



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	0342	Revision Date:	04/02/2022
	Product Name:	THERMALINE 4674	Supersedes Date:	13/05/2021
			Version Number:	2
	UFI Code:	9QG0-W0VS-100M-V2X8		
1.2	Relevant identified uses of the substance or mixture and uses advised against	Monocomponent industrial coating - Industrial use. Advised against: Please see Technical Data Sheet.		
	Product to be mixed with:	Not applicable		
	Mixing ratio by volume Part A/ Part B:	Not applicable		
1.3	Details of the supplier of the safety data sheet			
	Importer:	None		
	Manufacturer:	Carboline Norge AS Postboks 593 3412 Lierstranda Norway		
		Regulatory / Technical Information: +47 32 85 73 00 +47 32 85 74 00		
	Datasheet Produced by:	Tarka, Malgorzata - hms@carboline.com		
1.4	Emergency telephone number:	CHEMTREC +1 703 5273887 (Outside US)		

SECTION 2: Hazard Identification

2.1 Classification of the substance or mixture

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

HAZARD STATEMENTS

Flammable Liquid, category 3	H226
Skin Irritation, category 2	H315
Serious Eye Damage, category 1	H318
Acute Toxicity, Inhalation, category 4	H332
STOT, single exposure, category 3, RTI	H335
STOT, repeated exposure, category 2	H373

2.2 Label elements

Symbol(s) of Product



Signal Word

Danger

Named Chemicals on Label

Butan-1-ol, 2-methylpropan-1-ol, ethylbenzene, xylene

HAZARD STATEMENTS

Flammable Liquid, category 3	H226	Flammable liquid and vapour.
Skin Irritation, category 2	H315	Causes skin irritation.
Serious Eye Damage, category 1	H318	Causes serious eye damage.
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.

PRECAUTION PHRASES

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P304+340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
P308+313	IF exposed or concerned: Get medical advice/attention

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

Name According to EEC	EINEC No.	CAS-No.	%	Classifications	
xylene	215-535-7	1330-20-7	25 - <50	H226-304-312-315 -319-332-335-373	Acute Tox. 4 Dermal, Acute Tox. 4 Inhalation, Asp. Tox. 1, Eye Irrit. 2, Flam. Liq. 3, Skin Irrit. 2, STOT RE 2, STOT SE 3 RTI
aluminium powder (stabilised)	231-072-3	7429-90-5	10 - <25	H228	Flam. Solid 2
ethylbenzene	202-849-4	100-41-4	2.5 - <10	H225-304-332-373 -412	Acute Tox. 4 Inhalation, Aquatic Chronic 3, Asp. Tox. 1, Flam. Liq. 2, STOT RE 2

Naphtha (petroleum), hydrotreated heavy	265-150-3	64742-48-9	2.5 - <10	H304	Asp. Tox. 1, Skin Cracking
diisononyl phthalate	249-079-5	28553-12-0	2.5 - <10		
2-methylpropan-1-ol	201-148-0	78-83-1	2.5 - <10	H226-315-318-335 -336	Eye Dam. 1, Flam. Liq. 3, Skin Irrit. 2, STOT SE 3 NE, STOT SE 3 RTI
Butan-1-ol	200-751-6	71-36-3	1.0 - <2.5	H226-302-315-318 -335-336	Acute Tox. 4 Oral, Eye Dam. 1, Flam. Liq. 3, Skin Irrit. 2, STOT SE 3 NE, STOT SE 3 RTI

CAS-No.**M-Factors****REACH Reg No.**

1330-20-7		01-2119488216-32
7429-90-5		01-2119529243-45
100-41-4		01-2119489370-35
64742-48-9		01-2119457273-39
28553-12-0		01-2119430798-28
78-83-1		01-2119484609-23
71-36-3		01-2119484630-38

Remarks: CAS-no. 64742-48-9: Note P

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

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: Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses.

