

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Penta-Cool NM 14

Revision date: 20.10.2025

Product code: 770081

Page 1 of 16

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

ADDINOL Penta-Cool NM 14

UFI: 6WQS-4611-720G-DKVJ

1.2. Relevant identified uses of the substance or mixture and uses advised against**Use of the substance/mixture**

Metal working fluids.

1.3. Details of the supplier of the safety data sheet**Manufacturer**

Company name:	ADDINOL Lube Oil GmbH	
	4609	
Street:	Am Haupttor	
Place:	D-06237 Leuna	
Telephone:	+49 (0) 3461 845-0	Telefax: +49 (0) 3461 845-555
E-mail:	info@addinol.de	
Contact person:	Application Technology	
Internet:	www.addinol.de	
Responsible Department:	ADDINOL Application Technology	

Supplier

Company name:	ETL Fluid Experts Ltd.
Street:	Grimbald Crag Road
Place:	GB-HG5 8PY Knaresborough, North Yorkshire
Telephone:	+44 (0)1423 522911
E-mail:	sales(@)etlfe.com
Internet:	https://www.etlfluidexperts.com/

1.4. Emergency telephone number:

+44 (0)1423 522911 - This number is serviced during office hours.

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****GB CLP Regulation**

Eye Irrit. 2; H319
 Asp. Tox. 1; H304
 Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

2.2. Label elements**GB CLP Regulation****Hazard components for labelling**

Distillates (petroleum), hydrotreated light naphthenic

Signal word: Danger**Pictograms:**

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Penta-Cool NM 14

Revision date: 20.10.2025

Product code: 770081

Page 2 of 16

Hazard statements

- H304 May be fatal if swallowed and enters airways.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

- P264 Wash hands thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331 Do NOT induce vomiting.
P337+P313 If eye irritation persists: Get medical advice/attention.
P501 Dispose of contents/container to industrial incineration plant.

Special labelling of certain mixtures

- EUH208 Contains Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, N,N-Bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and N,N-Bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine. May produce an allergic reaction.

Additional advice on labelling

The product is classified and labelled according to EC directives or corresponding national laws.

2.3. Other hazards

- Prolonged/repetitive skin contact may cause skin defatting or dermatitis.
Do not allow uncontrolled leakage of product into the environment.
Do not allow to enter into surface water or drains.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Penta-Cool NM 14

Revision date: 20.10.2025

Product code: 770081

Page 3 of 16

Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
64742-53-6	Distillates (petroleum), hydrotreated light naphthenic			60 - < 80 %
	265-156-6		01-2119480375-34	
	Asp. Tox. 1; H304			
68442-22-8	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts			1 - < 2.5 %
	270-478-5		01-2119948548-22	
	Skin Irrit. 2, Eye Dam. 1, Aquatic Chronic 2; H315 H318 H411			
128-37-0	2,6-Di-tert-butyl-4-methylphenol			< 0,5 %
	204-881-4		01-2119480433-40	
	Aquatic Acute 1, Aquatic Chronic 1; H400 H410			
	Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, N,N-Bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and N,N-Bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine			0,1 - < 0,5 %
	939-700-4		01-2119982395-25	
	Skin Irrit. 2, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 2; H315 H317 H400 H411			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
64742-53-6	265-156-6	Distillates (petroleum), hydrotreated light naphthenic	60 - < 80 %
		dermal: LD50 = > 5000 mg/kg; oral: LD50 = > 5000 mg/kg	
68442-22-8	270-478-5	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	1 - < 2.5 %
		dermal: LD50 = > 2002 mg/kg; oral: LD50 = > 2000 - < 5000 mg/kg	
128-37-0	204-881-4	2,6-Di-tert-butyl-4-methylphenol	< 0,5 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = > 6000 mg/kg Aquatic Acute 1; H400: M=1	
	939-700-4	Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, N,N-Bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and N,N-Bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine	0,1 - < 0,5 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = 3313 mg/kg Aquatic Acute 1; H400: M=1	

Further Information

DMSO-Extract < 3 %; IP 346. Classification system: The classification corresponds to the current EC lists and is completed by information from specialist literature and company information.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Self-protection of the first aider. Change contaminated clothing. Do not put any product-impregnated cleaning rags into your trouser pockets.

After inhalation

Provide fresh air. In case of breathing difficulties administer oxygen. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. Seek medical attention if problems persist.

