



ALSAN FLASHING

Safety Data Sheet

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

Reference number: 55j

Issue date: 05/05/2008 Revision date: 17/02/2023 Supersedes version of: 03/07/2020 Version: 2.0

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

1.1. Product identifier

Product form : Mixture
Trade name : ALSAN FLASHING
Product code : EU-SDS_55
Product group : Trade product

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

1.2.1. Relevant identified uses

Main use category : Professional use

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

SOPREMA S.A.S.
14 rue Saint Nazaire
P.O. Box CS 60121
67025 STRASBOURG
France
T (+33) 03 88 79 84 00 - F (+33) 03 88 79 84 01
sds@soprema.fr - www.soprema.fr

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Flammable liquids, Category 2 H225
Acute toxicity (inhalation:dust,mist) Category 4 H332
Skin corrosion/irritation, Category 2 H315
Serious eye damage/eye irritation, Category 1 H318
Respiratory sensitisation, Category 1 H334
Skin sensitisation, Category 1 H317
Carcinogenicity, Category 2 H351
Reproductive toxicity, Category 1B H360
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation H335

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Highly flammable liquid and vapour. Suspected of causing cancer. May damage fertility or the unborn child. Harmful if inhaled. May cause respiratory irritation. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled.

ALSAN FLASHING

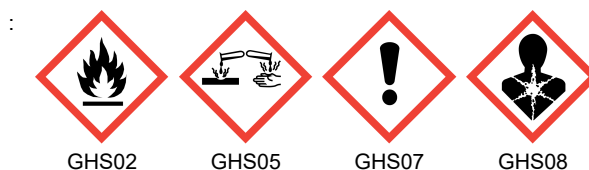
Safety Data Sheet

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

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

Contains

Hazard statements (CLP)

Precautionary statements (CLP)

EUH-statements

Extra phrases

- : Danger
- : Reaction mass of ethylbenzene and xylene; 4,4'-Methylenediphenyldiisocyanate (MDI); 4,4'-Methylenediphenyl diisocyanate, oligomers; Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate; 4-morpholinecarbaldehyde; Calcium oxide; 4-methylbenzenesulfonyl isocyanate; 1-methylpyrrolidin-2-one
- : H225 - Highly flammable liquid and vapour.
H315 - Causes skin irritation.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H332 - Harmful if inhaled.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 - May cause respiratory irritation.
H351 - Suspected of causing cancer.
H360 - May damage fertility or the unborn child.
- : P201 - Obtain special instructions before use.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- : EUH211 - Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
- : Restricted to professional users.
- As from 24 August 2023 adequate training is required before industrial or professional use.

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

Component	
1-methylpyrrolidin-2-one (872-50-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

Component	
1-methylpyrrolidin-2-one(872-50-4)	The substance is not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

ALSAN FLASHING

Safety Data Sheet

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

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Asphalt substance with national workplace exposure limit(s) (IE, GB)	CAS-No.: 8052-42-4 EC-No.: 232-490-9 REACH-no: 01-2119480172-44	25 – 50	Not classified
Limestone substance with national workplace exposure limit(s) (IE, GB)	CAS-No.: 1317-65-3 EC-No.: 215-279-6 REACH-no: Annex V (7)	10 – 20	Not classified
butanone (MEK) substance with national workplace exposure limit(s) (IE, MT, GB); substance with a Community workplace exposure limit	CAS-No.: 78-93-3 EC-No.: 201-159-0 EC Index-No.: 606-002-00-3 REACH-no: 01-2119457290-43	10 – 20	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336 EUH066
Reaction mass of ethylbenzene and xylene	EC-No.: 905-588-0 EC Index-No.: 601-023-00-4; 601-022-00-9 REACH-no: 01-2119486136-34, 01-2119488216-32	5 – 10	Flam. Liq. 3, H226 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 STOT RE 2, H373 Asp. Tox. 1, H304
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate (Note 2)(Note C)	EC-No.: 905-806-4 REACH-no: 01-2119457015-45	5 – 10	Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 EUH204
Calcium oxide substance with national workplace exposure limit(s) (IE, MT, GB); substance with a Community workplace exposure limit	CAS-No.: 1305-78-8 EC-No.: 215-138-9 REACH-no: 01-2119475325-36, 01-2119666323-39, 01-2119862019-36, 01-2119976279-19, 01-2120034600-72	5 – 10	Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335
4,4'-Methylenediphenyl diisocyanate, oligomers	CAS-No.: 25686-28-6 EC-No.: 500-040-3 REACH-no: 01-2119457013-49	1 – 5	Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373 EUH204
dioxotitanium substance with national workplace exposure limit(s) (IE, GB)	CAS-No.: 13463-67-7 EC-No.: 236-675-5 REACH-no: 01-2119489379-17	1 – 5	Not classified
Barium sulfate substance with national workplace exposure limit(s) (IE, GB)	CAS-No.: 7727-43-7 EC-No.: 231-784-4 REACH-no: 01-2119491274-35	1 – 5	Not classified

