Oil-Water Separation.

SECTION 14: Transport information

ADR	IMDG	ΙΑΤΑ	ADN	RID
14.1. UN number or ID I	number	· · ·	· · · · · ·	
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.2. UN proper shippir	ng name			
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.3. Transport hazard	class(es)	· · ·	l	
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.4. Packing group				
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated
14.5. Environmental ha	zards			
Not regulated	Not regulated	Not regulated	Not regulated	Not regulated

14.6. Special precautions for user

Overland transport Not regulated Transport by sea Not regulated Air transport Not regulated

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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

15.1.2. National regulations

Germany

Employment restrictions

Joint storage table

Joint storage permitted for

Water hazard class (WGK) Hazardous Incident Ordinance (12. BImSchV) Storage class (LGK, TRGS 510)

- : Observe restrictions according Act on the Protection of Working Mothers (MuSchG) Observe restrictions according Act on the Protection of Young People in Employment (JArbSchG)
- : WGK 3, Highly hazardous to water (Classification according to AwSV, Annex 1)
- : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)
- : LGK 6.1D Non-combustible substances of acute toxicity, category 3 / hazardous substances that are toxic or produce chronic effects

LGK 1	LGK 2A	LGK 2B	LGK 3	LGK 4.1A
LGK 4.1B	LGK 4.2	LGK 4.3	LGK 5.1A	LGK 5.1B
LGK 5.1C	LGK 5.2	LGK 6.1A	LGK 6.1B	LGK 6.1C
LGK 6.1D	LGK 6.2	LGK 7	LGK 8A	LGK 8B
LGK 10	LGK 11	LGK 12	LGK 13	LGK 10-13

Joint storage not permitted for : LGK 1, LGK 2A, LGK 4.1A, LGK 5.1A, LGK 5.1C, LGK 5.2, LGK 6.2, LGK 7 Joint storage with restrictions permitted for : LGK 3, LGK 4.1B, LGK 4.2, LGK 4.3, LGK 5.1B

: LGK 2B, LGK 6.1A, LGK 6.1B, LGK 6.1C, LGK 6.1D, LGK 8A, LGK 8B, LGK 10, LGK 11, LGK 12, LGK 13, LGK 10-13

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	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)

