

Safety Data Sheet

according to UK REACH Regulation

ADDINOL Penta-Cool WS 251

Revision date: 06.05.2024

Product code: 770089

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Hazard statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P501	Dispose of contents/container to an appropriate recycling or disposal facility.

Additional advice on labelling

According to EC directives or the corresponding national regulations the product does not have to be labelled.

2.3. Other hazards

Prolonged/repetitive skin contact may cause skin defatting or dermatitis.
Spilled product must not leak into the ground.
Do not allow uncontrolled leakage of product into the environment.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Relevant ingredients**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
101-83-7	dicyclohexylamine			1 - < 2.5 %
	202-980-7	612-066-00-3		
	Acute Tox. 4, Skin Corr. 1B, Aquatic Acute 1, Aquatic Chronic 1; H302 H314 H400 H410			
2634-33-5	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one			0.3 - < 0.5 %
	220-120-9	613-088-00-6		
	Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1, Aquatic Acute 1; H302 H315 H318 H317 H400			

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	
101-83-7	202-980-7	dicyclohexylamine	1 - < 2.5 %
		dermal: LD50 = 200 - 316 mg/kg; oral: LD50 = 200 mg/kg	
2634-33-5	220-120-9	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	0.3 - < 0.5 %
		dermal: LD50 = > 2000 mg/kg; oral: LD50 = 670 mg/kg Skin Sens. 1; H317: >= 0,05 - 100	

Further Information

DMSO-Extrakt < 3 %, IP 346.

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

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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

Move victim to fresh air. Put victim at rest and keep warm. Seek medical attention if problems persist.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Change contaminated clothing. Use skin protection ointment after cleaning. 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. Call a physician immediately.

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

No information available.

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

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Foam. Extinguishing powder. Carbon dioxide (CO₂). Atomized water. Sand.

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 dioxide (CO₂). Carbon monoxide. Nitrogen oxides (NO_x). carbon black.

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, eye and clothing.

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. Take up mechanically, placing in appropriate containers for disposal.

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6.4. Reference to other sections

Safe handling: see section 7
 Personal protection equipment: see section 8
 Section 12: Ecological Information (non-mandatory)
 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.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.

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 agents.

Further information on storage conditions

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

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
101-83-7	dicyclohexylamine			
Worker DNEL, long-term		inhalation	systemic	0,353 mg/m ³
Worker DNEL, long-term		dermal	systemic	0,1 mg/kg bw/day
2634-33-5	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one			
Worker DNEL, long-term		inhalation	systemic	6,81 mg/m ³
Worker DNEL, long-term		dermal	systemic	0,966 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	1,2 mg/m ³
Consumer DNEL, long-term		dermal	systemic	0,345 mg/kg bw/day

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PNEC values

CAS No	Substance	Value
Environmental compartment		
101-83-7	dicyclohexylamine	
Freshwater		0,002 mg/l
Freshwater (intermittent releases)		0,01 mg/l
Marine water		0 mg/l
Freshwater sediment		0,075 mg/kg
Marine sediment		0,007 mg/kg
Micro-organisms in sewage treatment plants (STP)		21 mg/l
Soil		0,014 mg/kg
2634-33-5	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	
Freshwater		0,00403 mg/l
Freshwater (intermittent releases)		0,0011 mg/l
Marine water		0,000403 mg/l
Freshwater sediment		0,0499 mg/kg
Marine sediment		0,00499 mg/kg
Micro-organisms in sewage treatment plants (STP)		1,03 mg/l
Soil		3 mg/kg

Additional advice on limit values

source:

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.

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

Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): EN 166

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).

Thickness of glove material: 0.7 mm.

Wearing time with occasional contact (splashes): 30 min

Suitable material: NBR (Nitrile rubber).

Thickness of glove material: 0.4 mm

Protect skin by using skin protective cream.

