

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 Product Reference code:according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878 SDS Ref. (EU): SH901-SDS Issue date: 11/03/2015 Revision date: 13/08/2020 Supersedes version of: 03/04/2020 Version: 4.0

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

1.1. Product identifier	
Product form Trade name UFI Product code Product group	 Mixture STRONGHOLD 901 90 SECOND ADHESIVE (SEMI-RIGID BLACK) U6Y0-G0N7-P002-W0DE SH9011, SH9012 Adhesives, sealants
1.2. Relevant identified uses of th	e substance or mixture and uses advised against
1.2.1. Relevant identified uses	
Main use category	: Industrial use, Professional use
Use of the substance/mixture	: Adhesives, sealants
Function or use category	: bonding agent
1.2.2. Uses advised against	
Restrictions on use	: Consumer uses: Private households (= general public = consumers)

1.3. Details of the supplier of the safety data sheet

Manufacturer

U-POL Limited Ltd Denington Road GB– NN8 2QH Wellingborough – Northamptonshire United Kingdom T +44 (0) 1933 230310 technicalsupport@u-pol.com - www.u-pol.com

Importer U-POL Netherlands B.V. B.V. Hoorgoorddreef 15 NL– 1101BA Amsterdam Netherlands T +31 20 240 2216 technicalsupport@u-pol.com - www.u-pol.com

1.4. Emergency telephone number

Emergency number

: CHEMTREC: +44 (0) 870 8200418 (24 hrs)

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	NHS England, Scotland & Wales	-	Call 111 or a Doctor	In Northern Ireland, contact your local GP or pharmacist during normal hours (www.gpoutofhours.h scni.net)

SECTION 2: Hazards identification		
2.1. Classification of the substance or mixture		
Classification according to Regulation (EC) No. 1272/200	08 [CLP]	
Skin corrosion/irritation, Category 2	H315	
Serious eye damage/eye irritation, Category 2	H319	
Skin sensitisation, Category 1	H317	

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Hazardous to the aquatic environment — Chronic Hazard, Category 3 H412

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

Adverse physicochemical, human health and environmental effects

Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation. Harmful to aquatic life with long lasting effects.

:

2.2. Label elements

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

Hazard pictograms (CLP)

	GHS07
Signal word (CLP)	: Warning
Contains	 formaldehyde, polymer with benzeneamine, hydrogenated, 4,4'- methylenebis(cyclohexylamine), liquid
Hazard statements (CLP)	 H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H319 - Causes serious eye irritation. H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP)	 P261 - Avoid breathing fume, vapours. P264 - Wash hands thoroughly after handling. P280 - Wear eye protection, protective clothing, protective gloves. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. P337+P313 - If eye irritation persists: Get medical advice/attention. P362+P364 - Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

Component	
4,4'-methylenebis(cyclohexylamine), liquid (1761-71- 3) This substance/mixture does not meet the PBT criteria of REACH regulation, annex	

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

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
formaldehyde, polymer with benzeneamine, hydrogenated	CAS-No.: 135108-88-2 EC-No.: 603-894-6	0.3 – 2.5	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Corr. 1C, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 2, H373 Aquatic Chronic 3, H412

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
4,4'-methylenebis(cyclohexylamine), liquid	CAS-No.: 1761-71-3 EC-No.: 217-168-8 REACH-no: 01-2119541673- 38	0.3 – 2.5	Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1B, H317 STOT RE 2, H373 Aquatic Chronic 2, H411
diethylmethylbenzenediamine (Note C)	CAS-No.: 68479-98-1 EC-No.: 270-877-4 EC Index-No.: 612-130-00-0 REACH-no: 01-2119486805- 25	0.25 – 1	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Eye Irrit. 2, H319 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

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 after inhalation First-aid measures after skin contact	 Remove person to fresh air and keep comfortable for breathing. Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.
First-aid measures after eye contact First-aid measures after ingestion	 Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention. Call a poison center or a doctor if you feel unwell.
4.2. Most important symptoms and effect	cts, both acute and delayed
Symptoms/effects after skin contact Symptoms/effects after eye contact	 Irritation. May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking. Eye irritation.
4.3. Indication of any immediate medica	I attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures		
5.1. Extinguishing media		
Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.	
5.2. Special hazards arising from the substance or mixture		
Hazardous decomposition products in case of fire	: Toxic fumes may be released.	
5.3. Advice for firefighters		
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.	

