

SAFETY DATA SHEET

ACCORDING TO REGULATION (EC) 1907/2006



Product name: **5082 Adhesion Primer**

Creation date: **30.01.2024**, Revision: **21.05.2024**, Version: **2.0**

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

1.1 Product identifier

Product name

5082 Adhesion Primer

UFI:

R819-PCR1-500T-0G5D



<https://my.chemius.net/p/Ble0J6/en/pd/en>

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

Relevant identified uses

Black primer

Uses advised against

No information.

1.3 Details of the supplier of the safety data sheet

Supplier

SILCO d.o.o.
Sentrupert 5a
3303 Gomilsko, Slovenia
+386 3 703 3180
msds@silco.si

1.4 Emergency Telephone Number

Emergency

111

Supplier

112

Section 2: Hazards identification

2.1 Classification of the substance or mixture

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

Flam. Liq. 2; H225 Highly flammable liquid and vapour.

Skin Irrit. 2; H315 Causes skin irritation.

Skin Sens. 1; H317 May cause an allergic skin reaction.

Eye Irrit. 2; H319 Causes serious eye irritation.

Resp. Sens. 1; H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

STOT SE 3; H335 May cause respiratory irritation.

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STOT SE 3; H336 May cause drowsiness or dizziness.
Carc. 2; H351 Suspected of causing cancer.

2.2 Label elements

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



Signal word: DANGER

H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P333 + P311 If skin irritation or rash occurs: Call a POISON CENTER or doctor/physician.
P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P501 Dispose of contents/container in accordance with national regulation.

Contains:

4,4'-methylenediphenyl diisocyanate, isomers and homologes
'4,4'-methylenediphenyl diisocyanate
hexamethylene-di-isocyanate

Special provisions

Persons already sensitised to diisocyanates may develop allergic reactions when using this product. Persons suffering from asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation unless a protective mask with an appropriate gas filter (i.e. type A1 according to standard EN 14387) is used.

2.3 Other hazards

PBT/vPvB

No information

Endocrine disrupting properties

No information

Additional information

9% of the mixture contains components with unknown oral toxicity. 12% of the mixture consists of ingredients with unknown acute inhalation toxicity. Contains 17% of a mixture with an unknown hazard for the aquatic environment.

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Section 3: Composition/information on ingredients

3.1 Substances

For mixtures see 3.2.

3.2 Mixtures

Name	CAS EC Index Reach	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Concentration Limits
butanone	78-93-3 201-159-0 606-002-00-3	50-60	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336 EUH066	/
n-butyl acetate	123-86-4 204-658-1 607-025-00-1	10-15	Flam. Liq. 3; H226 STOT SE 3; H336 EUH066	/
Aromatic, aliphatic polyisocyanate	26426-91-5 642-372-2 -	5-10	Skin Sens. 1; H317 Eye Irrit. 2; H319	/
4,4'-methylene diphenyl diisocyanate, isomers and homologes	9016-87-9 202-966-0 -	5-10	Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 Acute Tox. 4; H332 Resp. Sens. 1; H334 STOT SE 3; H335 Carc. 2; H351 STOT RE 2; H373	/
methylenediphenyl diisocyanate	- 905-806-4 - 01-2119457015-45	5-10	Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 Acute Tox. 4; H332 Resp. Sens. 1; H334 STOT SE 3; H335 Carc. 2; H351 STOT RE 2; H373	Skin Irrit. 2; H315; C ≥ 5% Eye Irrit. 2; H319; C ≥ 5% Resp. Sens. 1; H334; C ≥ 0.1% STOT SE 3; H335; C ≥ 5%

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Name	CAS EC Index Reach	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Concentration Limits
Carbo n	1333-86-4 215-609-9 -	2.5-5	/	/
'4,4'- meth ylene diphe nyl diiso cyana te	101-68-8 202-966-0 615-005-00-9	2.5-5	Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 Acute Tox. 4; H332 Resp. Sens. 1; H334 STOT SE 3; H335 Carc. 2; H351 STOT RE 2; H373	Skin Irrit. 2; H315; C ≥ 5% Eye Irrit. 2; H319; C ≥ 5% Resp. Sens. 1; H334; C ≥ 0.1% STOT SE 3; H335; C ≥ 5%
[3- (2,3- epok sipro poksi)prop il]tri meto ksisil an	2530-83-8 219-784-2 -	2.5-5	Acute Tox. 4; H302 Skin Sens. 1; H317 Eye Irrit. 2; H319	/
1,6- hexa meth ylene diiso ciana te homo poly mer	28182-81-2 500-060-2 -	1-2.5	Skin Sens. 1; H317	/
1- meth oxy- 2- propy lacet ate	108-65-6 203-603-9 607-195-00-7	1-2.5	Flam. Liq. 3; H226	/
hexa meth ylene -di- isocy anate	822-06-0 212-485-8 615-011-00-1	0.01- 0.1	Skin Irrit. 2; H315 Skin Sens. 1; H317 Eye Irrit. 2; H319 Acute Tox. 3; H331 Resp. Sens. 1; H334 STOT SE 3; H335	Skin Sens. 1; H317; C ≥ 0.5% Resp. Sens. 1; H334; C ≥ 0.5%

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Name	CAS EC Index Reach	%	Classification according to Regulation (EC) No 1272/2008 (CLP)	Specific Concentration Limits
4-methyl-m-phenylene diisocyanate	584-84-9 209-544-5 - 01-2119486974-18	0.01-0.1	Skin Irrit. 2; H315 Skin Sens. 1A; H317 Eye Irrit. 2; H319 Acute Tox. 1; H330 Resp. Sens. 1A; H334 STOT SE 3; H335 Carc. 2; H351 Aquatic Chronic 3; H412	/
bis(n-octadecylstannane)	68299-15-0 269-595-4 -	0-5	STOT SE 2; H371	/

Notes for substances

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.

Section 4: First aid measures

4.1 Description of first aid measures

General notes

Never give anything by mouth to an unconscious person. Place patient in recovery position and ensure airway patency. When in doubt or if feeling unwell seek medical assistance. Show the safety data sheet and label to the physician. No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. When it is suspected, that there may still be harmful vapours/fumes present in the air, respiratory protection (mask; self contained breathing apparatus) must be used. Wash contaminated clothing with water before removing or use gloves.

