Safety Data Sheet

Document group:	34-2922-2	**Version number:**	7.03
Revision date:	08/10/2024	**Supersedes date:**	08/10/2024

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
3M™ Single Step Primer PN 58012/PN 51011

Product Identification Numbers
UU-0092-9934-6

7100154584

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: 3M Ireland Limited, The Iveagh Building, The Park, Carrickmines, Dublin 18.
Telephone: +353 1 280 3555
E Mail: tox.uk@mmm.com
Website: www.3M.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
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

SIGNAL WORD
DANGER.

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

Pictograms

Ingredients:

Ingredient	CAS Nbr	EC No.	% by Wt
butanone	78-93-3	201-159-0	40 - 70
BENZENE, 2,4-DIISOCYANATO-1-METHYL-, POLYMER WITH 1,6-DIISOCYANATOHEXANE	26426-91-5		5 - 10
o-(p-isocyanatobenzyl)phenyl isocyanate	5873-54-1	227-534-9	1 - 5
Hexamethylene diisocyanate polymer	28182-81-2	500-060-2	1 - 5
4,4'-methylenediphenyl diisocyanate	101-68-8	202-966-0	1 - 5
Polymethylene polyphenylene isocyanate	9016-87-9		1 - 5

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.
H412	Harmful to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS

Prevention:

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261A	Avoid breathing vapours.
P280K	Wear protective gloves and respiratory protection.

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.

For containers not exceeding 125 ml the following Hazard and Precautionary statements may be used:

<=125 ml Hazard statements

H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317	May cause an allergic skin reaction.
H351	Suspected of causing cancer.
H412	Harmful to aquatic life with long lasting effects.

<=125 ml Precautionary statements

Prevention:

P261A	Avoid breathing vapours.
P280K	Wear protective gloves and respiratory protection.

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.

10% of the mixture consists of components of unknown acute oral toxicity.

12% of the mixture consists of components of unknown acute inhalation toxicity.
Contains 18% 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	40 - 70	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	10 - 30	Flam. Liq. 3, H226 STOT SE 3, H336

	(REACH-No.) 01-2119485493-29		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
Adipic acid - 1,4-butanediol - MDI - neopentyl glycol copolymer	(CAS-No.) 56815-45-3	1 - 5	Substance with a national occupational exposure limit
Polymethylene polyphenylene isocyanate	(CAS-No.) 9016-87-9	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
o-(p-isocyanatobenzyl)phenyl isocyanate	(CAS-No.) 5873-54-1 (EC-No.) 227-534-9	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
Hexamethylene diisocyanate polymer	(CAS-No.) 28182-81-2 (EC-No.) 500-060-2	1 - 5	Acute Tox. 4, H332 Skin Sens. 1, H317 STOT SE 3, H335
Alkyl Isocyanate Silane (NJTS No. 04499600-7195)	Trade Secret	1 - 5	Substance not classified as hazardous
Carbon black	(CAS-No.) 1333-86-4 (EC-No.) 215-609-9	1 - 5	Substance with a national occupational exposure limit
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	(CAS-No.) 2530-83-8 (EC-No.) 219-784-2	1 - 5	Eye Dam. 1, H318 Aquatic Chronic 3, H412
4,4'-methylenediphenyl diisocyanate	(CAS-No.) 101-68-8 (EC-No.) 202-966-0	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
2-methoxy-1-methylethyl acetate	(CAS-No.) 108-65-6 (EC-No.) 203-603-9 (REACH-No.) 01-2119475791-29	1 - 5	Flam. Liq. 3, H226 STOT SE 3, H336
4-isocyanatosulphonyltoluene	(CAS-No.) 4083-64-1 (EC-No.) 223-810-8	0.1 - 1	EUH014 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 STOT SE 3, H335
dibutyltin dichloride	(CAS-No.) 683-18-1	< 0.08	Acute Tox. 2, H330

	(EC-No.) 211-670-0		Acute Tox. 3, H301 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Muta. 2, H341 Repr. 1B, H360FD STOT RE 1, H372 Aquatic Acute 1, H400,M=10 Aquatic Chronic 1, H410,M=10 Skin Sens. 1B, H317 STOT SE 1, H370
4-methyl-m-phenylene diisocyanate	(CAS-No.) 584-84-9 (EC-No.) 209-544-5	< 0.05	Acute Tox. 1, H330 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1A, H334 Skin Sens. 1A, H317 Carc. 2, H351 STOT SE 3, H335 Aquatic Chronic 3, H412 Nota C

