



Safety Data Sheet
 according to Regulation (EC)
 No. 2015/830



SECTION 1: Identification of the Substance/Mixture and the Company/Undertaking

1.1 Product Identifier	1N400LL9	Revision Date:	14/09/2018
Product Name:	THERMALINE 400 EU FH ALU - A	Supersedes Date:	11/04/2017
		Version Number:	2
1.2 Relevant identified uses of the substance or mixture and uses advised against	Base component of 2 components coating - Industrial use. Advised against: Please see Technical Data Sheet.		
Product to be mixed with:	THERMALINE 400 EU - B		
Mixing ratio by volume Part A/ Part B:	2 / 1		
1.3 Details of the supplier of the safety data sheet			
Importer:	StonCor Europe 9, Rue du Travail - 1400 Nivelles, Belgium		
Manufacturer:	Carboline Italia, S.p.a. Via Margherita Vigano' De Vizzi . n 77 20092 Cinisello Balsamo (MI) Italy		
	Regulatory / Technical Information: +32 67493710 Nivelles, Belgium +39 02253751 Cinisello Balsamo, Italy		
Datasheet Produced by:	Larsen, Beate - ehs@stoncor.com		
1.4 Emergency telephone number:	CHEMTREC +1 703 5273887 (Outside US) PPC +1 412 6816669 (Outside US) Centro Antiveleni di Roma +39 06 49978000 (CAV) Policlinico Umberto I - Roma)(24h/24h) Emergenza ambientale +39 335-601 32 88 / +39 347-949 84 88 / +39 348-246 90 99		

SECTION 2: Hazard Identification

2.1 Classification of the substance or mixture

Classification according to Classification, Labeling & Packaging Regulation (EC) 1272/2008

HAZARD STATEMENTS

Other EU extensions	EUH205
Flammable Liquid, category 2	H225
Acute Toxicity, Dermal, category 4	H312
Skin Irritation, category 2	H315

Skin Sensitizer, category 1	H317
Eye Irritation, category 2	H319
Acute Toxicity, Inhalation, category 4	H332
STOT, single exposure, category 3, RTI	H335
STOT, repeated exposure, category 2	H373
Hazardous to the aquatic environment, Chronic, category 3	H412

2.2 Label elements

Symbol(s) of Product



Signal Word

Danger

Named Chemicals on Label

ethylbenzene, 4-methylpentan-2-one, 12-hydroxyoctadecanoic acid, reaction products with 1,3- benzenedimethanamine and hexamethylenediamine, xylene, poly(bisphenol a-co-epichlorohydrin), glycidyl end-capped, Reaction product: bisphenol-A-(epichlorohydrin) epoxy resin (number average molecular weight <= 700)

HAZARD STATEMENTS

Other EU extensions	EUH205	Contains epoxy constituents. May produce an allergic reaction.
Flammable Liquid, category 2	H225	Highly flammable liquid and vapour.
Acute Toxicity, Dermal, category 4	H312	Harmful in contact with skin.
Skin Irritation, category 2	H315	Causes skin irritation.
Skin Sensitizer, category 1	H317	May cause an allergic skin reaction.
Eye Irritation, category 2	H319	Causes serious eye irritation.
Acute Toxicity, Inhalation, category 4	H332	Harmful if inhaled.
STOT, single exposure, category 3, RTI	H335	May cause respiratory irritation.
STOT, repeated exposure, category 2	H373	May cause damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment, Chronic, category 3	H412	Harmful to aquatic life with long lasting effects.

PRECAUTION PHRASES

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+352	IF ON SKIN: Wash with plenty of soap and water.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P333+313	If skin irritation or rash occurs: Get medical advice/attention.
P403+235	Store in a well-ventilated place. Keep cool.

ADDITIONAL INFORMATION

**	Note P : The classification as a carcinogen or mutagen need not apply; the substance contains less than 0,1 % w/w benzene
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2.3 Other hazards

No Information

Results of PBT and vPvB assessment:

The product does not meet the criteria for PBT/vPvB in accordance with Annex XIII.

