

Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

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

1.1. Product identifier

PRIMER PANEL-FIX 451SW

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

Identified uses

Primer

1.3. Details of the supplier of the safety data sheet

Address: Adhesivos Soltec S.L, Avenida del Vallès 724-A, 08227, Terrassa, Barcelona

Telephone: + 34 937 352 744

E Mail: info@adhesivossoltec.com **Website:** https://adhesivossoltec.com

1.4. Emergency telephone number

Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture CLP REGULATION (EC) No 1272/2008

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

CLASSIFICATION:

Flammable Liquid, Category 2 - Flam. Liq. 2; H225

Skin Corrosion/Irritation, Category 2 - Skin Irrit. 2; H315

Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319

Respiratory Sensitization, Category 1 - Resp. Sens. 1; H334

Skin Sensitization, Category 1 - Skin Sens. 1; H317

Carcinogenicity, Category 2 - Carc. 2; H351

Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H336

Specific Target Organ Toxicity-Single Exposure, Category 3 - STOT SE 3; H335



For full text of H phrases, see Section 16.

2.2. Label elements CLP REGULATION (EC) No 1272/2008

SIGNAL WORD

DANGER.

Symbols

GHS02 (Flame) |GHS07 (Exclamation mark) |GHS08 (Health Hazard) |

Pictograms







Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
ingredient	C/13 IVDI	LC NO.	70 by VVI
butanone	78-93-3	201-159-0	40 - 60
BENZENE, 2,4-DIISOCYANATO-1-METHYL-, POLYMEI	R 26426-91-5		5 - 10
WITH 1,6-DIISOCYANATOHEXANE			
Polymethylene polyphenylene isocyanate	9016-87-9		< 10
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-	(p-	905-806-4	< 10
isocyanatobenzyl)phenyl isocyanate / methylene diphenyl			
diisocyanate			
4,4'-methylenediphenyl diisocyanate	101-68-8	202-966-0	1 - 5
Hexamethylene diisocyanate polymer	28182-81-2	500-060-2	< 2.5
hexamethylene-di-isocyanate	822-06-0	212-485-8	< 0.1
4-methyl-m-phenylene diisocyanate	584-84-9	209-544-5	< 0.1

HAZARD STATEMENTS:

H225 Highly flammable liquid and vapour.

H315 Causes skin irritation. H319 Causes serious eye irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.
H351 Suspected of causing cancer.
H336 May cause drowsiness or dizziness.
H335 May cause respiratory irritation.

PRECAUTIONARY STATEMENTS

Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P261A Avoid breathing vapours.
P280E Wear protective gloves.

Response:

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

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9% of the mixture consists of components of unknown acute oral toxicity.

12% of the mixture consists of components of unknown acute inhalation toxicity. Contains 17% of components with unknown hazards to the aquatic environment.

Information required per Regulation (EU) 2020/1149 as regards diisocyanates: As from 24 August 2023 adequate training is required before industrial or professional use. Further information can be found at feica.eu/Puinfo

2.3. Other hazards

Persons previously sensitised to isocyanates may develop a cross-sensitisation reaction to other isocyanates. This material does not contain any substances that are assessed to be a PBT or vPvB

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
butanone	(CAS-No.) 78-93- 3 (EC-No.) 201-159- 0 (REACH-No.) 01- 2119457290-43	40 - 60	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
n-butyl acetate	(CAS-No.) 123- 86-4 (EC-No.) 204-658- 1 (REACH-No.) 01- 2119485493-29	5 - 15	Flam. Liq. 3, H226 STOT SE 3, H336 EUH066
BENZENE, 2,4-DIISOCYANATO-1-METHYL-, POLYMER WITH 1,6-DIISOCYANATOHEXANE	(CAS-No.) 26426- 91-5	5 - 10	Eye Irrit. 2, H319 Skin Sens. 1, H317
Polymethylene polyphenylene isocyanate	(CAS-No.) 9016- 87-9	< 10	Acute Tox. 4, 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
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o- (p-isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate	(EC-No.) 905-806- 4 (REACH-No.) 01- 2119457015-45	< 10	Carc. 2, H351 Acute Tox. 4, H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317

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			STOT SE 3, H335 STOT RE 2, H373
Carbon black	(CAS-No.) 1333- 86-4 (EC-No.) 215-609- 9 (REACH-No.) 01- 2119384822-32	2 - 5	Substance with a national occupational exposure limit
4,4'-methylenediphenyl diisocyanate	(CAS-No.) 101- 68-8 (EC-No.) 202-966- 0 (REACH-No.) 01- 2119457014-47	1-5	Acute Tox. 4, 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 Nota 2,C
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	(CAS-No.) 2530- 83-8 (EC-No.) 219-784- 2 (REACH-No.) 01- 2119513212-58	<3	Eye Dam. 1, H318 Aquatic Chronic 3, H412
Hexamethylene diisocyanate polymer	(CAS-No.) 28182- 81-2 (EC-No.) 500-060- 2	< 2.5	Acute Tox. 4, H332 Skin Sens. 1, H317 STOT SE 3, H335
2-methoxy-1-methylethyl acetate	(CAS-No.) 108- 65-6 (EC-No.) 203-603- 9 (REACH-No.) 01- 2119475791-29	< 2	Flam. Liq. 3, H226 STOT SE 3, H336
Stannane, dioctylbis[(1-oxoneodecyl)oxy]-	(CAS-No.) 68299- 15-0 (EC-No.) 269-595- 4	< 1	Repr. 2, H361d STOT RE 1, H372 Aquatic Acute 1, H400,M=1 Aquatic Chronic 2, H411
hexamethylene-di-isocyanate	(CAS-No.) 822- 06-0 (EC-No.) 212-485- 8 (REACH-No.) 01- 2119457571-37	< 0.1	Resp. Sens. 1A, H334 Skin Sens. 1A, H317 STOT SE 3, H335 Nota 2 Acute Tox. 1, H330 Acute Tox. 4, H302 Skin Corr. 1C, H314 Eye Dam. 1, H318
4-methyl-m-phenylene diisocyanate	(CAS-No.) 584- 84-9 (EC-No.) 209-544- 5	< 0.1	Acute Tox. 1, H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1A,



(REACH-No.) 01-	H334
2119486974-18	Skin Sens. 1A,
	H317
	Carc. 2, H351
	STOT SE 3, H335
	Aquatic Chronic 3,
	H412
	Nota C

Any entry in the Identifier(s) column that begins with the numbers 6, 7, 8, or 9 are a Provisional List Number provided by ECHA pending publication of the official EC Inventory Number for the substance. Please see section 16 for the full text of any H statements referred to in this section

Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
hexamethylene-di-isocyanate	(CAS-No.) 822-06-0 (EC-No.) 212-485-8 (REACH-No.) 01- 2119457571-37	(C >= 0.5%) Resp. Sens. 1A, H334 (C >= 0.5%) Skin Sens. 1A, H317
4,4'-methylenediphenyl diisocyanate	(CAS-No.) 101-68-8 (EC-No.) 202-966-0 (REACH-No.) 01- 2119457014-47	(C >= 5%) Skin Irrit. 2, H315 (C >= 5%) Eye Irrit. 2, H319 (C >= 0.1%) Resp. Sens. 1, H334 (C >= 5%) STOT SE 3, H335
Polymethylene polyphenylene isocyanate	(CAS-No.) 9016-87-9	(C >= 5%) Skin Irrit. 2, H315 (C >= 5%) Eye Irrit. 2, H319 (C >= 0.1%) Resp. Sens. 1, H334 (C >= 5%) STOT SE 3, H335
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate	(EC-No.) 905-806-4	(C >= 5%) Skin Irrit. 2, H315 (C >= 5%) Eye Irrit. 2, H319 (C >= 0.1%) Resp. Sens. 1, H334 (C >= 5%) STOT SE 3, H335
4-methyl-m-phenylene diisocyanate	(CAS-No.) 584-84-9 (EC-No.) 209-544-5 (REACH-No.) 01- 2119486974-18	(C >= 0.1%) Resp. Sens. 1A, H334

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

SECTION 4: First aid measures

4.1. Description of first aid measures

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Inhalation

Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical

If swallowed

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

The most important symptoms and effects based on the CLP classification include:

Irritating to the respiratory tract (coughing, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain). Allergic respiratory reaction (difficulty breathing, wheezing, cough, and tightness of chest). Irritation to the skin (localized redness, swelling, itching, and dryness). Allergic skin reaction (redness, swelling, blistering, and itching). Serious irritation to the eyes (significant redness, swelling, pain, tearing, and impaired vision). Central nervous system depression (headache, dizziness, drowsiness, incoordination, nausea, slurred speech, giddiness, and unconsciousness).

4.3. Indication of any immediate medical attention and special treatment required

Not applicable.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

1 3	
<u>Substance</u>	Condition
Isocyanates	During combustion.
Carbon monoxide	During combustion.
Hydrogen cyanide.	During combustion.
Oxides of nitrogen.	During combustion.

5.3. Advice for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.



6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Cover spill area with a fire-extinguishing foam. Pour isocyanate decontaminant solution (90% water, 8% concentrated ammonia, 2% detergent) on spill and allow to react for 10 minutes. Or pour water on spill and allow to react for more than 30 minutes. Cover with absorbent material. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a container approved for transportation by appropriate authorities, but do not seal the container for 48 hours to avoid pressure build-up. Clean up residue with an appropriate solvent selected by a qualified and authorised person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and Safety Data Sheet. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. Use personal protective equipment (eg. gloves, respirators...) as required. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapour accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.

7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from acids. Store away from oxidising agents.

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient Free isocyanates	CAS Nbr 101-68-8	Agency Ireland OELs	Limit type TWA(8 hours):0.02 mg/m3;STEL(15 minutes):0.07	Additional comments as NCO
4,4'-methylenediphenyl diisocyanate	101-68-8	Ireland OELs	mg/m3 TWA(as NCO)(8 hours):0.005 ppm;TWA(8 hours):0.005 ppm	as NCO, Respiratory/Dermal
2-methoxy-1-methylethyl acetate	108-65-6	Ireland OELs	TWA(8 hours):275 mg/m3(50 ppm);TWA(8 hours):50	Sensitizer SKIN

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n-butyl acetate	123-86-4	Ireland OELs	ppm(275 mg/m3);STEL(15 minutes):550 mg/m3(100 ppm);STEL(15 minutes):100 ppm(550 mg/m3) TWA(8 hours):241 mg/m3(50 ppm);TWA(8 hours):50 ppm(241 mg/m3);STEL(15 minutes):723 mg/m3(150 ppm);STEL(15 minutes):150 ppm(723 mg/m3)	
Carbon black	1333-86-4	Ireland OELs	TWA(inhalable fraction)(8 hours):3 mg/m3	
4-methyl-m-phenylene diisocyanate	584-84-9	Ireland OELs	TWA(As NCO, Inhalable fraction and vapour)(8 hours):0.001 ppm;TWA(as NCO)(8 hours):0.02 mg/m3;TWA(inhalable fraction and vapor)(8 hours):0.001 ppm;TWA(8 hours):0.02 mg/m3;STEL(As NCO, Inhalable fraction and vapour)(15 minutes):0.003 ppm;STEL(as NCO)(15 minutes):0.07 mg/m3;STEL(inhalable fraction and vapor)(15 minutes):0.003 ppm;STEL(15 minutes):0.003 ppm;STEL(15 minutes):0.007 mg/m3	as NCO, Respiratory/Dermal Sensitizer
TIN, ORGANIC COMPOUNDS	68299-15-0	Ireland OELs	TWA(8 hours):0.1 mg/m3;STEL(15 minutes):0.2 mg/m3	as Sn
butanone	78-93-3	Ireland OELs	TWA(8 hours):600 mg/m3(200 ppm);TWA(8 hours):200 ppm(600 mg/m3);STEL(15 minutes):900 mg/m3(300 ppm);STEL(15 minutes):300 ppm(900 mg/m3)	SKIN
Free isocyanates	822-06-0	Ireland OELs	TWA(8 hours):0.02 mg/m3;STEL(15 minutes):0.07 mg/m3	as NCO
hexamethylene-di-isocyanate Free isocyanates	822-06-0 9016-87-9	Ireland OELs Ireland OELs	TWA(8 hours):0.005 ppm TWA(8 hours):0.02 mg/m3;STEL(15 minutes):0.07 mg/m3	as NCO as NCO
Polymethylene polyphenylene isocyanate Ireland OELs: Ireland. OELs	9016-87-9	Manufacturer determined	TWA(inhalable fraction)(8 hours):0.05 mg/m3;CEIL(inhalable fraction):0.1 mg/m3	Dermal Sensitizer, Respiratory Sensitizer

Ireland OELs : Ireland. OELs TWA: Time-Weighted-Average STEL: Short Term Exposure Limit CEIL: Ceiling

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

Derived no effect level (DNEL)

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Ingredient	Degradation Product	Population	Human exposure pattern	DNEL
butanone		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	1,161 mg/kg bw/d
butanone		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	600 mg/m ³

Predicted no effect concentrations (PNEC)

Ingredient	Degradation Product	Compartment	PNEC
butanone		Agricultural soil	22.5 mg/kg d.w.
butanone		Freshwater	55.8 mg/l
butanone		Freshwater sediments	284.7 mg/kg d.w.
butanone		Intermittent releases to water	55.8 mg/l
butanone		Marine water	55.8 mg/l
butanone		Marine water sediments	284.7 mg/kg d.w.
butanone		Sewage Treatment Plant	709 mg/l

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from Indust. Inspect./Ministry (IE)

8.2. Exposure controls

In addition, refer to the annex for more information.

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Safety glasses with side shields.

Indirect vented goggles.

Applicable Norms/Standards

Use eye protection conforming to EN 166

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended:

MaterialThickness (mm)Breakthrough TimePolymer laminateNo data availableNo data available

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Applicable Norms/Standards Use gloves tested to EN 374

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Apron - polymer laminate

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136: filter types A & P

8.2.3. Environmental exposure controls

Refer to Annex

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical stateLiquid.Specific Physical Form:fluidColourBlackOdorSolvent

Odour thresholdNo data available.Melting point/freezing pointNo data available.

Boiling point/boiling range 79 °C

Flammability (solid, gas)Not applicable.Flammable Limits(LEL)1.8 % volumeFlammable Limits(UEL)11.5 % volume

Flash point $-8\,^{\circ}\text{C}$ Autoignition temperature $>=200\,^{\circ}\text{C}$

Decomposition temperature No data available.

pH substance/mixture is non-soluble (in water)

Kinematic Viscosity 52.6 mm²/sec

Water solubility Immiscible **Solubility- non-water** *No data available.*

Partition coefficient: n-octanol/water *No data available.*

Vapour pressure 10.5 kPa

Density No data available.

Relative density 0.95

Relative Vapour Density *No data available.*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds No data available. Evaporation rateNo data available.



SECTION 10: Stability and reactivity

10.1 Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Not determined

10.5 Incompatible materials

Strong oxidising agents.

10.6 Hazardous decomposition products

Substance

None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

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

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation

May be harmful if inhaled. Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Allergic respiratory reaction: Signs/symptoms may include difficulty breathing, wheezing, cough, and tightness of chest. May cause additional health effects (see below).

Skin contact

Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, dryness, cracking, blistering, and pain. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact

Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:



Single exposure may cause target organ effects:

Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness. Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure.

Prolonged or repeated exposure may cause target organ effects:

Respiratory effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish coloured skin (cyanosis), sputum production, changes in lung function tests, and respiratory failure.

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Carcinogenicity:

Contains a chemical or chemicals which can cause cancer.

