



COLTACK EVOLUTION

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Reference number: 901g

Issue date: 08/07/2020 Revision date: 14/03/2023 Supersedes version of: 17/02/2023 Version: 3.0

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

1.1. Product identifier

Product form : Mixture
Trade name : COLTACK EVOLUTION
Product code : EU-SDS_901
Product group : Trade product

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

1.2.1. Relevant identified uses

Main use category : Professional use

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

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67025 STRASBOURG
France
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1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
Malta	Medicines & Poisons Info Office	Mater Dei Hospital Msida MSD 2090 Msida	+356 2545 6508	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (inhalation:dust,mist) Category 4 H332
Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 2 H319
Respiratory sensitisation, Category 1 H334
Skin sensitisation, Category 1 H317
Carcinogenicity, Category 2 H351
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation H335
Specific target organ toxicity – Repeated exposure, Category 2 H373
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Suspected of causing cancer. May cause damage to organs through prolonged or repeated exposure. Harmful if inhaled. May cause respiratory irritation. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

COLTACK EVOLUTION

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

2.2. Label elements

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

Hazard pictograms (CLP)



GHS07

GHS08

Signal word (CLP)

: Danger

Contains

: Isocyanic acid, polymethylenepolyphenylene ester; Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate; 4-methylbenzenesulfonyl isocyanate; 4,4'-Methylenediphenyldiisocyanate (MDI); 4,4'-Methylenediphenyl diisocyanate, oligomers

Hazard statements (CLP)

: H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H319 - Causes serious eye irritation.
H332 - Harmful if inhaled.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 - May cause respiratory irritation.
H351 - Suspected of causing cancer.
H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements (CLP)

: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor.

Extra phrases

: As from 24 August 2023 adequate training is required before industrial or professional use.

2.3. Other hazards

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 %

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]
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate (Note 2)(Note C)	EC-No.: 905-806-4 REACH-no: 01-2119457015-45	20 – 25	Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 EUH204

COLTACK EVOLUTION

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Isocyanic acid, polymethylenepolyphenylene ester	CAS-No.: 9016-87-9 EC-No.: 618-498-9 REACH-no: Polymer	10 – 20	Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
4,4'-Methylenediphenyl diisocyanate, oligomers	CAS-No.: 25686-28-6 EC-No.: 500-040-3 REACH-no: 01-2119457013-49	10 – 20	Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373 EUH204
4,4'-Methylenediphenyldiisocyanate (MDI) substance with national workplace exposure limit(s) (IE) (Note C)(Note 2)	CAS-No.: 101-68-8 EC-No.: 202-966-0 EC Index-No.: 615-005-00-9 REACH-no: 01-2119457014-47	5 – 10	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
4-methylbenzenesulfonyl isocyanate	CAS-No.: 4083-64-1 EC-No.: 223-810-8 EC Index-No.: 615-012-00-7 REACH-no: 01-2119980050-47	0.1 – 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 STOT SE 3, H335 EUH014
4-methylbenzenesulfonyl chloride substance with national workplace exposure limit(s) (IE, GB)	CAS-No.: 98-59-9 EC-No.: 202-684-8 REACH-no: 01-2119971273-36	< 0.1	Met. Corr. 1, H290 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	EC-No.: 905-806-4 REACH-no: 01-2119457015-45	(0.1 ≤ C < 100) Resp. Sens. 1, H334 (5 ≤ C < 100) Skin Irrit. 2, H315 (5 ≤ C < 100) Eye Irrit. 2, H319 (5 ≤ C < 100) STOT SE 3, H335
4,4'-Methylenediphenyldiisocyanate (MDI)	CAS-No.: 101-68-8 EC-No.: 202-966-0 EC Index-No.: 615-005-00-9 REACH-no: 01-2119457014-47	(0.1 ≤ C ≤ 100) Resp. Sens. 1, H334 (5 ≤ C ≤ 100) Eye Irrit. 2, H319 (5 ≤ C ≤ 100) Skin Irrit. 2, H315 (5 ≤ C ≤ 100) STOT SE 3, H335
4-methylbenzenesulfonyl isocyanate	CAS-No.: 4083-64-1 EC-No.: 223-810-8 EC Index-No.: 615-012-00-7 REACH-no: 01-2119980050-47	(5 ≤ C ≤ 100) Eye Irrit. 2, H319 (5 ≤ C ≤ 100) STOT SE 3, H335 (5 ≤ C ≤ 100) Skin Irrit. 2, H315

COLTACK EVOLUTION

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

- Note 2: The concentration of isocyanate stated is the percentage by weight of the free monomer calculated with reference to the total weight of the mixture.
- Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.
- 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 general : IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
- First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- 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

- Symptoms/effects after inhalation : May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.
- Symptoms/effects after eye contact : Eye 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 : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

- 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.