SECTION 3: Composition/Information On Ingredients

3.2 Mixtures

Hazardous Ingredients

<u>CAS-No.</u>	<u>EINEC No.</u>	<u>Name According to EEC</u>	<u>%</u>
25036-25-3	607-500-3	poly(bisphenol a-co-epichlorohydrin), glycidyl end-capped	25-50
1330-20-7	215-535-7	xylene	10-25
14807-96-6	238-877-9	talc	10-25
7429-90-5	231-072-3	aluminium powder (stabilised)	2.5-10
25068-38-6	500-033-5	Reaction product: bisphenol-A-(epichlorohydrin) epoxy resin (number average molecular weight <= 700)	2.5-10
100-41-4	202-849-4	ethylbenzene	2.5-10
64742-48-9	265-150-3	Naphtha (petroleum), hydrotreated heavy**	2.5-10
108-10-1	203-550-1	4-methylpentan-2-one	1.0-2.5
	432-840-2	12-hydroxyoctadecanoic acid, reaction products with 1,3- benzenedimethanamine and hexamethylenediamine	1.0-2.5
108-88-3	203-625-9	toluene	0.1-1.0

<u>CAS-No.</u>	<u>REACH Reg No.</u>	<u>CLP Symbols</u>	<u>CLP Hazard Statements</u>	<u>M-Factors</u>
25036-25-3		GHS07	H315-317-319	
1330-20-7	01-2119488216-32	GHS02-GHS07-GHS08	H226-304-312-315-319-332-335-373	
14807-96-6				
7429-90-5	01-2119529243-45	GHS02	H228	
25068-38-6	01-2119456619-26	GHS07-GHS09	H315-317-319-411	
100-41-4	01-2119489370-35	GHS02-GHS07-GHS08	H225-304-332-373-412	
64742-48-9		GHS02-GHS07-GHS08	H226-304-315-336	
108-10-1	01-2119473980-30	GHS02-GHS07	H225-319-332-335	
	01-0000017900-73	GHS07-GHS08	H332-373-413	
108-88-3	01-2119471310-51	GHS02-GHS07-GHS08	H225-304-315-336-361d-373-412	

Remarks: CAS No. 25068-38-6 identified as CAS No. 1675-54-3, EC No. 216-823-5 under REACH Registration

Additional Information: The text for CLP Hazard Statements shown above (if any) is given in Section 16.

SECTION 4: First-aid Measures

4.1 Description of First Aid Measures

GENERAL NOTES: Show this safety data sheet to the doctor in attendance.

AFTER INHALATION: Move to fresh air. Provide fresh air, rest and warmth. Call a physician immediately. Give oxygen or artificial respiration if needed. When risk of unconsciousness, place and transport the victim in secured recovery position.

AFTER SKIN CONTACT: Use a mild soap if available. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician. Do not use solvent or thinners to clean skin.

AFTER EYE CONTACT: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. If eye irritation persists, consult a specialist.

AFTER INGESTION: If vomiting occurs spontaneously: Keep head below hips to prevent aspiration of stomach vomit into lungs. Provide fresh air, rest and warmth. Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to an unconscious person.

Self protection of the first aider:

No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

May cause sensitization by skin contact. Danger of serious damage to health by prolonged exposure. Harmful by inhalation and in contact with skin. Irritating to eyes, respiratory system and skin.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11. When symptoms persist or in all cases of doubt seek medical advice.

SECTION 5: Fire-fighting Measures

5.1 Extinguishing Media:

Carbon Dioxide, Dry Chemical, Foam

FOR SAFETY REASONS NOT TO BE USED: Alcohol, Alcohol based solutions, any other media not listed above. Do not use a solid water stream as it may scatter and spread fire.

5.2 Special hazards arising from the substance or mixture

Heating or fire conditions liberates toxic gas. Flash back possible over considerable distance. As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion (see section 10). Vapours may form explosive mixtures with air. Solvent vapours are heavier than air and may spread along floors and ignite.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Keep containers and surroundings cool with water spray.

SECTION 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation. Use personal protective equipment. Remove all sources of ignition.

6.2 Environmental precautions

Do not allow material to contaminate ground water system. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

6.3 Methods and material for containment and cleaning up

Do not let product enter drains. Prevent further leakage or spillage if safe to do so. Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

FURTHER INSTRUCTIONS: Please refer to EU disposal requirements or country specific disposal requirements for this material. See Section 13 for further information.