Additional information:

Persons previously sensitised to isocyanates may develop a cross-sensitisation reaction to other isocyanates.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Inhalation- Vapour(4 hr)		No data available; calculated ATE >20 - =50 mg/l
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
butanone	Dermal	Rabbit	LD50 > 8,050 mg/kg
butanone	Inhalation- Vapour (4 hours)	Rat	LC50 34.5 mg/l
butanone	Ingestion	Rat	LD50 2,737 mg/kg
n-butyl acetate	Dermal	Rabbit	LD50 > 5,000 mg/kg
n-butyl acetate	Inhalation- Dust/Mist (4 hours)	Rat	LC50 1.4 mg/l
n-butyl acetate	Inhalation- Vapour (4 hours)	Rat	LC50 > 20 mg/l
n-butyl acetate	Ingestion	Rat	LD50 > 8,800 mg/kg
Polymethylene polyphenylene isocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
Polymethylene polyphenylene isocyanate	Inhalation- Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
Polymethylene polyphenylene isocyanate	Ingestion	Rat	LD50 31,600 mg/kg
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate	Inhalation- Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p- isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate	Ingestion	Rat	LD50 31,600 mg/kg
BENZENE, 2,4-DIISOCYANATO-1-METHYL-, POLYMER WITH 1,6-DIISOCYANATOHEXANE	Dermal	Professio nal judgeme	LD50 estimated to be > 5,000 mg/kg



BENZENE, 2,4-DIISOCYANATO-I-METHYL-, POLYMER WITH 1,6-DIISOCYANATOHEXANE Ingestion		1		
Dust/Mist Charles Ch	DEVICE OF A DATE OF A DESCRIPTION OF A DESCRIPTION OF A DATE OF A	7 1 1 1	nt	7.050 0.000 d
Carbon black				LC50 > 3.003 mg/1
DENZENE, 2,4-DISOCYANATO-1-METHYL-, POLYMER WITH 1,6-DISOCYANATOHEXANE Ingestion compound	WITH 1,6-DIISOCYANATOHEXANE			
Carbon black	DENZENE 2.4 DUCCCVANATO 1 METUNI. DOLVMED			I DEO > E 000 = //
Carbon black		Ingestion		LD50 > 5,000 mg/kg
Carbon black	WITH 1,6-DIISOCYANATOHEXANE			
Carbon black	C-vk-v blk	Dames		I DEO > 2 000 = //
4.4-methylenediphenyl diisocyanate				
A,4-methylenediphenyl diisocyanate				
Dust/Mist (4 hours) Carlo	4,4'-methylenediphenyl dilsocyanate			
(4 hours) (4 h	4,4'-metnylenedipnenyl dilsocyanate		Rat	LC50 0.368 mg/1
A.4-methylenediphenyl diisocyanate Ingestion Rat LD50 31,600 mg/kg 3-(2,3-epoxypropoxy)propyl]trimethoxysilane Inhalation-Dust/Mist (4 hours) 3-(2,3-epoxypropoxy)propyl]trimethoxysilane Ingestion Rat (LO50 7,010 mg/kg 4-methylene diisocyanate polymer Inhalation-Dust/Mist (4 hours) 4-methylene diisocyanate polymer Ingestion Rat (LD50 7,010 mg/kg 4-methylene diisocyanate polymer Ingestion Rat (LD50 7,010 mg/kg 4-methylene diisocyanate polymer Ingestion Rat (LD50 > 5,000 mg/kg 4-methylene diisocyanate polymer Ingestion Rat (LD50 > 5,000 mg/kg 5-methoxy-1-methylethyl acetate Dermal Rabbit LD50 > 5,000 mg/kg 5-methoxy-1-methylethyl acetate Dermal Rabbit LD50 > 5,000 mg/kg 6-methoxy-1-methylethyl acetate Inhalation-Dust/Mist (4 hours) Ingestion Rat (LD50 > 2,000 mg/kg 6-methoxy-1-methylethyl acetate Inhalation-Dust/Mist (4 hours) Ingestion Rat (LD50 > 2,000 mg/kg 6-methylene-di-isocyanate Inhalation-Dust/Mist (4 hours) Ingestion Rat (LD50 > 2,000 mg/kg 6-methylene-di-isocyanate Inhalation-Dust/Mist (4 hours) Ingestion Rat (LD50 > 1,000 mg/kg 6-methylene-di-isocyanate Inhalation-Dust/Mist (4 hours) Ingestion Rat (LD50 > 1,000 mg/kg 6-methylene-di-isocyanate Inhalation-Dust/Mist (4 hours) Ingestion Rat (LD50 > 1,000 mg/kg 6-methylene-di-isocyanate Inhalation-Dust/Mist (4 hours) Ingestion Rat (LD50 > 1,000 mg/kg 6-methylene-di-isocyanate Inhalation-Dust/Mist (4 hours) Ingestion Rat (LD50 > 1,000 mg/kg 7-methyl-m-phenylene diisocyanate Inhalation-Dust/Mist (4 hours) Ingestion Rat (LD50 > 1,000 mg/kg 8-methyl-m-phenylene diisocyanate Inhalation-Dust/Mist (4 hours) Ingestion Rat (LD50 > 1,000 mg/kg 8-methyl-m-phenylene diisocyanate Inhalation-Dust/Mist (4 hours) Ingestion Rat (LD50 > 1,000 mg/kg 8-methyl-m-phenylene diisocyanate Inhalation-Dust/Mist (4 hours) Ingestion Rat (LD50 > 1,000 mg/kg 8-methyl-m-phenylene diisocyan				
3-(2,3-epoxypropoxy)propyl]trimethoxysilane Dermal Rabbit LD50 4,000 mg/kg LC50 > 5.3 mg/l LC50 > 5.000 mg/kg LC50 > 5.000 m	4.41	+ 	D-4	LDE0 21 000 //
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane Inhalation-Dust/Mist (4 hours) Inhalation-Dust/Mis				
Dust/Mist (4 hours) Ingestion Rat LD50 7,010 mg/kg LC50 estimated to be 1 - 5 mg/l Dust/Mist LD50 7,010 mg/kg LC50 estimated to be 1 - 5 mg/l Dust/Mist LD50 7,010 mg/kg LC50 estimated to be 1 - 5 mg/l Dust/Mist LD50 7,010 mg/kg LC50 estimated to be 1 - 5 mg/l LC50 estimated to be 1	[3-(2,3-epoxypropoxy)propyl]trimetnoxysiiane			LD50 4,000 mg/kg
Garage G	[3-(2,3-epoxypropoxy)propyl]trimethoxysilane		Rat	LC50 > 5.3 mg/l
Gammathylene diisocyanate polymer				
Hexamethylene diisocyanate polymer	[2 (2 2 anayymyanayy)myanyiltyimathayyysilana		Dat	LDF0. 7.010 mg/kg
Dust/Mist (4 hours) nal judgeme nt				
Hexamethylene diisocyanate polymer Dermal Rabbit LD50 > 5,000 mg/kg	Hexametnylene diisocyanate polymer			LC50 estimated to be 1 - 5 mg/1
Hexamethylene diisocyanate polymer Hexamethylene diisocyanate polymer Ingestion Permal Rabit LD50 > 5,000 mg/kg LD50 > 28.8 mg/l LC50 > 28.8 mg/l LD50 > 28.8 mg/l LD				
Hexamethylene diisocyanate polymer Dermal Rabbit LD50 > 5,000 mg/kg Hexamethylene diisocyanate polymer Ingestion Rat LD50 > 5,000 mg/kg 2-methoxy-1-methylethyl acetate Inhalation-Vapour (4 hours) 2-methoxy-1-methylethyl acetate Inhalation-Vapour (4 hours) 2-methoxy-1-methylethyl acetate Ingestion Rat LD50 > 5,000 mg/kg 2-methoxy-1-methylethyl acetate Inhalation-Vapour (4 hours) 3-methoxy-1-methylethyl acetate Ingestion Rat LD50 > 2,000 mg/kg 3-methylene-di-isocyanate Dermal Rat LD50 > 2,000 mg/kg 4-methylene-di-isocyanate Inhalation-Vapour (4 hours) 4-methylene-di-isocyanate Inhalation-Vapour (4 hours) 4-methyl-m-phenylene diisocyanate Dermal Rat LD50 710 mg/kg 4-methyl-m-phenylene diisocyanate Dermal Rat LD50 > 9,400 mg/kg 4-methyl-m-phenylene diisocyanate Dermal Rat LD50 > 9,400 mg/kg 4-methyl-m-phenylene diisocyanate Dermal Rat LD50 > 9,400 mg/kg 4-methyl-m-phenylene diisocyanate Dermal Rat LC50 0.35 mg/l 4-methyl-m-phenylene diisocyanate Dermal		(4 Hours)	, ,	
Hexamethylene diisocyanate polymer Ingestion Rat LD50 > 5,000 mg/kg	Havamathylana diisasyanata palymar	Dormal		LD50 > 5 000 mg/kg
2-methoxy-1-methylethyl acetate 2-methoxy-1-methylethyl acetate 3-methoxy-1-methylethyl acetate 3-methylethyl acetate 3-methyl acetate 3-methylethyl acetate 3-methylethyl acetate 3-methylethyl acetate 3-methylethyl acetate 3-methyl				
2-methoxy-1-methylethyl acetate 2-methoxy-1-methylethyl acetate Inhalation-Vapour (4 hours) Ingestion Stannane, dioctylbis[(1-oxoneodecyl)oxy]- Ingestion Inhalation-Compount of similar compount				
Vapour (4 hours) Vapour (4 hours) 2-methoxy-1-methylethyl acetate Ingestion Rat LD50 8,532 mg/kg Stannane, dioctylbis[(1-oxoneodecyl)oxy]- Ingestion Rat LD50 > 2,000 mg/kg Stannane, dioctylbis[(1-oxoneodecyl)oxy]- Dermal similar compoun ds LD50 > 2,000 mg/kg hexamethylene-di-isocyanate Dermal Rat LD50 > 7,000 mg/kg hexamethylene-di-isocyanate Inhalation-Dust/Mist (4 hours) LC50 0.124 mg/l hexamethylene-di-isocyanate Inhalation-Vapour (4 hours) Rat LC50 0.124 mg/l hexamethylene-di-isocyanate Ingestion Rat LD50 710 mg/kg 4-methyl-m-phenylene diisocyanate Inhalation-Vapour (4 hours) Mouse LC50 0.12 mg/l 4-methyl-m-phenylene diisocyanate Dermal Rabbit LD50 > 9,400 mg/kg 4-methyl-m-phenylene diisocyanate Inhalation-Dust/Mist (4 hours) Rat LC50 0.35 mg/l		+		
hours hours Lost	2-inemoxy-1-inemylemyl acetate		Rat	LC50 > 20.0 IIIg/I
2-methoxy-1-methylethyl acetate Ingestion Rat LD50 8,532 mg/kg Stannane, dioctylbis[(1-oxoneodecyl)oxy]- Ingestion Rat LD50 > 2,000 mg/kg Stannane, dioctylbis[(1-oxoneodecyl)oxy]- Dermal similar compoun ds hexamethylene-di-isocyanate Dermal Rat LD50 > 2,000 mg/kg hexamethylene-di-isocyanate Inhalation-Dust/Mist (4 hours) Rat LC50 0.124 mg/l hexamethylene-di-isocyanate Inhalation-Vapour (4 hours) Rat LC50 0.124 mg/l hexamethylene-di-isocyanate Ingestion Rat LD50 710 mg/kg 4-methyl-m-phenylene diisocyanate Inhalation-Vapour (4 hours) Mouse 4-methyl-m-phenylene diisocyanate Dermal Rabbit LD50 > 9,400 mg/kg 4-methyl-m-phenylene diisocyanate Inhalation-Dust/Mist (4 hours) Rat LC50 0.35 mg/l LC50 0.35 mg/l				
Stannane, dioctylbis[(1-oxoneodecyl)oxy]- Ingestion Rat LD50 > 2,000 mg/kg Stannane, dioctylbis[(1-oxoneodecyl)oxy]- Dermal similar compoun ds LD50 > 2,000 mg/kg hexamethylene-di-isocyanate Dermal Rat LD50 > 7,000 mg/kg hexamethylene-di-isocyanate Inhalation-Dust/Mist (4 hours) Rat LC50 0.124 mg/l hexamethylene-di-isocyanate Inhalation-Vapour (4 hours) Rat LC50 0.124 mg/l hexamethylene-di-isocyanate Ingestion Rat LD50 710 mg/kg 4-methyl-m-phenylene diisocyanate Inhalation-Vapour (4 hours) Mouse LC50 0.12 mg/l 4-methyl-m-phenylene diisocyanate Dermal Rabbit LD50 > 9,400 mg/kg 4-methyl-m-phenylene diisocyanate Inhalation-Dust/Mist (4 hours) Rat LC50 0.35 mg/l	2-methoxy-1-methylethyl acetate		Rat	LD50_8 532 mg/kg
Stannane, dioctylbis[(1-oxoneodecyl)oxy]- Dermal similar compoun ds Dermal Similar compoun ds Dermal Rat LD50 > 7,000 mg/kg LC50 0.124 mg/l LC50 0.125 mg/l LC50 0.12 mg/l		+		
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hexamethylene-di-isocyanate hexamethylene-di-isocyanate Inhalation- Dust/Mist (4 hours) hexamethylene-di-isocyanate Inhalation- Vapour (4 hours) hexamethylene-di-isocyanate Inhalation- Vapour (4 hours) hexamethylene-di-isocyanate Ingestion Inhalation- Vapour (4 hours) A-methyl-m-phenylene diisocyanate Inhalation- Vapour (4 hours) Inhalation- Vapour (4 hours) Inhalation- Vapour (4 hours) Inhalation- Vapour (4 hours) Inhalation- Dust/Mist (4 hours)				
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Dust/Mist (4 hours) hexamethylene-di-isocyanate Inhalation-Vapour (4 hours) hexamethylene-di-isocyanate Ingestion Inhalation-Vapour (4 hours) Ingestion Inhalation-Vapour (4 hours) Inhalation-Vapour (4 hours) Inhalation-Vapour (4 hours) Inhalation-Vapour (4 hours) Inhalation-Dust/Mist (4 hours) Inhalation-Dust/Mist (4 hours) Inhalation-Dust/Mist (4 hours) Inhalation-Dust/Mist (4 hours)				
Amethylene-di-isocyanate Inhalation-Vapour (4 hours) Rat LC50 0.124 mg/l	inexumentylene ar isocyunate		Rut	1000 0.124 mg/1
hexamethylene-di-isocyanate Inhalation-Vapour (4 hours) hexamethylene-di-isocyanate Ingestion Inhalation-Vapour (4 hours) Inhalation-Dust/Mist (4 hours)				
Vapour (4 hours) Nexamethylene-di-isocyanate Ingestion Rat LD50 710 mg/kg	hexamethylene-di-isocyanate		Rat	LC50_0.124 mg/l
hours) hexamethylene-di-isocyanate Ingestion A-methyl-m-phenylene diisocyanate Inhalation-Vapour (4 hours) 4-methyl-m-phenylene diisocyanate Dermal A-methyl-m-phenylene diisocyanate Inhalation-Dust/Mist (4 hours) Rat LD50 710 mg/kg LC50 0.12 mg/l LD50 > 9,400 mg/kg LD50 > 9,400 mg/kg LC50 0.35 mg/l				
hexamethylene-di-isocyanate 4-methyl-m-phenylene diisocyanate Inhalation-Vapour (4 hours) 4-methyl-m-phenylene diisocyanate Dermal Rabbit LD50 710 mg/kg LC50 0.12 mg/l LD50 > 9,400 mg/kg LC50 0.35 mg/l				
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Vapour (4 hours) 4-methyl-m-phenylene diisocyanate Dermal Inhalation- Dust/Mist (4 hours) Rat LC50 0.35 mg/l LC50 0.35 mg/l				LC50 0.12 mg/l
4-methyl-m-phenylene diisocyanate Dermal Rabbit LD50 > 9,400 mg/kg 4-methyl-m-phenylene diisocyanate Inhalation-Dust/Mist (4 hours) LC50 0.35 mg/l		Vapour (4		
4-methyl-m-phenylene diisocyanate Inhalation- Dust/Mist (4 hours) Rat LC50 0.35 mg/l		hours)		
4-methyl-m-phenylene diisocyanate Inhalation- Dust/Mist (4 hours) Rat LC50 0.35 mg/l	4-methyl-m-phenylene diisocyanate	Dermal	Rabbit	LD50 > 9,400 mg/kg
(4 hours)	4-methyl-m-phenylene diisocyanate	Inhalation-	Rat	LC50 0.35 mg/l
		Dust/Mist		_
4-methyl-m-phenylene diisocyanate Ingestion Rat LD50 > 5,000 mg/kg		(4 hours)		
	4-methyl-m-phenylene diisocyanate	Ingestion	Rat	LD50 > 5,000 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
butanone	Rabbit	Minimal irritation
n-butyl acetate	Rabbit	Minimal irritation
Polymethylene polyphenylene isocyanate	official	Irritant
	classificat	
	ion	
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-	official	Irritant
isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate	classificat	
	ion	
BENZENE, 2,4-DIISOCYANATO-1-METHYL-, POLYMER WITH 1,6-	similar	No significant irritation
DIISOCYANATOHEXANE	compoun	
	ds	

