

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

1.1. Product identifier

Product form : Mixture
 Trade name : TF 1000 – Thermo-Flex Acrylic Roof Coating
 Product code : TF 1000 Series

1.2. Relevant identified uses of the 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 : Acrylic Elasto-Meric Fluid-Applied Coating
 Use of the substance/mixture : For professional use only

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Lapolla Industries, Inc.
 15402 Vantage Parkway East, Ste. 322
 Houston, Texas 77032
 Tel: +1 281 219 4100 , (877) 626-2648
 Email: sds@lapolla.com

1.4. Emergency telephone number

Emergency number : CARECHEM (866) 928-0789

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Sensitisation — Skin, Category 1 H317

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

Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

May cause sensitization by skin contact.

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS07

Signal word (CLP) :

Warning

Hazard statements (CLP) :

H317 - May cause an allergic skin reaction
 H412 - Harmful to aquatic life with long lasting effects

Precautionary statements (CLP) :

P261 - Avoid breathing fume, mist, spray, vapours
 P272 - Contaminated work clothing should not be allowed out of the workplace
 P273 - Avoid release to the environment
 P280 - Wear eye protection, protective clothing, protective gloves
 P302+P352 - IF ON SKIN: Wash with plenty of soap and water

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

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3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Zinc oxide	(CAS No) 1314-13-2 (EC no) 215-222-5 (EC index no) 030-013-00-7 (REACH-no) Not available	0,3 - 0,99	Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Ammonia	(CAS No) 7664-41-7 (EC no) 231-635-3;231-634-3 (EC index no) 007-001-00-5	<1	Flam. Gas 2, H221 Acute Tox. 3 (Inhalation:gas), H331 Skin Corr. 1A, H314 Aquatic Acute 1, H400
3(2H)-Isothiazolone, 4,5-dichloro-2-octyl-	(CAS No) 64359-81-5 (EC no) 264-843-8	< 0,2	Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: In all cases of doubt, or when symptoms persist, seek medical attention.
First-aid measures after inhalation	: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get immediate medical advice/attention.
First-aid measures after skin contact	: Remove contaminated clothing and shoes. Wash hands with water and soap. Seek medical attention if irritation develops.
First-aid measures after eye contact	: In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately get medical attention.
First-aid measures after ingestion	: If swallowed, rinse mouth with water (only if the person is conscious). Immediately call a POISON CENTER or doctor/ physician. Give water to drink if victim completely conscious/alert. Never give anything by mouth to an unconscious person.

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

Symptoms/injuries after inhalation	: Inhalation of mist or aerosol may cause irritation to nose and throat . In case of repeated or prolonged exposure : Lungs irritation. Dizziness, headaches, nausea.
Symptoms/injuries after skin contact	: May cause an allergic skin reaction. Prolonged or repeated contact with the skin may cause dermatitis.
Symptoms/injuries after eye contact	: May cause eye irritation. symptoms may include stinging, tearing, redness, swelling and blurred vision.
Symptoms/injuries after ingestion	: Abdominal pain, nausea. Vomiting.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Carbon dioxide (CO2), water, dry chemical powder, foam.
Unsuitable extinguishing media	: Do not use a water jet since it may cause the fire to spread.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions	: Exercise caution when fighting any chemical fire.
Protective equipment for firefighters	: Wear proper protective equipment. Wear a self contained breathing apparatus.
Other information	: Prevent entry to sewers and public waters. Material can splatter above 100° C (212° F). Dried product can burn.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Ensure adequate ventilation. The vapour is heavier than air; beware of pits and confined spaces. Spilled material may present a slipping hazard. Stop leak if safe to do so. No action shall be taken involving any personal risk or without suitable training.
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6.1.1. For non-emergency personnel

Protective equipment	: Wear suitable protective clothing. Refer to section 8.
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6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.
Emergency procedures : Evacuate unnecessary personnel.