ALSAN FLASHING

Safety Data Sheet

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

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-methoxy-1-methylethyl acetate substance with national workplace exposure limit(s) (IE, MT, GB); substance with a Community workplace exposure limit	CAS-No.: 108-65-6 EC-No.: 203-603-9 EC Index-No.: 607-195-00-7 REACH-no: 01-2119475791-29	1 – 5	Flam. Liq. 3, H226 STOT SE 3, H336
4,4'-Methylenediphenyldiisocyanate (MDI) substance with national workplace exposure limit(s) (IE) (Note C)(Note 2)	CAS-No.: 101-68-8 EC-No.: 202-966-0 EC Index-No.: 615-005-00-9 REACH-no: 01-2119457014-47	1 – 5	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 Carc. 2, H351 STOT SE 3, H335 STOT RE 2, H373
4-morpholinecarbaldehyde	CAS-No.: 4394-85-8 EC-No.: 224-518-3 REACH-no: 01-2119987993-12	0.1 – 1	Skin Sens. 1B, H317
4-methylbenzenesulfonyl isocyanate	CAS-No.: 4083-64-1 EC-No.: 223-810-8 EC Index-No.: 615-012-00-7 REACH-no: 01-2119980050-47	0.1 – 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 STOT SE 3, H335 EUH014
1-methylpyrrolidin-2-one substance listed as REACH Candidate (1-Methyl-2-pyrrolidone (NMP)) substance with national workplace exposure limit(s) (IE, MT, GB); substance with a Community workplace exposure limit	CAS-No.: 872-50-4 EC-No.: 212-828-1 EC Index-No.: 606-021-00-7 REACH-no: 01-2119472430-46	0.1 – 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Repr. 1B, H360D STOT SE 3, H335
toluene substance with national workplace exposure limit(s) (IE, MT, GB); substance with a Community workplace exposure limit	CAS-No.: 108-88-3 EC-No.: 203-625-9 EC Index-No.: 601-021-00-3 REACH-no: 01-2119471310-51	0.1 – 1	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Chronic 3, H412
4-methylbenzenesulfonyl chloride substance with national workplace exposure limit(s) (IE, GB)	CAS-No.: 98-59-9 EC-No.: 202-684-8 REACH-no: 01-2119971273-36	< 0.1	Met. Corr. 1, H290 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317
Butan-1-ol substance with national workplace exposure limit(s) (IE, GB)	CAS-No.: 71-36-3 EC-No.: 200-751-6 EC Index-No.: 603-004-00-6 REACH-no: 01-2119484630-38	< 0.1	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H336 STOT SE 3, H335

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	EC-No.: 905-806-4 REACH-no: 01-2119457015-45	(0.1 ≤ C < 100) Resp. Sens. 1, H334 (5 ≤ C < 100) Skin Irrit. 2, H315 (5 ≤ C < 100) Eye Irrit. 2, H319 (5 ≤ C < 100) STOT SE 3, H335

ALSAN FLASHING

Safety Data Sheet

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

Specific concentration limits:		
Name	Product identifier	Specific concentration limits
4,4'-Methylenediphenyldiisocyanate (MDI)	CAS-No.: 101-68-8 EC-No.: 202-966-0 EC Index-No.: 615-005-00-9 REACH-no: 01-2119457014-47	(0.1 ≤C ≤ 100) Resp. Sens. 1, H334 (5 ≤C ≤ 100) Eye Irrit. 2, H319 (5 ≤C ≤ 100) Skin Irrit. 2, H315 (5 ≤C ≤ 100) STOT SE 3, H335
4-methylbenzenesulfonyl isocyanate	CAS-No.: 4083-64-1 EC-No.: 223-810-8 EC Index-No.: 615-012-00-7 REACH-no: 01-2119980050-47	(5 ≤C ≤ 100) Eye Irrit. 2, H319 (5 ≤C ≤ 100) STOT SE 3, H335 (5 ≤C ≤ 100) Skin Irrit. 2, H315
1-methylpyrrolidin-2-one	CAS-No.: 872-50-4 EC-No.: 212-828-1 EC Index-No.: 606-021-00-7 REACH-no: 01-2119472430-46	(10 ≤C ≤ 100) STOT SE 3, H335

Note 2: The concentration of isocyanate stated is the percentage by weight of the free monomer calculated with reference to the total weight of the mixture.

Note C: Some organic substances may be marketed either in a specific isomeric form or as a mixture of several isomers. In this case the supplier must state on the label whether the substance is a specific isomer or a mixture of isomers.

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: IF exposed or concerned: Get medical advice/attention. Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing. Call a poison center or a doctor if you feel unwell.
First-aid measures after skin contact	: Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after inhalation	: May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking.
Symptoms/effects after eye contact	: Serious damage to eyes.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
------------------------------	--

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Highly flammable liquid and vapour.
-------------	---------------------------------------

ALSAN FLASHING

Safety Data Sheet

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

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : No open flames, no sparks, and no smoking. Only qualified personnel equipped with suitable protective equipment may intervene. Avoid breathing dust/fume/gas/mist/vapours/spray.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Use only outdoors or in a well-ventilated area. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid contact with skin and eyes.