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Carbon black	Rabbit	No significant irritation
4,4'-methylenediphenyl diisocyanate	official	Irritant
	classificat	
	ion	
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Rabbit	Mild irritant
Hexamethylene diisocyanate polymer	Rabbit	Minimal irritation
2-methoxy-1-methylethyl acetate	Rabbit	No significant irritation
Stannane, dioctylbis[(1-oxoneodecyl)oxy]-	similar	No significant irritation
	compoun	
	ds	
hexamethylene-di-isocyanate	Rabbit	Corrosive
4-methyl-m-phenylene diisocyanate	Rabbit	Irritant

Serious Eve Damage/Irritation

Name	Species	Value
butanone	Rabbit	Severe irritant
n-butyl acetate	Rabbit	Moderate irritant
Polymethylene polyphenylene isocyanate	official classificat ion	Severe irritant
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate	official classificat ion	Severe irritant
BENZENE, 2,4-DIISOCYANATO-1-METHYL-, POLYMER WITH 1,6-DIISOCYANATOHEXANE	similar compoun ds	Severe irritant
Carbon black	Rabbit	No significant irritation
4,4'-methylenediphenyl diisocyanate	official classificat ion	Severe irritant
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Rabbit	Corrosive
Hexamethylene diisocyanate polymer	Rabbit	Mild irritant
2-methoxy-1-methylethyl acetate	Rabbit	Mild irritant
Stannane, dioctylbis[(1-oxoneodecyl)oxy]-	In vitro data	No significant irritation
hexamethylene-di-isocyanate	Rabbit	Corrosive
4-methyl-m-phenylene diisocyanate	Rabbit	Corrosive

Skin Sensitisation

Name	Cnasias	Value
Name	Species	value
n-butyl acetate	Multiple	Not classified
	animal	
	species	
Polymethylene polyphenylene isocyanate	official	Sensitising
3 3 1 31 3	classificat	
	ion	
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-	official	Sensitising
isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate	classificat	
	ion	
BENZENE, 2,4-DIISOCYANATO-1-METHYL-, POLYMER WITH 1,6-	similar	Sensitising
DIISOCYANATOHEXANE	compoun	
	ds	
4,4'-methylenediphenyl diisocyanate	official	Sensitising
	classificat	
	ion	
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Guinea	Not classified
	pig	
Hexamethylene diisocyanate polymer	Guinea	Sensitising
	pig	
2-methoxy-1-methylethyl acetate	Guinea	Not classified
	pig	
Stannane, dioctylbis[(1-oxoneodecyl)oxy]-	similar	Not classified
	compoun	

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	ds	
hexamethylene-di-isocyanate	Multiple	Sensitising
	animal	_
	species	
4-methyl-m-phenylene diisocyanate	Human	Sensitising
	and	
	animal	

Respiratory Sensitisation

Name	Species	Value
	17	0 111
Polymethylene polyphenylene isocyanate	Human	Sensitising
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-	Human	Sensitising
isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate		
4,4'-methylenediphenyl diisocyanate	Human	Sensitising
Hexamethylene diisocyanate polymer	similar	Not classified
	compoun	
	ds	
hexamethylene-di-isocyanate	Human	Sensitising
	and	
	animal	
4-methyl-m-phenylene diisocyanate	Human	Sensitising

Germ Cell Mutagenicity

Name	Route	Value
butanone	In Vitro	Not mutagenic
n-butyl acetate	In Vitro	Not mutagenic
Polymethylene polyphenylene isocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
BENZENE, 2,4-DIISOCYANATO-1-METHYL-, POLYMER WITH 1,6- DIISOCYANATOHEXANE	In Vitro	Not mutagenic
Carbon black	In Vitro	Not mutagenic
Carbon black	In vivo	Some positive data exist, but the data are not sufficient for classification
4,4'-methylenediphenyl diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	In vivo	Not mutagenic
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	In Vitro	Some positive data exist, but the data are not sufficient for classification
Hexamethylene diisocyanate polymer	In Vitro	Not mutagenic
Hexamethylene diisocyanate polymer	In vivo	Not mutagenic
2-methoxy-1-methylethyl acetate	In Vitro	Not mutagenic
Stannane, dioctylbis[(1-oxoneodecyl)oxy]-	In Vitro	Not mutagenic
hexamethylene-di-isocyanate	In Vitro	Not mutagenic
hexamethylene-di-isocyanate	In vivo	Not mutagenic
4-methyl-m-phenylene diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Caremogenicity			
Name	Route	Species	Value
butanone	Inhalation	Human	Not carcinogenic
Polymethylene polyphenylene isocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Carbon black	Dermal	Mouse	Not carcinogenic
Carbon black	Ingestion	Mouse	Not carcinogenic
Carbon black	Inhalation	Rat	Carcinogenic.
4,4'-methylenediphenyl diisocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification

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[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Dermal	Mouse	Not carcinogenic
hexamethylene-di-isocyanate	Inhalation	Rat	Not carcinogenic
4-methyl-m-phenylene diisocyanate	Inhalation	Human and animal	Not carcinogenic
4-methyl-m-phenylene diisocyanate	Ingestion	Multiple animal species	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
butanone	Inhalation	Not classified for development	Rat	LOAEL 8.8 mg/l	during gestation
n-butyl acetate	Inhalation	Not classified for female reproduction	Rat	NOAEL 7.1 mg/l	premating & during gestation
n-butyl acetate	Inhalation	Not classified for development	Rat	NOAEL 7.1 mg/l	premating & during gestation
Polymethylene polyphenylene isocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p- isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
4,4'-methylenediphenyl diisocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
[3-(2,3- epoxypropoxy)propyl]trimethoxysilane	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
[3-(2,3- epoxypropoxy)propyl]trimethoxysilane	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	1 generation
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Ingestion	Not classified for development	Rat	NOAEL 3,000 mg/kg/day	during organogenesis
2-methoxy-1-methylethyl acetate	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2-methoxy-1-methylethyl acetate	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2-methoxy-1-methylethyl acetate	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating & during gestation
2-methoxy-1-methylethyl acetate	Inhalation	Not classified for development	Rat	NOAEL 21.6 mg/l	during organogenesis
Stannane, dioctylbis[(1-oxoneodecyl)oxy]-	Ingestion	Toxic to development	similar compoun ds	NOAEL not available	
hexamethylene-di-isocyanate	Inhalation	Not classified for female reproduction	Rat	NOAEL 0.002 mg/l	7 weeks
hexamethylene-di-isocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.002 mg/l	7 weeks
hexamethylene-di-isocyanate	Inhalation	Not classified for male reproduction	Rat	NOAEL 0.014 mg/l	4 weeks
4-methyl-m-phenylene diisocyanate	Inhalation	Not classified for female reproduction	Rat	NOAEL 0.002 mg/l	2 generation
4-methyl-m-phenylene diisocyanate	Inhalation	Not classified for male reproduction	Rat	NOAEL 0.002 mg/l	2 generation
4-methyl-m-phenylene diisocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis

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Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
butanone	Inhalation	central nervous system depression	May cause drowsiness or dizziness	official classifica tion	NOAEL Not available	
butanone	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	NOAEL Not available	
butanone	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available	
butanone	Ingestion	liver	Not classified	Rat	NOAEL Not available	not applicable
butanone	Ingestion	kidney and/or bladder	Not classified	Rat	LOAEL 1,080 mg/kg	not applicable
n-butyl acetate	Inhalation	respiratory system	May cause damage to organs	Rat	LOAEL 2.6 mg/l	4 hours
n-butyl acetate	Inhalation	central nervous system depression	May cause drowsiness or dizziness	Human	NOAEL Not available	not available
n-butyl acetate	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	not available
n-butyl acetate	Ingestion	central nervous system depression	May cause drowsiness or dizziness	Professio nal judgeme nt	NOAEL Not available	
Polymethylene polyphenylene isocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classifica tion	NOAEL Not available	
Reaction mass of 4,4'- methylenediphenyl diisocyanate and o-(p- isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classifica tion	NOAEL Not available	
4,4'-methylenediphenyl diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classifica tion	NOAEL Not available	
Hexamethylene diisocyanate polymer	Inhalation	respiratory irritation	May cause respiratory irritation		NOAEL Not available	
2-methoxy-1-methylethyl acetate	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification		NOAEL Not available	
2-methoxy-1-methylethyl acetate	Ingestion	central nervous system depression	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL not available	
hexamethylene-di- isocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	Human and animal	NOAEL Not available	
hexamethylene-di- isocyanate	Inhalation	blood	Not classified	Human	NOAEL Not available	occupational exposure
4-methyl-m-phenylene diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	Human	NOAEL Not available	occupational exposure

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
butanone	Dermal	nervous system	Not classified	Guinea pig	NOAEL Not available	31 weeks
butanone	Inhalation	liver kidney and/or bladder heart endocrine system gastrointestinal tract bone, teeth, nails,	Not classified	Rat	NOAEL 14.7 mg/l	90 days

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		and/or hair hematopoietic system immune				
L	To do ation	system muscles liver	Not classified	D-+	NOAEL No	7 3
butanone	Ingestion			Rat	NOAEL Not available	7 days
butanone	Ingestion	nervous system	Not classified	Rat	NOAEL 173 mg/kg/day	90 days
n-butyl acetate	Inhalation	olfactory system	Not classified	Rat	NOAEL 2.4 mg/l	14 weeks
n-butyl acetate	Inhalation	liver kidney and/or bladder	Not classified	Rabbit	NOAEL 7.26 mg/l	13 days
Polymethylene polyphenylene isocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Reaction mass of 4,4'- methylenediphenyl diisocyanate and o-(p- isocyanatobenzyl)phenyl isocyanate / methylene diphenyl diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Carbon black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
4,4'-methylenediphenyl diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
[3-(2,3-epoxypropoxy)propyl]trim ethoxysilane	Ingestion	heart endocrine system bone, teeth, nails, and/or hair hematopoietic system liver immune system nervous system kidney and/or bladder respiratory system	Not classified	Rat	NOAEL 1,000 mg/kg/day	28 days
Hexamethylene diisocyanate polymer	Inhalation	immune system blood	Not classified	Rat	NOAEL 0.084 mg/l	2 weeks
2-methoxy-1-methylethyl acetate	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 16.2 mg/l	9 days
2-methoxy-1-methylethyl acetate	Inhalation	olfactory system	Not classified	Mouse	LOAEL 1.62 mg/l	9 days
2-methoxy-1-methylethyl acetate	Inhalation	blood	Not classified	Multiple animal species	NOAEL 16.2 mg/l	9 days
2-methoxy-1-methylethyl acetate	Ingestion	endocrine system	Not classified	Rat	NOAEL 1,000 mg/kg/day	44 days
Stannane, dioctylbis[(1-oxoneodecyl)oxy]-	Ingestion	immune system	Causes damage to organs through prolonged or repeated exposure	similar compoun ds	NOAEL not available	
hexamethylene-di- isocyanate	Inhalation	liver kidney and/or bladder	Not classified	Rat	NOAEL 0.002 mg/l	3 weeks
hexamethylene-di- isocyanate	Inhalation	endocrine system	Not classified	Rat	NOAEL 0.0014 mg/l	4 weeks
hexamethylene-di- isocyanate	Inhalation	blood	Not classified	Rat	NOAEL 0.0012 mg/l	2 years
hexamethylene-di- isocyanate	Inhalation	nervous system	Not classified	Rat	NOAEL 0.002 mg/l	7 weeks
hexamethylene-di- isocyanate	Inhalation	heart	Not classified	Rat	NOAEL 0.001 mg/l	90 days
4-methyl-m-phenylene diisocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Human	NOAEL 0 mg/l	occupational exposure

Aspiration Hazard

For the component/components, either no data is currently available or the data is not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.



11.2. Information on other hazards

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS#	Organism	Type	Exposure	Test endpoint	Test result
butanone	78-93-3	Fathead minnow	Experimental	96 hours	LC50	2,993 mg/l
butanone	78-93-3	Green algae	Experimental	96 hours	ErC50	2,029 mg/l
butanone	78-93-3	Water flea	Experimental	48 hours	EC50	308 mg/l
butanone	78-93-3	Green algae	Experimental	96 hours	ErC10	1,289 mg/l
butanone	78-93-3	Water flea	Experimental	21 days	NOEC	100 mg/l
butanone	78-93-3	Bacteria	Experimental	16 hours	LOEC	1,150 mg/l
n-butyl acetate	123-86-4	Green algae	Analogous Compound	72 hours	ErC50	397 mg/l
n-butyl acetate	123-86-4	Fathead minnow	Experimental	96 hours	LC50	18 mg/l
n-butyl acetate	123-86-4	Water flea	Experimental	48 hours	EC50	44 mg/l
n-butyl acetate	123-86-4	Green algae	Analogous Compound	72 hours	NOEC	196 mg/l
n-butyl acetate	123-86-4	Water flea	Analogous Compound	21 days	NOEC	23.2 mg/l
n-butyl acetate	123-86-4	Ciliated protozoa	Experimental	40 hours	IC50	356 mg/l
n-butyl acetate	123-86-4	Lettuce	Experimental	14 days	EC50	>1,000 mg/kg (Dry Weight)
BENZENE, 2,4- DIISOCYANATO- 1-METHYL-, POLYMER WITH 1,6- DIISOCYANATO HEXANE	26426-91-5	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Polymethylene polyphenylene isocyanate	9016-87-9	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	>100 mg/l
Polymethylene polyphenylene isocyanate	9016-87-9	Water flea	Analogous Compound	24 hours	No tox obs at lmt of water sol	>100 mg/l
Polymethylene polyphenylene isocyanate	9016-87-9	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	>100 mg/l
Polymethylene polyphenylene isocyanate	9016-87-9	Activated sludge	Analogous Compound	3 hours	EC50	>100 mg/l
Reaction mass of 4,4'-	905-806-4	Activated sludge	Estimated	3 hours	EC50	>100 mg/l