Following inhalation

Remove patient to fresh air - move out of dangerous area. In case of unconsciousness bring patient into stable side position and seek medical attention. If breathing is irregular or respiratory arrest occurs provide artificial respiration. Keep at rest in a position comfortable for breathing. Seek medical help immediately.

Following skin contact

Take off all contaminated clothing. Areas of the body that have come into contact with the product must be rinsed with water. Consult a physician.

Following eye contact

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Immediately flush eyes with running water, keeping eyelids apart. Seek medical help.

Following ingestion

Do not induce vomiting! Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. Immediately consult a doctor. Show the physician the safety data sheet or label.

4.2 Most important symptoms and effects, both acute and delayed

Following inhalation

Can cause irritation of respiratory system. Symptoms include: headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, unconsciousness. Coughing, sneezing, nasal discharge, labored breathing. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Vapours may cause drowsiness and dizziness. Harmful.

Following skin contact

Itching, redness, pain. May cause sensitisation by skin contact (itching, redness, rashes).

Following eye contact

Redness, tearing, pain.

Following ingestion

May cause nausea/vomiting and diarrhea. May cause abdominal discomfort. Irritates mucous membranes in the mouth, throat, esophagus and in gastrointestinal area.

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

Carbon dioxide. Dry chemical powder. Water spray. Alcohol resistant foam.

Unsuitable extinguishing media

Full water jet.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products

In case of a fire toxic gases can be generated; do not inhale gases/smoke.

5.3 Advice for firefighters

Protective actions

In case of fire or heating do not breathe fumes/vapours. No action shall be taken involving any personal risk or without suitable training. Prolonged heating can cause an explosion. Vapours can form explosive mixtures with air. Cool containers at risk with water spray. If possible remove containers from endangered area.

Special protective equipment for fire-fighters

Firefighters should wear appropriate protective clothing for firefighters (including helmets, protective boots and gloves) (BS EN 469) and self-contained breathing apparatus (SCBA) with a full face-piece (BS EN 137).

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Additional information

No information.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment

No information.

Precautionary measures

Ensure adequate ventilation. Keep away from sources of ignition and/or heat; No smoking!

Emergency procedures

No action shall be taken involving any personal risk or without suitable training. Prevent access to unprotected personnel. Evacuate the danger zone. Do not breathe vapour or mist. Avoid contact with skin, eyes and clothing.

For emergency responders

Use personal protective equipment.

6.2 Environmental precautions

Do not allow product to reach water/drains/sewage systems or permeable soil. In case of release into the environment, inform the relevant authorities.

6.3 Methods and material for containment and cleaning up

For containment

Stem the spill if this does not pose risks.

For cleaning up

Absorb product (with inert material), collect it in special container and dispose it to a licensed hazardous-waste disposal contractor. Use only explosion-proof instruments and equipment. Use spark-proof tools. Prevent release into the sewer, water, basements or confined areas. Ventilate the premises. Clean contaminated area with plenty of water.

Other information

No information.

6.4 Reference to other sections

See also sections 8 and 13.

Section 7: Handling and storage

7.1 Precautions for safe handling

Protective measures

Measures to prevent fire

Ensure adequate ventilation. Keep away from sources of ignition - no smoking. Use spark-proof tools. Take precautionary measures against static discharges. Vapours are heavier than

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air and spread along the floor. They form explosive mixtures with air.

Measures to prevent aerosol and dust generation

Use general or local exhaust ventilation to prevent inhaling vapours and aerosols.

Measures to protect the environment

Do not discharge into drains, surface water and soil. After use immediately close container tightly.

Other measures

No information.

Advice on general occupational hygiene

Use good personal hygiene practices – wash hands at breaks and when done working with material. Do not eat, drink or smoke while working. Do not breathe vapours/mist. Avoid contact with skin, eyes and clothes. Remove contaminated clothes and wash them before reuse. Wear suitable protective equipment; see Section 8. Avoid exposure – obtain special instructions before using.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Keep in a cool, dry and well ventilated place. Protect from open fire, heat and direct sunlight. Keep away from food, drink and animal feeding stuffs. Keep away from oxidising substances. Keep away from sources of ignition – no smoking.

Packaging materials

Store only in original container.

Requirements for storage rooms and vessels

Close opened containers after use. Put the containers upright to prevent from leaking. Do not store in unlabelled containers.

Storage temperature

No information.

Storage class

No information.

Further information on storage conditions

No information.

7.3 Specific end use(s)

Recommendations

No information.

Industrial sector specific solutions

No information.

Section 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

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Name	mg/m ³	ml/m ³	Short-term value mg/m ³	Short-term value ml/m ³	Remark	Biological Tolerance Values
Butan-2-one (methyl ethyl ketone) (78-93-3)	600	200	899	300	Sk, BMGV	70 µmol butan-2-one/L in urine - Post shift
Isocyanates, all (as - NCO) Except methyl isocyanate	0.02	/	0.07	/	Sen	1 µmol isocyanate-derived diamine/mol creatinine in urine - At the end of the period of exposure
1-Methoxypropyl acetate (108-65-6)	274	50	548	100	Sk	/
Butyl acetate (123-86-4)	724	150	966	200	/	/
Carbon black (1333-86-4)	3.5	/	7	/	/	/

Information on monitoring procedures

BS EN 14042:2003 Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents. BS EN 689:2018 Workplace exposure. Measurement of exposure by inhalation to chemical agents. Strategy for testing compliance with occupational exposure limit values. BS EN 482:2021 Workplace exposure. Procedures for the determination of the concentration of chemical agents. Basic performance requirements.

DNEL/DMEL values

For product

No information.

