



RADIATOR CLEAN DEMI

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Issue date: 01/10/2024 Revision date: 28/08/2024 Supersedes version of: 04/12/2023 Version: 1.3

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

1.1. Product identifier

Product name : RADIATOR CLEAN DEMI
Product code : BDS002575BU

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

Relevant identified uses

Main use category : Professional use
Use of the substance/mixture : Cleaners - Heavy duty

1.3. Details of the supplier of the safety data sheet

Supplier

CRC Industries Europe B.V.
Touwslagerstraat 1
9240 Zele
Belgium
T +32(0)52/45.60.11, F +32(0)52/45.00.34
hse@crcind.com, www.crcind.com

1.4. Emergency telephone number

Emergency number : +32(0)52/45.60.11
Office hours: 9-17h CET

Country/Area	Organisation/Company	Address	Emergency number	Comment
Belgium	Centre Anti-Poisons/Antigifcentrum c/o Hôpital Militaire Reine Astrid	Rue Bruyn 1 1120 Brussels	+32 70 245 245	Please dial: 070 245 245 for any urgent questions about intoxication (free of charge 24/7), if not accessible, dial: 02 264 96 30 (standard fee)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazardous to the aquatic environment – Chronic Hazard, H412
Category 3
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Harmful to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Signal word (CLP) : -
Hazard statements (CLP) : H412 - Harmful to aquatic life with long lasting effects.
Precautionary statements (CLP) : P102 - Keep out of reach of children.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/eye protection.
P501 - Dispose of contents/container to a hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

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EUH-statements : EUH208 - Contains 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5).
May produce an allergic reaction.

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Amines, tallow alkyl, ethoxylated	CAS-No.: 61791-26-2	< 1	Acute Tox. 4 (Oral), H302 (ATE=300 mg/kg bodyweight) Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	CAS-No.: 2634-33-5 EC-No.: 220-120-9 EC Index-No.: 613-088-00-6	< 0,05	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Acute Tox. 2 (Inhalation:dust,mist), H330 (ATE=0,05 mg/l/4h) Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Specific concentration limits:

Name	Product identifier	Specific concentration limits (%)
1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one	CAS-No.: 2634-33-5 EC-No.: 220-120-9 EC Index-No.: 613-088-00-6	(0,05 \leq C \leq 100) Skin Sens. 1A; H317

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. If signs/symptoms develop, get medical attention.

First-aid measures after skin contact : Wash skin with plenty of water. Seek medical attention if irritation develops.

First-aid measures after eye contact : Rinse eyes with water as a precaution. Seek medical attention if irritation develops.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : During fire, gases hazardous to health may be formed.

5.3. Advice for firefighters

Firefighting instructions : Move containers from fire area if it can be done without personal risk. Use standard firefighting procedures and consider the hazards of other involved materials.
Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Protective equipment : Wear appropriate protective equipment and clothing during clean-up.
Emergency procedures : Ventilate spillage area.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures : Evacuate unnecessary personnel. Ventilate area.

6.2. Environmental precautions

Avoid release to the environment. Avoid the spillage or runoff entering drains, sewers or watercourses.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : For large spills, confine the spill in a dike and charge it with wet sand or earth for subsequent safe disposal. Following product recovery, flush area with water. Take up small spills with dry chemical absorbent. Clean surface thoroughly to remove residual contamination.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For disposal of contaminated materials refer to section 13 : "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wear personal protective equipment. Ensure good ventilation of the work station. Avoid prolonged exposure. Handle in accordance with good industrial hygiene and safety procedures.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container closed when not in use.