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
dibutyltin dichloride	(CAS-No.) 683-18-1 (EC-No.) 211-670-0	(C >= 5%) Skin Corr. 1B, H314 (0.01% =< C < 5%) Skin Irrit. 2, H315 (C >= 3%) Eye Dam. 1, H318 (0.01% =< C < 3%) Eye Irrit. 2, H319
o-(p-isocyanatobenzyl)phenyl isocyanate	(CAS-No.) 5873-54-1 (EC-No.) 227-534-9	(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
4,4'-methylenediphenyl diisocyanate	(CAS-No.) 101-68-8 (EC-No.) 202-966-0	(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
4-methyl-m-phenylene diisocyanate	(CAS-No.) 584-84-9 (EC-No.) 209-544-5	(C >= 0.1%) Resp. Sens. 1A, H334
4-isocyanatosulphonyltoluene	(CAS-No.) 4083-64-1 (EC-No.) 223-810-8	(C >= 5%) Skin Irrit. 2, H315 (C >= 5%) Eye Irrit. 2, H319 (C >= 5%) STOT SE 3, H335

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
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

Substance	Condition
Carbon monoxide	During combustion.
Carbon dioxide.	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. 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. Cover, but do not seal for 48 hours. 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
For industrial/occupational use only. Not for consumer sale or use. 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.) Keep away from reactive metals (eg. Aluminium, zinc etc.) to avoid the formation of hydrogen gas that could create an explosion hazard. 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 to prevent contamination with water or air. If contamination is suspected, do not reseal container. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidising agents. Store away from amines.

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
CAS NO SEQ911373	101-68-8	Ireland OELs	TWA(8 hours):0.02 mg/m3;STEL(15 minutes):0.07 mg/m3	as NCO

4,4'-methylenediphenyl diisocyanate	101-68-8	Ireland OELs	TWA(as NCO)(8 hours):0.005 ppm;TWA(8 hours):0.005 ppm	as NCO, Respiratory/Dermal Sensitizer
2-methoxy-1-methylethyl acetate	108-65-6	Ireland OELs	TWA(8 hours):275 mg/m3(50 ppm);TWA(8 hours):50 ppm(275 mg/m3);STEL(15 minutes):550 mg/m3(100 ppm);STEL(15 minutes):100 ppm(550 mg/m3)	SKIN
n-butyl acetate	123-86-4	Ireland OELs	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	
CAS NO SEQ911373	26426-91-5	Ireland OELs	TWA(8 hours):0.02 mg/m3;STEL(15 minutes):0.07 mg/m3	as NCO
CAS NO SEQ911373	28182-81-2	Ireland OELs	TWA(8 hours):0.02 mg/m3;STEL(15 minutes):0.07 mg/m3	as NCO
CAS NO SEQ911373	4083-64-1	Ireland OELs	TWA(8 hours):0.02 mg/m3;STEL(15 minutes):0.07 mg/m3	as NCO
4-isocyanatosulphonyltoluene	4083-64-1	Manufacturer determined	TWA(8 hours):0.005 ppm;STEL(15 minutes):0.02 ppm	Dermal Sensitizer, Respiratory Sensitizer
CAS NO SEQ911373	56815-45-3	Ireland OELs	TWA(8 hours):0.02 mg/m3;STEL(15 minutes):0.07 mg/m3	as NCO
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):0.07 mg/m3	as NCO, Respiratory/Dermal Sensitizer
CAS NO SEQ911373	5873-54-1	Ireland OELs	TWA(8 hours):0.02 mg/m3;STEL(15 minutes):0.07 mg/m3	as NCO
TIN, ORGANIC COMPOUNDS	683-18-1	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	SKIN

CAS NO SEQ911373	9016-87-9	Ireland OELs	ppm(600 mg/m3);STEL(15 minutes):900 mg/m3(300 ppm);STEL(15 minutes):300 ppm(900 mg/m3) TWA(8 hours):0.02 mg/m3;STEL(15 minutes):0.07 mg/m3	as NCO

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)

Ingredient	Degradation Product	Population	Human exposure pattern	DNEL
2-methoxy-1-methylethyl acetate		Worker	Dermal, Long-term exposure (8 hours), Systemic effects	796 mg/kg bw/d
2-methoxy-1-methylethyl acetate		Worker	Inhalation, Long-term exposure (8 hours), Systemic effects	275 mg/m³
2-methoxy-1-methylethyl acetate		Worker	Inhalation, Short-term exposure, Local effects	550 mg/m³

Predicted no effect concentrations (PNEC)