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

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

Harmful by inhalation. Danger of serious damage to health by prolonged exposure. Irritating to respiratory system and skin. Vapours may cause drowsiness and dizziness. Causes serious eye damage.

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

Fire will produce dense black smoke containing hazardous combustion products (see section 10). 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). Clean with detergents. Avoid solvents.

6.4 Reference to other sections

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

Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). 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. Preparation may charge electrostatically: always use earthing leads when transferring from one container to another. Use only in area provided with appropriate exhaust ventilation. Provide sufficient air exchange and/or exhaust in work rooms. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. 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.

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. Store away from: oxidising materials, acids, and alkalis.

7.3 Specific end use(s)

No Information

SECTION 8: Exposure Controls/Personal Protection

8.1 Control parameters

Ingredients with Occupational Exposure Limits (EU)

<u>Name</u>	<u>CAS-No.</u>	<u>LTEL ppm</u>	<u>STEL ppm</u>	<u>STEL mg/m3</u>	<u>LTEL mg/m3</u>
xylene	1330-20-7	50	100	442	221
aluminium powder (stabilised)	7429-90-5				
ethylbenzene	100-41-4	100	200	884	442
Naphtha (petroleum), hydrotreated heavy	64742-48-9				
diisononyl phthalate	28553-12-0				
2-methylpropan-1-ol	78-83-1				
Butan-1-ol	71-36-3				

<u>Name</u>	<u>CAS-No.</u>	<u>OEL Note</u>
xylene	1330-20-7	Can be absorbed through the skin.
aluminium powder (stabilised)	7429-90-5	
ethylbenzene	100-41-4	Can be absorbed through the skin.
Naphtha (petroleum), hydrotreated heavy	64742-48-9	
diisononyl phthalate	28553-12-0	
2-methylpropan-1-ol	78-83-1	Can be absorbed through the skin.
Butan-1-ol	71-36-3	Can be absorbed through the skin.

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 respiratory protection with combination filter (dust and gas filter, EN 14387:2004 +A1:2008) during spraying operations: Gas filter type A2 (organic substances). Dust filter P3 (for fine dust). When working in confined or poorly ventilated spaces, a battery powered assisted air-fed mask must be used.

EYE PROTECTION: Face-shield. Safety glasses with side-shields conforming to EN166.

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: Nitrile rubber. Viton®.

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				174 mg/m ³	174 mg/m ³		
Inhalation	289 mg/m ³	289 mg/m ³		77 mg/m ³				1.6 mg/kg bw/day
Dermal				180 mg/kg bw/day				14.8 mg/m ³ 108 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	6.58 mg/L
soil (agricultural)	2.31 mg/kg
Air	

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							
Inhalation			3.72 mg/m ³	3.72 mg/m ³				3.95 mg/kg bw/day
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:

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				300 mg/kg				900 mg/m ³
Dermal								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:

2-methylpropan-1-ol

EC No.:

201-148-0

CAS-No.:

78-83-1

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						55 mg/m ³	25 mg/kg
Inhalation			310 mg/m ³					
Dermal								

PNEC's - Predicted no effect concentration

Environmental protection target	PNEC
Fresh water	0,4 mg/l
Fresh water sediments	1,52 mg/kg
Marine water	0,04 mg/l
Marine sediments	0,152 mg/kg
Food chain	
Microorganisms in sewage treatment soil (agricultural)	10 mg/l
Air	0,0699 mg/kg

Chemical Name:

Butan-1-ol

EC No.:

200-751-6

CAS-No.:

71-36-3

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						55 mg/m3	3,1 mg/kg bw/day
Inhalation			310 mg/m3					
Dermal								

PNEC's - Predicted no effect concentration

	PNEC
Environmental protection target	
Fresh water	0,082 mg/l
Fresh water sediments	0,178 mg/kg dw
Marine water	0,0082 mg/l
Marine sediments	0,0178 mg/kg dw
Food chain	
Microorganisms in sewage treatment	
soil (agricultural)	0,015 mg/kg dw
Air	