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methylenediphenyl disocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate / methylene diphenyl disocyanate / methylene diphenyl disocyanate methylenediphenyl disocyanate methylenediphenyl disocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate / methylene diphenyl disocyanate / methylenediphenyl disocyanate / methylene diphenyl disocyanate / methylene diphenyl disocyanate / methylene diphenyl disocyanate / methylene diphenyl disocyanate / methylenediphenyl disocyanate / methylenediphenyl disocyanate / methylenediphenyl disocyanate / methylenediphenyl disocyanate / methylene diphenyl disocyanate / methylene dipheny
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Cp- isocyanatobenzyl)p henyl isocyanate / methylene diphenyl diisocyanate Reaction mass of 4,4'- methylenediphenyl diisocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate Reaction mass of 4,4'- methylene diphenyl diisocyanate Reaction mass of 4,4'- methylene diphenyl diisocyanate Reaction mass of 4,4'- methylenediphenyl diisocyanate Reaction mass of 905-806-4 Water flea Estimated 24 hours EC50 129.7 mg/l 4,4'- methylenediphenyl diisocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate / methylene diphenyl diisocyanate / methylene diphenyl diis
isocyanatobenzyl)p henyl isocyanate / methylene diphenyl diisocyanate Reaction mass of 4,4'- methylenediphenyl diisocyanate and o- (p- isocyanate / methylene diphenyl diisocyanate / methylene diphenyl diisocyanate / methylene diphenyl diisocyanate / methylene diphenyl diisocyanate Reaction mass of 4,4'- methylene diphenyl diisocyanate Reaction mass of 4,4'- methylene diphenyl diisocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate Reaction mass of 905-806-4 Water flea Estimated 24 hours EC50 129.7 mg/l Reaction mass of 905-806-4 Zebra Fish Estimated 96 hours LC50 >1,000 mg/l
henyl isocyanate / methylene diphenyl diisocyanate / Reaction mass of 4,4'- methylene diphenyl diisocyanate / methylene diphenyl diisocyanate
methylene diphenyl diisocyanate Reaction mass of 4,4'- methylene diphenyl diisocyanate / methylene diphenyl diisocyanate Sestimated
diisocyanate Reaction mass of 4,4'- methylenediphenyl diisocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate Reaction mass of 4,4'- methylene diphenyl diisocyanate Reaction mass of 4,4'- methylenediphenyl diisocyanate Reaction mass of 4,4'- methylenediphenyl diisocyanate Reaction mass of 6,4'- methylenediphenyl diisocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate / methylene diphenyl diisocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate / methylene diphenyl diisocyanate Reaction mass of 905-806-4 Zebra Fish Estimated 72 hours EC50 >1,640 mg/l
Reaction mass of 4,4'- methylenediphenyl disocyanate and o- (p- isocyanate Reaction mass of 4,4'- methylene diphenyl disocyanate Reaction mass of 4,4'- methylenediphenyl disocyanate methylenediphenyl disocyanate methylenediphenyl disocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate / methylenediphenyl disocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate / methylene diphenyl disocyanate of 4,4'- methylene diphenyl disocyanate of 5,640 mg/l Estimated 72 hours EC50 >1,640 mg/l
4,4'- methylenediphenyl diisocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate Reaction mass of 4,4'- methylene diphenyl diisocyanate Reaction mass of (p- isocyanate) Reaction mass of 4,4'- methylenediphenyl diisocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate / methylene diphenyl diisocyanate / methylene diphenyl diisocyanate / methylene diphenyl diisocyanate Reaction mass of 905-806-4 Zebra Fish Estimated 96 hours LC50 >1,000 mg/l
methylenediphenyl diisocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate / methylene diphenyl diisocyanate Reaction mass of 4,4'- methylenediphenyl diisocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate / methylene diphenyl diisocyanate / methylene diphenyl diisocyanate / methylene diphenyl diisocyanate / methylene diphenyl diisocyanate Reaction mass of 905-806-4 Reaction mass of 905-806-4 Zebra Fish Estimated 96 hours LC50 >1,000 mg/l
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(p- isocyanatobenzyl)p henyl isocyanate / methylene diphenyl diisocyanate Reaction mass of 4,4'- methylenediphenyl diisocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate / methylene diphenyl diisocyanate / methylene diphenyl diisocyanate of Reaction mass of 905-806-4 Zebra Fish Estimated 24 hours EC50 129.7 mg/l
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diisocyanate Reaction mass of 4,4'- methylenediphenyl diisocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate / methylene diphenyl diisocyanate / methylene diphenyl diisocyanate / Reaction mass of 905-806-4 Zebra Fish Estimated 96 hours LC50 >1,000 mg/l
Reaction mass of 4,4'- methylenediphenyl diisocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate / methylene diphenyl diisocyanate / methylene diphenyl diisocyanate Reaction mass of 905-806-4 Zebra Fish Estimated 24 hours EC50 129.7 mg/l Estimated 24 hours EC50 129.7 mg/l LC50 >1,000 mg/l
4,4'- methylenediphenyl diisocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate / methylene diphenyl diisocyanate Reaction mass of 905-806-4 Zebra Fish Estimated 96 hours LC50 >1,000 mg/l
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methylene diphenyl diisocyanate Reaction mass of 905-806-4 Zebra Fish Estimated 96 hours LC50 >1,000 mg/l
diisocyanate Reaction mass of 905-806-4 Zebra Fish Estimated 96 hours LC50 >1,000 mg/l
Reaction mass of 905-806-4 Zebra Fish Estimated 96 hours LC50 >1,000 mg/l
4,4'-
methylenediphenyl
diisocyanate and o-
[(p-
isocyanatobenzyl)p
henyl isocyanate /
methylene diphenyl
diisocyanate
Reaction mass of 905-806-4 Green algae Estimated N/A NOEL 1,640 mg/l
4.4'-
methylenediphenyl
diisocyanate and o-
(p-
isocyanatobenzyl)p
henyl isocyanate /
methylene diphenyl
diisocyanate
Reaction mass of 905-806-4 Water flea Estimated 21 days NOEC 10 mg/l
1625 16 mg/
methylenediphenyl
diisocyanate and o-
(p-
isocyanatobenzyl)p
henyl isocyanate /
methylene diphenyl
diisocyanate
Carbon black 1333-86-4 Activated sludge Experimental 3 hours EC50 >=100 mg/l
Carbon black 1333-86-4 N/A Data not available N/A N/A N/A
or insufficient for
classification
4,4'- 101-68-8 Activated sludge Estimated 3 hours EC50 >100 mg/l
methylenediphenyl
diisocyanate
4,4'- 101-68-8 Green algae Estimated 72 hours EC50 >1,640 mg/l
methylenediphenyl
diisocyanate
4,4'- 101-68-8 Water flea Estimated 24 hours EC50 >1,000 mg/l
methylenediphenyl Estillated 24 nours ESTILLATION PROPERTY OF THE PROPERTY OF
diisocyanate
4,4'- 101-68-8 Zebra Fish Estimated 96 hours LC50 >1,000 mg/l
methylenediphenyl
diisocyanate

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				-		
4,4'- methylenediphenyl diisocyanate	101-68-8	Green algae	Estimated	72 hours	NOEC	1,640 mg/l
4,4'- methylenediphenyl	101-68-8	Water flea	Estimated	21 days	NOEC	10 mg/l
diisocyanate [3-(2,3- epoxypropoxy)prop		Common Carp	Experimental	96 hours	LC50	55 mg/l
yl]trimethoxysilane [3-(2,3- epoxypropoxy)prop	2530-83-8	Green algae	Experimental	96 hours	ErC50	350 mg/l
yl]trimethoxysilane [3-(2,3- epoxypropoxy)prop	2530-83-8	Invertebrate	Experimental	48 hours	LC50	324 mg/l
yl]trimethoxysilane [3-(2,3- epoxypropoxy)prop	2530-83-8	Green algae	Experimental	96 hours	NOEC	130 mg/l
yl]trimethoxysilane [3-(2,3- epoxypropoxy)prop		Water flea	Experimental	21 days	NOEC	100 mg/l
yl]trimethoxysilane [3-(2,3- epoxypropoxy)prop	2530-83-8	Activated sludge	Experimental	3 hours	EC50	>100 mg/l
yl]trimethoxysilane Hexamethylene diisocyanate	28182-81-2	Activated sludge	Experimental	3 hours	EC50	3,828 mg/l
polymer Hexamethylene diisocyanate	28182-81-2	Green algae	Experimental	72 hours	ErC50	>1,000 mg/l
polymer Hexamethylene diisocyanate	28182-81-2	Zebra Fish	Experimental	96 hours	LL50	>100 mg/l
polymer Hexamethylene diisocyanate polymer	28182-81-2	Green algae	Experimental	72 hours	ErC10	370 mg/l
2-methoxy-1- methylethyl acetate	108-65-6	Activated sludge	Experimental	30 minutes	EC10	>1,000 mg/l
2-methoxy-1- methylethyl acetate	108-65-6	Green algae	Experimental	72 hours	ErC50	>1,000 mg/l
2-methoxy-1- methylethyl acetate		Rainbow trout	Experimental	96 hours	LC50	134 mg/l
2-methoxy-1- methylethyl acetate		Water flea	Experimental	48 hours	EC50	370 mg/l
2-methoxy-1- methylethyl acetate		Green algae	Experimental	72 hours	NOEC	1,000 mg/l
2-methoxy-1- methylethyl acetate		Water flea	Experimental	21 days	NOEC	100 mg/l
Stannane, dioctylbis[(1- oxoneodecyl)oxy]-	68299-15-0	Water flea	Analogous Compound	24 hours	EC50	0.98 mg/l
Stannane, dioctylbis[(1- oxoneodecyl)oxy]-	68299-15-0	Water flea	Analogous Compound	21 days	NOEC	0.4 mg/l
hexamethylene-di- isocyanate	822-06-0	Green algae	Estimated	96 hours	EC50	14.8 mg/l
hexamethylene-di- isocyanate	822-06-0	Medaka	Estimated	96 hours	LC50	71 mg/l
hexamethylene-di- isocyanate	822-06-0	Water flea	Estimated	48 hours	EC50	27 mg/l
hexamethylene-di- isocyanate	822-06-0	Activated sludge	Experimental	3 hours	EC50	842 mg/l
hexamethylene-di- isocyanate	822-06-0	Green algae	Estimated	72 hours	NOEC	10 mg/l
hexamethylene-di- isocyanate	822-06-0	Water flea	Estimated	21 days	NOEC	4.2 mg/l
4-methyl-m- phenylene	584-84-9	Green algae	Hydrolysis Product	72 hours	ErC50	18 mg/l

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diisocyanate						
4-methyl-m- phenylene diisocyanate	584-84-9	Medaka	Hydrolysis Product	96 hours	LC50	>100 mg/l
4-methyl-m- phenylene diisocyanate	584-84-9	Water flea	Hydrolysis Product	48 hours	EC50	1.6 mg/l
4-methyl-m- phenylene diisocyanate	584-84-9	Water flea	Analogous Compound	21 days	NOEC	0.5 mg/l
4-methyl-m- phenylene diisocyanate	584-84-9	Green algae	Hydrolysis Product	72 hours	NOEC	1 mg/l
4-methyl-m- phenylene diisocyanate	584-84-9	Activated sludge	Analogous Compound	3 hours	EC50	>100 mg/l
4-methyl-m- phenylene diisocyanate	584-84-9	Oats	Analogous Compound	14 days	EC50	>1,000 mg/kg (Dry Weight)
4-methyl-m- phenylene diisocyanate	584-84-9	Redworm	Analogous Compound	14 days	LC50	>1,000 mg/kg (Dry Weight)

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
butanone	78-93-3	Experimental Biodegradation	28 days	BOD	98 %BOD/ThOD	OECD 301D - Closed bottle test
n-butyl acetate	123-86-4	Experimental Biodegradation	28 days	BOD	83 %BOD/ThOD	OECD 301D - Closed bottle test
n-butyl acetate	123-86-4	Experimental Photolysis		Photolytic half-life (in air)	6.3 days (t 1/2)	
n-butyl acetate	123-86-4	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	3.1 years (t 1/2)	
BENZENE, 2,4- DIISOCYANATO- 1-METHYL-, POLYMER WITH 1,6- DIISOCYANATO HEXANE	26426-91-5	Data not availbl- insufficient	N/A	N/A	N/A	N/A
Polymethylene polyphenylene isocyanate	9016-87-9	Analogous Compound Aquatic Inherent Biodegrad.	28 days	BOD	0 %BOD/ThOD	OECD 302C - Modified MITI (II)
Polymethylene polyphenylene isocyanate	9016-87-9	Analogous Compound Hydrolysis		Hydrolytic half-life	20 hours (t 1/2)	
Reaction mass of 4,4'- methylenediphenyl diisocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate / methylene diphenyl diisocyanate		Data not availblinsufficient	N/A	N/A	N/A	N/A
Carbon black	1333-86-4	Data not availbl- insufficient	N/A	N/A	N/A	N/A
4,4'- methylenediphenyl diisocyanate	101-68-8	Estimated Hydrolysis		Hydrolytic half-life	20 hours (t 1/2)	
[3-(2,3- epoxypropoxy)prop yl]trimethoxysilane		Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	37 %removal of DOC	EC C.4.A. DOC Die-Away Test
[3-(2,3-	2530-83-8	Experimental		Hydrolytic half-life	6.5 hours (t 1/2)	OECD 111 Hydrolysis func

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epoxypropoxy)prop yl]trimethoxysilane		Hydrolysis		(pH 7)		of pH
Hexamethylene diisocyanate polymer	28182-81-2	Experimental Biodegradation	28 days	BOD	1 %BOD/ThOD	
Hexamethylene diisocyanate polymer	28182-81-2	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	7.7 hours (t 1/2)	
2-methoxy-1- methylethyl acetate	108-65-6	Experimental Biodegradation	28 days	BOD	87.2 %BOD/ThOD	OECD 301C - MITI test (I)
2-methoxy-1- methylethyl acetate	108-65-6	Experimental Aquatic Inherent Biodegrad.		Dissolv. Organic Carbon Deplet	>100 %removal of DOC	similar to OECD 302B
Stannane, dioctylbis[(1- oxoneodecyl)oxy]-	68299-15-0	Data not availbl- insufficient	N/A	N/A	N/A	N/A
hexamethylene-di- isocyanate	822-06-0	Estimated Biodegradation	28 days	BOD	82 %BOD/ThOD	OECD 301D - Closed bottle test
hexamethylene-di- isocyanate	822-06-0	Experimental Hydrolysis		Hydrolytic half-life	5 minutes (t 1/2)	
4-methyl-m- phenylene diisocyanate	584-84-9	Experimental Biodegradation	28 days	BOD	0 %BOD/ThOD	OECD 301C - MITI test (I)
4-methyl-m- phenylene diisocyanate	584-84-9	Analogous Compound Aquatic Inherent Biodegrad.	28 days	BOD	0 %BOD/ThOD	OECD 302C - Modified MITI (II)
4-methyl-m- phenylene diisocyanate	584-84-9	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	<1.6 hours (t 1/2)	

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
butanone	78-93-3	Experimental Bioconcentration		Log Kow	0.3	OECD 117 log Kow HPLC method
n-butyl acetate	123-86-4	Experimental Bioconcentration		Log Kow	2.3	OECD 117 log Kow HPLC method
BENZENE, 2,4- DIISOCYANATO- 1-METHYL-, POLYMER WITH 1,6- DIISOCYANATO HEXANE	26426-91-5	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Polymethylene polyphenylene isocyanate	9016-87-9	Analogous Compound BCF - Fish	28 days	Bioaccumulation factor	200	OECD305-Bioconcentration
Polymethylene polyphenylene isocyanate	9016-87-9	Analogous Compound Bioconcentration		Log Kow	4.51	
Reaction mass of 4,4'- methylenediphenyl diisocyanate and o- (p- isocyanatobenzyl)p henyl isocyanate / methylene diphenyl diisocyanate	905-806-4	Experimental BCF - Fish	28 days	Bioaccumulation factor	200	OECD305-Bioconcentration
Carbon black	1333-86-4	or insufficient for classification		N/A	N/A	N/A
4,4'- methylenediphenyl diisocyanate	101-68-8	Experimental BCF - Fish	28 days	Bioaccumulation factor	200	OECD305-Bioconcentration
[3-(2,3-	2530-83-8	Experimental		Log Kow	0.5	Episuite TM