Ingredient	Degradation Product	Compartment	PNEC
2-methoxy-1-methylethyl acetate		Agricultural soil	0.29 mg/kg d.w.
2-methoxy-1-methylethyl acetate		Freshwater	0.635 mg/l
2-methoxy-1-methylethyl acetate		Freshwater sediments	3.29 mg/kg d.w.
2-methoxy-1-methylethyl acetate		Intermittent releases to water	6.35 mg/l
2-methoxy-1-methylethyl acetate		Marine water	0.0635 mg/l
2-methoxy-1-methylethyl acetate		Marine water sediments	0.329 mg/kg d.w.
2-methoxy-1-methylethyl acetate		Sewage Treatment Plant	100 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:

Material	**Thickness (mm)**	**Breakthrough Time**
Polymer laminate	No data available	No 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: 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 state	Liquid.
Colour	Black
Odor	Pungent Methyl Ethyl Ketone
Odour threshold	*No data available.*
Melting point/freezing point	*No data available.*
Boiling point/boiling range	78.9 ºC

Flammability	Flammable Liquid: Category 2.
Flammable Limits(LEL)	1.8 % volume
Flammable Limits(UEL)	11.5 % volume
Flash point	-8 ºC [*Test Method:*Closed Cup]
Autoignition temperature	200 ºC
Decomposition temperature	*No data available.*
pH	*substance/mixture reacts with water*
Kinematic Viscosity	21.1 mm²/sec
Water solubility	14 g/100 ml
Solubility- non-water	*No data available.*
Partition coefficient: n-octanol/water	*No data available.*
Vapour pressure	10,665.8 Pa [@ 20 ºC]
Density	0.95 g/ml
Relative density	0.95 [@ 20 ºC] [*Ref Std:*WATER=1]
Relative Vapour Density	*No data available.*
Particle Characteristics	*Not applicable.*

9.2. Other information

9.2.2 Other safety characteristics

EU Volatile Organic Compounds	*No data available.*
Evaporation rate	3.5 [*Ref Std:*BUOAC=1]
Percent volatile	70.25 % weight

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
Heat.
High shear and high temperature conditions
Sparks and/or flames.
Temperatures above the boiling point.

10.5 Incompatible materials
Accelerators
Aluminium or magnesium powder and high/shear temperature conditions.
Alcohols.
Alkali and alkaline earth metals.
Amines.
Combustibles.
Finely divided active metals
Reaction with water, alcohols, and amines is not hazardous if container can vent to the atmosphere to prevent pressure

buildup.
Reactive metals
Strong acids.
Strong bases.
Strong oxidising agents.
Water

10.6 Hazardous decomposition products

Substance	Condition
None known.	

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
Mild Skin Irritation: Signs/symptoms may include localised redness, swelling, itching, and dryness. 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
May be harmful if swallowed.
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.

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 >2,000 - =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
BENZENE, 2,4-DIISOCYANATO-1-METHYL-, POLYMER WITH 1,6-DIISOCYANATOHEXANE	Dermal	Professional judgement	LD50 estimated to be > 5,000 mg/kg
BENZENE, 2,4-DIISOCYANATO-1-METHYL-, POLYMER WITH 1,6-DIISOCYANATOHEXANE	Inhalation-Dust/Mist (4 hours)	similar compounds	LC50 > 3.003 mg/l
BENZENE, 2,4-DIISOCYANATO-1-METHYL-, POLYMER WITH 1,6-DIISOCYANATOHEXANE	Ingestion	similar compounds	LD50 > 5,000 mg/kg
Carbon black	Dermal	Rabbit	LD50 > 3,000 mg/kg
Carbon black	Ingestion	Rat	LD50 > 8,000 mg/kg
4,4'-methylenediphenyl diisocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
4,4'-methylenediphenyl diisocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
4,4'-methylenediphenyl diisocyanate	Ingestion	Rat	LD50 31,600 mg/kg
Adipic acid - 1,4-butanediol - MDI - neopentyl glycol copolymer	Dermal		LD50 estimated to be > 5,000 mg/kg
Adipic acid - 1,4-butanediol - MDI - neopentyl glycol copolymer	Ingestion		LD50 estimated to be 2,000 - 5,000 mg/kg
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Dermal	Rabbit	LD50 4,000 mg/kg
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Inhalation-Dust/Mist (4 hours)	Rat	LC50 > 5.3 mg/l
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Ingestion	Rat	LD50 7,010 mg/kg
Hexamethylene diisocyanate polymer	Inhalation-Dust/Mist (4 hours)	Professional judgement	LC50 estimated to be 1 - 5 mg/l
Hexamethylene diisocyanate polymer	Dermal	Rabbit	LD50 > 5,000 mg/kg
Hexamethylene diisocyanate polymer	Ingestion	Rat	LD50 > 5,000 mg/kg
o-(p-isocyanatobenzyl)phenyl isocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg