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SECTION 6: Accidental release measures		
6.1. Personal precautions, protective equip	ment and emergency procedures	
6.1.1. For non-emergency personnel		
Protective equipment Emergency procedures	Safety glasses. Protective clothing. Gloves.Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing vapours, fume.	
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.		
6.3. Methods and material for containment a	and cleaning up	
For containment Methods for cleaning up Other information	 Contain released product, collect/pump into suitable containers. Collect spillage. Take up liquid spill into absorbent material. 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 Hygiene measures	 Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing vapours, fume. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
7.2. Conditions for safe storage, including any incompatibilities	
Storage conditions Storage temperature Storage area Special rules on packaging	 Store in a well-ventilated place. Keep cool. < 25 °C Store in a well-ventilated place. Keep only in original container.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

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8.1.4. DNEL and PNEC

formaldehyde, polymer with benzeneamine, hydrogenated (135108-88-2)		
DNEL/DMEL (Workers)		
Acute - systemic effects, dermal	6 mg/kg bodyweight/day	
Acute - systemic effects, inhalation	2 mg/m ³	
Long-term - systemic effects, dermal	2 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	0.2 mg/m ³	
PNEC (Water)	·	
PNEC aqua (freshwater)	0.015 mg/l	
PNEC aqua (marine water)	0.0015 mg/l	
PNEC aqua (intermittent, freshwater)	0.15 mg/l	
PNEC (Sediment)	·	
PNEC sediment (freshwater)	15 mg/kg dwt	
PNEC sediment (marine water)	1.5 mg/kg dwt	
PNEC (Soil)		
PNEC soil	1.8 mg/kg dwt	
PNEC (STP)	·	
PNEC sewage treatment plant	1.9 mg/l	
4,4'-methylenebis(cyclohexylamine), liquid (1	761-71-3)	
DNEL/DMEL (Workers)		
Long-term - systemic effects, dermal	0.1 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	1 mg/m ³	
DNEL/DMEL (General population)	·	
Long-term - systemic effects,oral	0.06 mg/kg bodyweight/day	
Long-term - systemic effects, inhalation	0.21 mg/m ³	
Long-term - systemic effects, dermal	0.06 mg/kg bodyweight/day	
PNEC (Water)		
PNEC aqua (freshwater)	0.08 mg/l	
PNEC aqua (marine water)	0.008 mg/l	
PNEC aqua (intermittent, freshwater)	0.08 mg/l	
PNEC (Sediment)		
PNEC sediment (freshwater)	137 mg/kg dwt	
PNEC sediment (marine water)	13.7 mg/kg dwt	
PNEC (Soil)		
PNEC soil	27.2 mg/kg dwt	
PNEC (STP)		
PNEC sewage treatment plant	3.2 mg/l	

8.1.5. Control banding

No additional information available

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8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection: Safety glasses

8.2.2.2. Skin protection

Skin and body protection: Wear suitable protective clothing

Hand protection: Protective gloves

Other skin protection Materials for protective clothing: Impermeable clothing

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

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

Dhyraigal state	Liquid
Physical state	: Liquid
Colour	: Black.
Appearance	: Liquid.
Odour	: aromatic.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not applicable
Explosive limits	: Not available
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: > 100 °C
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
pH	: Not available
Viscosity, kinematic	: Not available
Solubility	: Reacts with water. soluble in most organic solvents.

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Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50 °C	: Not available
Density	: Not available
Relative density	: Not available
Relative vapour density at 20 °C	: Not available
Particle size	: Not applicable
Particle size distribution	: Not applicable
Particle shape	: Not applicable
Particle aspect ratio	: Not applicable
Particle aggregation state	: Not applicable
Particle agglomeration state	: Not applicable
Particle specific surface area	: Not applicable
Particle dustiness	: Not applicable

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

VOC content

: 201 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

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

Acute toxicity (dermal) :	Not classified Not classified Not classified
dipropylene glycol (25265-71-8)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: EPA OPP 81-1 (Acute Oral Toxicity)
LD50 dermal rabbit	> 5010 mg/kg bodyweight Animal: rabbit, Guideline: EPA OPP 81-2 (Acute Dermal Toxicity)
LC50 Inhalation - Rat	> 2.34 mg/l air Animal: rat, Guideline: EPA OPP 81-3 (Acute inhalation toxicity)