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

Appearance:	Aluminum
Physical State	LIQUID
Odor	Solvent
Odor threshold	Not determined
pH	Not determined
Melting point / freezing point (°C)	Not determined
Boiling point/range (°C)	106 - 144
Flash Point, (°C)	26
Evaporation rate	Not determined
Flammability (solid, gas)	Not determined
Upper/lower flammability or explosive limits	1.0 - 10.9
Vapour Pressure, mmHg	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)	400
Decomposition temperature (°C)	Not determined
Viscosity	53 - 57 KU
Explosive properties	Not determined
Oxidising properties	Not determined

9.2 Other information

VOC Content g/l:

490

Grams of VOC per liter of coating product as applied per ISO 11890-1 and/or ISO 11890-2.

Specific Gravity (g/cm³) 1.03

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: No information available.

Corrosivity: Causes serious eye damage.

Sensitization: No information available.

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>
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)

100-41-4	ethylbenzene	3500 mg/kg rat, oral	5510 mg/kg, rabbit	4000 ppm, rat, 4h	10000 ppm	1.5 mg/L
64742-48-9	Naphtha (petroleum), hydrotreated heavy	>5000 mg/kg (oral-rat)	>2000 mg/kg (dermal-rabbit)	No information	No information	No information
28553-12-0	diisononyl phthalate	>10000 mg/ kg (oral-rat)	No information	No information	No information	No information
78-83-1	2-methylpropan-1-ol	2830 - 3350 mg/kg (oral- rat)	> 2000 mg/kg (dermal - rabbit)	> 20 mg/L (Inhalation, rat, 6h)	No information	No information
71-36-3	Butan-1-ol	790 mg/kg (oral-rat)	3400 mg/kg (dermal-rabbit)	8000 mg/l 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. Corrosive - causes irreversible eye damage. Chronic exposure causes drying effect on the skin and eczema. Gas or vapour is harmful on prolonged exposure or in high concentrations. Irritant of eyes and mucous membranes. CNS depressant. Inhalation is the main hazard in industrial use. The solvent vapours can be harmful and cause headaches, nausea, and intoxication. Acts as a defatting agent on skin. Chronic exposure has been associated with various neurotoxic effects including permanent brain damage. Inhalation of vapour or mist can cause headache, nausea, irritation of nose, throat, and lungs.

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)
100-41-4	ethylbenzene	1.37 mg/L	No information	32 mg/L (Bluegill)
64742-48-9	Naphtha (petroleum), hydrotreated heavy	>1000 mg/L (daphnia)	>1000 mg/L (algae)	>1000 mg/L (fish)
28553-12-0	diisononyl phthalate	>47 mg/L	>88 mg/L	>102 mg/L
78-83-1	2-methylpropan-1-ol	1100 mg/L (Daphnia magna)	1799 mg/L (Scenedesmus subspicatus)	1430 mg/L (Pimephales promelas)
71-36-3	Butan-1-ol	No information	No information	1740 mg/l (Pimephales promelas)

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. Rags/wiping cloths and the like, moistened with flammable liquids, must be discarded into designated fireproof buckets. 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	III
14.5	Environmental hazards	Marine pollutant: No
14.6	Special precautions for user	Not applicable
	EmS-No.:	F-E, S-E
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: 4 - 3

Danish MAL Code - Mixture: 4 - 3

Sweden Product Registration Number: Not available

Norway Product Registration Number: P-32266

WGK Class: 3

Covered by Directive 2012/18/EC (Seveso III): P5c

Restrictions to product or to substances according to Annex XVII, Regulation (CE) 1907/2006: Entry 52

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:

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

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.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Reasons for revision

This is a new Safety Data Sheet (SDS). . .

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
 ESIS (The European Chemical Substances Information System), provided by the European Commission
 Joint Research Centre in Ispra, Italy
 Annex VI of the EU Council Directive 67/548/EEC
 Council Directive 67/548/EEC - Annex I or EU Council Directive 1999/45/EC
 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/m ³	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

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.