Polymethylene polyphenylene isocyanate	Dermal	Rabbit	LD50 > 5,000 mg/kg
o-(p-isocyanatobenzyl)phenyl isocyanate	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.368 mg/l
o-(p-isocyanatobenzyl)phenyl isocyanate	Ingestion	Rat	LD50 31,600 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
2-methoxy-1-methylethyl acetate	Dermal	Rabbit	LD50 > 5,000 mg/kg
2-methoxy-1-methylethyl acetate	Inhalation-Vapour (4 hours)	Rat	LC50 > 28.8 mg/l
2-methoxy-1-methylethyl acetate	Ingestion	Rat	LD50 8,532 mg/kg
4-isocyanatosulphonyltoluene	Ingestion	Rat	LD50 2,234 mg/kg
4-isocyanatosulphonyltoluene	Dermal	similar compounds	LD50 > 2,000 mg/kg
dibutyltin dichloride	Inhalation-Dust/Mist (4 hours)	Rat	LC50 0.059 mg/l
dibutyltin dichloride	Ingestion	Rat	LD50 219 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
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
BENZENE, 2,4-DIISOCYANATO-1-METHYL-, POLYMER WITH 1,6-DIISOCYANATOHEXANE	similar compounds	No significant irritation
Carbon black	Rabbit	No significant irritation
4,4'-methylenediphenyl diisocyanate	official classification	Irritant
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Rabbit	Mild irritant
Hexamethylene diisocyanate polymer	Rabbit	Minimal irritation
o-(p-isocyanatobenzyl)phenyl isocyanate	official classification	Irritant
Polymethylene polyphenylene isocyanate	official classification	Irritant
2-methoxy-1-methylethyl acetate	Rabbit	No significant irritation
4-isocyanatosulphonyltoluene	Rabbit	Minimal irritation
dibutyltin dichloride	Multiple animal species	Corrosive
4-methyl-m-phenylene diisocyanate	Rabbit	Irritant

Serious Eye Damage/Irritation

Name	Species	Value
butanone	Rabbit	Severe irritant
n-butyl acetate	Rabbit	Moderate irritant
BENZENE, 2,4-DIISOCYANATO-1-METHYL-, POLYMER WITH 1,6-	similar	Severe irritant

DIISOCYANATOHEXANE	compounds	
Carbon black	Rabbit	No significant irritation
4,4'-methylenediphenyl diisocyanate	official classification	Severe irritant
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Rabbit	Corrosive
Hexamethylene diisocyanate polymer	Rabbit	Mild irritant
o-(p-isocyanatobenzyl)phenyl isocyanate	official classification	Severe irritant
Polymethylene polyphenylene isocyanate	official classification	Severe irritant
2-methoxy-1-methylethyl acetate	Rabbit	Mild irritant
4-isocyanatosulphonyltoluene	Rabbit	Severe irritant
dibutyltin dichloride	Rabbit	Corrosive
4-methyl-m-phenylene diisocyanate	Rabbit	Corrosive

Skin Sensitisation

Name	Species	Value
n-butyl acetate	Multiple animal species	Not classified
BENZENE, 2,4-DIISOCYANATO-1-METHYL-, POLYMER WITH 1,6-DIISOCYANATOHEXANE	similar compounds	Sensitising
4,4'-methylenediphenyl diisocyanate	Mouse	Sensitising
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Guinea pig	Not classified
Hexamethylene diisocyanate polymer	Guinea pig	Sensitising
o-(p-isocyanatobenzyl)phenyl isocyanate	Mouse	Sensitising
Polymethylene polyphenylene isocyanate	Mouse	Sensitising
2-methoxy-1-methylethyl acetate	Guinea pig	Not classified
4-isocyanatosulphonyltoluene	similar compounds	Not classified
dibutyltin dichloride	similar compounds	Sensitising
4-methyl-m-phenylene diisocyanate	Human and animal	Sensitising