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carbon black (1333-86-4)	
LD50 oral rat	> 8000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LC50 Inhalation - Rat	> 4.6 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Experimental value, Inhalation (dust))
bis(2-ethylhexyl) terephthalate (6422-86-2)	
LD50 oral rat	 > 5000 mg/kg bodyweight Animal: rat, Guideline: other:TSCA FHSA Regulations (1979): 16 CFR Part 1500.40 (Hazardous Substances and Articles, Administration and Enforcement Regulations)
formaldehyde, polymer with benzeneamine, h	ydrogenated (135108-88-2)
LD50 oral rat	> 1000 mg/kg
LD50 dermal rabbit	> 1000 mg/kg bodyweight Animal: rabbit, Guideline: other:40CFR Part 158 Series 81-2, EPA Pesticide Assessment Guidelines. F 1984
4,4'-methylenebis(cyclohexylamine), liquid (1	761-71-3)
LD50 oral rat	380 mg/kg (EPA OPP 81-1: Acute Oral Toxicity, Rat, Male / female, Experimental value, Oral)
LD50 dermal rabbit	2110 mg/kg bodyweight Animal: rabbit, Guideline: EPA OPP 81-2 (Acute Dermal Toxicity)
ethyl acetate (141-78-6)	
LD50 oral rat	10200 mg/kg bodyweight (Equivalent or similar to OECD 401, Rat, Female, Experimental value, Oral, 14 day(s))
LD50 oral	4934 mg/kg bodyweight Animal: rabbit, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
LD50 dermal rabbit	> 20000 mg/kg bodyweight Animal: rabbit, Animal sex: male
propylene carbonate (108-32-7)	
LD50 oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity)
triethylene diamine (280-57-9)	
LD50 oral rat	700 mg/kg bodyweight Animal: rat, Animal sex: male, 95% CL: 500 - 1100
LD50 dermal rat	> 2000 mg/kg
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Animal sex: female, Guideline: other:Evaluation and the scoring of the results was similar to that described in Section 1500.40 - Federal Hazardous Substances Act Regulations - 16 CFR - P o 123.
LC50 Inhalation - Rat (Dust/Mist)	> 20 mg/l/4h
zeolite, cuboidal, crystalline, synthetic, non-fibrous	
LD50 oral rat	> 5110 mg/kg
LD50 dermal rabbit	> 2000 mg/kg
silicon dioxide, amorphous (7631-86-9)	
LD50 oral rat	> 10000 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Dermal)
Skin corrosion/irritation :	Causes skin irritation.
Serious eye damage/irritation :	Causes serious eye irritation.
Respiratory or skin sensitisation :	May cause an allergic skin reaction.
Germ cell mutagenicity :	Not classified
Carcinogenicity :	Not classified

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Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
ethyl acetate (141-78-6)	
STOT-single exposure	May cause drowsiness or dizziness.
STOT-repeated exposure	: Not classified
formaldehyde, polymer with benzeneamine	hydrogenated (135108-88-2)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
4,4'-methylenebis(cyclohexylamine), liquid	(1761-71-3)
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
ethyl acetate (141-78-6)	
LOAEL (oral, rat, 90 days)	3600 mg/kg bodyweight Animal: rat, Guideline: EPA OTS 795.2600 (Subchronic Oral Toxicity Test)
NOAEL (oral, rat, 90 days)	900 mg/kg bodyweight Animal: rat, Guideline: EPA OTS 795.2600 (Subchronic Oral Toxicity Test)
diethylmethylbenzenediamine (68479-98-1)	
LOAEL (dermal, rat/rabbit, 90 days)	≥ 10 mg/kg bodyweight Animal: rabbit
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.
propylene carbonate (108-32-7)	
NOAEL (oral, rat, 90 days)	> 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)
triethylene diamine (280-57-9)	
LOAEL (oral, rat, 90 days)	300 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)
Aspiration hazard	: Not classified
11.2. Information on other hazards	

No additional information available

SECTION 12: Ecological information

12.1. Toxicity	
Hazardous to the aquatic environment, short-term : (acute)	Harmful to aquatic life with long lasting effects. Not classified Harmful to aquatic life with long lasting effects.
formaldehyde, polymer with benzeneamine, h	ydrogenated (135108-88-2)
LC50 - Fish [1]	63 mg/l Test organisms (species): Poecilia reticulata
EC50 - Crustacea [1]	6.84 mg/l (Daphnia magna)
EC50 72h - Algae [1]	43.94 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
4,4'-methylenebis(cyclohexylamine), liquid (1761-71-3)	
LC50 - Fish [1]	> 100 mg/l Test organisms (species): Leuciscus idus
LC50 - Fish [2]	68 mg/l Test organisms (species): Leuciscus idus