For components

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Name	Type	Exposure route	exp. frequency	Remark	Value
1,6-hexamethylene diisocyanate homopolymer	Worker	inhalation	long term local effects	/	0.5 mg/m ³
1,6-hexamethylene diisocyanate homopolymer	Worker	inhalation	short term local effects	/	1 mg/m ³
4,4'-methylenediphenyl diisocyanate, isomers and homologues	Worker	inhalation	long term local effects	/	0.05 mg/m ³
4,4'-methylenediphenyl diisocyanate, isomers and homologues	Worker	inhalation	short term local effects	/	0.1 mg/m ³
4,4'-methylenediphenyl diisocyanate, isomers and homologues	Consumer	inhalation	long term local effects	/	0.025 mg/m ³
4,4'-methylenediphenyl diisocyanate, isomers and homologues	Consumer	inhalation	short term local effects	/	0.05 mg/m ³
[3-(2,3-epoksi)propil]trimetoksisilan	Worker	dermal	long term systemic effects	/	21 mg/kg bw/day
[3-(2,3-epoksi)propil]trimetoksisilan	Worker	inhalation	long term systemic effects	/	147 mg/m ³
[3-(2,3-epoksi)propil]trimetoksisilan	Consumer	oral	long term systemic effects	/	12.5 mg/kg bw/day

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Name	Type	Exposure route	exp. frequency	Remark	Value
[3-(2,3-epoksipropoksi)propil]trimetoksisilan	Consumer	inhalation	long term systemic effects	/	43.5 mg/kg bw/day
[3-(2,3-epoksipropoksi)propil]trimetoksisilan	Consumer	dermal	long term systemic effects	/	12.5 mg/kg bw/day
butanone	Worker	inhalation	long term systemic effects	/	600 mg/m ³
butanone	Worker	dermal	long term systemic effects	/	1161 mg/kg bw/day
butanone	Consumer	inhalation	long term systemic effects	/	106 mg/m ³
butanone	Consumer	dermal	long term systemic effects	/	412 mg/kg bw/day
butanone	Consumer	oral	long term systemic effects	/	31 mg/kg bw/day
n-butyl acetate	Worker	inhalation	long term systemic effects	/	300 mg/m ³
n-butyl acetate	Worker	inhalation	short term systemic effects	/	600 mg/m ³
n-butyl acetate	Worker	inhalation	long term local effects	/	300 mg/m ³
n-butyl acetate	Worker	inhalation	short term local effects	/	600 mg/m ³
n-butyl acetate	Worker	dermal	long term systemic effects	/	11 mg/kg bw/day
n-butyl acetate	Worker	dermal	short term systemic effects	/	11 mg/kg bw/day
n-butyl acetate	Consumer	inhalation	long term systemic effects	/	35.7 mg/m ³

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n-butyl acetate	Consumer	inhalation	short term systemic effects	/	300 mg/m ³
n-butyl acetate	Consumer	inhalation	long term local effects	/	35.7 mg/m ³
n-butyl acetate	Consumer	inhalation	short term local effects	/	300 mg/m ³
n-butyl acetate	Consumer	dermal	long term systemic effects	/	6 mg/kg bw/day
n-butyl acetate	Consumer	dermal	short term systemic effects	/	6 mg/kg bw/day
n-butyl acetate	Consumer	oral	long term systemic effects	/	2 mg/kg bw/day
n-butyl acetate	Consumer	oral	short term systemic effects	/	2 mg/kg bw/day
1-methoxy-2-propylacetate	Worker	inhalation	long term systemic effects	/	275 mg/m ³
1-methoxy-2-propylacetate	Worker	inhalation	short term local effects	/	550 mg/m ³
1-methoxy-2-propylacetate	Worker	dermal	long term systemic effects	/	796 mg/kg bw/day
1-methoxy-2-propylacetate	Consumer	inhalation	long term systemic effects	/	33 mg/m ³
1-methoxy-2-propylacetate	Consumer	inhalation	long term local effects	/	33 mg/m ³
1-methoxy-2-propylacetate	Consumer	dermal	long term systemic effects	/	320 mg/kg bw/day
1-methoxy-2-propylacetate	Consumer	oral	long term systemic effects	/	36 mg/kg bw/day
1-methoxy-2-propylacetate	Consumer	oral	short term systemic effects	/	500 mg/kg bw/day

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Name	Type	Exposure route	exp. frequency	Remark	Value
'4,4'-methylenediphenyl diisocyanate	Worker	inhalation	long term local effects	/	0.05 mg/m ³
'4,4'-methylenediphenyl diisocyanate	Worker	inhalation	short term local effects	/	0.1 mg/m ³
'4,4'-methylenediphenyl diisocyanate	Consumer	inhalation	long term local effects	/	0.025 mg/m ³
'4,4'-methylenediphenyl diisocyanate	Consumer	inhalation	short term local effects	/	0.05 mg/m ³
hexamethylene-di-isocyanate	Worker	inhalation	long term systemic effects	/	0.035 mg/m ³
hexamethylene-di-isocyanate	Worker	inhalation	long term local effects	/	0.035 mg/m ³
hexamethylene-di-isocyanate	Worker	inhalation	short term systemic effects	/	0.07 mg/m ³
4-methyl-m-phenylene diisocyanate	Worker	inhalation	short term systemic effects	/	0.14 mg/m ³
4-methyl-m-phenylene diisocyanate	Worker	inhalation	short term local effects	/	0.14 mg/m ³
4-methyl-m-phenylene diisocyanate	Consumer	inhalation	long term systemic effects	/	0.035 mg/m ³
4-methyl-m-phenylene diisocyanate	Consumer	inhalation	long term local effects	/	0.035 mg/m ³

PNEC values

For product

No information.

For components

Name	Exposure route	Remark	Value
1,6-hexamethylene diisocyanate homopolymer	fresh water	/	0.127 mg/L

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Name	Exposure route	Remark	Value
1,6-hexamethylene diisocyanate homopolymer	water, intermittent release	/	1.27 mg/L
1,6-hexamethylene diisocyanate homopolymer	marine water	/	0.013 mg/L
1,6-hexamethylene diisocyanate homopolymer	water treatment plant	/	88 mg/L
1,6-hexamethylene diisocyanate homopolymer	fresh water sediment	dry weight	266701 mg/kg
1,6-hexamethylene diisocyanate homopolymer	marine water sediment	dry weight	26670 mg/kg
1,6-hexamethylene diisocyanate homopolymer	soil	dry weight	53183 mg/kg
4,4'-methylenediphenyl diisocyanate, isomers and homologes	fresh water	/	1 mg/L
4,4'-methylenediphenyl diisocyanate, isomers and homologes	water, intermittent release	/	10 mg/L
4,4'-methylenediphenyl diisocyanate, isomers and homologes	marine water	/	0.1 mg/L
4,4'-methylenediphenyl diisocyanate, isomers and homologes	water treatment plant	/	1 mg/L
4,4'-methylenediphenyl diisocyanate, isomers and homologes	soil	dry weight	1 mg/kg
[3-(2,3-epoksi)propoksi]propil]tri metoksisilan	fresh water	/	1 mg/L
[3-(2,3-epoksi)propoksi]propil]tri metoksisilan	marine water	/	0.1 mg/L
[3-(2,3-epoksi)propoksi]propil]tri metoksisilan	water treatment plant	/	10 mg/L
[3-(2,3-epoksi)propoksi]propil]tri metoksisilan	fresh water sediment	/	3.6 mg/kg
[3-(2,3-epoksi)propoksi]propil]tri metoksisilan	marine water sediment	/	0.36 mg/kg