Hygiene measures : Separate working clothes from town clothes. Launder separately. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

7.3. Specific end use(s)

No additional information available

ALSAN FLASHING

Safety Data Sheet

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

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

Butan-1-ol (71-36-3)	
Ireland - Occupational Exposure Limits	
Local name	Butan-1-ol [n-Butyl alcohol]
OEL TWA [2]	20 ppm
Regulatory reference	Chemical Agents Code of Practice 2021
United Kingdom - Occupational Exposure Limits	
Local name	Butan-1-ol
WEL STEL (OEL STEL)	154 mg/m ³
WEL STEL (OEL STEL) [ppm]	50 ppm
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
2-methoxy-1-methylethyl acetate (108-65-6)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	2-Methoxy-1-methylethylacetate
IOEL TWA	275 mg/m ³
IOEL TWA [ppm]	50 ppm
IOEL STEL	550 mg/m ³
IOEL STEL [ppm]	100 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Ireland - Occupational Exposure Limits	
Local name	2-Methoxy-1-methylethylacetate
OEL TWA [1]	275 mg/m ³
OEL TWA [2]	50 ppm
OEL STEL	550 mg/m ³
OEL STEL [ppm]	100 ppm
Remark	Sk (Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body), IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021
Malta - Occupational Exposure Limits	
Local name	2-Methoxy-1-methylethyl acetate
OEL TWA	275 mg/m ³
OEL TWA [ppm]	50 ppm
OEL STEL	550 mg/m ³
OEL STEL [ppm]	100 ppm

ALSAN FLASHING

Safety Data Sheet

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

2-methoxy-1-methylethyl acetate (108-65-6)	
Remark	Skin # Gilda
Regulatory reference	S.L.424.24 - Chemical Agents at Work Regulations (L.N.356 of 2021)
United Kingdom - Occupational Exposure Limits	
Local name	1-Methoxypropyl acetate
WEL TWA (OEL TWA) [1]	274 mg/m ³
WEL TWA (OEL TWA) [2]	50 ppm
WEL STEL (OEL STEL)	548 mg/m ³
WEL STEL (OEL STEL) [ppm]	100 ppm
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Limestone (1317-65-3)	
Ireland - Occupational Exposure Limits	
Local name	Calcium carbonate [Limestone, Marble]
OEL TWA [1]	10 mg/m ³ total inhalable dust 4 mg/m ³ respirable dust
Regulatory reference	Chemical Agents Code of Practice 2021
United Kingdom - Occupational Exposure Limits	
Local name	Calcium carbonate (Limestone, Marble)
WEL TWA (OEL TWA) [1]	10 mg/m ³ total inhalable 4 mg/m ³ respirable
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
toluene (108-88-3)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Toluene
IOEL TWA [ppm]	50 ppm
IOEL STEL	384 mg/m ³
IOEL STEL [ppm]	100 ppm
Remark	Skin
Regulatory reference	COMMISSION DIRECTIVE 2006/15/EC
Ireland - Occupational Exposure Limits	
Local name	Toluene
OEL TWA [1]	192 mg/m ³
OEL TWA [2]	50 ppm
OEL STEL	384 mg/m ³
OEL STEL [ppm]	100 ppm
Remark	Sk (Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body), IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021

ALSAN FLASHING

Safety Data Sheet

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

toluene (108-88-3)	
Ireland - Biological limit values	
Local name	Toluene
BMGV	0.02 mg/l Parameter: toluene - Medium: blood - Sampling time: Prior to last shift of workweek 0.03 mg/l Parameter: toluene - Medium: urine - Sampling time: End of shift 0.3 mg/g creatinine Parameter: o-cresol - Medium: urine - Sampling time: End of shift - Notations: B (Background)
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)
Malta - Occupational Exposure Limits	
Local name	Toluene
OEL TWA	192 mg/m ³
OEL TWA [ppm]	50 ppm
OEL STEL	384 mg/m ³
OEL STEL [ppm]	100 ppm
Remark	Skin # Ġilda
Regulatory reference	S.L.424.24 - Chemical Agents at Work Regulations (L.N.356 of 2021)
United Kingdom - Occupational Exposure Limits	
Local name	Toluene
WEL TWA (OEL TWA) [1]	191 mg/m ³
WEL TWA (OEL TWA) [2]	50 ppm
WEL STEL (OEL STEL)	384 mg/m ³
WEL STEL (OEL STEL) [ppm]	100 ppm
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
butanone (MEK) (78-93-3)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Butanone
IOEL TWA [ppm]	200 ppm
IOEL STEL	900 mg/m ³
IOEL STEL [ppm]	300 ppm
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC
Ireland - Occupational Exposure Limits	
Local name	Methyl ethyl ketone (MEK)
OEL TWA [1]	600 mg/m ³
OEL TWA [2]	200 ppm
OEL STEL	900 mg/m ³
OEL STEL [ppm]	300 ppm
Regulatory reference	Chemical Agents Code of Practice 2020