6.2. Environmental precautions

Do not discharge into drains or the environment. Relevant water authorities should be notified of any large spillage to water course or drain.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Wear proper protective equipment. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Collect all waste in suitable and labelled containers and dispose according to local legislation. Avoid static electricity discharges. Store away from other materials. Dispose of contents/container to comply with applicable local, national and international regulations.

6.4. Reference to other sections

For further information refer to section 8: Exposure-controls/personal protection. For disposal of residues refer to section 13 : Disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Obtain special instructions before use. Use only in well-ventilated areas. Avoid all eye and skin contact and do not breathe vapour and mist. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep container closed when not in use. Take precautionary measures against static discharge. Ensure adequate ventilation.
Hygiene measures : Do not eat, drink or smoke when using this product. Handle in accordance with good industrial hygiene and safety practices. Wash exposed skin thoroughly with soap and water after handling.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Provide adequate ventilation. A washing facility/water for eye and skin cleaning purposes should be present.
Storage conditions : Keep container tightly closed in a cool place. Keep only in the original container in a cool, well-ventilated place away from highly flammable substances. Store away from direct sunlight or other heat sources. PROTECT FROM FREEZING DURING SHIPMENT AND STORAGE. Do not store material at temperatures below 50 °F (10 °C).
Incompatible materials : Strong oxidizing agents. Acids. Base.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Aluminum hydroxide (Al(OH)3) (21645-51-2)		
Austria	MAK (mg/m ³)	5 mg/m ³ (respirable fraction)
Austria	MAK Short time value (mg/m ³)	10 mg/m ³ (respirable fraction)
Latvia	OEL TWA (mg/m ³)	6 mg/m ³
Lithuania	IPRV (mg/m ³)	6 mg/m ³
Poland	NDS (mg/m ³)	2,5 mg/m ³ (inhalable fraction) 1,2 mg/m ³ (respirable fraction)
Slovakia	NPHV (priemerná) (mg/m ³)	1,5 mg/m ³
1,2-Propylene glycol (57-55-6)		
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	474 mg/m ³ (total particles and vapor) 10 mg/m ³ (particles)
Croatia	GVI (granična vrijednost izloženosti) (ppm)	150 ppm
Ireland	OEL (8 hours ref) (mg/m ³)	470 mg/m ³ (total vapour and particulates) 10 mg/m ³ (particulate)
Ireland	OEL (8 hours ref) (ppm)	150 ppm (total vapour and particulates)
Ireland	OEL (15 min ref) (mg/m ³)	1410 mg/m ³ (calculated-total vapour and particulates) 30 mg/m ³ (calculated-particulate)
Ireland	OEL (15 min ref) (ppm)	450 ppm (calculated-total vapour and particulates)
Latvia	OEL TWA (mg/m ³)	7 mg/m ³
Lithuania	IPRV (mg/m ³)	7 mg/m ³
United Kingdom	Local name	Propane-1,2-diol