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. Do not breathe dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

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.

COLTACK EVOLUTION

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
- 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 : Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes.
- Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. 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 locked up. Store in a well-ventilated place. Keep container tightly closed. 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

4,4'-Methylenediphenyldiisocyanate (MDI) (101-68-8)	
Ireland - Occupational Exposure Limits	
Local name	4,4'-Methylene-diphenyl diisocyanate (as —NCO) [MDI]
OEL TWA [2]	0.005 ppm
Remark	Sens. (In the workplace respiratory or dermal exposures to sensitising agents may occur. Sensitizers may evoke respiratory or dermal reactions, e.g. asthma, rhinitis and allergic contact dermatitis. The notation does not distinguish between respiratory or dermal sensitisation. Chemical agents that are sensitizers present special problems in the workplace. Should an employee become sensitised, subsequent exposure may cause intense responses, even at low exposure concentrations well below the OELV. Exposure should be eliminated or significantly reduced through control measures such as engineering and process controls and use of personal protective equipment (PPE))
Regulatory reference	Chemical Agents Code of Practice 2021
4-methylbenzenesulfonyl chloride (98-59-9)	
Ireland - Occupational Exposure Limits	
Local name	p-Toluenesulphonyl chloride
OEL STEL	5 mg/m ³
Regulatory reference	Chemical Agents Code of Practice 2020
United Kingdom - Occupational Exposure Limits	
Local name	p-Toluenesulphonyl chloride

COLTACK EVOLUTION

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

4-methylbenzenesulfonyl chloride (98-59-9)	
WEL STEL (OEL STEL)	5 mg/m ³
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

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

Personal protective equipment symbol(s):



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:

[In case of inadequate ventilation] wear respiratory protection.

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	: Liquid
Colour	: Not available
Odour	: Not available
Odour threshold	: Not available
Melting point	: Not applicable

COLTACK EVOLUTION

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Freezing point	: Not available
Boiling point	: > 35 °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	: Not available
Viscosity, kinematic	: 4672.897 mm ² /s
Viscosity, dynamic	: 5000 mPa.s
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 1.07 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 additional information available

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)	: Harmful if inhaled.

COLTACK EVOLUTION

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

COLTACK EVOLUTION	
ATE CLP (dust,mist)	2.375 mg/l/4h
Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
LD50 oral rat	> 10000 mg/kg Method OECD TG401
LD50 dermal rabbit	> 9400 mg/kg Method OECD TG402
LC50 Inhalation - Rat	431 mg/m ³
LC50 Inhalation - Rat (Dust/Mist)	0.49 mg/l/4h OECD 403
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: other:84/449/EEC (Gazette of the European Community, No. L 251, of 19 Sept, 1984, page 96)
LD50 dermal rabbit	> 9400 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	368 mg/m ³
4-methylbenzenesulfonyl isocyanate (4083-64-1)	
LD50 oral rat	2330 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 2080 - 2600
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))
4,4'-Methylenediphenyldiisocyanate (MDI) (101-68-8)	
LD50 oral rat	> 2000 mg/kg Source: ECHA
LD50 dermal rabbit	> 9400 mg/kg Source: ECHA
4,4'-Methylenediphenyl diisocyanate, oligomers (25686-28-6)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
LD50 dermal rabbit	> 9400 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	368 – 559 mg/m ³
4-methylbenzenesulfonyl chloride (98-59-9)	
LD50 oral rat	4680 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 4280 - 5130
Skin corrosion/irritation	: Causes skin irritation.
Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
Additional information	(OECD 404 method)
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitisation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
4,4'-Methylenediphenyl diisocyanate, oligomers (25686-28-6)	
Additional information	May cause respiratory irritation.
Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
Additional information	(OECD 406 method)
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.