ALSAN FLASHING

Safety Data Sheet

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

butanone (MEK) (78-93-3)	
Ireland - Biological limit values	
Local name	Butan-2-one
BMGV	70 µmol/l Parameter: butan-2- one - Medium: urine - Sampling time: Post shift
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)
Malta - Occupational Exposure Limits	
Local name	Butanone
OEL TWA	600 mg/m ³
OEL TWA [ppm]	200 ppm
OEL STEL	900 mg/m ³
OEL STEL [ppm]	300 ppm
Regulatory reference	S.L.424.24 - Chemical Agents at Work Regulations (L.N.57 of 2018)
United Kingdom - Occupational Exposure Limits	
Local name	Butan-2-one (methyl ethyl ketone)
WEL TWA (OEL TWA) [1]	600 mg/m ³
WEL TWA (OEL TWA) [2]	200 ppm
WEL STEL (OEL STEL)	899 mg/m ³
WEL STEL (OEL STEL) [ppm]	300 ppm
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
United Kingdom - Biological limit values	
Local name	Butan-2-one (methyl ethyl ketone)
BMGV	70 µmol/l Parameter: butan-2-one - Medium: urine - Sampling time: Post shift
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
4,4'-Methylenediphenyldiisocyanate (MDI) (101-68-8)	
Ireland - Occupational Exposure Limits	
Local name	4,4'-Methylene-diphenyl diisocyanate (as —NCO) [MDI]
OEL TWA [2]	0.005 ppm
Remark	Sens. (In the workplace respiratory or dermal exposures to sensitising agents may occur. Sensitizers may evoke respiratory or dermal reactions, e.g. asthma, rhinitis and allergic contact dermatitis. The notation does not distinguish between respiratory or dermal sensitisation. Chemical agents that are sensitizers present special problems in the workplace. Should an employee become sensitised, subsequent exposure may cause intense responses, even at low exposure concentrations well below the OELV. Exposure should be eliminated or significantly reduced through control measures such as engineering and process controls and use of personal protective equipment (PPE))
Regulatory reference	Chemical Agents Code of Practice 2021
Calcium oxide (1305-78-8)	
EU - Indicative Occupational Exposure Limit (IOEL)	
Local name	Calcium oxide
IOEL TWA	1 mg/m ³ (Respirable fraction)

ALSAN FLASHING

Safety Data Sheet

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

Calcium oxide (1305-78-8)	
IOEL STEL	4 mg/m ³ (Respirable fraction)
Regulatory reference	COMMISSION DIRECTIVE (EU) 2017/164
Ireland - Occupational Exposure Limits	
Local name	Calcium oxide
OEL TWA [1]	1 mg/m ³ R (Respirable Fraction)
OEL STEL	4 mg/m ³ R (Respirable Fraction)
Remark	IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021
Malta - Occupational Exposure Limits	
Local name	Calcium oxide
OEL TWA	1 mg/m ³ (respirable fraction # frazzjoni respirabbli)
OEL STEL	4 mg/m ³ (respirable fraction # frazzjoni respirabbli)
Regulatory reference	S.L.424.24 - Chemical Agents at Work Regulations (L.N.356 of 2021)
United Kingdom - Occupational Exposure Limits	
Local name	Calcium oxide
WEL TWA (OEL TWA) [1]	2 mg/m ³ 1 mg/m ³ Respirable fraction
WEL STEL (OEL STEL)	4 mg/m ³ Respirable fraction
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Asphalt (8052-42-4)	
Ireland - Occupational Exposure Limits	
Local name	Asphalt (Bitumen), petroleum fumes
OEL TWA [1]	0.5 mg/m ³ inhalable fraction
Regulatory reference	Chemical Agents Code of Practice 2021
United Kingdom - Occupational Exposure Limits	
Local name	Asphalt
WEL TWA (OEL TWA) [1]	5 mg/m ³ petroleum fumes
WEL STEL (OEL STEL)	10 mg/m ³ petroleum fumes
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
4-methylbenzenesulfonyl chloride (98-59-9)	
Ireland - Occupational Exposure Limits	
Local name	p-Toluenesulphonyl chloride
OEL STEL	5 mg/m ³
Regulatory reference	Chemical Agents Code of Practice 2020
United Kingdom - Occupational Exposure Limits	
Local name	p-Toluenesulphonyl chloride
WEL STEL (OEL STEL)	5 mg/m ³
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

ALSAN FLASHING

Safety Data Sheet

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

dioxotitanium (13463-67-7)	
Ireland - Occupational Exposure Limits	
Local name	Titanium dioxide
OEL TWA [1]	10 mg/m ³ total inhalable dust 4 mg/m ³ respirable dust
Regulatory reference	Chemical Agents Code of Practice 2021
United Kingdom - Occupational Exposure Limits	
Local name	Titanium dioxide
WEL TWA (OEL TWA) [1]	4 mg/m ³ respirable 10 mg/m ³ total inhalable
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
Barium sulfate (7727-43-7)	
Ireland - Occupational Exposure Limits	
Local name	Barium sulphate, respirable dust
OEL TWA [1]	5 mg/m ³
Regulatory reference	Chemical Agents Code of Practice 2021
United Kingdom - Occupational Exposure Limits	
Local name	Barium sulphate
WEL TWA (OEL TWA) [1]	10 mg/m ³ inhalable dust 4 mg/m ³ respirable dust
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE
1-methylpyrrolidin-2-one (872-50-4)	
EU - Binding Occupational Exposure Limit (BOEL)	
Local name	1-Methyl-2-pyrrolidone
BOEL TWA	40 mg/m ³
BOEL TWA [ppm]	10 ppm
BOEL STEL	80 mg/m ³
BOEL STEL [ppm]	20 ppm
Notes	Skin (Substantial contribution to the total body burden via dermal exposure possible)
Regulatory reference	DIRECTIVE (EU) 2022/431 (amending Directive 2004/37/EC)
EU - Biological Limit Value (BLV)	
Local name	N-Methyl-2-pyrrolidone
BLV	20 mg/g creatinine Parameter: 2-hydroxy-N-methylsuccinimide - Medium: urine - Sampling time: morning-after-shift ; 18 hours 70 mg/g creatinine Parameter: 5-hydroxy-N-methyl-2-pyrrolidone - Medium: urine - Sampling time: 2-4 hours after the end of exposure/shift
Regulatory reference	SCOEL List of recommended health-based BLVs and BGVs
Ireland - Occupational Exposure Limits	
Local name	n-Methyl-2-pyrrolidone
OEL TWA [1]	40 mg/m ³
OEL TWA [2]	10 ppm
OEL STEL	80 mg/m ³