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1,2-Propylene glycol (57-55-6)		
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ particulates 474 mg/m ³ total vapour and particulates
United Kingdom	WEL TWA (ppm)	150 ppm total vapour and particulates
Zinc oxide (1314-13-2)		
Austria	MAK (mg/m ³)	5 mg/m ³ (respirable fraction, smoke)
Belgium	Limit value (mg/m ³)	10 mg/m ³ (dust) 5 mg/m ³ (fume) 5 mg/m ³ (aerosol and vapor)
Belgium	Short time value (mg/m ³)	10 mg/m ³
Bulgaria	OEL TWA (mg/m ³)	5,0 mg/m ³
Bulgaria	OEL STEL (mg/m ³)	10,0 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	5 mg/m ³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³)	10 mg/m ³
Czech Republic	Expoziční limity (PEL) (mg/m ³)	2 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	4 mg/m ³ 4 mg/m ³ (fume)
Estonia	OEL TWA (mg/m ³)	5 mg/m ³
Finland	HTP-arvo (8h) (mg/m ³)	2 mg/m ³ (fume)
Finland	HTP-arvo (15 min)	10 mg/m ³ (fume)
France	VME (mg/m ³)	5 mg/m ³ (fume) 10 mg/m ³ (dust)
Greece	OEL TWA (mg/m ³)	5 mg/m ³ (fume)
Greece	OEL STEL (mg/m ³)	10 mg/m ³ (fume)
Hungary	AK-érték	5 mg/m ³ (respirable dust)
Hungary	CK-érték	20 mg/m ³ (respirable dust)
Ireland	OEL (8 hours ref) (mg/m ³)	2 mg/m ³ (fume)
Ireland	OEL (15 min ref) (mg/m ³)	10 mg/m ³ (fume)
Latvia	OEL TWA (mg/m ³)	0,5 mg/m ³
Lithuania	IPRV (mg/m ³)	5 mg/m ³
Poland	NDS (mg/m ³)	5 mg/m ³ (inhalable fraction)
Poland	NDSch (mg/m ³)	10 mg/m ³ (inhalable fraction)
Portugal	OEL TWA (mg/m ³)	2 mg/m ³ (respirable fraction)
Portugal	OEL STEL (mg/m ³)	10 mg/m ³ (respirable fraction)
Romania	OEL TWA (mg/m ³)	5 mg/m ³ (fume)
Romania	OEL STEL (mg/m ³)	10 mg/m ³ (fume)
Slovakia	NPHV (priemerná) (mg/m ³)	1 mg/m ³ (fume)
Slovakia	NPHV (Hraničná) (mg/m ³)	1 mg/m ³
Slovenia	OEL TWA (mg/m ³)	5 mg/m ³ (respirable fraction, fume)
Slovenia	OEL STEL (mg/m ³)	20 mg/m ³ (respirable fraction, fume)
Spain	VLA-ED (mg/m ³)	2 mg/m ³ (respirable fraction)
Spain	VLA-EC (mg/m ³)	10 mg/m ³
Sweden	nivågränsvärde (NVG) (mg/m ³)	5 mg/m ³ (total dust)
United Kingdom	WEL TWA (mg/m ³)	5 mg/m ³
United Kingdom	WEL STEL (mg/m ³)	10 mg/m ³
United Kingdom	Remark (WEL)	(fume)
Ammonia (7664-41-7)		
EU	Local name	Ammonia, anhydrous
EU	IOELV TWA (mg/m ³)	14 mg/m ³
EU	IOELV TWA (ppm)	20 ppm
EU	IOELV STEL (mg/m ³)	36 mg/m ³
EU	IOELV STEL (ppm)	50 ppm
Austria	MAK (mg/m ³)	14 mg/m ³
Austria	MAK (ppm)	20 ppm
Austria	MAK Short time value (mg/m ³)	36 mg/m ³