SECTION 7: Handling and Storage

7.1 Precautions for safe handling

Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits. Electrical equipment should be protected to the appropriate standard. Use only in area provided with appropriate exhaust ventilation. Wear personal protective equipment. Do not breathe vapours or spray mist. Use only explosion-proof equipment. Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this preparation is being used. Apply technical measures to comply with the occupational exposure limits (see section 8). People handling polyurethane or epoxy products must have received special training according to guidelines from the National Occupational Health and Safety Board. Wash hands before breaks and at the end of workday. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

CONDITIONS TO AVOID: Avoid heat, sparks, flames and other ignition sources.

STORAGE CONDITIONS: Store in original container. Keep locked up or in an area accessible only to qualified or authorised persons. Keep container closed. Store in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. Store in upright position only. Storage of flammable liquids.

7.3 Specific end use(s)

No specific advice for end use available.

SECTION 8: Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits (UK WELS)

Name	CAS-No.	LTEL ppm	STEL ppm	STEL mg/m3	LTEL mg/m3
poly(bisphenol a-co-epichlorohydrin), glycidyl end-capped	25036-25-3				
xylene	1330-20-7	50	100	441	220
talc	14807-96-6				1
aluminium powder (stabilised)	7429-90-5			10 (inh. dust)	4 (resp. dust)

Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700)	25068-38-6				
ethylbenzene	100-41-4	100	125	552	441
Naphtha (petroleum), hydrotreated heavy**	64742-48-9				
4-methylpentan-2-one	108-10-1	50	100	416	208
12-hydroxyoctadecanoic acid, reaction products with 1,3- benzenedimethanamine and hexamethylenediamine					
toluene	108-88-3	50	100	384	191

<u>Name</u>	<u>CAS-No.</u>	<u>OEL Note</u>
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poly(bisphenol a-co-epichlorohydrin), glycidyl end-capped	25036-25-3	
xylene	1330-20-7	Sk
talca	14807-96-6	
aluminium powder (stabilised)	7429-90-5	
Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700)	25068-38-6	
ethylbenzene	100-41-4	Sk
Naphtha (petroleum), hydrotreated heavy**	64742-48-9	
4-methylpentan-2-one	108-10-1	Sk
12-hydroxyoctadecanoic acid, reaction products with 1,3-benzenedimethanamine and hexamethylenediamine		
toluene	108-88-3	Sk

FURTHER ADVICE: Refer to the regulatory exposure limits for the workforce enforced in each country. Some components may not have been classified under the EU CLP Regulation. Annotations: Carc = Capable of causing cancer and/or heritable genetic damage, Sen = Capable of causing occupational asthma, Sk = Can be absorbed through the skin.

8.2 Exposure controls

Personal Protection

RESPIRATORY PROTECTION: Wear a self-contained breathing apparatus or full-face airline respirator during spraying operations and long-term exposure. When working in confined or poorly ventilated spaces, a self-contained breathing apparatus or full-face airline respirator must be used. When painting small areas, or when using a roller or brush, respiratory protection with combination filter (dust and gas filter, EN 141) may be used: Gas filter type A1 (organic substances). Dust filter P3 (for fine dust).

EYE PROTECTION: If splashes are likely to occur, wear: Face-shield, tightly fitting safety goggles (EN 166).

HAND PROTECTION: Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact). Be aware that in daily use the durability of a chemical resistant protective glove can be notably shorter than the break through time measured according to EN 374, due to the numerous outside influences (e.g. temperature). Long sleeved clothing. Remove and wash contaminated clothing before re-use. Use chemical resistant gloves and lotions and barrier creams to prevent drying of the skin. Protective gloves complying with EN 374: Butyl rubber. Nitril rubber. Recommended glove material for mixed product: Protective gloves complying with EN 374: Butyl rubber. Nitril rubber.

OTHER PROTECTIVE EQUIPMENT: Ensure that eyewash stations and safety showers are close to the workstation location.

ENGINEERING CONTROLS: Ensure adequate ventilation, especially in confined areas.