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Name	Exposure route	Remark	Value
[3-(2,3-epoksipropoksi)propil]tri metoksisilan	soil	/	0.14 mg/kg
butanone	fresh water	/	55.8 mg/L
butanone	water, intermittent release	/	55.8 mg/L
butanone	marine water	/	55.8 mg/L
butanone	water treatment plant	/	709 mg/L
butanone	fresh water sediment	dry weight	284.74 mg/kg
butanone	marine water sediment	dry weight	284.7 mg/kg
butanone	soil	dry weight	22.5 mg/kg
butanone	secondary poisoning	food	1000 mg/kg
n-butyl acetate	fresh water	/	0.18 mg/L
n-butyl acetate	water, intermittent release	/	0.36 mg/L
n-butyl acetate	marine water	/	0.018 mg/L
n-butyl acetate	water treatment plant	/	35.6 mg/L
n-butyl acetate	fresh water sediment	dry weight	0.981 mg/kg
n-butyl acetate	marine water sediment	dry weight	0.098 mg/kg
n-butyl acetate	soil	dry weight	0.09 mg/kg
1-methoxy-2-propylacetate	fresh water	/	0.635 mg/L
1-methoxy-2-propylacetate	water, intermittent release	/	6.35 mg/L
1-methoxy-2-propylacetate	marine water	/	0.064 mg/L
1-methoxy-2-propylacetate	water treatment plant	/	100 mg/L
1-methoxy-2-propylacetate	fresh water sediment	dry weight	3.29 mg/kg
1-methoxy-2-propylacetate	marine water sediment	dry weight	0.329 mg/kg
1-methoxy-2-propylacetate	soil	dry weight	0.29 mg/kg
'4,4'-methylenediphenyl diisocyanate	fresh water	/	1 mg/L
'4,4'-methylenediphenyl diisocyanate	water, intermittent release	/	10 mg/L
'4,4'-methylenediphenyl diisocyanate	marine water	/	0.1 mg/L

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'4,4'-methylenediphenyl diisocyanate	water treatment plant	/	1 mg/L
'4,4'-methylenediphenyl diisocyanate	soil	dry weight	1 mg/kg
hexamethylene-di-isocyanate	soil	/	0.0026 mg/kg
hexamethylene-di-isocyanate	fresh water	/	0.0774 mg/L
4-methyl-m-phenylene diisocyanate	fresh water	/	0.0125 mg/L
4-methyl-m-phenylene diisocyanate	marine water	/	0.00125 mg/L
4-methyl-m-phenylene diisocyanate	water treatment plant	/	1 mg/L
4-methyl-m-phenylene diisocyanate	water, intermittent release	/	0.125 mg/L
4-methyl-m-phenylene diisocyanate	soil	/	1 mg/L

8.2 Exposure controls

Appropriate engineering control

Substance/mixture related measures to prevent exposure during identified uses

Use good personal hygiene practices – wash hands at breaks and when done working with material. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothes. Do not eat, drink or smoke while working. Do not breathe vapours/aerosols.

Structural measures to prevent exposure

No information.

Organisational measures to prevent exposure

Remove all contaminated clothes immediately and wash them before reuse.

Technical measures to prevent exposure

Provide good ventilation and local exhaust in areas with increased concentration. Keep away from food, drink and animal feeding stuffs.

Personal protective equipment

Eye and face protection

Safety glasses with side protection (BS EN ISO 16321-1:2022).

Hand protection

Protective gloves (EN ISO 374-1:2016). Observe the manufacturer's instructions regarding the use, storage, maintenance and replacement of gloves. In case of damage or at the first signs of wear and tear, change the gloves immediately. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. The penetration time is determined by the protective glove manufacturer and must be observed.

Appropriate materials

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Skin protection

Protective antistatic clothing EN 1149 (1:2006, 2:1998 and 3:2004, 5:2008), protective antistatic shoes (EN 20345:2012). At high risk of skin exposure chemical suits (BS EN 13034:2005+A1:2009) and boots may be required (BS EN ISO 20345:2022+A1:2024).

Respiratory protection

In case of insufficient ventilation wear suitable respiratory protection. Wear suitable protective breathing mask (EN 136) with filter A2-P2 (EN 14387). For dust/gas/ vapor concentrations above the applicable filter limit, in case of oxygen concentrations below 17% or in vague conditions, autonomous self-contained breathing apparatus should be used, according to standard BS EN 137, BS EN 138.

Thermal hazards

No information.

Environmental exposure controls

Substance/mixture related measures to prevent exposure

No information.

Instruction measures to prevent exposure

No information.

Organisational measures to prevent exposure

No information.

Technical measures to prevent exposure

Do not allow product to reach drains, sewage systems or ground water.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Important health, safety and environmental information

Physical state	liquid
Shape	liquid
Colour	black
Odour	characteristic
Odour threshold	No information.
Softening point	79 °C
Boiling point or initial boiling point and boiling range	No information.
Flammability	No information.
Lower and upper explosion limit	1.8 % v/v 11.5 % v/v
Flash point	-8 °C
Auto-ignition temperature	No information.
Decomposition temperature	No information.
pH	substance/mixture is non-soluble (in water) Does not apply

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Viscosity (kinematic)	52.6 mm ² /s
Solubility	No information.
Partition coefficient n-octanol/water (log value)	No information.
Vapour pressure	No information.
Density	0.95 kg/L
Relative vapour/gas density	No information.
Particle characteristics	No information.

9.2 Other information

Information with regard to physical hazard classes

No information.

Other safety characteristics

Weight organic solvents	0 g/l
Solids content	0 % -0.0000000000000014211 vol %

Section 10: STABILITY AND REACTIVITY

10.1 Reactivity

No information.

10.2 Chemical stability

Product is stable under normal conditions of use, recommended handling and storage conditions.

10.3 Possibility of hazardous reactions

Vapours and air can form flammable or explosive mixtures.

10.4 Conditions to avoid

Protect from heat, direct sunlight, open fire, sparks.