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Ammonia (7664-41-7)		
Austria	MAK Short time value (ppm)	50 ppm
Belgium	Limit value (mg/m ³)	14 mg/m ³
Belgium	Limit value (ppm)	20 ppm
Belgium	Short time value (mg/m ³)	36 mg/m ³
Belgium	Short time value (ppm)	50 ppm
Bulgaria	OEL TWA (mg/m ³)	14,0 mg/m ³
Bulgaria	OEL TWA (ppm)	20 ppm
Bulgaria	OEL STEL (mg/m ³)	36,0 mg/m ³
Bulgaria	OEL STEL (ppm)	50 ppm
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	14 mg/m ³
Croatia	GVI (granična vrijednost izloženosti) (ppm)	20 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m ³)	36 mg/m ³
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	50 ppm
Cyprus	OEL TWA (mg/m ³)	14 mg/m ³
Cyprus	OEL TWA (ppm)	20 ppm
Cyprus	OEL STEL (mg/m ³)	36 mg/m ³
Cyprus	OEL STEL (ppm)	50 ppm
Czech Republic	Expoziční limity (PEL) (mg/m ³)	14 mg/m ³
Denmark	Grænseværdie (langvarig) (mg/m ³)	14 mg/m ³
Denmark	Grænseværdie (langvarig) (ppm)	20 ppm
Estonia	OEL TWA (mg/m ³)	14 mg/m ³
Estonia	OEL TWA (ppm)	20 ppm
Estonia	OEL STEL (mg/m ³)	36 mg/m ³
Estonia	OEL STEL (ppm)	50 ppm
Finland	HTP-arvo (8h) (mg/m ³)	14 mg/m ³ (anhydrous)
Finland	HTP-arvo (8h) (ppm)	20 ppm (anhydrous)
Finland	HTP-arvo (15 min)	36 mg/m ³ (anhydrous)
Finland	HTP-arvo (15 min) (ppm)	50 ppm (anhydrous)
France	Local name	Ammoniac
France	VME (mg/m ³)	7 mg/m ³
France	VME (ppm)	10 ppm
France	VLE (mg/m ³)	14 mg/m ³
France	VLE (ppm)	20 ppm
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	14 mg/m ³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Germany	TRGS 900 Occupational exposure limit value (ppm)	20 ppm (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed)
Greece	OEL TWA (mg/m ³)	35 mg/m ³
Greece	OEL TWA (ppm)	50 ppm
Greece	OEL STEL (mg/m ³)	35 mg/m ³
Greece	OEL STEL (ppm)	50 ppm
Hungary	AK-érték	14 mg/m ³
Hungary	CK-érték	36 mg/m ³
Ireland	OEL (8 hours ref) (mg/m ³)	14 mg/m ³ (anhydrous)
Ireland	OEL (8 hours ref) (ppm)	20 ppm (anhydrous)
Ireland	OEL (15 min ref) (mg/m ³)	36 mg/m ³ (anhydrous)
Ireland	OEL (15 min ref) (ppm)	50 ppm (anhydrous)
Italy	OEL TWA (mg/m ³)	14 mg/m ³
Italy	OEL TWA (ppm)	20 ppm
Italy	OEL STEL (mg/m ³)	36 mg/m ³

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Ammonia (7664-41-7)		
Italy	OEL STEL (ppm)	50 ppm
Latvia	OEL TWA (mg/m ³)	14 mg/m ³
Latvia	OEL TWA (ppm)	20 ppm
Lithuania	IPRV (mg/m ³)	14 mg/m ³
Lithuania	IPRV (ppm)	20 ppm
Lithuania	TPRV (mg/m ³)	36 mg/m ³
Lithuania	TPRV (ppm)	50 ppm
Luxembourg	OEL TWA (mg/m ³)	14 mg/m ³
Luxembourg	OEL TWA (ppm)	20 ppm
Luxembourg	OEL STEL (mg/m ³)	36 mg/m ³
Luxembourg	OEL STEL (ppm)	50 ppm
Netherlands	Grenswaarde TGG 8H (mg/m ³)	14 mg/m ³
Netherlands	Grenswaarde TGG 15MIN (mg/m ³)	36 mg/m ³
Poland	NDS (mg/m ³)	14 mg/m ³
Poland	NDSch (mg/m ³)	28 mg/m ³
Portugal	OEL TWA (mg/m ³)	14 mg/m ³ (indicative limit value)
Portugal	OEL TWA (ppm)	20 ppm (indicative limit value)
Portugal	OEL STEL (mg/m ³)	36 mg/m ³ (indicative limit value)
Portugal	OEL STEL (ppm)	50 ppm (indicative limit value)
Romania	OEL TWA (mg/m ³)	14 mg/m ³
Romania	OEL TWA (ppm)	20 ppm
Romania	OEL STEL (mg/m ³)	36 mg/m ³
Romania	OEL STEL (ppm)	50 ppm
Slovakia	NPHV (priemerná) (mg/m ³)	14 mg/m ³
Slovakia	NPHV (priemerná) (ppm)	20 ppm
Slovakia	NPHV (Hraničná) (mg/m ³)	36 mg/m ³
Slovenia	OEL TWA (mg/m ³)	14 mg/m ³
Slovenia	OEL TWA (ppm)	20 ppm
Slovenia	OEL STEL (mg/m ³)	35 mg/m ³ (anhydrous)
Slovenia	OEL STEL (ppm)	50 ppm (anhydrous)
Spain	VLA-ED (mg/m ³)	14 mg/m ³ (indicative limit value)
Spain	VLA-ED (ppm)	20 ppm (indicative limit value)
Spain	VLA-EC (mg/m ³)	36 mg/m ³
Spain	VLA-EC (ppm)	50 ppm
Sweden	nivågränsvärde (NVG) (mg/m ³)	14 mg/m ³
Sweden	nivågränsvärde (NVG) (ppm)	20 ppm
Sweden	takgränsvärde (TGV) (mg/m ³)	36 mg/m ³
Sweden	takgränsvärde (TGV) (ppm)	50 ppm
United Kingdom	Local name	Ammonia, anhydrous
United Kingdom	WEL TWA (mg/m ³)	18 mg/m ³
United Kingdom	WEL TWA (ppm)	25 ppm
United Kingdom	WEL STEL (mg/m ³)	25 mg/m ³
United Kingdom	WEL STEL (ppm)	35 ppm
Limestone (1317-65-3)		
Bulgaria	OEL TWA (mg/m ³)	10 mg/m ³ (containing <2% free Crystalline silicon dioxide in respirable fibrous particles fraction-inhalable fraction)
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	10 mg/m ³ (total dust)
Estonia	OEL TWA (mg/m ³)	5 mg/m ³ (respirable dust)
Greece	OEL TWA (mg/m ³)	5 mg/m ³ (respirable fraction)
Ireland	OEL (8 hours ref) (mg/m ³)	4 mg/m ³ respirable dust
United Kingdom	Local name	Calcium carbonate