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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. full mask (DIN EN 136). 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:	clear
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:	> 100 °C
Flammability:	No data available
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	> 100 °C
Auto-ignition temperature:	not determined
Decomposition temperature:	No data available
pH-Value (at 20 °C):	9,4 5% - DIN 51369
Viscosity / kinematic: (at 20 °C)	13 mm ² /s DIN EN ISO 3104
Water solubility:	highly soluble.
Solubility in other solvents	
No data available	
Partition coefficient n-octanol/water:	No data available
Vapour pressure:	No data available
Density (at 15 °C):	1,070 g/cm ³ DIN EN ISO 12185
Relative vapour density:	No data available
Particle characteristics:	No data available

9.2. Other information**Information with regard to physical hazard classes**

Explosive properties

No data available

Self-ignition temperature

Solid:

No data available

Gas:

No data available

Oxidizing properties

No data available

Other safety characteristics

Evaporation rate:

No data available

Pour point:

No data available

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

The product is stable under storage at normal ambient temperatures.

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10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

Exothermic reaction with: Acids

10.4. Conditions to avoid

Refer to chapter 7 No further action is necessary.

10.5. Incompatible materials

Reacts with: Oxidising agent, strong. Acids

10.6. Hazardous decomposition products

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

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
101-83-7	dicyclohexylamine				
	oral	LD50 200 mg/kg	Rat	Other company data (1978)	Single oral application by gavage, undil
	dermal	LD50 200 - 316 mg/kg	Rabbit	Other company data (1977)	other:
2634-33-5	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one				
	oral	LD50 670 mg/kg	Rat	Study report (1988)	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	Study report (1994)	OECD Guideline 402

Irritation and corrosivity

Skin corrosion/irritation: Causes skin irritation.
Serious eye damage/eye irritation: Causes serious eye irritation.

Sensitising effects

May cause an allergic skin reaction. (1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one)

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

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

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11.2. Information on other hazards

Endocrine disrupting properties

not applicable

SECTION 12: Ecological information

12.1. Toxicity

Harmful to aquatic life with long lasting effects.

Mixture not tested.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
101-83-7	dicyclohexylamine					
	Acute fish toxicity	LC50 62 mg/l	96 h	Danio rerio	Study report (1992)	EU Method C.1
	Acute algae toxicity	ErC50 > 1 mg/l	72 h	Desmodesmus subspicatus	Other company data (1992)	EU Method C.3
	Acute crustacea toxicity	EC50 8 mg/l	48 h	Daphnia magna	Study report (1999)	OECD Guideline 202
	Crustacea toxicity	NOEC 0,016 mg/l	21 d	Daphnia magna	Study report (1999)	other: OECD Guideline 202, part 2 "Daphn
	Acute bacteria toxicity	EC50 712 mg/l ()	3 h	Activated sludge	Study report (1990)	ISO 8192
2634-33-5	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one					
	Acute fish toxicity	LC50 ca. 16,7 mg/l	96 h	Cyprinodon variegatus	REACH Registration Dossier	other:
	Acute algae toxicity	ErC50 0,15 mg/l	72 h	Raphidocelis subcapitata	Study report (1994)	OECD Guideline 201
	Acute crustacea toxicity	EC50 2,94 mg/l	48 h	Daphnia magna	Study report (1995)	OECD Guideline 202
	Acute bacteria toxicity	EC50 13 mg/l ()	3 h	activated sludge of a predominantly domestic sewage	REACH Registration Dossier	OECD Guideline 209

12.2. Persistence and degradability

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

12.3. Bioaccumulative potential

Mixture not tested.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
101-83-7	dicyclohexylamine	2,724
2634-33-5	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	0,63

BCF

CAS No	Chemical name	BCF	Species	Source
101-83-7	dicyclohexylamine	459		BCFWIN v. 2.1 (2005)
2634-33-5	1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	ca. 6,62	Lepomis macrochirus	REACH Registration D

12.4. Mobility in soil

Is eliminable from water only with difficulty.

12.5. Results of PBT and vPvB assessment

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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.

12.7. Other adverse effects

No data available

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

120110 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; synthetic machining oils; 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**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

not applicable

Other applicable information

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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 75

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): 1,2,5,8,9,10,12,13.

Abbreviations and acronyms

Acute Tox: Acute toxicity

Skin Corr: Skin corrosion

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

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

Classification	Classification procedure
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
Skin Sens. 1; H317	Calculation method
Aquatic Chronic 3; H412	Calculation method

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H314	Causes severe skin burns and eye damage.
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.
H412	Harmful to aquatic life with long lasting effects.

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.)