Respiratory Sensitisation

Name	Species	Value
4,4'-methylenediphenyl diisocyanate	Human	Sensitising
Hexamethylene diisocyanate polymer	similar compounds	Not classified
o-(p-isocyanatobenzyl)phenyl isocyanate	Human	Sensitising
Polymethylene polyphenylene isocyanate	Human	Sensitising
4-isocyanatosulphonyltoluene	official classification	Sensitising
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
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
o-(p-isocyanatobenzyl)phenyl isocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
Polymethylene polyphenylene isocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification
2-methoxy-1-methylethyl acetate	In Vitro	Not mutagenic
dibutyltin dichloride	In Vitro	Some positive data exist, but the data are not sufficient for classification
dibutyltin dichloride	In vivo	Mutagenic
4-methyl-m-phenylene diisocyanate	In Vitro	Some positive data exist, but the data are not sufficient for classification

Carcinogenicity

Name	Route	Species	Value
butanone	Inhalation	Human	Not carcinogenic
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
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Dermal	Mouse	Not carcinogenic
o-(p-isocyanatobenzyl)phenyl isocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
Polymethylene polyphenylene isocyanate	Inhalation	Rat	Some positive data exist, but the data are not sufficient for classification
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
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	1 generation

				mg/kg/day	
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	Ingestion	Not classified for development	Rat	NOAEL 3,000 mg/kg/day	during organogenesis
o-(p-isocyanatobenzyl)phenyl isocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	during organogenesis
Polymethylene polyphenylene isocyanate	Inhalation	Not classified for development	Rat	NOAEL 0.004 mg/l	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
dibutyltin dichloride	Ingestion	Not classified for male reproduction	Rat	NOAEL 12 mg/kg/day	28 days
dibutyltin dichloride	Ingestion	Toxic to female reproduction	Rat	NOAEL 1.7 mg/kg/day	premating into lactation
dibutyltin dichloride	Ingestion	Toxic to development	Rat	NOAEL 1.7 mg/kg/day	premating into lactation
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

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 classification	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	Professional judgement	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	Professional judgement	NOAEL Not available	
4,4'-methylenediphenyl diisocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Hexamethylene diisocyanate polymer	Inhalation	respiratory irritation	May cause respiratory irritation		NOAEL Not available	

o-(p-isocyanatobenzyl)phenyl isocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL Not available	
Polymethylene polyphenylene isocyanate	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	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	
4-isocyanatosulphonyltoluene	Inhalation	respiratory irritation	May cause respiratory irritation	official classification	NOAEL not available	
dibutyltin dichloride	Inhalation	respiratory irritation	Some positive data exist, but the data are not sufficient for classification	similar health hazards	NOAEL not available	
dibutyltin dichloride	Ingestion	immune system	Causes damage to organs	Rat	LOAEL 5 mg/kg	
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, and/or hair | hematopoietic system | immune system | muscles	Not classified	Rat	NOAEL 14.7 mg/l	90 days
butanone	Ingestion	liver	Not classified	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
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]trimethoxysilane	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
o-(p-isocyanatobenzyl)phenyl isocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
Polymethylene polyphenylene isocyanate	Inhalation	respiratory system	Causes damage to organs through prolonged or repeated exposure	Rat	LOAEL 0.004 mg/l	13 weeks
2-methoxy-1-methylethyl	Inhalation	kidney and/or	Not classified	Rat	NOAEL 16.2	9 days

acetate		bladder			mg/l	
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
dibutyltin dichloride	Ingestion	immune system	Causes damage to organs through prolonged or repeated exposure	Rat	NOAEL 0.3 mg/kg/day	28 days
dibutyltin dichloride	Ingestion	hematopoietic system | liver | nervous system | kidney and/or bladder	Not classified	Rat	NOAEL 12 mg/kg/day	28 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-DIISOCYANATOHEXANE	26426-91-5	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
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	108-65-6	Rainbow trout	Experimental	96 hours	LC50	134 mg/l
2-methoxy-1-methylethyl acetate	108-65-6	Water flea	Experimental	48 hours	EC50	370 mg/l
2-methoxy-1-methylethyl acetate	108-65-6	Green algae	Experimental	72 hours	NOEC	1,000 mg/l
2-methoxy-1-methylethyl acetate	108-65-6	Water flea	Experimental	21 days	NOEC	100 mg/l
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Common Carp	Experimental	96 hours	LC50	55 mg/l
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Green algae	Experimental	96 hours	ErC50	350 mg/l
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Invertebrate	Experimental	48 hours	LC50	324 mg/l
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Green algae	Experimental	96 hours	NOEC	130 mg/l
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Water flea	Experimental	21 days	NOEC	100 mg/l
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Activated sludge	Experimental	3 hours	EC50	>100 mg/l
Adipic acid - 1,4-butanediol - MDI - neopentyl glycol copolymer	56815-45-3	N/A	Data not available or insufficient for classification	N/A	N/A	n/a
Alkyl Isocyanate Silane (NJTS No. 04499600-7195)	Trade Secret	N/A	Data not available or insufficient for classification	N/A	N/A	N/A
Carbon black	1333-86-4	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	>100 mg/l
Carbon black	1333-86-4	Zebra Fish	Experimental	96 hours	No tox obs at lmt of water sol	>100 mg/l
Carbon black	1333-86-4	Green algae	Experimental	72 hours	No tox obs at lmt of water sol	100 mg/l
Carbon black	1333-86-4	Activated sludge	Experimental	3 hours	NOEC	>800 mg/l
o-(p-isocyanatobenzyl)phenyl isocyanate	5873-54-1	Activated sludge	Analogous Compound	3 hours	EC50	>100 mg/l
o-(p-isocyanatobenzyl)phenyl isocyanate	5873-54-1	Green algae	Analogous Compound	72 hours	No tox obs at lmt of water sol	>100 mg/l
o-(p-isocyanatobenzyl)phenyl isocyanate	5873-54-1	Water flea	Analogous Compound	24 hours	No tox obs at lmt of water sol	>100 mg/l