10.5 Incompatible materials

Oxidants.

10.6 Hazardous decomposition products

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Under normal use conditions no hazardous decomposition products are expected. In case of fire/explosion vapours/gases that pose a health hazard are released.

Section 11: Toxicological information

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

(a) Acute toxicity

For components

Name	Exposure route	Type	Species	Time	Value	Method	Remark
Carbon	dermal	LD ₅₀	rabbit	/	> 3000 mg/kg	/	/
Carbon	oral	LD ₅₀	rat	/	> 15400 mg/kg	/	/
1,6-hexamethylene diisocyanate homopolymer	oral	LD ₅₀	rat	/	> 5000 mg/kg	/	/
1,6-hexamethylene diisocyanate homopolymer	dermal	LD ₅₀	rabbit	/	> 2000 mg/kg	/	/
1,6-hexamethylene diisocyanate homopolymer	inhalation	LC ₀	rat	4 h	2.18 mg/l	/	/
4,4'-methylene diisocyanate, isomers and homologues	oral	LD ₅₀	rat (male)	/	> 10000 mg/kg	/	/

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Name	Exposure route	Type	Species	Time	Value	Method	Remark
4,4'-methylenediphenyl diisocyanate, isomers and homologues	dermal	LD ₅₀	rabbit (male/female)	/	> 9400 mg/kg	/	/
4,4'-methylenediphenyl diisocyanate, isomers and homologues	inhalation	LC ₅₀	rat (male/female)	4 h	0.49 mg/l	/	dust/aerosol
[3-(2,3-epoksipropoksi)propil]trimetoksisilan	oral	LD ₅₀	rat (male/female)	/	8025 mg/kg	OECD 401	This substance or mixture has no acute oral toxicity.
[3-(2,3-epoksipropoksi)propil]trimetoksisilan	inhalation (dusts/mists)	LC ₅₀	rat (male/female)	4 h	> 5.3 mg/l	OECD 403	The substance or mixture does not cause acute inhalation toxicity.
[3-(2,3-epoksipropoksi)propil]trimetoksisilan	dermal	LD ₅₀	rabbit (male)	/	4250 mg/kg	OECD 402	/
butanone	oral	LD ₅₀	rat	/	2737 mg/kg	/	/
butanone	dermal	LD ₅₀	rabbit	/	6480 mg/kg	/	/
butanone	inhalation	LC ₅₀	rat	4 h	23.5 mg/l	/	vapour
n-butyl acetate	dermal	LD ₅₀	rabbit	/	5000 mg/kg	/	/

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Name	Exposure route	Type	Species	Time	Value	Method	Remark
n-butyl acetate	inhalation	LC ₅₀	rat	4 h	9.6 - 29.2 mg/l	/	dust/aerosol
n-butyl acetate	oral	LD ₅₀	rat	/	4700 mg/kg	/	/
1-methoxy-2-propylacetate	oral	LD ₅₀	rat	/	8530 mg/kg	/	/
1-methoxy-2-propylacetate	inhalation	LC ₅₀	rat	4 h	35.7 mg/l	/	vapour
1-methoxy-2-propylacetate	dermal	LD ₅₀	rat	/	5000 mg/kg	/	/
'4,4'-methylenediphenyl diisocyanate	oral	LD ₅₀	rat (male)	/	> 10000 mg/kg	/	/
'4,4'-methylenediphenyl diisocyanate	dermal	LD ₅₀	rabbit (male/female)	/	> 9400 mg/kg	/	/
'4,4'-methylenediphenyl diisocyanate	inhalation	LC ₅₀	rat (male/female)	4 h	0.49 mg/l	/	dust/aerosol
hexamethylene-diisocyanate	oral	LD ₅₀	rat	/	746 mg/kg	/	/

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Name	Exposure route	Type	Species	Time	Value	Method	Remark
hexamethylene-diisocyanate	dermal	LD ₅₀	rabbit	/	593 mg/kg	/	/
hexamethylene-diisocyanate	inhalation	LC ₅₀	rat	8 h	0.124 mg/l	OECD 403	vapour
4-methyl-m-phenylene diisocyanate	oral	LD ₅₀	rat (male)	/	5110 mg/kg	OECD 401	/
4-methyl-m-phenylene diisocyanate	dermal	LD ₅₀	rabbit	/	9400 mg/kg	OECD 402	/

Additional information

Harmful if inhaled.

(b) Skin corrosion/irritation

For components

Name	Species	Time	result	Method	Remark
4,4'-methylenediphenyl diisocyanate, isomers and homologues	rabbit	/	Irritating.	OECD 404	/
[3-(2,3-epoxipropoksi)propil]trimetoksisilan	rabbit	/	No skin irritation.	OECD 404	/
butanone	/	/	Irritating.	/	/
4,4'-methylenediphenyl diisocyanate	rabbit	/	Irritating.	OECD 404	/

Additional information

Causes skin and eye irritation.

(c) Serious eye damage/irritation

For components

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Name	Exposure route	Species	Time	result	Method	Remark
4,4'-methylenedi phenyl diisocyanate , isomers and homologes	/	rabbit	/	Non-irritant.	OECD 405, GLP	/
4,4'-methylenedi phenyl diisocyanate , isomers and homologes	/	/	/	/	/	According to the OECD Guideline 405 it is not irritating, but according to data on occupational exposures of humans, the substance is regarded as irritating to eyes.
[3-(2,3-epoksi)propil]tri metoksisilan	/	rabbit	/	Danger of serious eye injury.	OECD 405	/
butanone	/	/	/	Irritating.	/	/
1-methoxy-2-propylacetate	/	/	/	May cause irritation.	/	/
4,4'-methylenedi phenyl diisocyanate	/	rabbit	/	Non-irritant.	OECD 405, GLP	/
4,4'-methylenedi phenyl diisocyanate	/	/	/	/	/	According to the OECD Guideline 405 it is not irritating, but according to data on occupational exposures of humans, the substance is regarded as irritating to eyes.