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ErCS0 aigae 140 – 200 mg/t (DIN 38412-9, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration) NOEC chronic) 4 mg/t Test organisms (species): Daphnia magna Duration: '21 d' NOEC chronic fish > 1 mg/t Test organisms (species): Daphnia magna Duration: '21 d' BCS0 - Crustacea [1] 0.5 mg/t Test organisms (species): Daphnia magna 12.2. Persistence and degradability 0.5 mg/t Test organisms (species): Daphnia magna 12.3. Bioaccumulative potential Vareadity biodegradable in water. 12.3. Bioaccumulative potential < 60 (OECD 305: Bioconcentration: Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-Through System, Fresh water, Read-across, GLP) Partition coefficient n-octanol/water (Log Pow) 2.03 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Mathod, 25 °C) Bioaccumulative potential Low potential for bioaccumulation (BCF < 500). 12.4. Mobility In soil 3.25 (log Koc, Other, Calculated value) Cog Koc) so (log Koc, Other, Calculated value) Clog Koc) so (log Koc, Other, Calculated value) Low potential for mobility in soil. 1.25 (log Koc, Other, Calculated value) Log Koc) so (log Koc, Other, Calculated value) Log Koc) <td< th=""><th>4.41 mothed and big (available and amino) liquid (4</th><th>764 74 9)</th></td<>	4.41 mothed and big (available and amino) liquid (4	764 74 9)	
ECS0 - Crustacea [2] 6.84 mg/l Test organisms (species): Daphnia magna ECS0 72h - Algae [1] 140 - 200 mg/l Test organisms (species): ECS0 72h - Algae [2] 141.42 - 200 mg/l Test organisms (species): ECS0 algae 140 - 200 mg/l Test organisms (species): ECS0 chronic fish 4 mg/l Test organisms (species): Daphnia magna Duration: 21 d' NOEC (chronic) 4 mg/l Test organisms (species): Daphnia magna Duration: 21 d' NOEC (chronic) 4 mg/l Test organisms (species): Daphnia magna Duration: 21 d' NOEC (chronic) 0.5 mg/l Test organisms (species): Daphnia magna 122. Persistence and degradability 0.5 mg/l Test organisms (species): Daphnia magna 123. Bioaccumulative potential 0.5 mg/l Test organisms (species): Daphnia magna 124 methylenebis(cyclohexylamine), liquid (1761-71-3) Persistence Persistence and degradability Not readily biodegradabile in water. 123. Bioaccumulative potential < 60 (OECD 305: Bioconcentration: Flow-Through Fish Test, 60 day(s), Cyprinus carplo, Flow-through ystem, Fresh water, Read-across. GLP)			
EC50 72h - Algae [1] 140 - 200 mg/l Test organisms (species): EC50 72h - Algae [2] 141.42 - 200 mg/l Test organisms (species): EC50 algae 140 - 200 mg/l Test organisms (species): EC50 algae 140 - 200 mg/l (DNI 38412-9, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration) NOEC (chronic) 4 mg/l Test organisms (species): Daphnia magna Durator: '21 d' NOEC chronic fish > 1 mg/l Test organisms (species): Daphnia magna Durator: '21 d' NOEC chronic fish > 1 mg/l Test organisms (species): Daphnia magna 122. Parsistence and degradability 0.5 mg/l Test organisms (species): Daphnia magna 123. Bioaccumulative potential 4.4'-methylenebis(cyclohexylamine), liquid (1761-71-3) Persistence and degradability Not readily biodegradable in water. 123. Bioaccumulative potential < 60 (DCCD 305: Bioconcentration: Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-through system, Fresh Read-across, GLP)			
EC50 72h - Algae [2] 141.42 - 200 mg/l Test organisms (species): ErC50 algae 140 - 200 mg/l (DN 3412-9, 72 h. Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration) NOEC (chronic) 4 mg/l Test organisms (species): Daphnia magna Duration: '21 d' NOEC chronic fish > 1 mg/l Test organisms (species): Daphnia magna Duration: '21 d' Cost organisms (species): Daphnia magna Duration: '21 d' 0.5 mg/l Test organisms (species): Daphnia magna 122. Porsistence and degradability 0.5 mg/l Test organisms (species): Daphnia magna 123. Bioaccumulative potential 4.4'-methylenebis(cyclohexylamine), liquid (1761-71-3) Persistence and degradability Not readily biodogradable in water. 123. Bioaccumulative potential < 600 CPCD 305. Bioconsentration: Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across, GLP)	EC50 - Crustacea [2]		