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Penta-Cool NM 14

Revision date: 20.10.2025

Product code: 770081

Page 4 of 16

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Remove/ Take off immediately all contaminated clothing. In case of skin irritation, seek medical treatment.

After contact with eyes

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.

After ingestion

Do NOT induce vomiting. Rinse mouth thoroughly with water. Medical treatment necessary.

Caution if victim vomits: Risk of aspiration!

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

after ingestion: Coughing. shortage of breath. Vomiting. fever. Symptoms can occur only after several hours.

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

Treat symptomatically. Where appropriate artificial ventilation. Regulation of the blood circulation, possible shock treatment. Subsequent observance for pneumonia and lung oedema.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Foam. Extinguishing powder. Carbon dioxide (CO₂). Atomized water. Water mist

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO₂). Nitrogen oxides (NO_x). carbon black. Sulfur oxides. Phosphorus oxides

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Co-ordinate fire-fighting measures to the fire surroundings. Use water spray jet to protect personnel and to cool endangered containers. In case of fire and/or explosion do not breathe fumes. Contaminated fire-fighting water must be collected separately. Do not allow to enter into surface water or drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

High slip hazard because of leaking or spilled product. Remove all sources of ignition. Wear breathing apparatus if exposed to vapours/dusts/aerosols. Avoid contact with skin, eyes and clothes.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. Prevent spread over a wide area (e.g. by containment or oil barriers).

6.3. Methods and material for containment and cleaning up

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Safe handling: see section 7

Personal protection equipment: see section 8

Section 12: Ecological Information (non-mandatory)

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Penta-Cool NM 14

Revision date: 20.10.2025

Product code: 770081

Page 5 of 16

Disposal: see section 13

SECTION 7: Handling and storage**7.1. Precautions for safe handling****Advice on safe handling**

Work in well-ventilated zones or use proper respiratory protection. Avoid oil mist. If handled uncovered, arrangements with local exhaust ventilation have to be used. Avoid contact with skin, eyes and clothes. Wear suitable protective clothing.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges. Use only antistatically equipped (spark-free) tools.

Advice on general occupational hygiene

Wash hands before breaks and after work. Take off immediately all contaminated clothing. Wash contaminated clothing prior to re-use. Do not eat, drink, smoke or sneeze at the workplace.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

Keep the packing dry and well sealed to prevent contamination and absorption of humidity. Keep container tightly closed in a cool place. Keep/Store only in original container.

Hints on joint storage

Keep away from food, drink and animal feedingstuffs.
Keep away from: Oxidizing agent

Further information on storage conditions

Keep away from sources of ignition - No smoking.
Protect against: UV-radiation/sunlight. frost. heat.
Recommended storage temperature: 5 - 40°C

7.3. Specific end use(s)

Further information: see technical data sheet.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters****Exposure limits (EH40)**

CAS No	Substance	ppm	mg/m ³	fibres/ml	Category	Origin
128-37-0	2,6-Di-tert-butyl-p-cresol	-	10		TWA (8 h)	WEL

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Penta-Cool NM 14

Revision date: 20.10.2025

Product code: 770081

Page 6 of 16

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
64742-53-6	Distillates (petroleum), hydrotreated light naphthenic			
Worker DNEL, long-term		inhalation	systemic	2,73 mg/m ³
Worker DNEL, long-term		inhalation	local	5,58 mg/m ³
Worker DNEL, long-term		dermal	systemic	0,97 mg/kg bw/day
Consumer DNEL, long-term		inhalation	local	1,19 mg/m ³
Consumer DNEL, long-term		oral	systemic	0,74 mg/kg bw/day
68442-22-8	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts			
Worker DNEL, long-term		inhalation	systemic	8,05 mg/m ³
Worker DNEL, long-term		dermal	systemic	11,4 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	1,98 mg/m ³
Consumer DNEL, long-term		dermal	systemic	5,71 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,24 mg/kg bw/day
128-37-0	2,6-Di-tert-butyl-4-methylphenol			
Consumer DNEL, long-term		inhalation	systemic	0,435 mg/m ³
Consumer DNEL, long-term		dermal	systemic	0,25 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,25 mg/kg bw/day
Worker DNEL, long-term		dermal	systemic	0,5 mg/kg bw/day
Worker DNEL, long-term		inhalation	systemic	1,76 mg/m ³
	Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, N,N-Bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and N,N-Bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine			
Worker DNEL, long-term		inhalation	systemic	1,3 mg/m ³
Worker DNEL, long-term		dermal	systemic	0,4 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,3 mg/m ³
Consumer DNEL, long-term		dermal	systemic	0,2 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,2 mg/kg bw/day