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Limestone (1317-65-3)		
United Kingdom	WEL TWA (mg/m ³)	10 mg/m ³ inhalable dust 4 mg/m ³ respirable 4 mg/m ³ Limestone, respirable 10 mg/m ³ Limestone, total inhalable 4 mg/m ³ Marble, respirable 10 mg/m ³ Marble, total inhalable
Titanium dioxide (13463-67-7)		
Austria	MAK (mg/m ³)	5 mg/m ³ (alveolar dust, respirable fraction)
Austria	MAK Short time value (mg/m ³)	10 mg/m ³ (alveolar dust, respirable fraction)
Belgium	Limit value (mg/m ³)	10 mg/m ³
Bulgaria	OEL TWA (mg/m ³)	10,0 mg/m ³ (respirable dust)
Croatia	GVI (granična vrijednost izloženosti) (mg/m ³)	10 mg/m ³ (total dust) 4 mg/m ³ (respirable dust)
Denmark	Grænseværdie (langvarig) (mg/m ³)	6 mg/m ³
Estonia	OEL TWA (mg/m ³)	5 mg/m ³
France	Local name	Titane (dioxyde de), en Ti
France	VME (mg/m ³)	10 mg/m ³
Greece	OEL TWA (mg/m ³)	10 mg/m ³ (inhalable fraction) 5 mg/m ³ (respirable fraction)
Ireland	OEL (8 hours ref) (mg/m ³)	10 mg/m ³ (total inhalable dust) 4 mg/m ³ (respirable dust)
Ireland	OEL (15 min ref) (mg/m ³)	30 mg/m ³ (calculated-total inhalable dust) 12 mg/m ³ (calculated-respirable dust)
Latvia	OEL TWA (mg/m ³)	10 mg/m ³
Lithuania	IPRV (mg/m ³)	5 mg/m ³
Poland	NDS (mg/m ³)	10,0 mg/m ³ (<2% free crystalline silica and containing no asbestos-inhalable fraction)
Portugal	OEL TWA (mg/m ³)	10 mg/m ³
Romania	OEL TWA (mg/m ³)	10 mg/m ³
Romania	OEL STEL (mg/m ³)	15 mg/m ³
Spain	VLA-ED (mg/m ³)	10 mg/m ³
Sweden	nivagränsvärde (NVG) (mg/m ³)	5 mg/m ³ (total dust)
United Kingdom	Local name	Titanium dioxide
United Kingdom	WEL TWA (mg/m ³)	4 mg/m ³ respirable 10 mg/m ³ total inhalable
United Kingdom	WEL STEL (mg/m ³)	30 mg/m ³ (calculated-total inhalable) 12 mg/m ³ (calculated-respirable)
Silica, amorphous (7631-86-9)		
Austria	MAK (mg/m ³)	4 mg/m ³ (also Silica manufactured through wet process-inhalable fraction)
Czech Republic	Expoziční limity (PEL) (mg/m ³)	0,1 mg/m ³ (respirable fraction) 4,0 mg/m ³
Estonia	OEL TWA (mg/m ³)	2 mg/m ³ (respirable dust)
Finland	HTP-arvo (8h) (mg/m ³)	5 mg/m ³
Germany	TRGS 900 Occupational exposure limit value (mg/m ³)	4 mg/m ³ (The risk of damage to the embryo or fetus can be excluded when AGW and BGW values are observed-inhalable fraction)
Ireland	OEL (8 hours ref) (mg/m ³)	6 mg/m ³ (total inhalable dust) 2,4 mg/m ³ (respirable dust)
Ireland	OEL (15 min ref) (mg/m ³)	7,2 mg/m ³ (calculated, respirable dust)
Latvia	OEL TWA (mg/m ³)	1 mg/m ³
Slovakia	NPHV (priemerná) (mg/m ³)	4,0 mg/m ³ (total aerosol)
Slovenia	OEL TWA (mg/m ³)	0,3 mg/m ³ (respirable fraction, fume)
United Kingdom	WEL TWA (mg/m ³)	6 mg/m ³ (inhalable dust) 2,4 mg/m ³ (respirable dust)
United Kingdom	WEL STEL (mg/m ³)	18 mg/m ³ (calculated-inhalable dust) 7,2 mg/m ³ (calculated-respirable dust)