(d) Respiratory or skin sensitisation

For components

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Name	Exposure route	Species	Time	result	Method	Remark
4,4'-methylenediphenyl diisocyanate, isomers and homologes	dermal	mouse	/	Sensitizing.	/	/
4,4'-methylenediphenyl diisocyanate, isomers and homologes	inhalation	guinea pig	/	Sensitizing.	/	/
[3-(2,3-epoxipropoksi)propil]trimetoksisilan	dermal	guinea pig	/	Does not cause skin sensitisation.	OECD 406	/
4,4'-methylenediphenyl diisocyanate	dermal	mouse	/	Sensitizing.	/	/
4,4'-methylenediphenyl diisocyanate	inhalation	guinea pig	/	Sensitizing.	/	/

Additional information

May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

(e) (Germ cell) mutagenicity

For components

Name	Type	Species	Time	result	Method	Remark
4,4'-methylenediphenyl diisocyanate, isomers and homologes	/	Bacteria	/	Negative.	EU EC B.13/14 Mutagenicity - Reverse Mutation Test using Bacteria	/
4,4'-methylenediphenyl diisocyanate, isomers and homologes	/	/	/	Negative.	474 Mammalian Erythrocyte Micronucleus Test	/

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Name	Type	Species	Time	result	Method	Remark
[3-(2,3-epoksispropoksi)propil]trimetoksisilan	Genotoxicity	in vitro	/	Positive.	OECD 476	with and without metabolic activation
[3-(2,3-epoksispropoksi)propil]trimetoksisilan	Genotoxicity	in vitro	/	Positive.	OECD 471	with and without metabolic activation
[3-(2,3-epoksispropoksi)propil]trimetoksisilan	Genotoxicity	/	/	Positive.	OECD 474	intraperitoneal, in vivo
[3-(2,3-epoksispropoksi)propil]trimetoksisilan	Genotoxicity	/	/	Negative.	/	intraperitoneal injection, dose: 1600 mg/kg
[3-(2,3-epoksispropoksi)propil]trimetoksisilan	Genotoxicity	/	/	Negative.	/	Oral, in vivo.
4,4'-methylenediphenyl diisocyanate	/	Bacteria	/	Negative.	EU EC B.13/14 Mutagenicity - Reverse Mutation Test using Bacteria	/
4,4'-methylenediphenyl diisocyanate	/	/	/	Negative.	474 Mammalian Erythrocyte Micronucleus Test	/

(f) Carcinogenicity

For components

Name	Exposure route	Type	Species	Time	Value	result	Method	Remark
4,4'-methylenediphenyl diisocyanate, isomers and homologs	inhalation	/	Rat (lungs)	2 years	/	Positive	OECD 453 Combined Chronic Toxicity/Carcinogenicity Studies	5 days per week

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Name	Exposure route	Type	Species	Time	Value	result	Method	Remark
[3-(2,3-epoxysipropyl)trimethylsilane]	dermal	/	mouse (male)	482 days	5 mg/kg	Negative.	/	3 days per week
'4,4'-methylenediphenyl diisocyanate	inhalation	/	Rat (lungs)	2 years	/	Positive	OECD 453 Combined Chronic Toxicity/Carcinogenicity Studies	5 days per week

(g) Reproductive toxicity

For components

Name	Reproductive toxicity type	Type	Species	Time	Value	result	Method	Remark
4,4'-methylenediphenyl diisocyanate, isomers and homologues	Teratogenicity	NOAEL	rat (male/female)	/	12 mg/m ³	/	OECD 414	/
[3-(2,3-epoxysipropyl)trimethylsilane]	Effects on fertility	/	rat (male/female)	/	/	No effect on fertility and early embryonic development was observed.	OECD 414	oral

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Name	Reproductive toxicity type	Type	Species	Time	Value	result	Method	Remark
[3-(2,3-epoksi propoksi)propil]trimetoksisilan	Effects on fetal development	NOAEL	rabbit (female)	/	200	No teratogenic effects.	OECD 414	oral
'4,4'-methylenediphenyl diisocyanate	Teratogenicity	NOAEL	rat (male/female)	/	12 mg/m ³	/	OECD 414	/

Summary of evaluation of the CMR properties

Suspected of causing cancer.

(h) STOT-single exposure

For components

Name	Exposure route	Type	Species	Time	Exposure	organ	Value	result	Method	Remark
4,4'-methylenediphenyl diisocyanate, isomers and homologues	inhalation	-	/	/	/	Respiratory tract	/	Category 3	/	Respiratory irritant
'4,4'-methylenediphenyl diisocyanate	inhalation	-	/	/	/	Respiratory tract	/	Category 3	/	Respiratory irritant

Additional information

May cause drowsiness or dizziness. May cause respiratory irritation.

(i) STOT-repeated exposure

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For components

Name	Exposure route	Type	Species	Time	Exposure	organ	Value	result	Method	Remarks
4,4'-methylenediphenyl diisocyanate, isomers and homologues	inhalation	-	/	/	/	Respiratory tract	/	Category 2	/	/
[3-(2,3-epoxyspiro[5.5]undecan-2-ylidene)propyl]trimetoxysilane	inhalation	NOEC	rat (male/female)	672 h	/	/	> 1000 mg/m ³	/	OECD 412	5 days
[3-(2,3-epoxyspiro[5.5]undecan-2-ylidene)propyl]trimetoxysilane	oral	NOAEL	rat (male/female)	2160 h	/	/	1000 mg/kg/day	/	/	7 days
4,4'-methylenediphenyl diisocyanate	inhalation	-	/	/	/	Respiratory tract	/	Category 2	/	/

Additional information

May cause damage to organs through prolonged or repeated exposure.

(j) Aspiration hazard

No information.

Additional information

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Aspiration hazard: Not classified.

Symptoms related to the physical, chemical and toxicological characteristics

No information.

Interactive effects

No information.

11.2 Information on other hazards

Endocrine disrupting properties

The product does not contain substances with the potential for endocrine disorders.

Other information

No information.