Chemical Name:

xylene

EC No.:

215-535-7

CAS-No.:

1330-20-7

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							1.6 mg/kg bw/day
Inhalation	289 mg/m ³	289 mg/m ³		77 mg/m ³	174 mg/m ³	174 mg/m ³		14.8 mg/m ³
Dermal				180 mg/kg bw/day				108 mg/kg bw/day

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.327 mg/L
Fresh water sediments	12.46 mg/kg
Marine water	0.327 mg/L
Marine sediments	12.46 mg/kg
Food chain	
Microorganisms in sewage treatment soil (agricultural)	6.58 mg/L
Air	2.31 mg/kg

Chemical Name:

aluminium powder (stabilised)

EC No.:

231-072-3

CAS-No.:

7429-90-5

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							3.95 mg/kg bw/day
Inhalation			3.72 mg/m ³	3.72 mg/m ³				
Dermal								

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	
Fresh water sediments	
Marine water	
Marine sediments	
Food chain	
Microorganisms in sewage treatment soil (agricultural)	
Air	

Chemical Name:

Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700)

EC No.:
500-033-5**CAS-No.:**
25068-38-6**DNELs - Derived no effect level**

Route of Exposure	Workers				Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required					0.75 mg/kg bw/day		0.75 mg/kg bw/day
Inhalation		12.25 mg/m ³		12.25 mg/m ³				
Dermal		8.33 mg/kg bw/day		8.33 mg/kg bw/day		3.571 mg/kg bw/day		3.571 mg/kg bw/day

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.006 mg/l
Fresh water sediments	0.996 mg/L
Marine water	0.0006 mg/l
Marine sediments	0.0996 mg/kg
Food chain	
Microorganisms in sewage treatment soil (agricultural)	0.196 mg/kg
Air	

Chemical Name:

ethylbenzene

EC No.:
202-849-4**CAS-No.:**
100-41-4**DNELs - Derived no effect level**

Route of Exposure	Workers				Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							1.6 mg/kg bw/day
Inhalation	293 mg/m ³ irritation (respiratory tract)	Low hazard (no threshold derived)		77 mg/m ³				15 mg/m ³
Dermal				180 mg/kg bw/day				

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	100 µg/L
Fresh water sediments	13.7 mg/kg sediment dw
Marine water	10 - 100 µg/L
Marine sediments	1.37 mg/kg sediment dw
Food chain	
Microorganisms in sewage treatment soil (agricultural)	2.68 mg/kg soil dw
Air	

Chemical Name:

Naphtha (petroleum), hydrotreated heavy**

EC No.:

265-150-3

CAS-No.:

64742-48-9

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							300 mg/kg
Inhalation								900 mg/kg
Dermal				300 mg/kg				300 mg/kg

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	
Fresh water sediments	
Marine water	
Marine sediments	
Food chain	
Microorganisms in sewage treatment soil (agricultural)	
Air	

Chemical Name:

4-methylpentan-2-one

EC No.:

203-550-1

CAS-No.:

108-10-1

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							4,2 mg/kg bw/day
Inhalation	208 mg/m3	208 mg/m3		83 mg/m3		115,2 mg/m3		14,7 mg/m
Dermal				11,8 mg/kg bw/day				4,2 mg/kg bw/day

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	600 µg/L
Fresh water sediments	8.27 mg/kg sediment dw
Marine water	60 µg/L
Marine sediments	0,83 mg/kg sediment dw
Food chain	
Microorganisms in sewage treatment soil (agricultural)	1.3 mg/kg soil dw
Air	

Chemical Name:

toluene

EC No.:

203-625-9

CAS-No.:

108-88-3

DNELs - Derived no effect level

Route of Exposure	Workers				Consumers			
	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic	Acute effect local	Acute effects systemic	Chronic effects local	Chronic effects systemic
Oral	Not required							8.13 mg/kg bw/day
Inhalation	384 mg/m3	384 mg/m3	192 mg/m3	192 mg/m3	226 mg/m3	226 mg/m3	56.5 mg/m3	56.5 mg/m3
Dermal				384 mg/Kg bw/day				226 mg/Kg bw/day

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0.68 mg/l
Fresh water sediments	16.39 mg/kg
Marine water	0.68 mg/l
Marine sediments	16.39 mg/kg
Food chain	
Microorganisms in sewage treatment	13.61 mg/l
soil (agricultural)	2.89 mg/kg
Air	