ErCS0 algae 140 – 200 mg/ (DIN 38412-9, 72 h, Desmodesmus subspicatus, Static system, Fresh water, Experimental value, Nominal concentration) NOEC (chronic) 4 mg/l Test organisms (species): Daphnia magna Duration: '21 d' NOEC chronic fish > 1 mg/l Test organisms (species): Daphnia magna Duration: '21 d' NOEC chronic fish > 1 mg/l Test organisms (species): Daphnia magna 122. Porsistence and degradability 0.5 mg/l Test organisms (species): Daphnia magna 123. Bioaccumulative potential 4.4-methylenebis(cyclohexylamine), liquid (1761-71-3) Persistence and degradability Not readily biodegradable in water. 12.3. Bioaccumulative potential < 60 (OECD 305: Bioconcentration: Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-Through system, Fresh water, Read-across, GLP)	EC50 72h - Algae [1]	140 – 200 mg/l Test organisms (species):	
water, Experimental value, Nominal concentration) NOEC (chronic) 4 mg/l Test organisms (species): Daphnia magna Duration: '21 d' NOEC (chronic fish > 1 mg/l Test organisms (species): Daphnia magna Duration: '21 d' dicthylmethylbenzonediamine (68479-98-1) 0.5 mg/l Test organisms (species): Daphnia magna 12.2. Persistence and degradability 0.5 mg/l Test organisms (species): Daphnia magna 4.4-methylenebis(cyclohexylamine), liquid (17-17-13) Persistence and degradability Not readily biodegradabile in water. 12.3. Bioaccumulative potential 4.4-methylenebis(cyclohexylamine), liquid (17-61-71-3) BCF - Fish [1] C80 (DECD 205; Bioconcentration: Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across, GLP) Partition coefficient n-octanol/water (Log Pow) 2.03 (Experimental value, DECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C) Bioaccumulative potential Low potential for bioaccumulation (BCF < 500).	EC50 72h - Algae [2]	141.42 – 200 mg/l Test organisms (species):	
NOEC chronic fish > 1 mgi Test organisms (species): other.freshwater fish diethylmethylbenzenediamine (68479-98-1) 0.5 mgi Test organisms (species): Daphnia magna EC50 - Crustacea [1] 0.5 mgi Test organisms (species): Daphnia magna 12.2. Persistence and degradability A4'-methylenebis(cyclohexylamine), liquid (1761-71-3) Persistence and degradability Not readily biodegradable in water. 12.3. Bioaccumulative potential 4.4'-methylenebis(cyclohexylamine), liquid (1761-71-3) BCF - Fish [1] < 60 (DECD 305: Bioconcentration: Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across, GLP)	ErC50 algae		
diethylmethylbenzenediamine (68479-98-1) EC50 - Crustacea [1] 0.5 mg/l Test organisms (species): Daphnia magna 12.2. Persistence and degradability 4.4-methylenebis(cyclohexylamine), liquid (1761-71-3) Persistence and degradability Not readily biodegradable in water. 12.3. Bioaccumulative potential 4.4-methylenebis(cyclohexylamine), liquid (1761-71-3) BCF - Fish [1] < 60 (OECD 305: Bioconcentration: Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across, GLP)	NOEC (chronic)	4 mg/l Test organisms (species): Daphnia magna Duration: '21 d'	
EC50 - Crustacea [1] 0.5 mgl Test organisms (species): Daphnia magna 122. Persistence and degradability 4.4-methylenebis(cyclohexylamine), liquid (1761-71-3) Persistence and degradability Not readily biodegradable in water. 12.3. Bioaccumulative potential 4.4-methylenebis(cyclohexylamine), liquid (1761-71-3) BCF - Fish [1] < 60 (OECD 305: Bioconcentration: Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read across, GLP	NOEC chronic fish	> 1 mg/l Test organisms (species): other:freshwater fish	
12.2. Persistence and degradability 4.4*methylenebis(cyclohexylamine), liquid (1761-71-3) Persistence and degradability Not readily biodegradable in water. 12.3. Bioaccumulative potential 4.4*methylenebis(cyclohexylamine), liquid (1761-71-3) BCF - Fish [1] < 60 (DECD 305: Bioconcentration: Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across, GLP)	diethylmethylbenzenediamine (68479-98-1)		
4.4*-methylenebis(cyclohexylamine), liquid (1761-71-3) Persistence and degradability Not readily biodegradable in water. 12.3. Bioaccumulative potential 4.4*-methylenebis(cyclohexylamine), liquid (1761-71-3) BCF - Fish [1] < 60 (OECD 305: Bioconcentration: Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across, GLP)	EC50 - Crustacea [1]	0.5 mg/l Test organisms (species): Daphnia magna	
Persistence and degradability Not readily biodegradable in water. 12.3. Bioaccumulative potential 4.4'-methylenebis(cyclohexylamine), liquid (1761-71-3) BCF - Fish [1] < 60 (OECD 305: Bioconcentration: Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across, GLP)	12.2. Persistence and degradability		