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epoxypropoxy)prop yl]trimethoxysilane		Bioconcentration				
Hexamethylene diisocyanate polymer	28182-81-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
2-methoxy-1- methylethyl acetate	108-65-6	Experimental Bioconcentration		Log Kow		OECD 107 log Kow shke flsk mtd
Stannane, dioctylbis[(1- oxoneodecyl)oxy]-	68299-15-0	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
hexamethylene-di- isocyanate	822-06-0	Estimated Bioconcentration		Log Kow	0.02	
4-methyl-m- phenylene diisocyanate	584-84-9	Experimental BCF - Fish	60 days	Bioaccumulation factor	180	OECD305-Bioconcentration
4-methyl-m- phenylene diisocyanate	584-84-9	Analogous Compound Bioconcentration		Log Kow	3.43	OECD 117 log Kow HPLC method

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
n-butyl acetate	123-86-4	Modeled Mobility in Soil	Koc	135 l/kg	Episuite™
4,4'- methylenediphenyl diisocyanate	101-68-8	Estimated Mobility in Soil	Koc	34,000 l/kg	Episuite™
[3-(2,3- epoxypropoxy)prop yl]trimethoxysilane	2530-83-8	Modeled Mobility in Soil	Koc	10 l/kg	Episuite™
2-methoxy-1- methylethyl acetate	108-65-6	Experimental Mobility in Soil	Koc	4 l/kg	Episuite™
4-methyl-m- phenylene diisocyanate	584-84-9	Modeled Mobility in Soil	Koc	950 l/kg	Episuite [™]

12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

12.6. Endocrine disrupting properties

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of the manufacturer, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC -

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2000/532/CE and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor

EU waste code (product as sold)

14 06 03* Other solvents and solvent mixtures

SECTION 14: Transportation information

- · 14.1 UN-Number
- · ADR, IMDG, IATA UN1866
- · 14.2 UN proper shipping name
- · ADR 1866 RESIN SOLUTION (vapour pressure at 50°Cnot more than 110 kPa)
- · IMDG, IATA RESIN SOLUTION
- · 14.3 Transport hazard class(es)
- · ADR, IMDG, IATA
- · Class 3 Flammable liquids.
- · Label 3
- · 14.4 Packing group
- · ADR, IMDG, IATA II
- · 14.5 Environmental hazards: Not applicable.
- · 14.6 Special precautions for user

Warning: Flammable liquids.

- · Danger code (Kemler): 33
- · EMS Number: F-E,S-E
- · Stowage Category B
- \cdot 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable.

- · Transport/Additional information:
- \cdot ADR
- · Limited quantities (LQ) 5L
- · Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

- · Transport category 2
- · Tunnel restriction code D/E
- · Limited quantities (LQ) 5L
- · Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

 \cdot UN "Model Regulation": UN 1866 RESIN SOLUTION (VAPOUR PRESSUREAT 50°C NOT MORE THAN 110 KPA), 3, II

SECTION 15: Regulatory information

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

Carcinogenicity

<u>Ingredient</u>	CAS Nbr	<u>Classification</u>	<u>Regulation</u>
Carbon black	1333-86-4	Grp. 2B: Possible human	International Agency

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		carc.	for Research on Cancer
4,4'-methylenediphenyl diisocyanate	101-68-8	Carc. 2	Regulation (EC) No.
			1272/2008, Table 3.1
4,4'-methylenediphenyl diisocyanate	101-68-8	Gr. 3: Not classifiable	International Agency
			for Research on Cancer
Polymethylene polyphenylene isocyanate	9016-87-9	Carc. 2	3M classified
			according to
			Regulation (EC) No
			1272/2008
Polymethylene polyphenylene isocyanate	9016-87-9	Gr. 3: Not classifiable	International Agency
			for Research on Cancer
Reaction mass of 4,4'-methylenediphenyl	905-806-4	Carc. 2	Vendor classified
diisocyanate and o-(p-isocyanatobenzyl)phenyl			according to
isocyanate / methylene diphenyl diisocyanate			Regulation (EC) No
			1272/2008
4-methyl-m-phenylene diisocyanate	584-84-9	Carc. 2	Regulation (EC) No.
			1272/2008, Table 3.1
4-methyl-m-phenylene diisocyanate	584-84-9	Grp. 2B: Possible human	International Agency
		carc.	for Research on Cancer

Restrictions on the manufacture, placing on the market and use:

The following substance(s) contained in this product is/are subject through Annex XVII of REACH regulation to restrictions on the manufacture, placing on the market and use when present in certain dangerous substances, mixtures and articles. Users of this product are required to comply with the restrictions placed upon it by the aforementioned provision.

CAS Nbr
822-06-0
101-68-8
9016-87-9
905-806-4
584-84-9

Restriction status: listed in REACH Annex XVII

Restricted uses: See Annex XVII to Regulation (EC) No 1907/2006 for Conditions of Restriction

Global inventory status

Contact manufacturer for more information

DIRECTIVE 2012/18/EU

Seveso hazard categories, Annex 1, Part 1

Hazard Categories	Qualifying quantity (tonnes) for the application of		
	Lower-tier requirements Upper-tier requirements		
P5c FLAMMABLE LIQUIDS*	5000	50000	

^{*}If maintained at a temperature above its boiling point or if particular processing conditions, such as high pressure or high temperature, may create major-accident hazards, P5a or P5b FLAMMABLE LIQUIDS may apply

Seveso named dangerous substances, Annex 1, Part 2

Dangerous Substances	Identifier(s)	Qualifying quantity (tonnes) for the application of	
		Lower-tier requirements	Upper-tier requirements
2-methoxy-1-methylethyl	108-65-6	10	50
acetate			
hexamethylene-di-isocyanate	822-06-0	50	200



butanone	78-93-3	10	50
n-butyl acetate	123-86-4	10	50
4-methyl-m-phenylene diisocyanate	584-84-9	10	100
4-methyl-m-phenylene diisocyanate	584-84-9	50	200

Regulation (EU) No 649/2012

Chemical	Identifier(s)	Annex I
Stannane, dioctylbis[(1-	68299-15-0	Part 1
oxoneodecyl)oxy]-		

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained substances may have been carried out by the registrants of the substances in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H330	Fatal 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.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Davisian informatio	n.

Revision information:

Formulation: Section 16: Annex information was added.

Industrial Use of Coatings: Section 16: Annex information was added.

Section 1: Emergency telephone information was modified.

CLP: Ingredient table information was modified.

Section 3: Composition/ Information of ingredients table information was modified.

Section 8: 8.2. Exposure controls information information was added.

Section 8: 8.2.3. Environmental exposure controls information information was added.

Section 8: DNEL table row information was added.

Section 8: Eye/face protection information information was modified.

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Section 8: glove data value information was deleted.

Section 8: glove data value information was modified.

Section 8: Occupational exposure limit table information was modified.

Section 8: Personal Protection - Skin/hand information information was modified.

Section 8: PNEC table row information was added.

Section 8: Skin protection - protective clothing information information was modified.

Section 11: Acute Toxicity table information was modified.

Section 11: Germ Cell Mutagenicity Table information was modified.

Section 11: Reproductive Toxicity Table information was modified.

Section 11: Reproductive/developmental effects information information was added.

Section 11: Serious Eye Damage/Irritation Table information was modified.

Section 11: Skin Corrosion/Irritation Table information was modified.

Section 11: Skin Sensitization Table information was modified.

Section 11: Target Organs - Repeated Table information was modified.

Section 12: Component ecotoxicity information information was modified.

Section 12: Mobility in soil information information was modified.

Section 12: Persistence and Degradability information information was modified.

Section 12:Bioccumulative potential information information was modified.

Section 15: Restrictions on manufacture ingredients information information was modified.

Section 15: Seveso Hazard Category Text information was added.

Annex: Prediction of exposure statement information was added.

Two-column table displaying the unique list of H Codes and statements (std phrases) for all components of the given material. information was modified.

Annex

1. Title	
Substance identification	butanone;
	EC No. 201-159-0;
	CAS Nbr 78-93-3;
Exposure Scenario Name	Formulation
Lifecycle Stage	Formulation or re-packing
Contributing activities	PROC 05 -Mixing or blending in batch processes
	PROC 08a -Transfer of substance or mixture (charging and discharging) at non- dedicated facilities
	PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities
	ERC 02 -Formulation into mixture
Processes, tasks and activities covered	Mixing or blending of solid or liquid materials. Transfers with dedicated controls,
	including loading, filling, dumping, bagging. Transfers without dedicated controls,
	including loading, filling, dumping, bagging.
2. Operational conditions and risk mana	
Operating Conditions	Physical state:Liquid.
	General operating conditions:
	Duration of exposure per day at workplace [for one worker]: 8 hours/day;
	Emission days per year: 225 days per year;
	Indoor use with Local Exhaust Ventilation;
	Outdoor use;
	Task; PROC05;
	Indoors with good general ventilation;
Risk management measures	Under the operational conditions described above the following risk management
TASK Management measures	measures apply:
	General risk management measures:
	Human health:
	Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific

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	glove material.; Environmental: None needed;
Waste management measures	Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point; Do not release to waterways or sewers;
3. Prediction of exposure	
Prediction of exposure	Human and environmental exposures are not expected to exceed the DNELs and PNECs when the identified risk management measures are adopted.
1. Title	

1. Title	,
Substance identification	butanone;
	EC No. 201-159-0;
	CAS Nbr 78-93-3;
Exposure Scenario Name	Industrial Use of Coatings
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 05 -Mixing or blending in batch processes
	PROC 08a -Transfer of substance or mixture (charging and discharging) at non-
	dedicated facilities
	PROC 08b -Transfer of substance or mixture (charging and discharging) at
	dedicated facilities PROC 10 -Roller application or brushing
	ERC 04 -Use of non-reactive processing aid at industrial site (no inclusion into or
	onto article)
Processes, tasks and activities covered	Application of product with a roller or brush. Mixing or blending of solid or liquid
	materials. Transfers with dedicated controls, including loading, filling, dumping,
	bagging. Transfers without dedicated controls, including loading, filling, dumping,
	bagging.
2. Operational conditions and risk mana	B
Operating Conditions	Physical state:Liquid.
	General operating conditions:
	Duration of exposure per day at workplace [for one worker]: 8 hours/day;
	Emission days per year: 225 days per year;
	Indoor use with Local Exhaust Ventilation;
	Outdoor use;
	Task: PROC08b;
	Indoors with good general ventilation;
Risk management measures	Under the operational conditions described above the following risk management
	measures apply:
	General risk management measures:
	Human health:
	Protective Gloves - Chemical resistant. Refer to Section 8 of the SDS for specific
	glove material.;
	Environmental:
	None needed;
Waste management measures	Do not empty into drains, dispose of this material and its container at hazardous or
	special waste collection point;
	Do not release to waterways or sewers;
3. Prediction of exposure	<u></u>
Prediction of exposure	Human and environmental exposures are not expected to exceed the DNELs and
	PNECs when the identified risk management measures are adopted.

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our



knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.

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Safety Data Sheet

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Document group: 2024-02-15-07 **Version number:** 1.00 **Revision date:** 15/02/2024 **Supersedes date:** Initial issue.

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

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

1.1. Product identifier

PROMOTER PANEL-FIX P202

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

Identified uses

Primer

1.3. Details of the supplier of the safety data sheet

Address: Adhesivos Soltec S.L, Avenida del Vallès 724-A, 08227, Terrassa, Barcelona

Telephone: + 34 937 352 744

E Mail: info@adhesivossoltec.com **Website:** https://adhesivossoltec.com

1.4. Emergency telephone number

Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

CLASSIFICATION:

Flammable Liquid, Category 2 - Flam. Liq. 2; H225 Serious Eye Damage/Eye Irritation, Category 2 - Eye Irrit. 2; H319 Skin Sensitization, Category 1B - Skin Sens. 1B; H317

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

SIGNAL WORD



DANGER.

Symbols

GHS02 (Flame) |GHS07 (Exclamation mark) |

Pictograms





Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
3-Trimethoxysilylpropane-1-thiol	4420-74-0	224-588-5	< 2.5
3-aminopropyltriethoxysilane	919-30-2	213-048-4	< 1

HAZARD STATEMENTS:

H225 Highly flammable liquid and vapour.
 H319 Causes serious eye irritation.
 H317 May cause an allergic skin reaction.

PRECAUTIONARY STATEMENTS

Prevention:

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P280E Wear protective gloves.

Response:

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present

and easy to do. Continue rinsing.

P333 + P313 If skin irritation or rash occurs: Get medical advice/attention.

P370 + P378 In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or

carbon dioxide to extinguish.

2.3. Other hazards

None known.

This material does not contain any substances that are assessed to be a PBT or vPvB

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Ingredient	Identifier(s)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
ethanol	(CAS-No.) 64-17-	Flam. Liq. 2, H225
	5	Eye Irrit. 2, H319



	(EC-No.) 200-578- 6 (REACH-No.) 01- 2119457610-43	
3-Trimethoxysilylpropane-1-thiol	(CAS-No.) 4420- 74-0 (EC-No.) 224-588- 5 (REACH-No.) 01- 2120763539-41	Acute Tox. 4, H302 Skin Sens. 1B, H317 Aquatic Chronic 2, H411
3-aminopropyltriethoxysilane	(CAS-No.) 919- 30-2 (EC-No.) 213-048- 4 (REACH-No.) 01- 2119480479-24	Acute Tox. 4, H302 Skin Corr. 1B, H314 Skin Sens. 1B, H317

Please see section 16 for the full text of any H statements referred to in this section

Specific Concentration Limits

Ingredient	Identifier(s)	Specific Concentration Limits
ethanol	(CAS-No.) 64-17-5	(C >= 50%) Eye Irrit. 2,
	(EC-No.) 200-578-6	Б Н319
	(REACH-No.) 01-	
	2119457610-43	

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact

Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

If swallowed

Rinse mouth. If you feel unwell, get medical attention.

4.2. Most important symptoms and effects, both acute and delayed

No critical symptoms or effects. See Section 11.1, information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable.



SECTION 5: Fire-fighting measures

5.1. Extinguishing media

In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture

Closed containers exposed to heat from fire may build pressure and explode.

Hazardous Decomposition or By-Products

<u>Substance</u>	<u>Condition</u>
Carbon monoxide	During combustion.
Carbon dioxide.	During combustion.
Oxides of sulphur.	During combustion.

5.3. Advice for fire-fighters

Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture. Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Warning! A motor could be an ignition source and could cause flammable gases or vapours in the spill area to burn or explode. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment. For larger spills, cover drains and build dykes to prevent entry into sewer systems or bodies of water.

6.3. Methods and material for containment and cleaning up

Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with water. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Take precautionary measures against static discharge. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Wear low static or properly grounded shoes. To minimize the risk of ignition, determine applicable electrical classifications for the process using this product and select specific local exhaust ventilation equipment to avoid flammable vapour accumulation. Ground/bond container and receiving equipment if there is potential for static electricity accumulation during transfer.



7.2. Conditions for safe storage including any incompatibilities

Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store away from acids. Store away from oxidising agents.

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and personal protection recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient CAS Nbr Agency Limit type Additional comments

ethanol 64-17-5 Ireland OELs STEL(15 minutes):1000 ppm

Ireland OELs : Ireland. OELs TWA: Time-Weighted-Average STEL: Short Term Exposure Limit

CEIL: Ceiling

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from Indust. Inspect./Ministry (IE)

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment. Use explosion-proof ventilation equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:

Indirect vented goggles.

Applicable Norms/Standards

Use eye protection conforming to EN 166

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing.

Gloves made from the following material(s) are recommended:

MaterialThickness (mm)Breakthrough TimeNeoprene.No data availableNo data available



Applicable Norms/Standards Use gloves tested to EN 374

If this product is used in a manner that presents a higher potential for exposure (eg. spraying, high splash potential etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Neoprene apron.

