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

· **1.1 Product identifier**

· **Trade name:** **Akvasafe 88**

· **UFI:** R05C-603N-S006-NCWQ
· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
· **Sector of Use** Coating
· **Application of the substance / the mixture**
Water borne emulsion paint
Uses in Coatings - Industrial use
Uses in Coatings - Professional use

· **1.3 Details of the supplier of the safety data sheet**
· **Manufacturer/Supplier:**
Nor-Maali Oy
Vanhatie 20, 15240 Lahti, FINLAND

· **Further information obtainable from:** MSDS (Nor-Maali Oy) tel.+358 3 874 650, sds@nor-maali.fi
· **1.4 Emergency telephone number:** Contact National Poison Center

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SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

Product definition: mixture

· **Classification according to Regulation (EC) No 1272/2008**


GHS02 flame

Flam. Liq. 3 H226 Flammable liquid and vapour.

· **2.2 Label elements**
· **Labelling according to Regulation (EC) No 1272/2008**
The product is classified and labelled according to the GB CLP regulation.
· **Hazard pictograms**


GHS02

· **Signal word** Warning
· **Hazard statements**
H226 Flammable liquid and vapour.
· **Precautionary statements**

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P403+P235	Store in a well-ventilated place. Keep cool.

· **Additional information:**
EUH211 Warning! Hazardous respirable droplets may be formed when sprayed. Do not breathe spray or mist.
· **2.3 Other hazards**
· **Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.

(Contd. on page 2)

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SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

CAS: 1330-20-7 EINECS: 215-535-7 Reg.nr.: 01-2119488216-32-	xylene Flam. Liq. 3, H226; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315	0.1 - 2.5%
CAS: 100-41-4 EINECS: 202-849-4 Reg.nr.: 01-2119489370-35-	ethylbenzene Flam. Liq. 2, H225; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H332	0.1 - 2.5%
CAS: 67-56-1 EINECS: 200-659-6 Reg.nr.: 01-2119392409-28-	methanol Flam. Liq. 2, H225; Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; STOT SE 1, H370 Specific concentration limits: STOT SE 1; H370: C ≥ 10 % STOT SE 2; H371: 3 % ≤ C < 10 %	< 0.2%
CAS: 77-99-6 EINECS: 201-074-9 Reg.nr.: 01-2119486799-10-	propylidynetrimethanol Repr. 2, H361fd	< 0.2%

· **Additional information:**
Contains: > 1 % TiO_2 (<10 µm)
For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**
· **General information:**
Never give anything by mouth or induce vomiting to an unconscious person or a person who has convulsions.
· **After inhalation:**
Remove person to fresh air, keep patient warm and at rest. If breathing is irregular, call national emergency number, if needed start giving artificial respiration and seek medical advice.
· **After skin contact:**
Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
· **After eye contact:**
Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open.
· **After swallowing:**
If swallowed, seek medical advice immediately and show the container or label. Keep person warm and at rest. Do not induce vomiting.
· **Information for doctor:** Treatment according to symptoms.
· **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
· **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**
· **Suitable extinguishing agents:** Alcohol resistant foam, CO_2, powders, water spray.
· **For safety reasons unsuitable extinguishing agents:** Water with full jet
· **5.2 Special hazards arising from the substance or mixture** No further relevant information available.
· **5.3 Advice for firefighters**
Evacuate people from danger area and deny access to area. Remove containers from danger area and try to cool containers which cannot be removed safely.

(Contd. on page 3)

(Contd. of page 2)

· **Protective equipment:** Compressed air respirator and protective clothing.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**
No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

· **6.2 Environmental precautions:**
Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

· **6.3 Methods and material for containment and cleaning up:**
Absorb liquid components with liquid-binding material (sand, peat or other absorbent material).
Ensure adequate ventilation.

· **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**
Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapours in air and avoid vapour concentrations higher than the occupational exposure limits. In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard. To dissipate static electricity during transfer, earth drum and connect to receiving container with bonding strap. Operators should wear antistatic footwear and clothing and floors should be of the conducting type. Keep container tightly closed. Keep away from heat, sparks and flame. No sparking tools should be used. Avoid contact with skin and eyes. Avoid the inhalation of dust, particulates, spray or mist arising from the application of this preparation. Avoid inhalation of dust from sanding. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Put on appropriate personal protective equipment (see section 8). Never use pressure to empty. Container is not a pressure vessel. Always keep in containers made from the same material as the original one.Comply with the health and safety at work laws.
When operators, whether spraying or not, have to work inside the spray booth, ventilation is unlikely to be sufficient to control particulates and solvent vapour in all cases. In such circumstances they should wear a compressed air-fed respirator during the spraying process and until such time as the particulates and solvent vapour concentration has fallen below the exposure limits.