12.3. Bioaccumulative potential 4.4'-methylenebis(cyclohexylamine), liquid (1761-71-3) BCF - Fish [1] < 60 (OECD 305: Bioconcentration: Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across, GLP)	4,4'-methylenebis(cyclohexylamine), liquid (1	761-71-3)	
4,4'-methylenebis(cyclohexylamine), liquid (1761-71-3) BCF - Fish [1] < 60 (OECD 305: Bioconcentration: Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across, GLP)	Persistence and degradability Not readily biodegradable in water.		
BCF - Fish [1] < 60 (DECD 305: Bioconcentration: Flow-Through Fish Test, 60 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across, GLP)	12.3. Bioaccumulative potential		
Flow-through system, Fresh water, Read-across, GLP) Partition coefficient n-octanol/water (Log Pow) 2.03 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 25 °C) Bioaccumulative potential Low potential for bioaccumulation (BCF < 500).	4,4'-methylenebis(cyclohexylamine), liquid (1	761-71-3)	
Method, 25 °C) Bioaccumulative potential Low potential for bioaccumulation (BCF < 500).	BCF - Fish [1]		
12.4. Mobility in soil 4,4'-methylenebis(cyclohexylamine), liquid (1761-71-3) Organic Carbon Normalized Adsorption Coefficient (Log Koc) 3.25 (log Koc, Other, Calculated value) Ecology - soil Low potential for mobility in soil. 12.5. Results of PBT and vPvB assessment Component 4,4'-methylenebis(cyclohexylamine), liquid (1761-71-3) 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 12.7. Other adverse effects No additional information available	Partition coefficient n-octanol/water (Log Pow)		
4,4'-methylenebis(cyclohexylamine), liquid (1761-71-3) Organic Carbon Normalized Adsorption Coefficient (Log Koc) 3.25 (log Koc, Other, Calculated value) Ecology - soil Low potential for mobility in soil. 12.5. Results of PBT and vPvB assessment Component 4,4'-methylenebis(cyclohexylamine), liquid (1761-71- 3) 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 Vo additional information available 12.7. Other adverse effects No additional information available	Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).	
Organic Carbon Normalized Adsorption Coefficient (Log Koc) 3.25 (log Koc, Other, Calculated value) Ecology - soil Low potential for mobility in soil. 12.5. Results of PBT and vPvB assessment Component 4,4'-methylenebis(cyclohexylamine), liquid (1761-71- 3) 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 Vo additional information available 12.7. Other adverse effects No additional information available	12.4. Mobility in soil		
(Log Koc) Low potential for mobility in soil. Ecology - soil Low potential for mobility in soil. 12.5. Results of PBT and vPvB assessment Component 4,4'-methylenebis(cyclohexylamine), liquid (1761-71- 3) 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 12.7. Other adverse effects No additional information available	4,4'-methylenebis(cyclohexylamine), liquid (1	761-71-3)	
12.5. Results of PBT and vPvB assessment Component 4,4'-methylenebis(cyclohexylamine), liquid (1761-71- 3) 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 12.7. Other adverse effects No additional information available	с ,	3.25 (log Koc, Other, Calculated value)	
Component 4,4'-methylenebis(cyclohexylamine), liquid (1761-71- 3) 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 12.7. Other adverse effects No additional information available	Ecology - soil	Low potential for mobility in soil.	
4,4'-methylenebis(cyclohexylamine), liquid (1761-71- 3) 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 12.7. Other adverse effects No additional information available	12.5. Results of PBT and vPvB assessment		
3) This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII 12.6. Endocrine disrupting properties No additional information available 12.7. Other adverse effects No additional information available	Component		
No additional information available 12.7. Other adverse effects No additional information available	4,4'-methylenebis(cyclohexylamine), liquid (1761-71- 3)		
12.7. Other adverse effects No additional information available	12.6. Endocrine disrupting properties		
No additional information available	No additional information available		
	12.7. Other adverse effects		
SECTION 13: Disposal considerations	No additional information available		
	SECTION 13: Disposal considerations		