ALSAN FLASHING

Safety Data Sheet

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

1-methylpyrrolidin-2-one (872-50-4)	
OEL STEL [ppm]	20 ppm
Remark	Sk (Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body), IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2021
Ireland - Biological limit values	
Local name	N-Methyl-2-Pyrrolidone
BMGV	20 mg/g creatinine Parameter: 2-HMSI - Medium: urine - Notations: 2-HMSI measured morning after shift (8hrs) 70 mg/g creatinine Parameter: 5-HNMP - Medium: urine - Sampling time: End of shift - Notations: 5-HNMP measured 2-4hrs after the end of the shift
Regulatory reference	Biological Monitoring Guidelines (HSA, 2011)
Malta - Occupational Exposure Limits	
Local name	n-Methyl-2-pyrrolidone
OEL TWA	40 mg/m ³
OEL TWA [ppm]	10 ppm
OEL STEL	80 mg/m ³
OEL STEL [ppm]	20 ppm
Remark	Skin # Ġilda
Regulatory reference	S.L.424.24 - Chemical Agents at Work Regulations (L.N.356 of 2021)
United Kingdom - Occupational Exposure Limits	
Local name	n-Methyl-2-pyrrolidone
WEL TWA (OEL TWA) [1]	40 mg/m ³
WEL TWA (OEL TWA) [2]	10 ppm
WEL STEL (OEL STEL)	80 mg/m ³
WEL STEL (OEL STEL) [ppm]	20 ppm
Remark	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

ALSAN FLASHING

Safety Data Sheet

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

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: brown.
Odour	: solvent-like.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: > 35 °C
Flammability	: Not applicable
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: 15.5 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: 18691.589 mm ² /s
Viscosity, dynamic	: 20000 mPa.s
Solubility	: Not available
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 1.07 g/cm ³
Relative density	: Not available
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

ALSAN FLASHING

Safety Data Sheet

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

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

VOC content : Ai

SECTION 10: Stability and reactivity

10.1. Reactivity

Highly flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Harmful if inhaled.

ALSAN FLASHING	
ATE CLP (dust,mist)	3.637 mg/l/4h
2-methoxy-1-methylethyl acetate (108-65-6)	
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other:
toluene (108-88-3)	
LD50 oral rat	5580 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: EU Method B.1 (Acute Toxicity (Oral)), 95% CL: 5300 - 5910
LD50 dermal rabbit	> 5000 mg/kg bodyweight Animal: rabbit, Animal sex: male, 95% CL: 9,63 - 20,77
LC50 Inhalation - Rat (Vapours)	28.1 (25.7 – 30) mg/l/4h OECD 403
4,4'-Methylenediphenyldiisocyanate (MDI) (101-68-8)	
LD50 oral rat	> 2000 mg/kg Source: ECHA
LD50 dermal rabbit	> 9400 mg/kg Source: ECHA

ALSAN FLASHING

Safety Data Sheet

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

4,4'-Methylenediphenyl diisocyanate, oligomers (25686-28-6)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
LD50 dermal rabbit	> 9400 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	368 – 559 mg/m³
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: other:84/449/EEC (Gazette of the European Community, No. L 251, of 19 Sept, 1984, page 96)
LD50 dermal rabbit	> 9400 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	368 mg/m³
4-morpholinecarbaldehyde (4394-85-8)	
LD50 oral rat	> 7314 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), Remarks on results: other:
LD50 dermal rabbit	> 18400 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other:
LC50 Inhalation - Rat	≥ 5319 mg/l/4h Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity), Guideline: EPA OPPTS 870.1300 (Acute inhalation toxicity), Guideline: EU Method B.2 (Acute Toxicity (Inhalation))
Calcium oxide (1305-78-8)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))
LC50 Inhalation - Rat	> 6.04 mg/l/4h Animal: rat, Guideline: OECD Guideline 436 (Acute Inhalation Toxicity: Acute Toxic Class Method)
Asphalt (8052-42-4)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	>94,4 mg/m3 (OECD 403)
4-methylbenzenesulfonyl isocyanate (4083-64-1)	
LD50 oral rat	2330 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 2080 - 2600
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))
4-methylbenzenesulfonyl chloride (98-59-9)	
LD50 oral rat	4680 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 4280 - 5130
dioxotitanium (13463-67-7)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 425 (Acute Oral Toxicity: Up-and-Down Procedure), Guideline: EPA OPPTS 870.1100 (Acute Oral Toxicity)