· **Information about fire - and explosion protection:**
Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage:**

· **Requirements to be met by storerooms and receptacles:**
The product must be stored in a dry, well ventilated, cool (temperature > +5C) space. Must be transported and stored free from frost. Containers must be kept tightly closed and away from foodstuff.

· **Information about storage in one common storage facility:** Not required.

· **Further information about storage conditions:** Keep container tightly sealed.

· **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

· **8.1 Control parameters**

· **Ingredients with limit values that require monitoring at the workplace:**	
1330-20-7 xylene	
HTP	Short-term value: 440 mg/m³, 100 ppm Long-term value: 220 mg/m³, 50 ppm Sk; BMGV

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100-41-4 ethylbenzene	
HTP	Short-term value: 880 mg/m³, 200 ppm Long-term value: 220 mg/m³, 50 ppm Sk; BMGV
67-56-1 methanol	
HTP	Short-term value: 330 mg/m³, 250 ppm Long-term value: 270 mg/m³, 200 ppm Sk

· **DNELs**

1330-20-7 xylene		
Dermal	DNEL	180 mg/kg bw/day (Workers - Long-term systemic effects)
Inhalative	DNEL	211 mg/m3 (Workers - Long-term systemic effects)
100-41-4 ethylbenzene		
Dermal	DNEL	180 mg/kg bw/day (Workers - Long-term systemic effects)
Inhalative	DNEL	77 mg/m3 (Workers - Long-term systemic effects)
		442 mg/m3 (Workers - Long-term local effects)
67-56-1 methanol		
Dermal	DNEL	20 mg/kg bw/day (Workers - Long-term systemic effects)
		20 mg/kg bw/day (Workers - acute systemic effects)
Inhalative	DNEL	130 mg/m3 (Workers - Long-term systemic effects)
		130 mg/m3 (Workers - acute systemic effects)
		130 mg/m3 (Workers - Long-term local effects)
77-99-6 propylidynetrimethanol		
Dermal	DNEL	940 µg/kg bw/day (Workers - Long-term systemic effects)
Inhalative	DNEL	3.3 mg/m3 (Workers - Long-term systemic effects)

· **PNECs**

1330-20-7 xylene	
PNEC	6.58 mg/L (Sewage treatment)
PNEC	12.46 mg/kg dwt (Fresh water sediment)
	12.46 mg/kg dwt (Marine water sediment)
	2.31 mg/kg dwt (Soil)
PNEC	2.31 mg/kg (Soil)
PNEC	327 µg/L (Freshwater)
	327 µg/L (Marine water)
100-41-4 ethylbenzene	
PNEC	0.1 mg/L (Freshwater)
	0.01 - 0.1 mg/L (Marine water)
	9.6 mg/L (Sewage treatment)
PNEC	13.7 mg/kg dwt (Fresh water sediment)
	1.37 mg/kg dwt (Marine water sediment)
	2.68 mg/kg dwt (Soil)
PNEC	20 mg/kg (Secondary Poisoning)

· **Ingredients with biological limit values:**

1330-20-7 xylene	
BMGV	5.0 mmol/l creatinine Sampling time: post shift Parameter: methyl hippuric acid of urine
100-41-4 ethylbenzene	
BMGV	5.2 mmol/l creatinine Sampling time: post shift after working week or exposure period Parameter: mandelic acid of urine

(Contd. on page 5)

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· **Additional information:**
The information is based on the valid lists at the time of manufacture (Finland 654/2020).