13.1. Waste treatment methods

Regional legislation (waste)

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

Waste treatment methods

: Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport informati	
In accordance with ADR / IMDG / IATA / ADI	N / RID
14.1. UN number or ID number	
UN-No. (ADR)	: Not regulated
UN-No. (IMDG)	: Not regulated
UN-No. (IATA) UN-No. (ADN)	: Not regulated : Not regulated
UN-No. (RID)	: Not regulated
14.2. UN proper shipping name	
Proper Shipping Name (ADR)	: Not regulated
Proper Shipping Name (IMDG)	: Not regulated
Proper Shipping Name (IATA)	: Not regulated
Proper Shipping Name (ADN)	: Not regulated
Proper Shipping Name (RID)	: Not regulated
14.3. Transport hazard class(es)	
ADR	
Transport hazard class(es) (ADR)	: Not regulated
IMDG	
Transport hazard class(es) (IMDG)	: Not regulated
ΙΑΤΑ	
Transport hazard class(es) (IATA)	: Not regulated
ADN	
Transport hazard class(es) (ADN)	: Not regulated
RID	
Transport hazard class(es) (RID)	: Not regulated
14.4. Packing group	
Packing group (ADR)	: Not regulated
Packing group (IMDG)	: Not regulated
Packing group (IATA)	: Not regulated
Packing group (ADN)	: Not regulated
Packing group (RID)	: Not regulated
14.5. Environmental hazards	
Dangerous for the environment	: No
Marine pollutant	: No
Other information	: No supplementary information available
14.6. Special precautions for user	
Overland transport Not regulated	
Transport by sea Not regulated	
Air transport Not regulated	

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

Inland waterway transport

Not regulated

Rail transport

Not regulated

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

EU restriction list (REACH Annex XVII)		
Reference code	Applicable on	Entry title or description
3(b)	STRONGHOLD 901 90 SECOND ADHESIVE (SEMI-RIGID BLACK) ; formaldehyde, polymer with benzeneamine, hydrogenated ; 4,4'- methylenebis(cyclohexyla mine), liquid ; diethylmethylbenzenedia mine	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard classes 3.1 to 3.6, 3.7 adverse effects on sexual function and fertility or on development, 3.8 effects other than narcotic effects, 3.9 and 3.10
3(c)	STRONGHOLD 901 90 SECOND ADHESIVE (SEMI-RIGID BLACK) ; formaldehyde, polymer with benzeneamine, hydrogenated ; 4,4'- methylenebis(cyclohexyla mine), liquid ; diethylmethylbenzenedia mine	Substances or mixtures fulfilling the criteria for any of the following hazard classes or categories set out in Annex I to Regulation (EC) No 1272/2008: Hazard class 4.1

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

VOC content

: 201 g/l

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

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

Abbreviations and acronyms:		
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road	
ATE	Acute Toxicity Estimate	
BLV	Biological limit value	
CAS-No.	Chemical Abstract Service number	
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008	
DMEL	Derived Minimal Effect level	
DNEL	Derived-No Effect Level	
EC50	Median effective concentration	
EC-No.	European Community number	
EN	European Standard	
ΙΑΤΑ	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	
OEL	Occupational Exposure Limit	
РВТ	Persistent Bioaccumulative Toxic	
PNEC	Predicted No-Effect Concentration	
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006	
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail	
SDS	Safety Data Sheet	
vPvB	Very Persistent and Very Bioaccumulative	
WGK	Water Hazard Class	

Full text of H- and EUH-statements:	
Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.

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Full text of H- and EUH-statements:	
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
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.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Corr. 1C	Skin corrosion/irritation, Category 1, Sub-Category 1C
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

For professional use only.

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