SECTION 9: Physical and Chemical Properties**9.1 Information on basic physical and chemical properties**

Appearance:	Aluminium
Physical State	LIQUID
Odor	Solvent
Odor threshold	Not determined
pH	Not applicable
Melting point / freezing point (°C)	Not determined
Boiling point/range (°C)	114 - 144
Flash Point, (°C)	18
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	1.0 - 8.0
Vapour Pressure	Not determined
Vapour density	>1 (air = 1)
Relative density	Not determined
Solubility in / Miscibility with water	Negligible
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature (°C)	>432
Decomposition temperature (°C)	Not determined
Viscosity	Not determined
Explosive properties	Not determined
Oxidising properties	Not determined

9.2 Other information

VOC Content g/l:	450
Grams of VOC per liter of coating product as applied per ISO 11890-1 and/or ISO 11890-2.	
Specific Gravity (g/cm ³)	1.22

SECTION 10: Stability and Reactivity**10.1 Reactivity**

No reactivity hazards known under normal storage and use conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

No reactivity hazards known under normal storage and use conditions.

10.4 Conditions to avoid

Avoid heat, sparks, flames and other ignition sources.

10.5 Incompatible materials

Keep away from strong oxidising agents and strongly acid or alkaline materials.

10.6 Hazardous decomposition products

In case of fire or hot work operations, **hazardous decomposition products** may be formed such as: Carbon dioxide (CO₂), carbon monoxide (CO), oxides of nitrogen (NO_x), aliphatic amines, aldehydes.

SECTION 11: Toxicological Information**11.1 Information on toxicological effects****Acute Toxicity:**

Oral LD50:	No information available on the product itself as the product is not tested.
Inhalation LC50:	No information available on the product itself as the product is not tested.

Irritation: Irritating to eyes and skin.

Corrosivity: No information available.

Sensitization: May cause an allergic skin reaction.

Repeated dose toxicity: No information available.

Carcinogenicity: No information available.

Mutagenicity: No information available.

Toxicity for reproduction: No information available.

STOT-single exposure: Vapour/spray mist may irritate respiratory system and lungs.

STOT-repeated exposure: Central nervous system depression.

Aspiration hazard: No information available.

If no information is available above under Acute Toxicity then the acute effects of this product have not been tested.
Data on individual components are tabulated below:

<u>CAS-No.</u>	<u>Name According to EEC</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Vapor LC50</u>	<u>Gas LC50</u>	<u>Dust/Mist LC50</u>
25036-25-3	poly(bisphenol a-co-epichlorohydrin), glycidyl end-capped	>2000 mg/kg (oral-rat)	>2000 mg/kg (dermal-rat)	No information	No information	No information

1330-20-7	xylene	>2000 mg/kg (oral-rat)	1100 mg/kg (ATE dermal-rabbit)	11 mg/L (ATE inh/ vapour)	4500 ppmV (ATE inh -Gas)	1.5 mg/L (ATE inh/dust/mist)
7429-90-5	aluminium powder (stabilised)	>2000 mg/kg (oral-rat)	No information	No information	No information	>5 mg/L (rat-dust/mist, 4h)
25068-38-6	Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700)	5000 mg/kg (oral-rat)	>2000 mg/kg (dermal, rat M-F)	No information	No information	No information
100-41-4	ethylbenzene	3500 mg/kg rat, oral	>20000 mg/kg bw (rabbit)	17.2 mg/L (rat/4h/ vapour); 4000 ppm, rat, 4h	10000 ppm	1.5 mg/L
64742-48-9	Naphtha (petroleum), hydrotreated heavy**	5000 mg/kg (oral-rat)	5000 mg/kg (dermal-rabbit)	8500 mg/kg (4h/ inh-rat)	No information	No information
108-10-1	4-methylpentan-2-one	2080 mg/kg, (oral-rat)	>2000 mg/kg (dermal-rabbit)	5000 ppm/ 1 hour (rat)	No information	>8.2 ppm
108-88-3	toluene	5000 mg/kg (oral-rat)	14000 mg/kg (dermal-rabbit)	8000 ppm/4hrs, rat, inhalation	No information	No information