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Ammonium hydroxide (1336-21-6)		
Finland	HTP-arvo (15 min)	36 mg/m ³
Finland	HTP-arvo (15 min) (ppm)	50 ppm

8.2. Exposure controls

- Appropriate engineering controls : Provide adequate ventilation. Provide local exhaust or general room ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
- Personal protective equipment : Insufficient ventilation: wear respiratory protection. Protective goggles. Gloves. Protective clothing. For certain operations, additional Personal Protection Equipment (PPE) may be required.
- Hand protection : Wear protective gloves. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. (to European standard EN 374 or equivalent)
- Eye protection : Eye protection, including both chemical splash goggles and face shield, must be worn when possibility exists for eye contact due to spraying liquid or airborne particles. Contact lenses should not be worn. Chemical goggles should be consistent with EN166 or equivalent.
- Skin and body protection : Long sleeved protective clothing. Personal protective clothing should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling.
- Respiratory protection : Approved organic vapour respirator/supplied air or self-contained breathing apparatus must be used when vapour concentration exceeds applicable exposure limits. Use an approved air purifying respirator equipped with an ammonia/methylamine cartridge.



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Liquid
- Colour : White or colors.
- Odour : Slight odour.
- Odour threshold : No data available
- pH : 8,5 - 9,5
- Relative evaporation rate (butyl acetate=1) : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point : 100 °C (212 °F)
- Flash point : 115 °C (240 °F)
- Auto-ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available
- Vapour pressure : No data available
- Relative vapour density at 20 °C : Heavier than air
- Relative density : No data available
- Density : 1,44 Specific Gravity
- Solubility : Soluble in water.
- Log Pow : No data available
- Viscosity, kinematic : No data available
- Viscosity, dynamic : No data available
- Explosive properties : No data available
- Oxidising properties : No data available
- Explosive limits : No data available

9.2. Other information

- VOC content : 20,1 g/l (0.17 lb/gal)

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SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable at normal conditions. will freeze and become unusable at temperatures below 32°F (0 °C).