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Penta-Cool NM 14

Revision date: 20.10.2025

Product code: 770081

Page 7 of 16

PNEC values

CAS No	Substance	Value
Environmental compartment		
64742-53-6	Distillates (petroleum), hydrotreated light naphthenic	
Secondary poisoning		9,33 mg/kg
68442-22-8	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	
Freshwater		0,004 mg/l
Freshwater (intermittent releases)		0,045 mg/l
Marine water		0,0046 mg/l
Freshwater sediment		0,045 mg/kg
Marine sediment		0,005 mg/kg
Secondary poisoning		10,67 mg/kg
Micro-organisms in sewage treatment plants (STP)		100 mg/l
Soil		0,007 mg/kg
128-37-0	2,6-Di-tert-butyl-4-methylphenol	
Freshwater		0,000199 mg/l
Freshwater (intermittent releases)		0,00199 mg/l
Marine water		0,00002 mg/l
Freshwater sediment		0,458 mg/kg
Marine sediment		0,046 mg/kg
Secondary poisoning		16,67 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,017 mg/l
Soil		0,054 mg/kg
Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, N,N-Bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and N,N-Bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine		
Freshwater		0,009 mg/l
Freshwater (intermittent releases)		0,01 mg/l
Marine water		0,001 mg/l
Freshwater sediment		0,127 mg/kg
Marine sediment		0,013 mg/kg
Micro-organisms in sewage treatment plants (STP)		0,69 mg/l
Soil		0,02 mg/kg

Additional advice on limit values

Recommended limit value for cooling lubricants (steam and aerosol)
MAK: 10 mg/m³

8.2. Exposure controls



Appropriate engineering controls

Provide adequate ventilation as well as local exhaust at critical locations.

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Penta-Cool NM 14

Revision date: 20.10.2025

Product code: 770081

Page 8 of 16

Individual protection measures, such as personal protective equipment**Eye/face protection**

Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): DIN EN ISO 16321

Hand protection

Tested protective gloves are to be worn: German Industry Norms (DIN) / European Norms (EN): EN ISO 374

Duration of wearing with permanent contact: 480 min

Suitable material: NBR (Nitrile rubber). CR (polychloroprenes, Chloroprene rubber).

Thickness of glove material: 0.7 mm.

Wearing time with occasional contact (splashes): 30 min

Suitable material: NBR (Nitrile rubber). CR (polychloroprenes, Chloroprene rubber).

Thickness of glove material: 0.4 mm

Protect skin by using skin protective cream.

Skin protection

Wear suitable protective clothing. Change contaminated clothing. Do not put any product-impregnated cleaning rags into your trouser pockets.

Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Breathing protection with filter against organic gases and vapours type A - boiling point > 65°C: A1: < 1000 ppm; A2: < 5000 ppm; A3: < 10000 ppm

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

Physical state:	liquid
Colour:	brown
Odour:	like: mineral oil.
Odour threshold:	not determined

	Test method
Melting point/freezing point:	No data available
Boiling point or initial boiling point and boiling range:	> 200 °C
Flammability:	No data available
Lower explosion limits:	0,6 vol. %
Upper explosion limits:	6,5 vol. %
Flash point:	156 °C DIN EN ISO 2592
Auto-ignition temperature:	> 240 °C
Decomposition temperature:	No data available
pH-Value:	not applicable
Viscosity / kinematic: (at 40 °C)	14 mm ² /s DIN EN ISO 3104
Water solubility:	insoluble
Solubility in other solvents	
No data available	
Partition coefficient n-octanol/water:	No data available
Vapour pressure:	No data available
Density (at 20 °C):	0,913 g/cm ³ DIN EN ISO 12185
Relative vapour density:	No data available
Particle characteristics:	No data available

9.2. Other information

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Penta-Cool NM 14

Revision date: 20.10.2025

Product code: 770081

Page 9 of 16

Information with regard to physical hazard classes

Explosive properties

not Explosive.

Self-ignition temperature

Solid:

No data available

Gas:

No data available

Oxidizing properties

Not oxidising.

Other safety characteristics

Evaporation rate:

No data available

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable under storage at normal ambient temperatures.

10.2. Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Keep away from sources of ignition - No smoking.

Do not overheat to avoid decomposition by heat.