Additional Information:

This product may contain Ethyl Benzene, which is listed by IARC as possibly carcinogenic to humans (Group 2B). This listing is based on inadequate evidence of carcinogenicity in humans and sufficient evidence in experimental animals. Chronic exposure has been associated with various neurotoxic effects including permanent brain damage. Chronic exposure causes drying effect on the skin and eczema. The product is irritating to the eyes and may cause sensitisation to the respiratory system. Swallowing concentrated chemical may cause severe internal injury. Inhalation of vapour or mist can cause headache, nausea, irritation of nose, throat, and lungs. Repeated skin contact leads to irritation and to sensitisation, possible with cross-sensitisation to other epoxies.

SECTION 12: Ecological Information**12.1 Toxicity:**

EC50 48hr (Daphnia):	No information
IC50 72hr (Algae):	No information
LC50 96hr (fish):	No information

12.2 Persistence and degradability: No information

12.3 Bioaccumulative potential: No information

12.4 Mobility in soil: No information

12.5 Results of PBT and vPvB assessment: The product does not meet the criteria for PBT/vPvB in accordance with Annex XIII.

12.6 Other adverse effects: No information

<u>CAS-No.</u>	<u>Name According to EEC</u>	<u>EC50 48hr</u>	<u>IC50 72hr</u>	<u>LC50 96hr</u>
1330-20-7	xylene	165 mg/L (Daphnia magna 24h)	3 - 5 mg/L (Selenastrum sp.)	2 - 11 mg/L (Roccus saxatilis), 8.2 mg/L (Salmo gairdneri), 13.5 mg/L (Lepomis macrochirus), 21.0 mg/L (Pimephales promelas)
25068-38-6	Reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight <= 700)	1.8 mg/l (Daphnia magna, EC50, 48h,static)	11 mg/l (Scenedesmus capricornutum, EC50r, 72h)	1.5 mg/L (Rainbow trout), 3.6 mg/L (fish)
100-41-4	ethylbenzene	No information	No information	5.1 mg/L (Atlantic silverfish)
108-10-1	4-methylpentan-2-one	>100 mg/L	>100 mg/L	>179 mg/L (Brachydanio rerio, LD50, 96h)
108-88-3	toluene	No information	No information	5.5 mg/L (Oncorhynchus kisutch)

SECTION 13: Disposal Considerations

13.1 WASTE TREATMENT METHODS: Do not burn, or use a cutting torch on, the empty drum. According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. Empty containers should be taken to an approved waste handling site for recycling or disposal. Dispose of waste material at an approved (hazardous) waste treatment/disposal facility in accordance with applicable local state, and federal regulations. Do not dispose of waste with normal garbage, or to sewer systems.

European Waste Code: 08 01 11*
Packaging Waste Code: 15 01 10

SECTION 14: Transport Information

14.1	UN number	UN1263
14.2	UN proper shipping name	PAINT
	Technical name	Not applicable
14.3	Transport hazard class(es)	3
	Subsidiary shipping hazard	Not applicable
14.4	Packing group	II
14.5	Environmental hazards	Marine Pollutant: NO
14.6	Special precautions for user	Not applicable
	EmS-No.:	F-E, <u>S-E</u>
14.7	Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	Not applicable

SECTION 15: Regulatory Information

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

National Regulations:

Denmark Product Registration Number:	Not available
Danish MAL Code:	Not available
Danish MAL Code - Mixture:	Not available
Sweden Product Registration Number:	Not available
Norway Product Registration Number:	Not available
Germany WGK Class:	2
Directive 2004/42/CE :	Cat A/j: 500 g/L
Covered by Directive 2012/18/EC (Seveso III):	P5c
Restrictions to product or to substances according to Annex XVII, Regulation (CE) 1907/2006:	Entry 48

Annex XIV - Authorisation List:

CAS-No. Name According to EEC

Not Applicable

SVHC - Substances of very high concern (Candidate List):

CAS-No. Name According to EEC

Not Applicable

15.2 Chemical Safety Assessment:

Refer to the appended Exposure Scenario Report for further chemical safety assessment information.