ALSAN FLASHING

Safety Data Sheet

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

1-methylpyrrolidin-2-one (872-50-4)	
LD50 oral rat	4150 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 3100 - 5560
LD50 dermal rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 5.1 mg/l/4h Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity)
Skin corrosion/irritation	: Causes skin irritation.
Calcium oxide (1305-78-8)	
Skin corrosion/irritation (OECD 404 method)	
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
toluene (108-88-3)	
Additional information	(OECD 406 method)
4,4'-Methylenediphenyl diisocyanate, oligomers (25686-28-6)	
Additional information	May cause respiratory irritation.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Suspected of causing cancer.
4,4'-Methylenediphenyldiisocyanate (MDI) (101-68-8)	
IARC group	3 - Not classifiable
Barium sulfate (7727-43-7)	
NOAEL (chronic, oral, animal/male, 2 years)	60 mg/kg bodyweight Animal: rat, Animal sex: male, Remarks on results: other:
NOAEL (chronic, oral, animal/female, 2 years)	75 mg/kg bodyweight Animal: rat, Animal sex: female, Remarks on results: other:
1-methylpyrrolidin-2-one (872-50-4)	
NOAEL (chronic, oral, animal/male, 2 years)	≈ 89 mg/kg bodyweight Animal: mouse, Animal sex: male, Guideline: OECD Guideline 451 (Carcinogenicity Studies), Guideline: EU Method B.32 (Carcinogenicity Test), Guideline: EPA OTS 798.3300 (Carcinogenicity), Remarks on results: other:
NOAEL (chronic, oral, animal/female, 2 years)	≈ 221 mg/kg bodyweight Animal: mouse, Animal sex: female, Guideline: OECD Guideline 451 (Carcinogenicity Studies), Guideline: EU Method B.32 (Carcinogenicity Test), Guideline: EPA OTS 798.3300 (Carcinogenicity), Remarks on results: other:
Reproductive toxicity	: May damage fertility or the unborn child.
STOT-single exposure	: May cause respiratory irritation.
Butan-1-ol (71-36-3)	
STOT-single exposure	May cause drowsiness or dizziness. May cause respiratory irritation.
2-methoxy-1-methylethyl acetate (108-65-6)	
STOT-single exposure	May cause drowsiness or dizziness.
, central nervous system, subacute	
toluene (108-88-3)	
STOT-single exposure	May cause drowsiness or dizziness.
Reaction mass of ethylbenzene and xylene	
STOT-single exposure	May cause respiratory irritation.

ALSAN FLASHING

Safety Data Sheet

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

butanone (MEK) (78-93-3)	
STOT-single exposure	May cause drowsiness or dizziness.
4,4'-Methylenediphenyldiisocyanate (MDI) (101-68-8)	
STOT-single exposure	May cause respiratory irritation.
4,4'-Methylenediphenyl diisocyanate, oligomers (25686-28-6)	
STOT-single exposure	May cause respiratory irritation.
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	
STOT-single exposure	May cause respiratory irritation.
Calcium oxide (1305-78-8)	
STOT-single exposure	May cause respiratory irritation.
Asphalt (8052-42-4)	
LOAEC (inhalation, rat, dust/mist/fume)	OECD 403 - fumes from oxidized (air-recertified) asphalt
4-methylbenzenesulfonyl isocyanate (4083-64-1)	
STOT-single exposure	May cause respiratory irritation.
1-methylpyrrolidin-2-one (872-50-4)	
STOT-single exposure	May cause respiratory irritation.
STOT-repeated exposure	: Not classified
2-methoxy-1-methylethyl acetate (108-65-6)	
NOAEL (dermal, rat/rabbit, 90 days)	> 1000 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
toluene (108-88-3)	
LOAEL (oral, rat, 90 days)	1250 mg/kg bodyweight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (oral, rat, 90 days)	625 mg/kg bodyweight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEC (inhalation, rat, vapour, 90 days)	2.355 mg/l air Animal: rat, Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Reaction mass of ethylbenzene and xylene	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
4,4'-Methylenediphenyldiisocyanate (MDI) (101-68-8)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
4,4'-Methylenediphenyl diisocyanate, oligomers (25686-28-6)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	
NOAEC (inhalation, rat, vapour, 90 days)	1 mg/m³ air
4-morpholinecarbaldehyde (4394-85-8)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 407 (Repeated Dose 28-Day Oral Toxicity Study in Rodents)

ALSAN FLASHING

Safety Data Sheet

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

Calcium oxide (1305-78-8)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Asphalt (8052-42-4)	
LOAEC (inhalation, rat,dust/mist/fume, 90 days)	20.7 mg/m³ Animal: rat, Guideline: other:OECD 451
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	30 mg/m³ OECD 451
4-methylbenzenesulfonyl chloride (98-59-9)	
LOAEL (oral, rat, 90 days)	150 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
1-methylpyrrolidin-2-one (872-50-4)	
LOAEL (dermal, rat/rabbit, 90 days)	1653 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
NOAEL (dermal, rat/rabbit, 90 days)	826 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
Aspiration hazard	: Not classified
ALSAN FLASHING	
Viscosity, kinematic	18691.589 mm²/s
toluene (108-88-3)	
Viscosity, kinematic	≈ 0.647 mm²/s
Reaction mass of ethylbenzene and xylene	
Viscosity, kinematic	≈ 0.76 mm²/s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm²/s)'
Hydrocarbon	Yes
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	
Viscosity, kinematic	9.09 mm²/s Temp.: '20°C' Parameter: 'cStcSt'
4-morpholinecarbaldehyde (4394-85-8)	
Viscosity, kinematic	Not applicable
Calcium oxide (1305-78-8)	
Viscosity, kinematic	Not applicable
Asphalt (8052-42-4)	
Viscosity, kinematic	Not applicable
4-methylbenzenesulfonyl chloride (98-59-9)	
Viscosity, kinematic	Not applicable
1-methylpyrrolidin-2-one (872-50-4)	
Viscosity, kinematic	1612.621 mm²/s