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Avoid Freezing. Heat, open flame, sparks, hot surfaces, ignition sources, elevated temperature . Avoid exposure to temperatures above 150 °F (65.6 °C) May emit toxic materials when heated to 350° F (177 °C) or above.

10.5. Incompatible materials

Strong oxidizing agents. Acids. Base.

10.6. Hazardous decomposition products

Hazardous combustion products : Carbon dioxide, carbon monoxide, smoke, fumes, unburned hydrocarbons and oxides of sulfur, phosphorus, zinc and/or nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified (Based on available data, the classification criteria are not met)

Zinc oxide (1314-13-2)	
LD50 oral rat	> 5000 mg/kg

Ammonia (7664-41-7)	
LD50 oral rat	350 mg/kg
LC50 inhalation rat (ppm)	2000 ppm/4h

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 8,5 - 9,5

Serious eye damage/irritation : Not classified (Based on concentration of components in the mixture, the classification criteria are not met)
pH: 8,5 - 9,5

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified (Based on concentration of components in the mixture, the classification criteria are not met)

Carcinogenicity : Not classified (Based on concentration of components in the mixture, the classification criteria are not met)

Reproductive toxicity : Not classified (Based on concentration of components in the mixture, the classification criteria are not met)

Specific target organ toxicity (single exposure) : Not classified (Based on concentration of components in the mixture, the classification criteria are not met)

Specific target organ toxicity (repeated exposure) : Not classified (Based on available data, the classification criteria are not met)

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Harmful to aquatic life with long lasting effects

Ammonia (7664-41-7)	
LC50 fish 1	0,44 mg/l (Exposure time: 96 h - Species: Cyprinus carpio)
LC50 fish 2	0,26 - 4,6 mg/l (Exposure time: 96 h - Species: Lepomis macrochirus)
EC50 Daphnia 1	25,4 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Ammonia (7664-41-7)	
Log Pow	-1,14 (at 25 °C)

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

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12.6. Other adverse effects

Other adverse effects : Prevent entry to sewers and public waters.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose of contents/container to comply with applicable local, national and international regulations. Consult the appropriate authorities about waste disposal.

Additional information : Do not re-use empty containers. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose containers to flames, sparks, heat, or other potential ignition sources.

Ecology - waste materials : Avoid release to the environment. Do not allow into drains or water courses.

SECTION 14: Transport information

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

14.1. UN number

UN-No. (ADR) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable
UN-No. (ADN) : Not applicable
UN-No. (RID) : Not applicable

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 applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

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

No data available

- Transport by sea

No data available

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- Air transport

No data available

- Inland waterway transport

No data available

- Rail transport

No data available

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

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

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

VOC content : 20,1 g/l (0.17 lb/gal)

15.1.2. National regulations

Germany

VwVwS Annex reference : Water hazard class (WGK) 2, hazard to waters (Classification according to VwVwS, Annex 4)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : None of the components are listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : None of the components are listed

Denmark

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product
Persons suffering from asthma or eczema and persons who have chronic lung diseases, skin or respiratory allergies to isocyanates should not work with the material
The requirements from the Danish Working Environment Authorities regarding work with epoxy resins and isocyanates must be observed during use and disposal

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Date of Preparation : May 4, 2016

Other information : None.

Full text of H- and EUH-statements:

Acute Tox. 3 (Inhalation:gas)	Acute toxicity (inhalation:gas) Category 3
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Gas 2	Flammable gases, Category 2
Skin Corr. 1A	Skin corrosion/irritation Category 1A
Skin Corr. 1B	Skin corrosion/irritation Category 1B
Skin Sens. 1	Sensitisation — Skin, Category 1
H221	Flammable gas
H314	Causes severe skin burns and eye damage
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H331	Toxic if inhaled
H400	Very toxic to aquatic life

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H410	Very toxic to aquatic life with long lasting effects
H412	Harmful to aquatic life with long lasting effects

SDS EU (REACH Annex II)

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