10.5. Incompatible materials

Reacts with: Oxidising agent, strong

10.6. Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO₂). Nitrogen oxides (NO_x). carbon black.

No known hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in GB CLP Regulation

Acute toxicity

Based on available data, the classification criteria are not met.

Mixture not tested.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Penta-Cool NM 14

Revision date: 20.10.2025

Product code: 770081

Page 10 of 16

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64742-53-6	Distillates (petroleum), hydrotreated light naphthenic				
	oral	LD50 > 5000 mg/kg	Rat	Study report (1982)	OECD Guideline 401
	dermal	LD50 > 5000 mg/kg	Rabbit	Study report (1982)	OECD Guideline 402
68442-22-8	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts				
	oral	LD50 > 2000 - < 5000 mg/kg	Rat	Study report (1983)	other: Section 1500.3 – Federal Hazardous
	dermal	LD50 > 2002 mg/kg	Rat	Study report (1985)	OECD Guideline 402
128-37-0	2,6-Di-tert-butyl-4-methylphenol				
	oral	LD50 > 6000 mg/kg	Rat	Study report (1989)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1988)	OECD Guideline 402
	Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, N,N-Bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and N,N-Bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine				
	oral	LD50 3313 mg/kg	Rat	Study report (1981)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (2012)	OECD Guideline 402

Irritation and corrosivity

Serious eye damage/eye irritation: Causes serious eye irritation.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Contains Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, N,N-Bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and N,N-Bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine. May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

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.

Prolonged/repetitive skin contact may cause skin defatting or dermatitis.

Aspiration hazard

May be fatal if swallowed and enters airways.

11.2. Information on other hazards

Endocrine disrupting properties

not applicable

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Penta-Cool NM 14

Revision date: 20.10.2025

Product code: 770081

Page 11 of 16

SECTION 12: Ecological information**12.1. Toxicity**

Harmful to aquatic life with long lasting effects.
Mixture not tested.

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Penta-Cool NM 14

Revision date: 20.10.2025

Product code: 770081

Page 12 of 16

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
64742-53-6	Distillates (petroleum), hydrotreated light naphthenic					
	Acute fish toxicity	LL50 > 100 mg/l	96 h	Pimephales promelas	Study report (1995)	OECD Guideline 203
	Acute algae toxicity	ErC50 > 100 mg/l				
	Fish toxicity	NOEC >= 1000 mg/l	14 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2010)	The aquatic toxicity was estimated by a
68442-22-8	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts					
	Acute fish toxicity	LL50 4,5 mg/l	96 h	Oncorhynchus mykiss	Study report (2005)	OECD Guideline 203
	Acute algae toxicity	ErC50 21 mg/l	72 h	Desmodesmus subspicatus	Study report	OECD Guideline 201
	Acute crustacea toxicity	EL50 23 mg/l	48 h	Daphnia magna	Study report (2005)	OECD Guideline 202
	Crustacea toxicity	NOEC 0,4 mg/l	21 d	Daphnia magna	Study report (2010)	OECD Guideline 211
	Acute bacteria toxicity	EC50 > 10000 mg/l ()	3 h	activated sludge of a domestic residential sewage	Study report (1994)	OECD Guideline 209
128-37-0	2,6-Di-tert-butyl-4-methylphenol					
	Acute fish toxicity	LC50 0,199 mg/l	96 h	Oryzias latipes	REACH Registration Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50 0,758 mg/l	96 h	Raphidocelis subcapitata	REACH Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50 0,48 mg/l	48 h	Daphnia magna	REACH Registration Dossier	OECD Guideline 202
	Fish toxicity	NOEC 0,053 mg/l	30 d	Oryzias latipes	REACH Registration Dossier	OECD Guideline 210
	Crustacea toxicity	NOEC 0,069 mg/l	21 d	Daphnia magna	REACH Registration Dossier	OECD Guideline 211
	Acute bacteria toxicity	EC50 > 10000 mg/l ()	3 h	Activated sludge	Study report (2000)	OECD Guideline 209
	Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, N,N-Bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and N,N-Bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine					
	Acute fish toxicity	LC50 1,3 mg/l	96 h	Danio rerio	Study report (1988)	OECD Guideline 203
	Acute algae toxicity	ErC50 0,976 mg/l	72 h	Desmodesmus subspicatus	Study report (2013)	OECD Guideline 201
	Crustacea toxicity	NOEC 0,35 mg/l	21 d	Daphnia magna	Study report (2016)	OECD Guideline 211

12.2. Persistence and degradability

Not easily bio-degradable (according to OECD-criteria). Do not allow to enter into surface water or drains.