COLTACK EVOLUTION

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

4,4'-Methylenediphenyldiisocyanate (MDI) (101-68-8)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
STOT-single exposure	May cause respiratory irritation.
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	
STOT-single exposure	May cause respiratory irritation.
4-methylbenzenesulfonyl isocyanate (4083-64-1)	
STOT-single exposure	May cause respiratory irritation.
4,4'-Methylenediphenyldiisocyanate (MDI) (101-68-8)	
STOT-single exposure	May cause respiratory irritation.
4,4'-Methylenediphenyl diisocyanate, oligomers (25686-28-6)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	
NOAEC (inhalation, rat, vapour, 90 days)	1 mg/m ³ air
4,4'-Methylenediphenyldiisocyanate (MDI) (101-68-8)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
4,4'-Methylenediphenyl diisocyanate, oligomers (25686-28-6)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
4-methylbenzenesulfonyl chloride (98-59-9)	
LOAEL (oral, rat, 90 days)	150 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Aspiration hazard	: Not classified
COLTACK EVOLUTION	
Viscosity, kinematic	4672.897 mm ² /s
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	
Viscosity, kinematic	9.09 mm ² /s Temp.: '20°C' Parameter: 'cStcSt'
4-methylbenzenesulfonyl chloride (98-59-9)	
Viscosity, kinematic	Not applicable

11.2. Information on other hazards

No additional information available

COLTACK EVOLUTION

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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
Hazardous to the aquatic environment, long-term (chronic)	: Not classified
Not rapidly degradable	

Isocyanic acid, polymethylenepolyphenylene ester (9016-87-9)	
LC50 - Fish [1]	> 1000 mg/l Danio Rerio, OECD TG203
EC50 - Crustacea [1]	> 1000 mg/l Daphnia Magna, OECD TG202
EC50 72h - Algae [1]	> 1640 mg/l Scenedesmus subspicatus, OECD TG201
NOEC chronic crustacea	> 10 mg/l /21d Daphnia Magna, OECD TG202

Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	
LC50 - Fish [1]	> 1000 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
NOEC (chronic)	≥ 10 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

4-methylbenzenesulfonyl isocyanate (4083-64-1)	
LC50 - Fish [1]	> 45 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	30 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	25 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

4,4'-Methylenediphenyldiisocyanate (MDI) (101-68-8)	
LC50 - Fish [1]	> 1000 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	> 1000 mg/l
NOEC (chronic)	≥ 10 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

4,4'-Methylenediphenyl diisocyanate, oligomers (25686-28-6)	
LC50 - Fish [1]	> 1000 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
NOEC (chronic)	≥ 10 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

4-methylbenzenesulfonyl chloride (98-59-9)	
LC50 - Fish [1]	55 mg/l Test organisms (species): Oryzias latipes
LC50 - Fish [2]	> 100 mg/l Test organisms (species): Oryzias latipes
EC50 - Crustacea [1]	70 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	> 334 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

12.2. Persistence and degradability

4-methylbenzenesulfonyl isocyanate (4083-64-1)	
Persistence and degradability	Readily biodegradable.

COLTACK EVOLUTION

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

4-methylbenzenesulfonyl isocyanate (4083-64-1)

Biodegradation	83 %
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4-methylbenzenesulfonyl chloride (98-59-9)

Persistence and degradability	Readily biodegradable.
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Biodegradation	60 %
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12.3. Bioaccumulative potential

4,4'-Methylenediphenyldiisocyanate (MDI) (101-68-8)

Partition coefficient n-octanol/water (Log Pow)	4.51 Source: ECHA
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

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
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				

COLTACK EVOLUTION

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

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

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)

Reference code	Applicable on	Entry title or description
74.	Isocyanic acid, polymethylenepolyphenylene ester ; Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate ; 4,4'-Methylenediphenyl diisocyanate, oligomers ; 4,4'-Methylenediphenyldiisocyanate (MDI)	Diisocyanates, O = C=N-R-N = C=O, with R an aliphatic or aromatic hydrocarbon unit of unspecified length

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

VOC Directive (2004/42)

Decopaint Directive (2004/42/EC) - Annex II : A/i (Paints and Varnishes - One-pack performance coatings)
Maximum allowed concentration : 500 g/l VOC

COLTACK EVOLUTION

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Maximum content of VOC : 143.19 g/l VOC

Explosives Precursors Regulation (2019/1148)

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

Drug Precursors Regulation (273/2004)

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

15.1.2. National regulations

No additional information available

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)
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

COLTACK EVOLUTION

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Abbreviations and acronyms:	
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

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Carc. 2	Carcinogenicity, Category 2
EUH014	Reacts violently with water.
EUH204	Contains isocyanates. May produce an allergic reaction.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H290	May be corrosive to metals.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
Met. Corr. 1	Corrosive to metals, Category 1
Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation

The classification complies with : ATP 12

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.