SECTION 16: Other Information**Text for CLP Hazard Statements shown in Section 3 describing each ingredient:**

H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H228	Flammable solid.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Reasons for revision

This Safety Data Sheet (SDS) has been revised to meet the new EU CLP requirements. There have been both formatting and content changes based on the CLP classification (if applicable), please review each section of the SDS for specific changes. . . .

List of References:

This Safety Data Sheet was compiled with data and information from the following sources:

The Ariel Regulatory Database provided by the 3E Corporation in Copenhagen, Denmark;
 European Union Commission Regulation No. 1907/2006 on REACH as amended within Commission Regulation (EU) 2015/830;
 European Union (EC) Regulation No. 1272/2008 on the classification, labelling and packaging of substances and mixtures (CLP Regulation) and subsequent technical progress adaptations (ATP);
 EU Council Decision 2000/532/EC and its Annex entitled "List of Wastes".

Acronym & Abbreviation Key:

CLP	Classification, Labeling & Packaging Regulation
EC	European Commission
EU	European Union
US	United States
CAS	Chemical Abstract Service
EINECS	European Inventory of Existing Chemical Substances
REACH	Registration, Evaluation, Authorization of Chemicals Regulation
GHS	Globally Harmonized System of Classification and Labeling of Chemicals
LTEL	Long term exposure limit
STEL	Short term exposure limit
OEL	Occupational exposure limit
ppm	Parts per million
mg/m3	Milligrams per cubic meter
TLV	Threshold Limit Value
ACGIH	American Conference of Governmental Industrial Hygienists
OSHA	Occupational Safety & Health Administration
PEL	Permissible Exposure Limits
VOC	Volatile organic compounds
g/l	Grams per liter
mg/kg	Milligrams per kilogram
N/A	Not applicable

LD50	Lethal dose at 50%
LC50	Lethal concentration at 50%
EC50	Half maximal effective concentration
IC50	Half maximal inhibitory concentration
PBT	Persistent bioaccumulative toxic chemical
vPvB	Very persistent and very bioaccumulative
EEC	European Economic Community
ADR	International Transport of Dangerous Goods by Road
RID	International Transport of Dangerous Goods by Rail
UN	United Nations
IMDG	International Maritime Dangerous Goods Code
IATA	International Air Transport Association
MARPOL	International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978
IBC	International Bulk Container
RTI	Respiratory Tract Irritation
NE	Narcotic Effects

For further information, please contact: Technical Services Department

The information on this sheet corresponds to our present knowledge. It is not a specification and it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage, and use of the product. It is not applicable to unusual or non-standard uses of the product or where instructions and recommendations are not followed.



ANNEX: Exposure Scenario - Industrial Use

1N400LL9: THERMALINE 400 EU FH ALU - A

Exposure Scenario:	Industrial Use
Life cycle stages:	Use at Industrial sites
Sector of use:	SU0 - Other
Process Category:	PROC10 - Roller application or brushing PROC7 - Industrial spraying PROC8A - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Environmental Release category(ies):	ERC5 - Use at industrial site leading to inclusion into/onto article
Chemical Product category(ies):	PC9A - Coatings and paints, thinners, paint removers

Operational conditions and risk management measures

Control of worker exposure

Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently).
General--Operational Conditions:	Assumes a good basic standard of occupational hygiene is implemented.
General--Risk Management Measures:	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training. Wear suitable coveralls to prevent exposure to the skin. Use eye protection according to EN 166. For further specification, refer to section 8 of the SDS.



Type of activity or process

Preparation of material for application:	Provide extract ventilation to points where emissions occur.
Preparation of material for application - indoor:	Provide extract ventilation to points where emissions occur.
Preparation of material for application - outdoor:	Provide extract ventilation to points where emissions occur.