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DMELDerived Minimal Effect levelDNELDerived-No Effect LevelEC-No.European Community numberEC50Median effective concentrationENEuropean StandardIARCInternational Agency for Research on CancerIATAInternational Agency for Research on CancerIATAInternational Maritime Dangerous GoodsLC50Median lethal concentrationLD50Median lethal concentrationLD50Median lethal doseLOAELLowest Observed Adverse Effect LevelNOAECNo-Observed Adverse Effect ConcentrationNOAECNo-Observed Adverse Effect ConcentrationOECDOrganisation for Economic Co-operation and DevelopmentOECDOrganisation for Economic Co-operation and DevelopmentOELOccupational Exposure LimitPBTPersistent Bicaccumulative ToxicPIECPredicted No-Effect ConcentrationRIDRegulations concerning the International Carriage of Dangerous Goods by RailSDSSafety Data SheetSTFSewage treatment plantThODTheoretical oxygen demand (ThOD)TLMMedian Tolerance LimitVOCVolatile Organic CompundsCAS-No.Not Otherwise SpecifiedVPVBVery Persistent BioaccumulativeEDEndocrine disrupting properties		
EC-No.European Community numberECS0Median effective concentrationENEuropean StandardIARCInternational Agency for Research on CancerIATAInternational Agency for Research on CancerIATAInternational Agency for Research on CancerIATAInternational Maritime Dangerous GoodsLCS0Median lethal concentrationLDS0Median lethal concentrationLDS0Median lethal doseLOAELLowest Observed Adverse Effect LevelNOAECNo-Observed Adverse Effect ConcentrationNOAECNo-Observed Adverse Effect ConcentrationNOAELNo-Observed Adverse Effect ConcentrationOECDOrganisation for Economic Co-operation and DevelopmentOELOccupational Exposure LimitPBTPersistent Bioaccumulative ToxicPNECPredicted No-Effect ConcentrationRIDRegulations concerning the International Carriage of Dangerous Goods by RailSDSSafety Data SheetSTPSewage treatment plantThODTheoretical oxygen demand (ThOD)TLMMedian Tolerance LimitVOCValatie Organic CompoundsCAS-No.Chemical Abstract Service numberNO.S.Not Otherwise SpecifiedvPvBVery Persistent and Very Bioaccumulative	DMEL	Derived Minimal Effect level
EC50Median effective concentrationENEuropean StandardIARCInternational Agency for Research on CancerIATAInternational Alir Transport AssociationIMDGInternational Maritime Dangerous GoodsLC50Median lethal concentrationLD50Median lethal doseLOAELLowest Observed Adverse Effect LevelNOAECNo-Observed Adverse Effect ConcentrationNOAECNo-Observed Adverse Effect LevelNOECNo-Observed Effect ConcentrationOECDOrganisation for Economic Co-operation and DevelopmentOELOccupational Exposure LimitPBTPersistent Bioaccumulative ToxicPNECPredicted No-Effect ConcentrationRIDRegulations concerning the International Carriage of Dangerous Goods by RailSDSSafety Data SheetSTPSwage treatment plantThODTheoretical oxygen demand (ThOD)TLMMedian Tolerance LimitVOCVolatile Organic CompoundsCAS-No.Chemical Abstract Service numberN.O.S.Not Otherwise SpecifiedvPvBVery Persistent and Very Bioaccumulative	DNEL	Derived-No Effect Level
ENEuropean StandardIARCInternational Agency for Research on CancerIATAInternational Agency for Research on CancerIATAInternational Air Transport AssociationIMDGInternational Maritime Dangerous GoodsLC50Median lethal concentrationLD50Median lethal doseLOAELLowest Observed Adverse Effect LevelNOAECNo-Observed Adverse Effect LevelNOAELNo-Observed Adverse Effect LevelNOECNo-Observed Effect ConcentrationOECDOrganisation for Economic Co-operation and DevelopmentOELOccupational Exposure LimitPBTPersistent Bioaccumulative ToxicPNECRegulations concerning the International Carriage of Dangerous Goods by RailSDSSafety Data SheetSTPSewage treatment plantThODTheoretical oxygen demand (ThOD)TLMMedian Tolerance LimitVOCVolatile Organic CompoundsCAS-No.Chemical Abstract Service numberN.O.S.Not Otherwise SpecifiedvPvBVery Persistent and Very Bioaccumulative	EC-No.	European Community number