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Penta-Cool NM 14

Revision date: 20.10.2025

Product code: 770081

Page 13 of 16

12.3. Bioaccumulative potential

Mixture not tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
68442-22-8	Phosphorodithioic acid, mixed O,O-bis(2-ethylhexyl and iso-Bu) esters, zinc salts	1,67
128-37-0	2,6-Di-tert-butyl-4-methylphenol	5,03
	Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, N,N-Bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and N,N-Bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine	7,62

BCF

CAS No	Chemical name	BCF	Species	Source
128-37-0	2,6-Di-tert-butyl-4-methylphenol	465	Fish	REACH Registration D
	Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, N,N-Bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and N,N-Bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine	1676	Fish	EPIWIN (2011)

12.4. Mobility in soil

Due to its low solubility in water the product is almost completely mechanically separated in biological waste water treatment plants.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

Further information

Do not allow uncontrolled leakage of product into the environment.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Must not be disposed of with domestic refuse. Do not allow to enter into surface water or drains.

List of Wastes Code - residues/unused products

120107 WASTES FROM SHAPING AND PHYSICAL AND MECHANICAL SURFACE TREATMENT OF METALS AND PLASTICS; wastes from shaping and physical and mechanical surface treatment of metals and plastics; mineral-based machining oils free of halogens (except emulsions and solutions); hazardous waste

Contaminated packaging

Contaminated packages must be completely emptied and can be re-used following proper cleaning. Dispose of waste according to applicable legislation. Packing which cannot be properly cleaned must be thrown away.

SECTION 14: Transport information

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Penta-Cool NM 14

Revision date: 20.10.2025

Product code: 770081

Page 14 of 16

Land transport (ADR/RID)

- 14.1. UN number or ID number:** -
14.2. UN proper shipping name: -
14.3. Transport hazard class(es): -
14.4. Packing group: -

Inland waterways transport (ADN)

- 14.1. UN number or ID number:** -
14.2. UN proper shipping name: -
14.3. Transport hazard class(es): -
14.4. Packing group: -

Marine transport (IMDG)

- 14.1. UN number or ID number:** -
14.2. UN proper shipping name: -
14.3. Transport hazard class(es): -
14.4. Packing group: -

Air transport (ICAO-TI/IATA-DGR)

- 14.1. UN number or ID number:** -
14.2. UN proper shipping name: -
14.3. Transport hazard class(es): -
14.4. Packing group: -

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of these transport regulations.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 28

National regulatory information

Water hazard class (D): 1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information**Changes**

This data sheet contains changes from the previous version in section(s): 2,3,4,5,6,7,8,9,10,12.

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Penta-Cool NM 14

Revision date: 20.10.2025

Product code: 770081

Page 15 of 16

Abbreviations and acronyms

Asp. Tox: Aspiration hazard

Skin Irrit: Skin irritation

Eye Dam: Eye damage

Eye Irrit: Eye irritation

Skin Sens: Skin sensitisation

Aquatic Acute: Acute aquatic hazard

Aquatic Chronic: Chronic aquatic hazard

For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations).

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ASTM - American Society for the Testing of Materials; ATE - Acute Toxicity Estimates; bw - Body weight; CAO - Cargo Aircraft Only; CAS - Chemical Abstracts Service; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DNEL - Derived No-Effect Level; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); EG - European Union; EN - European standards; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; OECD - Organization for Economic Co-operation and Development; PBT - Persistent, Bioaccumulative and Toxic substance; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulation concerning the International Carriage of Dangerous Goods by Rail; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Eye Irrit. 2; H319	Calculation method
Asp. Tox. 1; H304	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains Reaction mass of 1H-Benzotriazole-1-methanamine, N,N-bis(2-ethylhexyl)-6-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-4-methyl-, 2H-Benzotriazole-2-methanamine, N,N-bis(2-ethylhexyl)-5-methyl-, N,N-Bis(2-ethylhexyl)-4-methyl-1H-benzotriazole-1-methylamine and N,N-Bis(2-ethylhexyl)-5-methyl-1H-benzotriazole-1-methylamine. May produce an allergic

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Penta-Cool NM 14

Revision date: 20.10.2025

Product code: 770081

Page 16 of 16

reaction.

Further Information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)