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours

For questions about suitability for a specific application, consult with your respirator manufacturer.

Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136: filter type A

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical stateLiquid.Specific Physical Form:fluidColourColourlessOdorOdourless

Odour threshold No data available.

Melting point/freezing point-114.5 °CBoiling point/boiling range78 °C

Flammability (solid, gas)Not applicable.Flammable Limits(LEL)3.5 % volumeFlammable Limits(UEL)15 % volume

Flash point 13 °C [Test Method:Closed Cup]

Autoignition temperature >=200 °C

Decomposition temperature *No data available.*

pН

Kinematic Viscosity 1.9 mm²/sec **Water solubility** 1,000 g/l

Solubility- non-waterPartition coefficient: n-octanol/water
No data available.
No data available.

Vapour pressure 5.9 kPa

Density

Relative density

Relative Vapor Density

No data available.

Relative Vapor Density

No data available.



9.2. Other information

9.2.2 Other safety characteristics EU Volatile Organic Compounds Evaporation rate

No data available. No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Not determined

10.5 Incompatible materials

Not determined

10.6 Hazardous decomposition products

Substance
None known.

Condition

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

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

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation



Respiratory tract irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. May cause additional health effects (see below).

Skin contact

Contact with the skin during product use is not expected to result in significant irritation. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact

Severe eye irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired vision.

Ingestion

No known health effects.

Additional Health Effects:

Single exposure may cause target organ effects:

Central nervous system (CNS) depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Additional information:

This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified by the International Agency for Research on Cancer as carcinogenic to humans. There are also data associating human consumption of alcoholic beverages with developmental toxicity and liver toxicity. Exposure to ethanol during the foreseeable use of this product is not expected to cause cancer, developmental toxicity, or liver toxicity.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Dermal		No data available; calculated ATE >5,000 mg/kg
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
ethanol	Dermal	Rabbit	LD50 > 15,800 mg/kg
ethanol	Inhalation- Vapour (4 hours)	Rat	LC50 124.7 mg/l
ethanol	Ingestion	Rat	LD50 17,800 mg/kg
3-Trimethoxysilylpropane-1-thiol	Dermal	Rabbit	LD50 2,270 mg/kg
3-Trimethoxysilylpropane-1-thiol	Ingestion	Rat	LD50 770 mg/kg
3-aminopropyltriethoxysilane	Dermal	Rabbit	LD50 4,290 mg/kg
3-aminopropyltriethoxysilane	Ingestion	Rat	LD50 1,570 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Name	Species	Value
ethanol	Rabbit	No significant irritation
3-Trimethoxysilylpropane-1-thiol	Rabbit	No significant irritation
3-aminopropyltriethoxysilane	Rabbit	Corrosive

Serious Eye Damage/Irritation

Name	Species	Value
ethanol	Rabbit	Severe irritant

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3-Trimethoxysilylpropane-1-thiol	Rabbit	No significant irritation
3-aminopropyltriethoxysilane	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
ethanol	Human	Not classified
3-Trimethoxysilylpropane-1-thiol	Guinea	Sensitising
	pig	
3-aminopropyltriethoxysilane	Guinea	Sensitising
	pig	

Respiratory Sensitisation

For the component/components, either no data is currently available or the data is not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
ethanol	In Vitro	Some positive data exist, but the data are not sufficient for classification
ethanol	In vivo	Some positive data exist, but the data are not sufficient for classification
3-Trimethoxysilylpropane-1-thiol	In Vitro	Not mutagenic

Carcinogenicity

Name	Route	Species	Value
ethanol	Ingestion	Multiple	Some positive data exist, but the data are not
		animal	sufficient for classification
		species	

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
ethanol	Inhalation	Not classified for development	Rat	NOAEL 38 mg/l	during gestation
ethanol	Ingestion	Not classified for development	Rat	NOAEL 5,200 mg/kg/day	premating & during gestation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
ethanol	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	Human	LOAEL 9.4 mg/l	not available
ethanol	Inhalation	central nervous system depression	Not classified	Human and animal	NOAEL not available	
ethanol	Ingestion	central nervous system depression	Not classified	Multiple animal species	NOAEL not available	
ethanol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg	

Specific Target Organ Toxicity - repeated exposure

opecine rarger organ	pecific furget organ foneity repetited exposure							
Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration		
ethanol	Inhalation	liver	Some positive data exist, but the	Rabbit	LOAEL 124	365 days		



			data are not sufficient for classification		mg/l	
ethanol	Inhalation	hematopoietic system immune system	Not classified	Rat	NOAEL 25 mg/l	14 days
ethanol	Ingestion	liver	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 8,000 mg/kg/day	4 months
ethanol	Ingestion	kidney and/or bladder	Not classified	Dog	NOAEL 3,000 mg/kg/day	7 days

Aspiration Hazard

For the component/components, either no data is currently available or the data is not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

11.2. Information on other hazards

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS#	Organism	Type	Exposure	Test endpoint	Test result
ethanol	64-17-5	Fathead minnow	Experimental	96 hours	LC50	14,200 mg/l
ethanol	64-17-5	Fish	Experimental	96 hours	LC50	11,000 mg/l
ethanol	64-17-5	Green algae	Experimental	72 hours	EC50	275 mg/l
ethanol	64-17-5	Water flea	Experimental	48 hours	LC50	5,012 mg/l
ethanol	64-17-5	Green algae	Experimental	72 hours	ErC10	11.5 mg/l
ethanol	64-17-5	Water flea	Experimental	10 days	NOEC	9.6 mg/l
3- Trimethoxysilylpro pane-1-thiol	4420-74-0	Green algae	Experimental	72 hours	EC50	267 mg/l
3- Trimethoxysilylpro pane-1-thiol	4420-74-0	Water flea	Experimental	48 hours	EC50	6.7 mg/l
3- Trimethoxysilylpro pane-1-thiol	4420-74-0	Zebra Fish	Experimental	96 hours	LC50	439 mg/l
3- aminopropyltrietho xysilane	919-30-2	Bacteria	Experimental	5.75 hours	EC50	43 mg/l
3- aminopropyltrietho xysilane	919-30-2	Green algae	Experimental	72 hours	EC50	603 mg/l

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3-	919-30-2	Invertebrate	Experimental	48 hours	LC50	580 mg/l
aminopropyltrietho			_			-
xysilane						
3-	919-30-2	Water flea	Experimental	48 hours	EC50	331 mg/l
aminopropyltrietho						
xysilane						
3-	919-30-2	Zebra Fish	Experimental	96 hours	LC50	>934 mg/l
aminopropyltrietho						
xysilane						
3-	919-30-2	Green algae	Experimental	72 hours	NOEC	1.3 mg/l
aminopropyltrietho						
xysilane						

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
ethanol	64-17-5	Experimental Biodegradation	14 days	BOD	89 %BOD/ThOD	OECD 301C - MITI test (I)
3- Trimethoxysilylpro pane-1-thiol	4420-74-0	Estimated Hydrolysis		Hydrolytic half-life	53.3 minutes (t 1/2)	
3- aminopropyltrietho xysilane	919-30-2	Experimental Biodegradation	28 days	BOD	54 %BOD/ThOD	OECD 301C - MITI test (I)
3- aminopropyltrietho xysilane	919-30-2	Estimated Photolysis		Photolytic half-life (in air)		
3- aminopropyltrietho xysilane	919-30-2	Experimental Hydrolysis		Hydrolytic half-life	8.5 hours (t 1/2)	

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
ethanol	64-17-5	Experimental Bioconcentration		Log Kow	-0.35	
3- Trimethoxysilylpro pane-1-thiol	4420-74-0	Estimated Bioconcentration		Log Kow	0.25	
3- aminopropyltrietho xysilane	919-30-2	Experimental BCF - Fish	56 days	Bioaccumulation factor	<3.4	OECD305-Bioconcentration

12.4. Mobility in soil

No test data available.

12.5. Results of the PBT and vPvB assessment

This material does not contain any substances that are assessed to be a PBT or vPvB

12.6. Endocrine disrupting properties

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

12.7. Other adverse effects

Material	CAS Nbr	Ozone Depletion Potential	Global Warming Potential
(gamma-	4420-74-0	0	
mercaptopropyl)trimethoxysilane			

SECTION 13: Disposal considerations



13.1 Waste treatment methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Incinerate in a permitted waste incineration facility. As a disposal alternative, utilize an acceptable permitted waste disposal facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of the manufacturer, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/CE and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor

EU waste code (product as sold)

14 06 03* Other solvents and solvent mixtures

SECTION 14: Transportation information

- · 14.1 UN-Number
- · ADR, IMDG, IATA UN1170
- · 14.2 UN proper shipping name
- · ADR 1170 ETHANOL (ETHYL ALCOHOL)
- · IMDG ETHANOL (ETHYL ALCOHOL)
- · IATA ETHANOL
- · 14.3 Transport hazard class(es)
- · ADR, IMDG, IATA
- · Class 3 Flammable liquids.
- · Label 3
- · 14.4 Packing group
- · ADR, IMDG, IATA II
- · 14.5 Environmental hazards:
- · Marine pollutant: No
- \cdot 14.6 Special precautions for user

Warning: Flammable liquids.

- · Danger code (Kemler): 33
- · EMS Number: F-E,S-D
- · Stowage Category A
- \cdot 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code Not applicable.
- · Transport/Additional information:
- · ADR · Limited quantities (LQ) 1L
- · Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

- · Transport category 2
- · Tunnel restriction code D/E
- · Limited quantities (LQ) 1L



· Excepted quantities (EQ) Code: E2

Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

· UN "Model Regulation": UN 1170 ETHANOL (ETHYL ALCOHOL), 3, II

SECTION 15: Regulatory information

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

Global inventory status

Contact manufacturer for more information

DIRECTIVE 2012/18/EU

Seveso hazard categories, Annex 1, Part 1 None

Seveso named dangerous substances, Annex 1, Part 2

Dangerous Substances	Identifier(s)	Qualifying quantity (tonnes) for the application of		
		Lower-tier requirements	Upper-tier requirements	
ethanol	64-17-5	10	50	

Regulation (EU) No 649/2012

No chemicals listed

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained substances may have been carried out by the registrants of the substances in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H411	Toxic to aquatic life with long lasting effects.

Revision information:

No revision information

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.



Safety Data Sheet

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Revision date: 15/02/2024 **Supersedes date:** 28/11/2023

This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

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

1.1. Product identifier

PANEL-FIX

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

Identified uses

Sealant.

1.3. Details of the supplier of the safety data sheet

Address: Adhesivos Soltec S.L, Avenida del Vallès 724-A, 08227, Terrassa, Barcelona

Telephone: + 34 937 352 744

E Mail: info@adhesivossoltec.com **Website:** https://adhesivossoltec.com

1.4. Emergency telephone number

Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture CLP REGULATION (EC) No 1272/2008

The health and environmental classifications of this material have been derived using the calculation method, except in cases where test data are available or the physical form impacts classification. Classification(s) based on test data or physical form are noted below, if applicable.

The carcinogenicity classification for titanium dioxide is not applicable based on physical form (material is not a powder).

CLASSIFICATION:

Hazardous to the Aquatic Environment (Chronic), Category 3 - Aquatic Chronic 3; H412

For full text of H phrases, see Section 16.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008

HAZARD STATEMENTS:

H412 Harmful to aquatic life with long lasting effects.

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PRECAUTIONARY STATEMENTS

Disposal:

P501 Dispose of contents/container in accordance with applicable local/regional/national/international

regulations.

SUPPLEMENTAL INFORMATION:

Supplemental Hazard Statements:

EUH212 Warning! Hazardous respirable dust may be formed when used. Do not breathe dust.

EUH208 Contains Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-. | Trimethoxyvinylsilane. | N-

(3-(Trimethoxysilyl)propyl)ethylenediamine. May produce an allergic reaction.

2% of the mixture consists of components of unknown acute oral toxicity.

Contains 32% of components with unknown hazards to the aquatic environment.

2.3. Other hazards

None known.

This material does not contain any substances that are assessed to be a PBT or vPvB

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Ingredient	Identifier(s)	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Calcium carbonate	(CAS-No.) 471- 34-1 (EC-No.) 207-439- 9	30 - 60	Substance with a national occupational exposure limit
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	(CAS-No.) 68515- 49-1 (EC-No.) 271-091- 4	10 - 30	Substance with a national occupational exposure limit
Oxide glass chemicals	(CAS-No.) 65997- 17-3 (EC-No.) 266-046- 0	3 - 7	Substance with a national occupational exposure limit
Titanium dioxide	(CAS-No.) 13463- 67-7 (EC-No.) 236-675-	1-5	Carc. 2, H351 (inhalation)

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T
No.) 01-
79-17
) 1333- < 3 Substance with a
national
215-609- occupational
1 *
exposure limit
No.) 01-
22-32
Skin Sens. 1B,
H317
ELINCS Repr. 2, H361d
No.) 01- Aquatic Chronic 2,
99-67 H411
) 2768- < 1 Skin Sens. 1B,
H317
220-449- Flam. Liq. 3, H226
Acute Tox. 4, H33
No.) 01-
15-52
) 1760- < 1 Acute Tox. 4, H33
Acute Tox. 4, H30
217-164- Eye Dam. 1, H318
Skin Sens. 1, H317
No.) 01- STOT RE 2, H373
, I
15-39
) 63843- < 0.1 Aquatic Chronic 1,
H410,M=10
264-513- Acute Tox. 4, H302
STOT RE 1, H372
No.) 01-
31-37
$\frac{7}{1}$) 2 N2) E6N9) 2 N1) 2 N1) 2

Please see section 16 for the full text of any H statements referred to in this section

For information on ingredient occupational exposure limits or PBT or vPvB status, see sections 8 and 12 of this SDS

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation

Remove person to fresh air. If you feel unwell, get medical attention.

Skin contact

Immediately wash with soap and water. Remove contaminated clothing and wash before reuse. If signs/symptoms develop, get medical attention.

Eye contact

If exposed, flush eyes with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms develop, get medical attention.

If swallowed

Rinse mouth. If you feel unwell, get medical attention.



4.2. Most important symptoms and effects, both acute and delayed

No critical symptoms or effects. See Section 11.1, information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required

Not applicable.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture

None inherent in this product.

Hazardous Decomposition or By-Products

Substance

Carbon monoxide Carbon dioxide.

Condition

During combustion. During combustion.

5.3. Advice for fire-fighters

Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Evacuate area. Ventilate the area with fresh air. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapours, in accordance with good industrial hygiene practice. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue. Seal the container. Dispose of collected material as soon as possible.

6.4. Reference to other sections

Refer to Section 8 and Section 13 for more information

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse. Avoid contact with oxidising agents (eg. chlorine, chromic acid etc.) Use personal protective equipment (eg. gloves, respirators...) as required.

7.2. Conditions for safe storage including any incompatibilities

Store away from acids. Store away from oxidising agents.

7.3. Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See Section 8 for exposure controls and



personal protection recommendations.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

Ingredient	CAS Nbr	Agency	Limit type	Additional comments
Carbon black	1333-86-4	Ireland OELs	TWA(inhalable fraction)(8 hours):3 mg/m3	
Titanium dioxide	13463-67-7	Ireland OELs	TWA(Total inhalable dust)(8 hours):10 mg/m3;TWA(as respirable dust)(8 hours):4 mg/m3	
DUST, INERT OR NUISANCE	471-34-1	Ireland OELs	TWA(Total inhalable dust)(8 hours):10 mg/m3;TWA(as respirable dust)(8 hours):4 mg/m3	
TIN, ORGANIC COMPOUNDS	54068-28-9	Ireland OELs	TWA(8 hours):0.1 mg/m3;STEL(15 minutes):0.2 mg/m3	as Sn
Mineral wool, with the exception of those specified elsewhere in this Annex	65997-17-3	Ireland OELs	TWA(8 hours):5 mg/m3(2 fiber/cc)	
Oxide glass chemicals	65997-17-3	Manufacturer determined	TWA(as non-fibrous, respirable)(8 hours):3 mg/m3;TWA(as non-fibrous, inhalable fraction)(8 hours):10 mg/m3	
1,2-Benzenedicarboxylic acid, 1,2-diisodecyl ester	68515-49-1	Ireland OELs	TWA(8 hours):5 mg/m3	

Ireland OELs : Ireland. OELs TWA: Time-Weighted-Average STEL: Short Term Exposure Limit

CEIL: Ceiling

Biological limit values

No biological limit values exist for any of the components listed in Section 3 of this safety data sheet.