o-(p-isocyanatobenzyl)phenyl isocyanate	5873-54-1	Zebra Fish	Analogous Compound	96 hours	No tox obs at lmt of water sol	>100 mg/l
o-(p-isocyanatobenzyl)phenyl isocyanate	5873-54-1	Green algae	Analogous Compound	72 hours	NOEL	100 mg/l
o-(p-isocyanatobenzyl)phenyl isocyanate	5873-54-1	Water flea	Experimental	21 days	NOEC	100 mg/l
Hexamethylene diisocyanate polymer	28182-81-2	Activated sludge	Experimental	3 hours	EC50	3,828 mg/l
Hexamethylene diisocyanate polymer	28182-81-2	Green algae	Experimental	72 hours	ErC50	>1,000 mg/l
Hexamethylene diisocyanate polymer	28182-81-2	Zebra Fish	Experimental	96 hours	LL50	>100 mg/l
Hexamethylene diisocyanate polymer	28182-81-2	Green algae	Experimental	72 hours	ErC10	370 mg/l
4,4'-methylenediphenyl diisocyanate	101-68-8	Activated sludge	Estimated	3 hours	EC50	>100 mg/l
4,4'-methylenediphenyl diisocyanate	101-68-8	Green algae	Estimated	72 hours	EC50	>1,640 mg/l
4,4'-methylenediphenyl diisocyanate	101-68-8	Water flea	Estimated	24 hours	EC50	>1,000 mg/l
4,4'-methylenediphenyl diisocyanate	101-68-8	Zebra Fish	Estimated	96 hours	LC50	>1,000 mg/l
4,4'-methylenediphenyl diisocyanate	101-68-8	Green algae	Estimated	72 hours	NOEC	1,640 mg/l
4,4'-methylenediphenyl diisocyanate	101-68-8	Water flea	Estimated	21 days	NOEC	10 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	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
4-isocyanatosulphonyltoluene	4083-64-1	Green algae	Estimated	72 hours	EC50	30 mg/l
4-isocyanatosulphonyltoluene	4083-64-1	Medaka	Estimated	96 hours	LC50	435 mg/l
4-isocyanatosulphonyltoluene	4083-64-1	Water flea	Estimated	48 hours	EC50	150 mg/l
4-isocyanatosulphonyltoluene	4083-64-1	Green algae	Estimated	72 hours	EC10	23 mg/l
4-isocyanatosulphonyltoluene	4083-64-1	Water flea	Estimated	21 days	NOEC	47 mg/l
dibutyltin dichloride	683-18-1	Algae or other aquatic plants	Experimental	96 hours	ErC50	0.0427 mg/l
dibutyltin dichloride	683-18-1	Water flea	Experimental	48 hours	EC50	0.843 mg/l
dibutyltin dichloride	683-18-1	Medaka	Experimental	28 days	NOEC	1.8 mg/l
dibutyltin dichloride	683-18-1	Water flea	Experimental	21 days	NOEC	0.0105 mg/l
dibutyltin dichloride	683-18-1	Activated sludge	Experimental	24 hours	IC50	11.5 mg/l
4-methyl-m-phenylene diisocyanate	584-84-9	Green algae	Hydrolysis Product	72 hours	ErC50	18 mg/l