IARCInternational Agency for Research on CancerIATAInternational Air Transport AssociationIMDGInternational Maritime Dangerous GoodsLC50Median lethal concentrationLD50Median lethal concentrationLOAELLowest Observed Adverse Effect LevelNOAECNo-Observed Adverse Effect ConcentrationNOAELNo-Observed Adverse Effect LevelNOAELNo-Observed Adverse Effect LevelNOAELNo-Observed Adverse Effect LevelNOECNo-Observed Effect ConcentrationOECDOrganisation for Economic Co-operation and DevelopmentOELOccupational Exposure LimitPBTPersistent Bioaccumulative ToxicPNECPredicted No-Effect ConcentrationRIDRegulations concerning the International Carriage of Dangerous Goods by RailSDSSafety Data SheetSTPSewage treatment plantThODTheoretical oxygen demand (ThOD)TLMMedian Tolerance LimitVOCVolatile Organic CompoundsCAS-No.Chemical Abstract Service numberNO.S.Not Otherwise SpecifiedvPvBVery Persistent and Very Bioaccumulative	EC50	Median effective concentration
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IMDGInternational Maritime Dangerous GoodsLC50Median lethal concentrationLD50Median lethal doseLOAELLowest Observed Adverse Effect LevelNOAECNo-Observed Adverse Effect ConcentrationNOAELNo-Observed Adverse Effect LevelNOECNo-Observed Effect ConcentrationOECDOrganisation for Economic Co-operation and DevelopmentOELOccupational Exposure LimitPBTPersistent Bioaccumulative ToxicPNECPredicted No-Effect ConcentrationRIDRegulations concerning the International Carriage of Dangerous Goods by RailSDSSafety Data SheetSTPSewage treatment plantThODTheoretical oxygen demand (ThOD)TLMMedian Tolerance LimitVOCVolatile Organic CompoundsCAS-No.Chemical Abstract Service numberN.O.S.Not Otherwise SpecifiedvPvBVery Persistent and Very Bioaccumulative	IARC	International Agency for Research on Cancer
LC50Median lethal concentrationLD50Median lethal doseLOAELLowest Observed Adverse Effect LevelNOAECNo-Observed Adverse Effect ConcentrationNOAELNo-Observed Adverse Effect LevelNOECNo-Observed Effect ConcentrationOECDOrganisation for Economic Co-operation and DevelopmentOELOccupational Exposure LimitPBTPersistent Bioaccumulative ToxicPNECPredicted No-Effect ConcentrationRIDRegulations concerning the International Carriage of Dangerous Goods by RailSDSSafety Data SheetSTPSewage treatment plantThODTheoretical oxygen demand (ThOD)TLMMedian Tolerance LimitVOCVolatile Organic CompoundsCAS-No.Chemical Abstract Service numberN.O.S.Not Otherwise SpecifiedvPvBVery Persistent and Very Bioaccumulative	ΙΑΤΑ	International Air Transport Association
LD50Median lethal doseLOAELLowest Observed Adverse Effect LevelNOAECNo-Observed Adverse Effect ConcentrationNOAELNo-Observed Adverse Effect ConcentrationNOECNo-Observed Effect ConcentrationOECDOrganisation for Economic Co-operation and DevelopmentOELOccupational Exposure LimitPBTPersistent Bioaccumulative ToxicPNECPredicted No-Effect ConcentrationRIDRegulations concerning the International Carriage of Dangerous Goods by RailSDSSafety Data SheetSTPSewage treatment plantThODTheoretical oxygen demand (ThOD)TLMMedian Tolerance LimitVOCVolatile Organic CompoundsCAS-No.Chemical Abstract Service numberN.O.S.Not Otherwise SpecifiedvPvBVery Persistent and Very Bioaccumulative	IMDG	International Maritime Dangerous Goods
LOAELLowest Observed Adverse Effect LevelNOAECNo-Observed Adverse Effect ConcentrationNOAELNo-Observed Adverse Effect LevelNOECNo-Observed Effect ConcentrationOECDOrganisation for Economic Co-operation and DevelopmentOELOccupational Exposure LimitPBTPersistent Bioaccumulative ToxicPNECPredicted No-Effect ConcentrationRIDRegulations concerning the International Carriage of Dangerous Goods by RailSDSSafety Data SheetSTPSewage treatment plantThODTheoretical oxygen demand (ThOD)TLMMedian Tolerance LimitVOCVolatile Organic CompoundsCAS-No.Chemical Abstract Service numberN.O.S.Not Otherwise SpecifiedvPvBVery Persistent and Very Bioaccumulative	LC50	Median lethal concentration