Recommended monitoring procedures: Information on recommended monitoring procedures can be obtained from Indust. Inspect./Ministry (IE)

8.2. Exposure controls

8.2.1. Engineering controls

Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapours/spray. If ventilation is not adequate, use respiratory protection equipment.

8.2.2. Personal protective equipment (PPE)

Eye/face protection

Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:



Safety glasses with side shields.

Applicable Norms/Standards
Use eye protection conforming to EN 166

Skin/hand protection

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Note: Nitrile gloves may be worn over polymer laminate gloves to improve dexterity. Gloves made from the following material(s) are recommended:

MaterialThickness (mm)Breakthrough TimePolymer laminateNo data availableNo data available

Applicable Norms/Standards
Use gloves tested to EN 374

Respiratory protection

An exposure assessment may be needed to decide if a respirator is required. If a respirator is needed, use respirators as part of a full respiratory protection program. Based on the results of the exposure assessment, select from the following respirator type(s) to reduce inhalation exposure:

Half facepiece or full facepiece air-purifying respirator suitable for organic vapours and particulates

For questions about suitability for a specific application, consult with your respirator manufacturer.

Applicable Norms/Standards

Use a respirator conforming to EN 140 or EN 136: filter types A & P

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical stateSolid.Specific Physical Form:Paste

ColourBlack, Grey, WhiteOdorLight OdorOdour thresholdNo data available.Melting point/freezing pointNo data available.Boiling point/boiling range>=120 °CFlammability (solid, gas)Not classifiedFlammable Limits(LEL)0.7 % volume

Flammable Limits(LEL)

Flammable Limits(UEL)

0.7 % volume

No data available.

Flash point 91 °C [*Test Method*:ISO Method] [*Details*:ISO 3679]

Autoignition temperatureNo data available.Decomposition temperatureNo data available.

pH substance/mixture is non-soluble (in water)

Kinematic Viscosity *Not applicable.*

Water solubility Immiscible

Solubility- non-waterNo data available.Partition coefficient: n-octanol/waterNo data available.Vapour pressureNo data available.



DensityNo data available.**Relative density**1.34 [Ref Std:WATER=1]**Relative Vapour Density**No data available.

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic CompoundsNo data available.Evaporation rateNo data available.Percent volatileNo data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

This material may be reactive with certain agents under certain conditions - see the remaining headings in this section

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

Hazardous polymerisation will not occur.

10.4 Conditions to avoid

Not determined

10.5 Incompatible materials

Not determined

10.6 Hazardous decomposition products

SubstanceConditionMethanolMoisture.

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 11 are based on UN GHS calculation rules and classifications derived from internal hazard assessments.

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

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation

No known health effects.

Skin contact

Contact with the skin during product use is not expected to result in significant irritation. Allergic skin reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

Eye contact



Contact with the eyes during product use is not expected to result in significant irritation.

Ingestion

Gastrointestinal irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhoea. May cause additional health effects (see below).

Additional Health Effects:

Reproductive/Developmental Toxicity:

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

Toxicological Data

If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

Acute Toxicity

Name	Route	Species	Value
Overall product	Ingestion		No data available; calculated ATE >5,000 mg/kg
Calcium carbonate	Dermal	Rat	LD50 > 2,000 mg/kg
Calcium carbonate	Inhalation- Dust/Mist (4 hours)	Rat	LC50 3 mg/l
Calcium carbonate	Ingestion	Rat	LD50 6,450 mg/kg
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Dermal	Rabbit	LD50 > 3,160 mg/kg
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 12.5 mg/l
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Ingestion	Rat	LD50 > 9,700 mg/kg
Oxide glass chemicals	Dermal		LD50 estimated to be > 5,000 mg/kg
Oxide glass chemicals	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
Titanium dioxide	Dermal	Rabbit	LD50 > 10,000 mg/kg
Titanium dioxide	Inhalation- Dust/Mist (4 hours)	Rat	LC50 > 6.82 mg/l
Titanium dioxide	Ingestion	Rat	LD50 > 10,000 mg/kg
Carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon black	Ingestion	Rat	LD50 > 8,000 mg/kg
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Dermal	Rabbit	LD50 > 2,000 mg/kg
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Inhalation- Dust/Mist (4 hours)	Rat	LC50 >1.49, <2.44 mg/l
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Ingestion	Rat	LD50 1,897 mg/kg
Trimethoxyvinylsilane	Dermal	Rabbit	LD50 3,260 mg/kg
Trimethoxyvinylsilane	Inhalation- Vapour (4 hours)	Rat	LC50 16.8 mg/l
Trimethoxyvinylsilane	Ingestion	Rat	LD50 7,120 mg/kg
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	Dermal	Rat	LD50 > 2,000 mg/kg
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	Ingestion	Rat	LD50 > 2,000 mg/kg
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate	Dermal	Rat	LD50 > 3,170 mg/kg
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate	Ingestion	Rat	LD50 1,490 mg/kg

ATE = acute toxicity estimate

Skin Corrosion/Irritation

Chin Corrosion irrador							
Name	Species	Value					
Calcium carbonate	Rabbit	No significant irritation					



1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Rabbit	Minimal irritation
Oxide glass chemicals	Professio	No significant irritation
	nal	
	judgemen	
	t	
Titanium dioxide	Rabbit	No significant irritation
Carbon black	Rabbit	No significant irritation
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Rabbit	Mild irritant
Trimethoxyvinylsilane	Rabbit	Minimal irritation
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	Rabbit	No significant irritation
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)[[3,5-bis(1,1-dimethylethyl)-4-	Rabbit	No significant irritation
hydroxyphenyl]methyl]butylmalonate		

Serious Eye Damage/Irritation

Name	Species	Value
Calcium carbonate	Rabbit	No significant irritation
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Rabbit	Mild irritant
Oxide glass chemicals	Professio	No significant irritation
	nal	
	judgemen	
	t	
Titanium dioxide	Rabbit	No significant irritation
Carbon black	Rabbit	No significant irritation
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Rabbit	Corrosive
Trimethoxyvinylsilane	Rabbit	No significant irritation
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	Rabbit	Mild irritant
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)[[3,5-bis(1,1-dimethylethyl)-4-	Rabbit	Mild irritant
hydroxyphenyl]methyl]butylmalonate		

Skin Sensitisation

Name	Species	Value
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Guinea	Not classified
	pig	
Titanium dioxide	Human	Not classified
	and	
	animal	
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	Multiple	Sensitising
	animal	
	species	
Trimethoxyvinylsilane	Guinea	Some positive data exist, but the data are not
	pig	sufficient for classification
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	Mouse	Sensitising
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)[[3,5-bis(1,1-dimethylethyl)-4-	Guinea	Not classified
hydroxyphenyl]methyl]butylmalonate	pig	

Photosensitisation

Name	Species	Value
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)[[3,5-bis(1,1-dimethylethyl)-4-	Guinea	Not sensitising
hydroxyphenyl methyl butyl malonate	pig	

Respiratory Sensitisation

For the component/components, either no data is currently available or the data is not sufficient for classification.

Germ Cell Mutagenicity

Name	Route	Value
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	In Vitro	Not mutagenic
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	In vivo	Not mutagenic
Oxide glass chemicals	In Vitro	Some positive data exist, but the data are not sufficient for classification



Titanium dioxide	In Vitro	Not mutagenic
Titanium dioxide	In vivo	Not mutagenic
Carbon black	In Vitro	Not mutagenic
Carbon black	In vivo	Some positive data exist, but the data are not sufficient for classification
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	In Vitro	Not mutagenic
N-(3-(Trimethoxysilyl)propyl)ethylenediamine	In vivo	Not mutagenic
Trimethoxyvinylsilane	In vivo	Not mutagenic
Trimethoxyvinylsilane	In Vitro	Some positive data exist, but the data are not sufficient for classification
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	In Vitro	Not mutagenic
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate	In vivo	Not mutagenic
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Curemogenery			
Name	Route	Species	Value
Oxide glass chemicals	Inhalation	Multiple	Some positive data exist, but the data are not
		animal	sufficient for classification
		species	
Titanium dioxide	Ingestion	Multiple	Not carcinogenic
	-	animal	
		species	
Titanium dioxide	Inhalation	Rat	Carcinogenic.
Carbon black	Dermal	Mouse	Not carcinogenic
Carbon black	Ingestion	Mouse	Not carcinogenic
Carbon black	Inhalation	Rat	Carcinogenic.

Reproductive Toxicity

Reproductive and/or Developmental Effects

Name	Route	Value	Species	Test result	Exposure Duration
Calcium carbonate	Ingestion	Not classified for development	Rat	NOAEL 625 mg/kg/day	premating & during gestation
1,2-Benzenedicarboxylic acid, di-C9-11- branched alkyl esters, C10-rich	Ingestion	Not classified for female reproduction	Rat	NOAEL 927 mg/kg/day	2 generation
1,2-Benzenedicarboxylic acid, di-C9-11- branched alkyl esters, C10-rich	Ingestion	Not classified for male reproduction	Rat	NOAEL 929 mg/kg/day	2 generation
1,2-Benzenedicarboxylic acid, di-C9-11- branched alkyl esters, C10-rich	Ingestion	Toxic to development	Rat	NOAEL 38 mg/kg/day	2 generation
N-(3- (Trimethoxysilyl)propyl)ethylenediamine	Ingestion	Not classified for female reproduction	Rat	NOAEL 500 mg/kg/day	premating into lactation
N-(3- (Trimethoxysilyl)propyl)ethylenediamine	Ingestion	Not classified for male reproduction	Rat	NOAEL 500 mg/kg/day	28 days
N-(3- (Trimethoxysilyl)propyl)ethylenediamine	Ingestion	Not classified for development	Rat	NOAEL 750 mg/kg/day	during gestation
Trimethoxyvinylsilane	Ingestion	Not classified for male reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Trimethoxyvinylsilane	Ingestion	Not classified for development	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Trimethoxyvinylsilane	Ingestion	Not classified for female reproduction	Rat	NOAEL 1,000 mg/kg/day	premating into lactation
Trimethoxyvinylsilane	Inhalation	Not classified for development	Rat	NOAEL 1.8 mg/l	during organogenesis
Tin, dioctylbis(2,4-pentanedionato- κ O2, κ O4)-	Ingestion	Toxic to development	similar compoun ds	NOAEL not available	2 generation
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate	Ingestion	Not classified for female reproduction	Rat	NOAEL 10 mg/kg/day	premating into lactation

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Bis(1,2,2,6,6-pentamethyl-4-piperidyl)[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl]methyl]butylmalonate	Ingestion	Not classified for male reproduction	Rat	NOAEL 10 mg/kg/day	36 days
Bis(1,2,2,6,6-pentamethyl-4-piperidyl)[[3,5-bis(1,1-dimethylethyl)-4-hydroxyphenyl methyl butylmalonate	Ingestion	Not classified for development	Rat	NOAEL 10 mg/kg/day	premating into lactation

Target Organ(s)

Specific Target Organ Toxicity - single exposure

-1								
Name	Route	Target Organ(s)	Value	Species	Test result	Exposure		
						Duration		
Calcium carbonate	Inhalation	respiratory system	Not classified	Rat	NOAEL	90 minutes		
					0.812 mg/l			
N-(3-	Inhalation	respiratory irritation	Some positive data exist, but the	similar	NOAEL Not			
(Trimethoxysilyl)propyl)et			data are not sufficient for	health	available			
hylenediamine			classification	hazards				

Specific Target Organ Toxicity - repeated exposure

Name	Route	Target Organ(s)	Value	Species	Test result	Exposure Duration
Calcium carbonate	Inhalation	respiratory system	Not classified	Human	NOAEL Not available	occupational exposure
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Inhalation	respiratory system hematopoietic system liver	Not classified	Rat	NOAEL 0.5 mg/l	2 weeks
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL 0.5 mg/l	2 generation
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Ingestion	endocrine system	Not classified	Rat	NOAEL 686 mg/kg/day	90 days
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Ingestion	liver kidney and/or bladder heart	Not classified	Rat	NOAEL 500 mg/kg/day	90 days
1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich	Ingestion	hematopoietic system	Not classified	Dog	NOAEL 320 mg/kg/day	90 days
Oxide glass chemicals	Inhalation	respiratory system	Not classified	Human	NOAEL not available	occupational exposure
Titanium dioxide	Inhalation	respiratory system	Some positive data exist, but the data are not sufficient for classification	Rat	LOAEL 0.01 mg/l	2 years
Titanium dioxide	Inhalation	pulmonary fibrosis	Not classified	Human	NOAEL Not available	occupational exposure
Carbon black	Inhalation	pneumoconiosis	Not classified	Human	NOAEL Not available	occupational exposure
N-(3- (Trimethoxysilyl)propyl)et hylenediamine	Dermal	skin endocrine system hematopoietic system kidney and/or bladder	Not classified	Rat	NOAEL 1,545 mg/kg/day	11 days
N-(3- (Trimethoxysilyl)propyl)et hylenediamine	Inhalation	respiratory system	May cause damage to organs though prolonged or repeated exposure	Rat	NOAEL 0.015 mg/l	90 days
N-(3- (Trimethoxysilyl)propyl)et hylenediamine	Inhalation	hematopoietic system eyes kidney and/or bladder	Not classified	Rat	NOAEL 0.044 mg/l	90 days
N-(3- (Trimethoxysilyl)propyl)et hylenediamine	Ingestion	hematopoietic system nervous system	Not classified	Rat	NOAEL 500 mg/kg/day	28 days
Trimethoxyvinylsilane	Inhalation	kidney and/or bladder	Not classified	Rat	NOAEL mg/l	14 weeks
Trimethoxyvinylsilane	Inhalation	hematopoietic system eyes	Not classified	Rat	NOAEL 2.4 mg/l	14 weeks



Trimethoxyvinylsilane	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg/day	40 days
Trimethoxyvinylsilane	Ingestion	endocrine system hematopoietic system liver immune system	Not classified	Rat	NOAEL 1,000 mg/kg/day	40 days
Tin, dioctylbis(2,4- pentanedionato-κO2,κO4)-	Ingestion	immune system	Causes damage to organs through prolonged or repeated exposure	similar compoun ds	NOAEL not available	
Bis(1,2,2,6,6-pentamethyl- 4-piperidyl)[[3,5-bis(1,1- dimethylethyl)-4- hydroxyphenyl]methyl]but ylmalonate	Ingestion	gastrointestinal tract hematopoietic system liver immune system	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 2 mg/kg/day	36 days

Aspiration Hazard

For the component/components, either no data is currently available or the data is not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

11.2. Information on other hazards

This material does not contain any substances that are assessed to be an endocrine disruptor for human health.

SECTION 12: Ecological information

The information below may not agree with the EU material classification in Section 2 and/or the ingredient classifications in Section 3 if specific ingredient classifications are mandated by a competent authority. In addition, statements and data presented in Section 12 are based on UN GHS calculation rules and classifications derived from 3M assessments.

12.1. Toxicity

No product test data available.