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-DIISOCYANATOHEXANE	26426-91-5	Data not availbl-insufficient	N/A	N/A	N/A	N/A
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
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Biodegradation	28 days	Dissolv. Organic Carbon Deplet	37 %removal of DOC	EC C.4.A. DOC Die-Away Test
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Hydrolysis		Hydrolytic half-life (pH 7)	6.5 hours (t 1/2)	OECD 111 Hydrolysis func of pH
Adipic acid - 1,4-butanediol - MDI - neopentyl glycol copolymer	56815-45-3	Data not availbl-insufficient	N/A	N/A	N/A	N/A
Alkyl Isocyanate Silane (NJTS No. 04499600-7195)	Trade Secret	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
o-(p-isocyanatobenzyl)phenyl isocyanate	5873-54-1	Data not availbl-insufficient	N/A	N/A	N/A	N/A
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)	
4,4'-methylenediphenyl diisocyanate	101-68-8	Estimated Hydrolysis		Hydrolytic half-life	20 hours (t 1/2)	
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)	
4-	4083-64-1	Estimated	28 days	BOD	86 %BOD/ThO	OECD 301D - Closed bottle

isocyanatosulphonyltoluene		Biodegradation			D	test
4-isocyanatosulphonyltoluene	4083-64-1	Estimated Hydrolysis		Hydrolytic half-life	<10 minutes (t 1/2)	
dibutyltin dichloride	683-18-1	Experimental Biodegradation	28 days	CO2 evolution	6 %CO2 evolution/THCO2 evolution	OECD 301B - Modified sturm or CO2
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-DIISOCYANATOHEXANE	26426-91-5	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	0.36	OECD 107 log Kow shke flsk mtd
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Experimental Bioconcentration		Log Kow	0.5	Episuite™
Adipic acid - 1,4-butanediol - MDI - neopentyl glycol copolymer	56815-45-3	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Alkyl Isocyanate Silane (NJTS No. 04499600-7195)	Trade Secret	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
Carbon black	1333-86-4	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
o-(p-isocyanatobenzyl)phenyl isocyanate	5873-54-1	Analogous Compound BCF - Fish	28 days	Bioaccumulation factor	200	
o-(p-isocyanatobenzyl)phenyl isocyanate	5873-54-1	Experimental Bioconcentration		Log Kow	4.51	OECD 117 log Kow HPLC method
Hexamethylene diisocyanate polymer	28182-81-2	Data not available or insufficient for classification	N/A	N/A	N/A	N/A
4,4'-methylenediphenyl diisocyanate	101-68-8	Experimental BCF - Fish	28 days	Bioaccumulation factor	200	OECD305-Bioconcentration
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	
4-isocyanatosulphonyltoluene	4083-64-1	Estimated Bioconcentration		Log Kow	0.6	
dibutyltin dichloride	683-18-1	Analogous Compound BCF - Fish	56 days	Bioaccumulation factor	≤110	similar to OECD 305
dibutyltin dichloride	683-18-1	Experimental Bioconcentration		Log Kow	0.97	OECD 107 log Kow shke flsk mtd
4-methyl-m-phenylene	584-84-9	Experimental BCF -	60 days	Bioaccumulation	180	OECD305-Bioconcentration

diisocyanate		Fish		factor		
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™
2-methoxy-1-methylethyl acetate	108-65-6	Experimental Mobility in Soil	Koc	4 l/kg	Episuite™
[3-(2,3-epoxypropoxy)propyl]trimethoxysilane	2530-83-8	Modeled Mobility in Soil	Koc	10 l/kg	Episuite™
o-(p-isocyanatobenzyl)phenyl isocyanate	5873-54-1	Modeled Mobility in Soil	Koc	300,000 l/kg	Episuite™
4,4'-methylenediphenyl diisocyanate	101-68-8	Estimated Mobility in Soil	Koc	34,000 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 3M, no waste code(s) for products after use will be provided. Please refer to the European Waste Code (EWC - 2000/532/EC 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

	Ground Transport (ADR)	Air Transport (IATA)	Marine Transport (IMDG)
14.1 UN number or ID number	UN1993	UN1993	UN1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S.(METHYL ETHYL KETONE; N-BUTYL ACETATE)	FLAMMABLE LIQUID, N.O.S.(METHYL ETHYL KETONE; N-BUTYL ACETATE)	FLAMMABLE LIQUID, N.O.S.(METHYL ETHYL KETONE; N-BUTYL ACETATE)
14.3 Transport hazard class(es)	3	3	3
14.4 Packing group	II	II	II
14.5 Environmental hazards	Not Environmentally Hazardous	Not applicable	Not a Marine Pollutant
14.6 Special precautions for user	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.	Please refer to the other sections of the SDS for further information.
14.7 Marine Transport in bulk according to IMO instruments	No data available.	No data available.	No data available.
Control Temperature	No data available.	No data available.	No data available.
Emergency Temperature	No data available.	No data available.	No data available.
ADR Classification Code	F1	Not applicable.	Not applicable.
IMDG Segregation Code	Not applicable.	Not applicable.	NONE

Please contact the address or phone number listed on the first page of the SDS for additional information on the transport/shipment of the material by rail (RID) or inland waterways (ADN).