Section 12: Ecological information

12.1 Toxicity

Acute (short-term) toxicity

For components

Name	Type	Value	Exposure time	Species	organism	Method	Remark
1,6-hexamethylene diisocyanate homopolymer	EC ₅₀	100 mg/L	48 h	daphnia	/	/	/
1,6-hexamethylene diisocyanate homopolymer	EC ₅₀	51 mg/L	72 h	algae	/	/	/
4,4'-methylenediphenyl diisocyanate, isomers and homologues	LC ₅₀	> 1000 mg/L	96 h	fish	/	OECD 203	static system

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Name	Type	Value	Exposure time	Species	organism	Method	Remark
4,4'-methylenediphenyl diisocyanate, isomers and homologues	EC ₅₀	> 1000 mg/L	24 h	daphnia	<i>Daphnia sp.</i>	OECD 202	static system
[3-(2,3-epoksipropoksi)propil]trimetoksisilan	LC ₅₀	55 mg/L	96 h	fish	<i>Cyprinus carpio</i>	67/548/E EC Annex V C.1.	semi-static, fresh water
[3-(2,3-epoksipropoksi)propil]trimetoksisilan	LC ₅₀	324 mg/L	48 h	crustacea	<i>Daphnia magna</i>	/	static test, fresh water
[3-(2,3-epoksipropoksi)propil]trimetoksisilan	EC ₅₀	119 mg/L	168 h	algae/aquatic plants	/	/	static test, fresh water
butanone	EC ₅₀	5091 mg/L	48 h	crustacea	/	/	/
butanone	LC ₅₀	3220 mg/L	96 h	fish	/	/	/
butanone	EC ₅₀	1150 mg/L	/	bacteria	/	/	/
n-butyl acetate	LC ₅₀	18 mg/L	96 h	fish	/	/	/
n-butyl acetate	EC ₅₀	44 mg/L	48 h	crustacea	/	/	/
n-butyl acetate	EC ₅₀	675 mg/L	72 h	algae	/	/	/
1-methoxy-2-propylacetate	LC ₅₀	100 mg/L	96 h	fish	<i>Oncorhynchus mykiss</i>	/	/

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Name	Type	Value	Exposure time	Species	organism	Method	Remark
1-methoxy-2-propylacetate	EC ₅₀	500 mg/L	48 h	crustacea	/	/	/
'4,4'-methylenediphenyldiisocyanate	LC ₅₀	> 1000 mg/L	96 h	fish	/	OECD 203	static system
'4,4'-methylenediphenyldiisocyanate	EC ₅₀	> 1000 mg/L	24 h	daphnia	<i>Daphnia sp.</i>	OECD 202	static system
4-methyl-m-phenylene diisocyanate	LC ₅₀	133 mg/L	96 h	fish	<i>Oncorhynchus mykiss</i>	OECD 203	/
4-methyl-m-phenylene diisocyanate	EC ₅₀	12.5 mg/L	48 h	/	<i>Daphnia magna</i>	OECD 202	/
4-methyl-m-phenylene diisocyanate	ErC ₅₀	4300 mg/L	96 h	algae	<i>Chlorella vulgaris</i>	OECD 201	/

Chronic (long-term) toxicity

For components

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Name	Type	Value	Exposure time	Species	organism	Method	Remark
4,4'-methylenediphenyl diisocyanate, isomers and homologes	NOEC	> 10 mg/l	21 days	Magna Daphnia	<i>Daphnia magna</i>	OECD 211	semi-static system
[3-(2,3-epoksipropoksi)propil]trimetoksisilan	NOEC	≥ 100 mg/l	21 days	crustacea	<i>Daphnia magna</i>	OECD 211	semi-static, fresh water
4,4'-methylenediphenyl diisocyanate	NOEC	> 10 mg/l	21 days	Magna Daphnia	<i>Daphnia magna</i>	OECD 211	semi-static system
4-methyl-m-phenylene diisocyanate	NOEC	1.1 mg/l	21 days	crustacea	<i>Daphnia magna</i>	OECD 211 (Daphnia magna Reproduction Test)	/

12.2 Persistence and degradability

Abiotic degradation, physical- and photo-chemical elimination

For components

Name	Environment	Type / Method	Half Time	Evaluation	Method	Remark
4,4'-methylenediphenyl diisocyanate, isomers and homologes	water	hydrolysis	0.83 days	poor	half-life	/

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Name	Environment	Type / Method	Half Time	Evaluation	Method	Remark
[3-(2,3-epoksipro poksi)prop il]trimetok sisilan	Fresh-water	DT50	6.5 h	/	OECD 111	pH 7, 24,5 °C
[3-(2,3-epoksipro poksi)prop il]trimetok sisilan	Fresh-water	DT50	0.15 h	/	OECD 111	pH 5, 24,5 °C
[3-(2,3-epoksipro poksi)prop il]trimetok sisilan	Fresh-water	DT50	0.13 h	/	OECD 111	pH 9, 24,5 °C
'4,4'-methylene diphenyl diisocyanate	water	hydrolysis	0.83 days	poor	half-life	/

Biodegradation

For components

Name	Type	Rate	Time	Evaluation	Method	Remark
4,4'-methylene diphenyl diisocyanate, isomers and homologes	aerobic	%	/	0 %	OECD 302C Test	/
[3-(2,3-epoksipro poksi)prop il]trimetok sisilan	aerobic	37 %	28 days	Not easily biodegradable.	92/32/EEC Aneks V, C.4.A	activated sludge
'4,4'-methylene diphenyl diisocyanate	aerobic	%	/	0 %	OECD 302C Test	/
4-methyl-m-phenylene diisocyanate	/	/	/	Non-biodegradable	/	/

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12.3 Bioaccumulative potential

Partition coefficient n-octanol/water (log value)

For components

Name	Value	Temperature °C	pH	Concentration	Method
4,4'-methylenedi phenyl diisocyanate, isomers and homologes	4.51	/	/	/	/
[3-(2,3-epoksipropoksi)propil]trimetoksisilan	-2.6	25	/	/	/
4,4'-methylenedi phenyl diisocyanate	4.51	/	/	/	/

Bioconcentration factor (BCF)

For components

Name	Species	organism	Value	Duration	Evaluation	Method	Remark
4,4'-methylenediphenyl diisocyanate, isomers and homologes	BCF	/	200	/	high	/	/
1-methoxy-2-propylacetate	organism	/	0.43	/	/	/	/
4,4'-methylenediphenyl diisocyanate	BCF	/	200	/	high	/	/

12.4 Mobility in soil

Known or predicted distribution to environmental compartments

No information.

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Surface tension

No information.

Adsorption/Desorption

No information.

12.5 Results of PBT and vPvB assessment

No evaluation.

12.6 Endocrine disrupting properties

The product does not contain substances with the potential for endocrine disorders.

12.7 Other adverse effects

No information.

12.8 Additional information

For product

Product is not classified as dangerous for environment. Do not allow to reach ground water, water courses or sewage system.

For components

butanone

Very volatile, partially soluble in water, absorption into the soil is likely to be readily biodegradable, is not bioaccumulative.