Material	CAS#	Organism	Type	Exposure	Test endpoint	Test result
Calcium carbonate	471-34-1	Green algae	Experimental	72 hours	EC50	>100 mg/l
Calcium carbonate	471-34-1	Rainbow trout	Experimental	96 hours	LC50	>100 mg/l
Calcium carbonate	471-34-1	Water flea	Experimental	48 hours	EC50	>100 mg/l
Calcium carbonate	471-34-1	Green algae	Experimental	72 hours	EC10	100 mg/l
1,2- Benzenedicarboxyl ic acid, di-C9-11- branched alkyl esters, C10-rich	68515-49-1	Activated sludge	Experimental	30 minutes	EC50	>83.3 mg/l
1,2- Benzenedicarboxyl ic acid, di-C9-11- branched alkyl esters, C10-rich	68515-49-1	Green algae	Experimental	96 hours	EC50	>100 mg/l
1,2- Benzenedicarboxyl ic acid, di-C9-11- branched alkyl esters, C10-rich	68515-49-1	Rainbow trout	Experimental	96 hours	LC50	>100 mg/l
1,2- Benzenedicarboxyl	68515-49-1	Water flea	Experimental	48 hours	EC50	>100 mg/l

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Trimethoxyvinylsilane	Ingestion	kidney and/or bladder	Some positive data exist, but the data are not sufficient for classification	Rat	NOAEL 250 mg/kg/day	40 days
Trimethoxyvinylsilane	Ingestion	endocrine system hematopoietic system liver immune system	Not classified	Rat	NOAEL 1,000 mg/kg/day	40 days
Tin, dioctylbis(2,4- pentanedionato-κO2,κO4)-	Ingestion	immune system	Causes damage to organs through prolonged or repeated exposure	similar compoun ds	NOAEL not available	
Bis(1,2,2,6,6-pentamethyl- 4-piperidyl)[[3,5-bis(1,1- dimethylethyl)-4- hydroxyphenyl]methyl]but ylmalonate	Ingestion	gastrointestinal tract hematopoietic system liver immune system	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 2 mg/kg/day	36 days

Aspiration Hazard

For the component/components, either no data is currently available or the data is not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

11.2. Information on other hazards

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12.1. Toxicity

No product test data available.

Material	CAS#	Organism	Type	Exposure	Test endpoint	Test result
Calcium carbonate	471-34-1	Green algae	Experimental	72 hours	EC50	>100 mg/l
Calcium carbonate	471-34-1	Rainbow trout	Experimental	96 hours	LC50	>100 mg/l
Calcium carbonate	471-34-1	Water flea	Experimental	48 hours	EC50	>100 mg/l
Calcium carbonate	471-34-1	Green algae	Experimental	72 hours	EC10	100 mg/l
1,2- Benzenedicarboxyl ic acid, di-C9-11- branched alkyl esters, C10-rich	68515-49-1	Activated sludge	Experimental	30 minutes	EC50	>83.3 mg/l
1,2- Benzenedicarboxyl ic acid, di-C9-11- branched alkyl esters, C10-rich	68515-49-1	Green algae	Experimental	96 hours	EC50	>100 mg/l
1,2- Benzenedicarboxyl ic acid, di-C9-11- branched alkyl esters, C10-rich	68515-49-1	Rainbow trout	Experimental	96 hours	LC50	>100 mg/l
1,2- Benzenedicarboxyl	68515-49-1	Water flea	Experimental	48 hours	EC50	>100 mg/l

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hydroxyphenyl]met						
hyl]butylmalonate			_			
Tin, dioctylbis(2,4-	54068-28-9	Fathead minnow	Estimated	96 hours	LC50	282 mg/l
pentanedionato-						
κΟ2,κΟ4)-						
Tin, dioctylbis(2,4-	54068-28-9	Green algae	Estimated	72 hours	ErC50	226 mg/l
pentanedionato-						
κΟ2,κΟ4)-						
Tin, dioctylbis(2,4-	54068-28-9	Water flea	Estimated	48 hours	EC50	70.2 mg/l
pentanedionato-						
κΟ2,κΟ4)-						
Tin, dioctylbis(2,4-	54068-28-9	Fathead minnow	Estimated	34 days	NOEC	27 mg/l
pentanedionato-						
κΟ2,κΟ4)-						
Tin, dioctylbis(2,4-	54068-28-9	Green algae	Estimated	72 hours	NOEC	8.7 mg/l
pentanedionato-						
κΟ2,κΟ4)-						
, ()	54068-28-9	Water flea	Estimated	21 days	NOEC	0.62 mg/l
pentanedionato-						
κΟ2,κΟ4)-						
Trimethoxyvinylsil	2768-02-7	Bacteria	Experimental	5 hours	EC10	1.1 mg/l
ane						
Trimethoxyvinylsil	2768-02-7	Green algae	Experimental	72 hours	EC50	>957 mg/l
ane						
Trimethoxyvinylsil	2768-02-7	Rainbow trout	Experimental	96 hours	LC50	191 mg/l
ane						
Trimethoxyvinylsil	2768-02-7	Water flea	Experimental	48 hours	EC50	169 mg/l
ane						
Trimethoxyvinylsil	2768-02-7	Green algae	Experimental	72 hours	NOEC	957 mg/l
ane						
Trimethoxyvinylsil	2768-02-7	Water flea	Experimental	21 days	NOEC	28 mg/l
ane						

12.2. Persistence and degradability

Material	CAS Nbr	Test type	Duration	Study Type	Test result	Protocol
Calcium carbonate	471-34-1	Data not availbl- insufficient	N/A	N/A	N/A	N/A
1,2- Benzenedicarboxyl ic acid, di-C9-11- branched alkyl esters, C10-rich	68515-49-1	Experimental Biodegradation	28 days	BOD	74 %BOD/ThOD	OECD 301F - Manometric respirometry
Oxide glass chemicals	65997-17-3	Data not availbl- insufficient	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Data not availbl- insufficient	N/A	N/A	N/A	N/A
Carbon black	1333-86-4	Data not availbl- insufficient	N/A	N/A	N/A	N/A
N-(3- (Trimethoxysilyl)pr opyl)ethylenediami ne	1760-24-3	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	39 %removal of DOC	EC C.4.A. DOC Die-Away Test
N-(3- (Trimethoxysilyl)pr opyl)ethylenediami ne	1760-24-3	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	1.5 minutes (t 1/2)	
Bis(1,2,2,6,6- pentamethyl-4- piperidyl)[[3,5- bis(1,1- dimethylethyl)-4- hydroxyphenyl]met hyl]butylmalonate	63843-89-0	Experimental Biodegradation	28 days	CO2 evolution	2 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
Tin, dioctylbis(2,4- pentanedionato- κO2,κO4)-	54068-28-9	Experimental Biodegradation	28 days	BOD	9 %BOD/ThOD	OECD 301F - Manometric respirometry



Tin, dioctylbis(2,4-	54068-28-9	Experimental		Hydrolytic half-life	<10 minutes (t 1/2)	OECD 111 Hydrolysis func
pentanedionato-		Hydrolysis		(pH 7)		of pH
κΟ2,κΟ4)-						-
Trimethoxyvinylsil	2768-02-7	Experimental	28 days	BOD	51 %BOD/ThOD	OECD 301F - Manometric
ane		Biodegradation				respirometry

12.3 : Bioaccumulative potential

Material	Cas No.	Test type	Duration	Study Type	Test result	Protocol
Calcium carbonate	471-34-1	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
1,2- Benzenedicarboxyl ic acid, di-C9-11- branched alkyl esters, C10-rich	68515-49-1	Estimated BCF - Fish	56 days	Bioaccumulation factor	<14.4	OECD305-Bioconcentration
Oxide glass chemicals	65997-17-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Titanium dioxide	13463-67-7	Experimental BCF - Fish	42 days	Bioaccumulation factor	9.6	
Carbon black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
N-(3- (Trimethoxysilyl)pr opyl)ethylenediami ne		Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Bis(1,2,2,6,6- pentamethyl-4- piperidyl)[[3,5- bis(1,1- dimethylethyl)-4- hydroxyphenyl]met hyl]butylmalonate	63843-89-0	Experimental BCF - Fish	60 days	Bioaccumulation factor	≤437.1	OECD305-Bioconcentration
Tin, dioctylbis(2,4- pentanedionato- κO2,κO4)-	54068-28-9	Analogous Compound BCF - Fish	30 days	Bioaccumulation factor	<100	OECD305-Bioconcentration
Tin, dioctylbis(2,4- pentanedionato- κO2,κO4)-	54068-28-9	Hydrolysis product Bioconcentration		Log Kow	0.68	EC A.8 Partition Coefficient
Trimethoxyvinylsil ane	2768-02-7	Estimated Bioconcentration		Log Kow	-2	

12.4. Mobility in soil

Material	Cas No.	Test type	Study Type	Test result	Protocol
Bis(1,2,2,6,6- pentamethyl-4- piperidyl)[[3,5- bis(1,1- dimethylethyl)-4- hydroxyphenyl]met hyl]butylmalonate	63843-89-0	Modeled Mobility in Soil	Кос	≥420 l/kg	ACD/Labs ChemSketch™
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	54068-28-9	Analogous Compound Mobility in Soil	Koc	290,000 l/kg	
Tin, dioctylbis(2,4-pentanedionato-κO2,κO4)-	54068-28-9	Analogous Compound Mobility in Soil	Koc	33 l/kg	ACD/Labs ChemSketch™
Trimethoxyvinylsila ne	2768-02-7	Estimated Mobility in Soil	Koc	650 l/kg	Episuite [™]

12.5. Results of the PBT and vPvB assessment



This material does not contain any substances that are assessed to be a PBT or vPvB

12.6. Endocrine disrupting properties

This material does not contain any substances that are assessed to be an endocrine disruptor for environmental effects

12.7. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose of contents/ container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

The coding of a waste stream is based on the application of the product by the consumer. Since this is out of the control of the manufacturer, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/CE and amendments) to assign the correct waste code to your waste stream. Ensure national and/or regional regulations are complied with and always use a licensed waste contractor

EU waste code (product as sold)

08 04 09* Waste adhesives and sealants containing organic solvents or other dangerous substances

SECTION 14: Transportation information

Not regulated for transportation.

SECTION 15: Regulatory information

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

Carcinogenicity

<u>Ingredient</u>	CAS Nbr	<u>Classification</u>	<u>Regulation</u>
Carbon black	1333-86-4	Grp. 2B: Possible human	International Agency
		carc.	for Research on Cancer
Titanium dioxide	13463-67-7	Grp. 2B: Possible human	International Agency
		carc.	for Research on Cancer

Restrictions on the manufacture, placing on the market and use:

The following substance(s) contained in this product is/are subject through Annex XVII of REACH regulation to restrictions on the manufacture, placing on the market and use when present in certain dangerous substances, mixtures and articles. Users of this product are required to comply with the restrictions placed upon it by the aforementioned provision.

Ingredient

CAS Nbr

1,2-Benzenedicarboxylic acid, di-C9-11-

68515-49-1

branched alkyl esters, C10-rich

Restriction status: listed in REACH Annex XVII

Restricted uses: See Annex XVII to Regulation (EC) No 1907/2006 for Conditions of Restriction

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Global inventory status

Contact manufacturer for more information

DIRECTIVE 2012/18/EU

Seveso hazard categories, Annex 1, Part 1 None

Seveso named dangerous substances, Annex 1, Part 2

Regulation (EU) No 649/2012

Chemical	Identifier(s)	Annex I
Tin, dioctylbis(2,4-pentanedionato-	54068-28-9	Part 1
κΟ2,κΟ4)-		

15.2. Chemical Safety Assessment

A chemical safety assessment has not been carried out for this mixture. Chemical safety assessments for the contained substances may have been carried out by the registrants of the substances in accordance with Regulation (EC) No 1907/2006, as amended.

SECTION 16: Other information

List of relevant H statements

H226

H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H351i	Suspected of causing cancer by inhalation.
H361d	Suspected of damaging the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Flammable liquid and vapour.

Revision information:

No revision information

DISCLAIMER: The information on this Safety Data Sheet is based on our experience and is correct to the best of our knowledge at the date of publication, but we do not accept any liability for any loss, damage or injury resulting from its use (except as required by law). The information may not be valid for any use not referred to in this Data Sheet or use of the product in combination with other materials. For these reasons, it is important that customers carry out their own test to satisfy themselves as to the suitability of the product for their own intended applications. In addition, this SDS is being provided to convey health and safety information. If you are the importer of record of this product into the European Union, you are responsible for all regulatory requirements, including, but not limited to, product registrations/notifications, substance volume tracking, and potential substance registration.

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PANEL-FIX TAPE C



Safety Data Sheet

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This Safety Data Sheet has been prepared in accordance with the REACH Regulation (EC) 1907/2006 and its modifications.

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

1.1. Product identifier

PANEL-FIX TAPE C

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

Identified uses

Double-sided foam tape

1.3. Details of the supplier of the safety data sheet

Address: Adhesivos Soltec S.L, Avenida del Vallès 724-A, 08227, Terrassa, Barcelona

Telephone: + 34 937 352 744

E Mail: info@adhesivossoltec.com **Website:** https://adhesivossoltec.com

1.4. Emergency telephone number

Emergency medical information: 8am-10pm (seven days) contact National Poisons Information Centre, Beaumont Hospital, Dublin 9 DOV2NO, Ireland. Telephone Number: +353 (0)1 809 2166

SECTION 2: Possible risks

2.1. Classification of the substance or mixture

CLP REGULATION (EC) No 1272/2008

The product is not classified as dangerous to health or the environment in accordance with the CLP regulation.

2.2. Label elements

CLP REGULATION (EC) No 1272/2008: suppressed

Danger pictograms: suppressed **Danger word:** suppressed **Hazard statements:** suppressed

SECTION 3: Composition/information on ingredients

Carrier: Tissue

Liner: Silicone papper Adhesive: Acrylic Core: cardboard

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PANEL-FIX TAPE C



SECTION 4: First aid measures

First Aid-Eye Contact: Immediately flush eyes with large quantities of water. Get medical attention immediately.

First Aid-Skin Contact: In the event of skin hypersensitivity it can cause irritation. In such a case get medical attention.

First Aid-Inhalation: Non-applicable

First Aid-Ingestion: Accidental ingestion is not possible. In case of voluntary ingestion, attend the medical center.

Do not induce vomiting.

SECTION 5: Fire-fighting measures

Extinguishing Media: Carbon dioxide, Dry Chemical, Foam, Water fog.

SECTION 6: Accidental release measures

Non-applicable.

SECTION 7: Handling and storage

Handling: Non special measures recommended.

Keep the material in the original packaging, in a dry environment, away from sunlight and a relative humidity Of 50%. Before application, check that the surfaces are dry, clean and free of grease, oil or other substances.

SECTION 8: Exposure controls/personal protection

8.1 Personal protective equipment: Protective gloves suitable for handling paper/adhesive

8.2 General hygiene measures: wash hands before breaks and at the end of work

SECTION 9: Physical and chemical properties

Physical state: Solid. Tape colour: black. Liner colour: White. Smell: Light.

SECTION 10: Stability and reactivity

Heat decomposition: None during a correct manipulation. Dangerous reactions: None during a correct manipulation.

SECTION 11: Toxicological information

We do not have at our disposal date about this subject. Nevertheless, due to the product characteristics, we consider this is a low-risk product.

PANEL-FIX TAPE C



SECTION 12: Ecological information

Ecological injuries are not known or expected under normal use .Our products are not damaging to the environment, they contain no solvents, CFC gases, benzene or poisonous heavy metals.

SECTION 13: Transportation information

Non dangerous goods according to transport regulations.

SECTION 14: Other information

Avoid contact with alkaline substances, acids and strong oxidants.

The information shown in this safety sheet only refers to this specific product, becoming not valid when this product is used in combination with others.

The data shown match our present knowledge and they do not represent a property guarantee.

The user of our product should observe, under his/her liability, the respective regulations and guidelines.