11.2. Information on other hazards

No additional information available

ALSAN FLASHING

Safety Data Sheet

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

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.
Hazardous to the aquatic environment, short-term (acute)	: Not classified
Hazardous to the aquatic environment, long-term (chronic)	: Not classified
Not rapidly degradable	

2-methoxy-1-methylethyl acetate (108-65-6)

LC50 - Fish [1]	> 100 mg/l Test organisms (species): Oryzias latipes
EC50 - Crustacea [1]	> 500 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC (chronic)	≥ 100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	47.5 mg/l Test organisms (species): Oryzias latipes Duration: '14 d'

toluene (108-88-3)

LC50 - Fish [1]	5.5 mg/l Test organisms (species): Oncorhynchus kisutch
EC50 - Crustacea [1]	3.78 mg/l Ceriodaphnia dubia, 48h (US-EPA)
EC50 72h - Algae [1]	134 mg/l freshwater algae
ErC50 algae	134 mg/l Chlamydomonas angulosa; 3 h
LOEC (chronic)	2.76 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'
NOEC (chronic)	0.74 mg/l Test organisms (species): Ceriodaphnia dubia Duration: '7 d'
NOEC chronic fish	1.39 mg/l Test organisms (species): Oncorhynchus kisutch Duration: '40 d'
NOEC chronic crustacea	0.74 mg/l Niederlehner (1998) : 7d
NOEC chronic algae	10 mg/l

Reaction mass of ethylbenzene and xylene

EC50 - Crustacea [1]	> 3.4 mg/l Test organisms (species): Ceriodaphnia dubia
LOEC (chronic)	3.16 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic fish	> 1.3 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri) Duration: '56 d'

butanone (MEK) (78-93-3)

LC50 - Fish [1]	2993 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	308 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	1972 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	2029 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

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

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

ALSAN FLASHING

Safety Data Sheet

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

4,4'-Methylenediphenyl diisocyanate, oligomers (25686-28-6)	
LC50 - Fish [1]	> 1000 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
NOEC (chronic)	≥ 10 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	
LC50 - Fish [1]	> 1000 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
NOEC (chronic)	≥ 10 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
4-morpholinecarbaldehyde (4394-85-8)	
LC50 - Fish [1]	> 500 mg/l Test organisms (species): Leuciscus idus
EC50 - Crustacea [1]	> 500 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	23880 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	17440 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
NOEC (chronic)	> 1 mg/l Test organisms (species): Daphnia magna
NOEC chronic fish	> 1 mg/l Test organisms (species): other:
Calcium oxide (1305-78-8)	
LC50 - Fish [1]	50.6 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	49.1 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	184.57 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC (chronic)	32 mg/l Test organisms (species): Crangon septemspinosa Duration: '14 d'
4-methylbenzenesulfonyl isocyanate (4083-64-1)	
LC50 - Fish [1]	> 45 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	30 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	25 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
4-methylbenzenesulfonyl chloride (98-59-9)	
LC50 - Fish [1]	55 mg/l Test organisms (species): Oryzias latipes
LC50 - Fish [2]	> 100 mg/l Test organisms (species): Oryzias latipes
EC50 - Crustacea [1]	70 mg/l Test organisms (species): Daphnia magna
EC50 - Crustacea [2]	> 334 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
dioxotitanium (13463-67-7)	
EC50 - Other aquatic organisms [1]	> 100 mg/l Test organisms (species):
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
LOEC (chronic)	5 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

ALSAN FLASHING

Safety Data Sheet

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

Barium sulfate (7727-43-7)

EC50 72h - Algae [1]	> 1.15 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	> 30.07 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

1-methylpyrrolidin-2-one (872-50-4)

LC50 - Fish [1]	> 500 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 72h - Algae [1]	600.5 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
EC50 72h - Algae [2]	672.8 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
LOEC (chronic)	25 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	12.5 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

12.2. Persistence and degradability

toluene (108-88-3)

Biodegradation	86 % 20d
----------------	----------

4-methylbenzenesulfonyl isocyanate (4083-64-1)

Persistence and degradability	Readily biodegradable.
Biodegradation	83 %

4-methylbenzenesulfonyl chloride (98-59-9)

Persistence and degradability	Readily biodegradable.
Biodegradation	60 %

Barium sulfate (7727-43-7)

Persistence and degradability	Readily biodegradable. in water.
-------------------------------	----------------------------------

12.3. Bioaccumulative potential

toluene (108-88-3)

BCF - Fish [1]	≈ 90 mg/kg Freitag et al (1985): 3d
Partition coefficient n-octanol/water (Log Kow)	2.73 20°C

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

Partition coefficient n-octanol/water (Log Pow)	4.51 Source: ECHA
---	-------------------

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component

1-methylpyrrolidin-2-one (872-50-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
-------------------------------------	---