· **8.2 Exposure controls**
· **Appropriate engineering controls** No further data; see item 7.
· **Individual protection measures, such as personal protective equipment**
· **General protective and hygienic measures:**
Provide adequate ventilation. Where reasonably practicable, this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapours below the HTP, suitable respiratory protection must be worn.
· **Respiratory protection:** Use suitable respiratory protective device in case of insufficient ventilation.
· **Hand protection**

Protective gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
· **Material of gloves**
Wear suitable gloves tested to EN374.
May be used, gloves(breakthrough time) 4 - 8 hours: butyl rubber, nitrile rubber
· **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
· **Eye/face protection**

Tightly sealed goggles

The eye flushing device should be located near the the paint work area.
· **Body protection:** Protective work clothing

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SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**
· **General Information**

· **Physical state**	Fluid
· **Colour:**	Colourful
· **Odour:**	Mild
· **Odour threshold:**	Not determined.
· **Melting point/freezing point:**	Undetermined.
· **Boiling point or initial boiling point and boiling range**	100 °C (7732-18-5 water, distilled, conductivity or of similar purity)
· **Flammability**	Not applicable.
· **Lower and upper explosion limit**	
· **Lower:**	1 vol-%
· **Upper:**	11 vol-%
· **Flash point:**	32 °C
· **Decomposition temperature:**	Not determined.
· **pH**	Not determined.
· **Viscosity:**	
· **Kinematic viscosity at 40 °C**	> 20.5 mm²/s
· **Dynamic:**	Not determined.
· **Solubility**	
· **water:**	Not miscible or difficult to mix.
· **Partition coefficient n-octanol/water (log value)**	Not determined.
· **Vapour pressure:**	Not determined.

(Contd. on page 6)

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· **Density and/or relative density**	
· **Density at 20 °C:**	1.4 g/cm³
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **9.2 Other information**	
· **Appearance:**	
· **Form:**	Fluid
· **Important information on protection of health and environment, and on safety.**	
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
· **Change in condition**	
· **Evaporation rate**	Not determined.
· **Information with regard to physical hazard classes**	
· **Explosives**	Void
· **Flammable gases**	Void
· **Aerosols**	Void
· **Oxidising gases**	Void
· **Gases under pressure**	Void
· **Flammable liquids**	
Flammable liquid and vapour.	
· **Flammable solids**	Void
· **Self-reactive substances and mixtures**	Void
· **Pyrophoric liquids**	Void
· **Pyrophoric solids**	Void
· **Self-heating substances and mixtures**	Void
· **Substances and mixtures, which emit flammable gases in contact with water**	Void
· **Oxidising liquids**	Void
· **Oxidising solids**	Void
· **Organic peroxides**	Void
· **Corrosive to metals**	Void
· **Desensitised explosives**	Void

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No specific test data related to reactivity available for this product or its ingredients.
· **10.2 Chemical stability**
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **10.3 Possibility of hazardous reactions**
Under normal conditions of storage and use, hazardous decomposition products should not be produced.
· **10.4 Conditions to avoid** No further relevant information available.
· **10.5 Incompatible materials:** No further relevant information available.
· **10.6 Hazardous decomposition products:**
Under normal conditions of storage and use, hazardous decomposition products should not be produced.

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SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
· **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

1330-20-7 xylene

Oral	LD50	> 3,253 mg/kg (rat)
Dermal	LD50	12,126 mg/kg (rabbit)

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Inhalative	LC50/4 h	27.124 mg/l (rat)
100-41-4 ethylbenzene		
Oral	LD50	> 3,500 mg/kg (rat)
Dermal	LD50	> 15,400 mg/kg (rabbit)
Inhalative	LC50/4 h	> 17.629 mg/l (rat)
67-56-1 methanol		
Oral	LD50	1,187 mg/kg (rat)
Dermal	LD50	17,100 mg/kg (rabbit)
Inhalative	LC50/4 h	43.7 mg/l (rat)
77-99-6 propylidynetrimethanol		
Oral	LD50	14,700 mg/kg (rat)
Dermal	LD50	10,000 mg/kg (rabbit)
Inhalative	LC50/4 h	850 mg/l (rat)

· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
· **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
· **Carcinogenicity** Based on available data, the classification criteria are not met.
· **Reproductive toxicity** Based on available data, the classification criteria are not met.
· **STOT-single exposure** Based on available data, the classification criteria are not met.
· **STOT-repeated exposure** Based on available data, the classification criteria are not met.
· **Aspiration hazard** Based on available data, the classification criteria are not met.
· **Other information (about experimental toxicology):**
Exposure to component solvent vapour concentrations in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on the kidneys, liver and central nervous system. Solvents may cause some of the above effects by absorption through the skin. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and, in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. If splashed in the eyes, the liquid may cause irritation and reversible damage. Swallowing may cause nausea, diarrhea, vomiting, gastro-intestinal irritation and chemical pneumonia.
· **Additional toxicological information:**
· **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
Ethylbenzene may cause cancer to humans (carcinogenic, group 2B, IARC), but information available is insufficient for satisfactory estimate.
· **11.2 Information on other hazards**