Roller, spreader, flow application:	When painting small areas, or when using a roller or brush, respiratory protection with combination filter (dust and gas filter, EN 141) may be used: Gas filter type A1 (organic substances). Dust filter P3 (for fine dust).
Roller, spreader, flow application - indoor:	When painting small areas, or when using a roller or brush, respiratory protection with combination filter (dust and gas filter, EN 141) may be used: Gas filter type A1 (organic substances). Dust filter P3 (for fine dust).
Roller, spreader, flow application - outdoor:	When painting small areas, or when using a roller or brush, respiratory protection with combination filter (dust and gas filter, EN 141) may be used: Gas filter type A1 (organic substances). Dust filter P3 (for fine dust).
Spraying -- manual:	Wear a self-contained breathing apparatus or full-face airline respirator during spraying operations and long-term exposure.
Spraying -- manual - indoor:	When working in confined or poorly ventilated spaces, a self-contained breathing apparatus or full-face airline respirator must be used.
Spraying -- manual - outdoor:	Wear a self-contained breathing apparatus or full-face airline respirator during spraying operations and long-term exposure.

Control of Environmental Exposure

Organizational measures to prevent / limit release from site:	Contain and dispose of waste according to local regulations. Avoid release to the environment.
Conditions and measures related to external treatment of waste for disposal:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and Measures related to external recovery of waste:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Additional Information

REACH Reg No.:	01-2119488216-32, 01-2119473980-30
REACH Reg No. when mixed with THERMALINE 400 EU - B:	01-2119488216-32, 01-2119457435-35

For further specification, refer to section 13 of the SDS.



ANNEX: Exposure Scenario - Professional Use

1N400LL9: THERMALINE 400 EU FH ALU - A

Exposure Scenario:	Professional Use
Life cycle stages:	Professional Workers
Sector of use:	SU0 - Other
Process Category:	PROC10 - Roller application or brushing PROC7 - Industrial spraying PROC8A - Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Environmental Release category(ies):	ERC8C - Widespread use leading to inclusion into/onto article (indoor) ERC8F - Widespread use leading to inclusion into/onto article (outdoor)
Chemical Product category(ies):	PC9A - Coatings and paints, thinners, paint removers

Operational conditions and risk management measures

Control of worker exposure

Frequency and duration of use:	Covers daily exposures up to 8 hours (unless stated differently).
General--Operational Conditions:	Assumes a good basic standard of occupational hygiene is implemented.
General--Risk Management Measures:	Wear chemically resistant gloves (tested to EN374) in combination with specific activity training. Wear suitable coveralls to prevent exposure to the skin. Use eye protection according to EN 166. For further specification, refer to section 8 of the SDS.



Type of activity or process

Preparation of material for application:	Provide extract ventilation to points where emissions occur.
Preparation of material for application - indoor:	Provide extract ventilation to points where emissions occur.
Preparation of material for application - outdoor:	Provide extract ventilation to points where emissions occur.

Roller, spreader, flow application:	When painting small areas, or when using a roller or brush, respiratory protection with combination filter (dust and gas filter, EN 141) may be used: Gas filter type A1 (organic substances). Dust filter P3 (for fine dust).
Roller, spreader, flow application - indoor:	When painting small areas, or when using a roller or brush, respiratory protection with combination filter (dust and gas filter, EN 141) may be used: Gas filter type A1 (organic substances). Dust filter P3 (for fine dust).
Roller, spreader, flow application - outdoor:	When painting small areas, or when using a roller or brush, respiratory protection with combination filter (dust and gas filter, EN 141) may be used: Gas filter type A1 (organic substances). Dust filter P3 (for fine dust).
Spraying -- manual:	Wear a self-contained breathing apparatus or full-face airline respirator during spraying operations and long-term exposure.
Spraying -- manual - indoor:	When working in confined or poorly ventilated spaces, a self-contained breathing apparatus or full-face airline respirator must be used.
Spraying -- manual - outdoor:	Wear a self-contained breathing apparatus or full-face airline respirator during spraying operations and long-term exposure.

Control of Environmental Exposure

Organizational measures to prevent / limit release from site:	Contain and dispose of waste according to local regulations. Avoid release to the environment.
Conditions and measures related to external treatment of waste for disposal:	External treatment and disposal of waste should comply with applicable local and/or national regulations.
Conditions and Measures related to external recovery of waste:	External recovery and recycling of waste should comply with applicable local and/or national regulations.

Additional Information

REACH Reg No.:	01-2119488216-32, 01-2119473980-30
REACH Reg No. when mixed with THERMALINE 400 EU - B:	01-2119488216-32, 01-2119457435-35

For further specification, refer to section 13 of the SDS.