SECTION 15: Regulatory information

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

Carcinogenicity

Ingredient	CAS Nbr	Classification	Regulation
Carbon black	1333-86-4	Grp. 2B: Possible human carc.	International Agency for Research on Cancer
o-(p-isocyanatobenzyl)phenyl isocyanate	5873-54-1	Carc. 2	Regulation (EC) No. 1272/2008, Table 3.1
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
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 carc.	International Agency 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
o-(p-isocyanatobenzyl)phenyl isocyanate	5873-54-1
4,4'-methylenediphenyl diisocyanate	101-68-8
Polymethylene polyphenylene isocyanate	9016-87-9
4-methyl-m-phenylene diisocyanate	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

Authorization status under REACH:
The following substance/s contained in this product might be or is/are subject to authorization in accordance with REACH:

Ingredient	CAS Nbr
dibutyltin dichloride	683-18-1

Authorization status: listed in the Candidate List of Substances of Very High Concern for Authorization

Global inventory status
Contact 3M for more information. The components of this material are in compliance with the provisions of the Korea Chemical Control Act. Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information. The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information. This product complies with Measures on Environmental Management of New Chemical Substances. All ingredients are listed on or exempt from on China IECSC inventory. The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

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
4-methyl-m-phenylene diisocyanate	584-84-9	10	100

Regulation (EU) No 649/2012

Chemical	Identifier(s)	Annex I
dibutyltin dichloride	683-18-1	Part 1

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

EUH014	Reacts violently with water.
EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H312	Harmful in contact with skin.
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.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H360FD	May damage fertility. May damage the unborn child.
H370	Causes damage to organs.
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.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Revision information:
Section 3: Composition/ Information of ingredients table information was modified.
Section 09: Flammability information information was added.
Section 09: Odor information was modified.
Section 09: Particle Characteristics N/A information was added.
Section 11: Skin Sensitization 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: Seveso Substance Text information was modified.
Section 8: Occupational exposure limit table information was modified.
Section 9: Flammability (solid, gas) information information was deleted.

Annex

1. Title	
Substance identification	2-methoxy-1-methylethyl acetate; EC No. 203-603-9; CAS Nbr 108-65-6;
Exposure Scenario Name	Formulation
Lifecycle Stage	Formulation or re-packing
Contributing activities	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 09 -Transfer of substance or mixture into small containers (dedicated filling line, including weighing) ERC 02 -Formulation into mixture
Processes, tasks and activities covered	Transfer of substances/mixtures into small containers e.g. tubes , bottles or small reservoirs. Transfers with dedicated controls, including loading, filling, dumping, bagging. Transfers without dedicated controls, including loading, filling, dumping, bagging.
2. Operational conditions and risk management measures	
Operating Conditions	**Physical state:**Liquid. **General operating conditions:** Assumes use at not more than 20°C above ambient temperature; Duration of use: 8 hours/day;
Risk management measures	Under the operational conditions described above the following risk management measures apply: **General risk management measures:** **Human health:** None needed; **Environmental:** None needed;
Waste management measures	No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:
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	
Substance identification	2-methoxy-1-methylethyl acetate; EC No. 203-603-9; CAS Nbr 108-65-6;
Exposure Scenario Name	Industrial Mixing and Application
Lifecycle Stage	Use at industrial sites
Contributing activities	PROC 05 -Mixing or blending in batch processes PROC 08b -Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC 09 -Transfer of substance or mixture into small containers (dedicated filling line, including weighing) 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	Indoor coating application of product. Mixing or blending of solid or liquid materials. Transfer of substance/mixture with dedicated engineering controls. Transfer of substances/mixtures into small containers e.g. tubes , bottles or small reservoirs.
2. Operational conditions and risk management measures	
Operating Conditions	**Physical state:**Liquid. **General operating conditions:** Assumes use at not more than 20°C above ambient temperature; Duration of use: 8 hours/day;
Risk management measures	Under the operational conditions described above the following risk management measures apply: **General risk management measures:** **Human health:** None needed; **Environmental:** None needed;
Waste management measures	No use-specific waste management measures are required for this product. Refer to Section 13 of main SDS for disposal instructions:
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.

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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