NOAECNo-Observed Adverse Effect ConcentrationNOAELNo-Observed Adverse Effect LevelNOECNo-Observed Effect ConcentrationOECDOrganisation for Economic Co-operation and DevelopmentOELOccupational Exposure LimitPBTPersistent Bioaccumulative ToxicPNECPredicted No-Effect ConcentrationRIDRegulations concerning the International Carriage of Dangerous Goods by RailSDSSafety Data SheetSTPSewage treatment plantThODTheoretical oxygen demand (ThOD)TLMMedian Tolerance LimitVOCVolatile Organic CompoundsCAS-No.Chemical Abstract Service numberN.O.S.Not Otherwise SpecifiedvPvBVery Persistent and Very Bioaccumulative	LD50	Median lethal dose
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PNECPredicted No-Effect ConcentrationRIDRegulations concerning the International Carriage of Dangerous Goods by RailSDSSafety Data SheetSTPSewage treatment plantThODTheoretical oxygen demand (ThOD)TLMMedian Tolerance LimitVOCVolatile Organic CompoundsCAS-No.Chemical Abstract Service numberN.O.S.Not Otherwise SpecifiedvPvBVery Persistent and Very Bioaccumulative	OEL	Occupational Exposure Limit
RIDRegulations concerning the International Carriage of Dangerous Goods by RailSDSSafety Data SheetSTPSewage treatment plantThODTheoretical oxygen demand (ThOD)TLMMedian Tolerance LimitVOCVolatile Organic CompoundsCAS-No.Chemical Abstract Service numberN.O.S.Not Otherwise SpecifiedvPvBVery Persistent and Very Bioaccumulative	РВТ	Persistent Bioaccumulative Toxic
SDSSafety Data SheetSTPSewage treatment plantThODTheoretical oxygen demand (ThOD)TLMMedian Tolerance LimitVOCVolatile Organic CompoundsCAS-No.Chemical Abstract Service numberN.O.S.Not Otherwise SpecifiedvPvBVery Persistent and Very Bioaccumulative	PNEC	Predicted No-Effect Concentration
STPSewage treatment plantThODTheoretical oxygen demand (ThOD)TLMMedian Tolerance LimitVOCVolatile Organic CompoundsCAS-No.Chemical Abstract Service numberN.O.S.Not Otherwise SpecifiedvPvBVery Persistent and Very Bioaccumulative	RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
ThODTheoretical oxygen demand (ThOD)TLMMedian Tolerance LimitVOCVolatile Organic CompoundsCAS-No.Chemical Abstract Service numberN.O.S.Not Otherwise SpecifiedvPvBVery Persistent and Very Bioaccumulative	SDS	Safety Data Sheet
TLMMedian Tolerance LimitVOCVolatile Organic CompoundsCAS-No.Chemical Abstract Service numberN.O.S.Not Otherwise SpecifiedvPvBVery Persistent and Very Bioaccumulative	STP	Sewage treatment plant
VOC Volatile Organic Compounds CAS-No. Chemical Abstract Service number N.O.S. Not Otherwise Specified vPvB Very Persistent and Very Bioaccumulative	ThOD	Theoretical oxygen demand (ThOD)
CAS-No. Chemical Abstract Service number N.O.S. Not Otherwise Specified vPvB Very Persistent and Very Bioaccumulative	TLM	Median Tolerance Limit
N.O.S. Not Otherwise Specified vPvB Very Persistent and Very Bioaccumulative	VOC	Volatile Organic Compounds
vPvB Very Persistent and Very Bioaccumulative	CAS-No.	Chemical Abstract Service number
	N.O.S.	Not Otherwise Specified
ED Endocrine disrupting properties	vPvB	Very Persistent and Very Bioaccumulative
	ED	Endocrine disrupting properties

Full text of H- and EUH-statements:	
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Carc. 1B	Carcinogenicity, Category 1B
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Repr. 1B	Reproductive toxicity, Category 1B
Skin Sens. 1	Skin sensitisation, Category 1
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

H319	Causes serious eye irritation.
H350	May cause cancer.
H360	May damage fertility or the unborn child.
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.
EUH208	Contains N-1,3-dimethylbutyl-N'-phenyl-p-phenylenediamine. May produce an allergic reaction.

The classification complies with : ATP 12

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.