· **Endocrine disrupting properties**		
95-14-7	benzotriazole	List II

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SECTION 12: Ecological information

· **12.1 Toxicity**

· **Aquatic toxicity:**	
1330-20-7 xylene	
48-h EC50	165 mg/L (Daphnia magna)
96-h LC50	26.7 mg/L (Pimephales promelas)
48-h LC50	86 mg/L (Leucuscus idus melanotus)
100-41-4 ethylbenzene	
48-h EC50	7.2 mg/L (Daphnia magna)
96-h LC50	4.2 mg/L (Oncorhynchus mykiss)
67-56-1 methanol	
96-h LC50	15,400 mg/L (Fish)
96-h EC50	22,000 mg/L (Algae)
	18,260 mg/L (Daphnia magna)

(Contd. on page 8)

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77-99-6 propylidynetrimethanol	
72-h EC50	1 mg/L (Algae)
48-h EC50	13 mg/L (Daphnia magna)
96-h LC50	1 - 10 mg/L (Fish)

· **12.2 Persistence and degradability**
Biodegradation:
Xylene: readily
Ethylbenzene: readily
· **12.3 Bioaccumulative potential**
Xylene: LogPow = 3,12 (low)
Ethylbenzene: LogPow = 3,15 (low)
· **12.4 Mobility in soil** No further relevant information available.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.
· **12.7 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**
· **Recommendation**
Do not allow to enter drains or watercourses. Material and/or container must be disposed of as hazardous waste.

· **European waste catalogue**	
08 01 15*	aqueous sludges containing paint or varnish containing organic solvents or other hazardous substances

· **Uncleaned packaging:**
· **Recommendation:**
Empty, dry paint containers (hole made to the bottom) should be taken to collection centres for metallic paint packages. If this collecting/recycling centre doesn't exist, containers can be taken to a local dump pit. For more information contact your local waste disposal authorities or paint deliverer.

SECTION 14: Transport information

· **14.1 UN number or ID number** · **ADR, IMDG, IATA**	 UN1263
· **14.2 UN proper shipping name** · **ADR, IMDG, IATA**	 PAINT
· **14.3 Transport hazard class(es)** · **ADR, IMDG, IATA**  · **Class**	 3 Flammable liquids.
· **14.4 Packing group** · **ADR, IMDG, IATA**	 III
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user** · **Hazard identification number (Kemler code):**	Do not freeze. Warm transport. Warning: Flammable liquids. 30

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· **EMS Number:**	F-E,S-E
· **Stowage Category**	A
· **14.7 Maritime transport in bulk according to IMO instruments**	Not applicable.
· **Transport/Additional information:**	
· **ADR**	
· **Limited quantities (LQ)**	5L
· **Transport category**	3
· **Tunnel restriction code**	D/E
· **IMDG**	
· **Limited quantities (LQ)**	5L
· **UN "Model Regulation":**	UN 1263 PAINT, 3, III

SECTION 15: Regulatory information

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

· **Directive 2012/18/EU**
· **Named dangerous substances - ANNEX I** None of the ingredients is listed.
· **Seveso category**
FLAMMABLE LIQUIDS
P5c FLAMMABLE LIQUIDS
· **Qualifying quantity (tonnes) for the application of lower-tier requirements** 5,000 t
· **Qualifying quantity (tonnes) for the application of upper-tier requirements** 50,000 t
· **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 69

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**

None of the ingredients is listed.

· **REGULATION (EU) 2019/1148**

· **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

· **Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

· **Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

· **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

None of the ingredients is listed.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H301 Toxic if swallowed.
H304 May be fatal if swallowed and enters airways.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H315 Causes skin irritation.

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H331 Toxic if inhaled.
H332 Harmful if inhaled.
H361fd Suspected of damaging fertility. Suspected of damaging the unborn child.
H370 Causes damage to organs.
H373 May cause damage to organs through prolonged or repeated exposure.

· **Contact:** Nor-Maali Oy, tel. +358 3 874 650 or sds@nor-maali.fi
· **Date of previous version:** 08.06.2020
· **Version number of previous version:** 3
· **Abbreviations and acronyms:**
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Repr. 2: Reproductive toxicity – Category 2
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
· *** Data compared to the previous version altered.**