12.6. Endocrine disrupting properties

No additional information available

ALSAN FLASHING

Safety Data Sheet

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

12.7. Other adverse effects

No additional information available






SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
UN 1263	UN 1263	UN 1263	UN 1263	UN 1263
14.2. UN proper shipping name				
PAINT	PAINT	Paint	PAINT	PAINT
Transport document description				
UN 1263 PAINT, 3, II, (D/E)	UN 1263 PAINT, 3, II (15.5°C c.c.)	UN 1263 Paint, 3, II	UN 1263 PAINT, 3, II	UN 1263 PAINT, 3, II
14.3. Transport hazard class(es)				
3	3	3	3	3
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR) : F1
Special provisions (ADR) : 163, 367, 640D, 650
Limited quantities (ADR) : 5I
Excepted quantities (ADR) : E2
Packing instructions (ADR) : P001, IBC02, R001
Special packing provisions (ADR) : PP1
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T4
Portable tank and bulk container special provisions (ADR) : TP1, TP8, TP28
Tank code (ADR) : LGBF
Vehicle for tank carriage : FL
Transport category (ADR) : 2

ALSAN FLASHING

Safety Data Sheet

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

Special provisions for carriage - Operation (ADR) : S2, S20
Hazard identification number (Kemler No.) : 33
Orange plates :



Tunnel restriction code (ADR) : D/E
EAC code : •3YE

Transport by sea

Special provisions (IMDG) : 163, 367
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
Special packing provisions (IMDG) : PP1
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1, TP8, TP28
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-E
Stowage category (IMDG) : B
Properties and observations (IMDG) : Miscibility with water depends upon the composition.

Air transport

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y341
PCA limited quantity max net quantity (IATA) : 1L
PCA packing instructions (IATA) : 353
PCA max net quantity (IATA) : 5L
CAO packing instructions (IATA) : 364
CAO max net quantity (IATA) : 60L
Special provisions (IATA) : A3, A72, A192
ERG code (IATA) : 3L

Inland waterway transport

Classification code (ADN) : F1
Special provisions (ADN) : 163, 367, 640D, 650
Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E2
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 1

Rail transport

Classification code (RID) : F1
Special provisions (RID) : 163, 367, 640D, 650
Limited quantities (RID) : 5L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02, R001
Special packing provisions (RID) : PP1
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T4
Portable tank and bulk container special provisions (RID) : TP1, TP8, TP28
Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE7
Hazard identification number (RID) : 33

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

ALSAN FLASHING

Safety Data Sheet

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

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

EU restriction list (REACH Annex XVII)

Reference code	Applicable on	Entry title or description
30.	2-methoxypropyl acetate ; 1-methylpyrrolidin-2-one	Substances which are classified as reproductive toxicant category 1A or 1B in Part 3 of Annex VI to Regulation (EC) No 1272/2008 and are listed in Appendix 5 or Appendix 6, respectively.
71.	1-methylpyrrolidin-2-one	1-methyl-2-pyrrolidone (NMP)
74.	4,4'-Methylenediphenyldiisocyanate (MDI) ; 4,4'-Methylenediphenyl diisocyanate, oligomers ; Reaction mass of 4,4'-methylenediphenyl diisocyanate and o-(p-isocyanatobenzyl)phenyl isocyanate	Diisocyanates, $O = C=N-R-N = C=O$, with R an aliphatic or aromatic hydrocarbon unit of unspecified length

REACH Annex XIV (Authorisation List)

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

REACH Candidate List (SVHC)

Contains substance(s) listed on the REACH Candidate List in concentrations $\geq 0.1\%$ or SCL: 1-methylpyrrolidin-2-one (EC 212-828-1, CAS 872-50-4)

PIC Regulation (Prior Informed Consent)

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

POP Regulation (Persistent Organic Pollutants)

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

Ozone Regulation (1005/2009)

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

VOC Directive (2004/42)

VOC content : Ai
Decopaint Directive (2004/42/EC) - Annex II : A/i (Paints and Varnishes - One-pack performance coatings)
Maximum allowed concentration : 500 g/l VOC
Maximum content of VOC : 187.69 g/l VOC

Explosives Precursors Regulation (2019/1148)

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

Drug Precursors Regulation (273/2004)

Contains substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

Name	CN designation	CAS-No.	CN code	Category	Threshold	Annex
Toluene		108-88-3	2902 30 00	Category 3		Annex I
Methylethylketone	Butanone	78-93-3	2914 12 00	Category 3		Annex I

15.1.2. National regulations

No additional information available

ALSAN FLASHING

Safety Data Sheet

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

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

ALSAN FLASHING

Safety Data Sheet

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

Full text of H- and EUH-statements:	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Carc. 2	Carcinogenicity, Category 2
EUH014	Reacts violently with water.
EUH066	Repeated exposure may cause skin dryness or cracking.
EUH204	Contains isocyanates. May produce an allergic reaction.
EUH211	Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 2	Flammable liquids, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H360D	May damage the unborn child.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.
Met. Corr. 1	Corrosive to metals, Category 1
Repr. 1B	Reproductive toxicity, Category 1B
Repr. 2	Reproductive toxicity, Category 2

ALSAN FLASHING

Safety Data Sheet

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

Full text of H- and EUH-statements:

Resp. Sens. 1	Respiratory sensitisation, Category 1
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1B	Skin sensitisation, category 1B
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2
STOT SE 3	Specific target organ toxicity – Single exposure, Category 3, Narcosis

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.