1-methoxy-2- propylacetate

Water hazard class 1 (Self-assessment): slightly hazardous for water

Section 13: Disposal considerations

13.1 Waste treatment methods

Product / Packaging disposal

Waste chemical

Do not allow product to reach drains/sewage systems. Disposal must be made according to official regulations: deliver it to authorised collector/remover/transformer of hazardous waste.

Waste codes / waste designations according to LoW

No information.

Packaging

Deliver completely emptied containers to approved waste disposal authorities. Uncleaned containers are classified as hazardous waste - they should be handled in the same manner as the contents. Uncleaned containers should not be perforated, cut or welded. Empty containers represent a fire hazard as they may contain flammable product residues and vapours.

Waste codes / waste designations according to LoW

No information.

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Product name: **5082 Adhesion Primer**

Creation date: **30.01.2024**, Revision: **21.05.2024**, Version: **2.0**

Waste treatment-relevant information

No information.





Sewage disposal-relevant information

No information.

Other disposal recommendations

No information.

Section 14: Transport information

ADR/RID	IMDG	IATA	ADN
14.1 UN number or ID number			
UN 1866	UN 1866	UN 1866	UN 1866
14.2 UN proper shipping name			
RESIN SOLUTION	RESIN SOLUTION	RESIN SOLUTION	RESIN SOLUTION
14.3 Transport hazard class(es)			
3	3	3	3
			
14.4 Packing group			
II	II	II	II
14.5 Environmental hazards			
NO	NO	NO	NO
14.6 Special precautions for user			

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ADR/RID	IMDG	IATA	ADN
Limited quantities 5 L Special provisions 640D Packing Instructions P001, IBC02, R001 Special packing provisions PP1 Transport category 2 Tunnel restriction code (D/E) Classification code F1	Limited quantities 5 L EmS F-E, <u>S-E</u> Flash point -8 °C	Limited Quantity, Packing Instructions (Ltd Qty, Pkg Inst) Y341 Limited Quantity, Maximum Net Quantity/Package (Ltd Qty, Max Net Qty/Pkg) 1 L Packing Instructions (Pkg Inst) 353 Maximum Net Quantity/Package (Max Net Qty/Pkg) 5 L	Limited quantities 5 L
14.7 Maritime transport in bulk according to IMO instruments			
Goods may not be carried in bulk in bulk containers, containers or vehicles.			

Section 15: Regulatory information

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

- Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)(including last amendment Commission Regulation (EU) 2020/878)

- Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures

Information according 2004/42/EC about limitation of emissions of volatile organic compounds (VOC-guideline)

not applicable

Ingredients according to Regulation (EC) No 648/2004 on detergents

No information.

Special instructions

Observe the regulations on employment and protection against dangerous substances for young people, pregnant women and nursing mothers.

15.2 Chemical Safety Assessment

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No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

Section 16: Other information

Indication of changes

2.2 Label elements 8.1 Control parameters 8.2 Exposure controls 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 12.1 Toxicity 12.2 Persistence and degradability 12.3 Bioaccumulative potential 12.8 Additional information 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Key literature references and sources for data

No information.

Abbreviations and acronyms

ATE - Acute Toxicity Estimate
ADR - Agreement concerning the International Carriage of Dangerous Goods by Road
ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CEN - European Committee for Standardisation
C&L - Classification and Labelling
CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
CAS# - Chemical Abstracts Service number
CMR - Carcinogen, Mutagen, or Reproductive Toxicant
CSA - Chemical Safety Assessment
CSR - Chemical Safety Report
DMEL - Derived Minimal Effect Level
DNEL - Derived No Effect Level
DPD - Dangerous Preparations Directive 1999/45/EC
DSD - Dangerous Substances Directive 67/548/EEC
DU - Downstream User
EC - European Community
ECHA - European Chemicals Agency
EC-Number - EINECS and ELINCS Number (see also EINECS and ELINCS)
EEA - European Economic Area (EU + Iceland, Liechtenstein and Norway)
EEC - European Economic Community
EINECS - European Inventory of Existing Commercial Substances
ELINCS - European List of notified Chemical Substances
EN - European Standard
EQS - Environmental Quality Standard
EU - European Union
Euphrac - European Phrase Catalogue
EWC - European Waste Catalogue (replaced by LoW - see below)
GES - Generic Exposure Scenario
GHS - Globally Harmonized System
IATA - International Air Transport Association
ICAO-TI - Technical Instructions for the Safe Transport of Dangerous Goods by Air
IMDG - International Maritime Dangerous Goods
IMSBC - International Maritime Solid Bulk Cargoes
IT - Information Technology
IUCLID - International Uniform Chemical Information Database
IUPAC - International Union for Pure Applied Chemistry
JRC - Joint Research Centre
Kow - octanol-water partition coefficient

SAFETY DATA SHEET

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LC50 - Lethal Concentration to 50 % of a test population
LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose)
LE - Legal Entity
LoW - List of Wastes (see <http://ec.europa.eu/environment/waste/framework/list.htm>)
LR - Lead Registrant
M/I - Manufacturer / Importer
MS - Member States
MSDS - Material Safety Data Sheet
OC - Operational Conditions
OECD - Organization for Economic Co-operation and Development
OEL - Occupational Exposure Limit
OJ - Official Journal
OR - Only Representative
OSHA - European Agency for Safety and Health at work
PBT - Persistent, Bioaccumulative and Toxic substance
PEC - Predicted Effect Concentration
PNEC(s) - Predicted No Effect Concentration(s)
PPE - Personal Protection Equipment
(Q)SAR - Qualitative Structure Activity Relationship
REACH - Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID - Regulations concerning the International Carriage of Dangerous Goods by Rail
RIP - REACH Implementation Project
RMM - Risk Management Measure
SCBA - Self-Contained Breathing Apparatus
SDS - Safety data sheet
SIEF - Substance Information Exchange Forum
SME - Small and Medium sized Enterprises
STOT - Specific Target Organ Toxicity
(STOT) RE - Repeated Exposure
(STOT) SE - Single Exposure
SVHC - Substances of Very High Concern
UN - United Nations
vPvB - Very Persistent and Very Bioaccumulative

List of relevant H phrases

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H330 Fatal if inhaled.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H351 Suspected of causing cancer.
H371 May cause damage to organs.
H373 May cause damage to organs through prolonged or repeated exposure.
H412 Harmful to aquatic life with long lasting effects.
EUH066 Repeated exposure may cause skin dryness or cracking.