7.3. Specific end use(s)

No additional information available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL and PNEC

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, dermal	0,966 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	6,81 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, inhalation	1,2 mg/m ³
Long-term - systemic effects, dermal	0,345 mg/kg bodyweight/day
PNEC (Water)	
PNEC aqua (freshwater)	4,03 µg/l
PNEC aqua (marine water)	0,403 µg/l
PNEC aqua (intermittent, freshwater)	1,1 µg/l
PNEC aqua (intermittent, marine water)	110 ng/l
PNEC (Sediment)	
PNEC sediment (freshwater)	49,9 µg/kg dw
PNEC sediment (marine water)	4,99 µg/kg dw
PNEC (Soil)	
PNEC soil	3 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	1,03 mg/l

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Personal protection equipment

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Use eye protection according to EN 166. Safety glasses with side shields.

Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Wear suitable gloves tested to EN374. The breakthrough time of the glove should be longer than the total duration of product use. If work lasts longer than the breakthrough time, gloves should be changed part-way through. Neoprene or nitrile rubber gloves.

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Respiratory protection

Respiratory protection:

No respiratory protection needed under normal use conditions

Thermal hazards

Thermal hazard protection:

Not expected to present a significant hazard under anticipated conditions of normal use. Wear appropriate thermal protective clothing, when necessary.

Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: colourless to yellow.
Odour	: characteristic.
Odour threshold	: Not available
Melting point	: Not applicable
Freezing point	: Not available
Boiling point	: 100 °C
Flammability	: Non flammable.
Lower explosion limit	: Not available
Upper explosion limit	: Not available
Flash point	: Not applicable
Auto-ignition temperature	: > 200 °C
Decomposition temperature	: Not available
pH	: 9,5 – 10,5
Viscosity, kinematic	: < 7 mm ² /s
Viscosity, dynamic	: < 7 mPa·s at 40 °C
Solubility	: soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not applicable
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: 1 g/cm ³ at 20 °C
Relative density	: 1 at 20 °C
Relative vapour density at 20°C	: Not available
Particle characteristics	: Not applicable

9.2. Other information

Other safety characteristics

VOC content : 0 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

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10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7). Avoid temperatures exceeding the flash point.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal) : Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation) : Not classified (Based on available data, the classification criteria are not met)

Amines, tallow alkyl, ethoxylated (61791-26-2)

LD50 oral rat	300 – 2000 mg/kg
LD50 dermal rat	> 10000 mg/kg

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)

LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 2000 mg/kg bodyweight
LC50 Inhalation - Rat (Dust/Mist)	100 mg/l/4h

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 9,5 – 10,5

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)

pH	5,5 – 8,5
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Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 9,5 – 10,5

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)

pH	5,5 – 8,5
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Respiratory or skin sensitisation : Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity : Not classified (Based on available data, the classification criteria are not met)

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)

NOAEL (animal/female, F0/P)	112 mg/kg bodyweight
NOAEL (animal/female, F1)	56,6 mg/kg bodyweight

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

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Viscosity, kinematic	< 7 mm ² /s
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Amines, tallow alkyl, ethoxylated (61791-26-2)

Viscosity, kinematic	170 mm ² /s
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11.2. Information on other hazards

Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute) : Not classified (Based on available data, the classification criteria are not met)
Hazardous to the aquatic environment, long-term (chronic) : Harmful to aquatic life with long lasting effects.

Amines, tallow alkyl, ethoxylated (61791-26-2)

LC50 - Fish [1]	0,13 mg/l Oncorhynchus mykiss
EC50 - Crustacea [1]	0,17 mg/l Daphnia magna

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)

LC50 - Fish [1]	2,2 mg/l
EC50 - Crustacea [1]	3,27 mg/l Daphnia magna (Water flea)
EC50 72h - Algae [1]	0,11 mg/l
NOEC chronic fish	0,21 mg/l 28 d
NOEC chronic crustacea	1,2 mg/l 21 d

12.2. Persistence and degradability

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Persistence and degradability : Not established. No data is available on the degradability of this product.

12.3. Bioaccumulative potential

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Partition coefficient n-octanol/water (Log Kow) : Not applicable

1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5)

Partition coefficient n-octanol/water (Log Pow) : 0,7

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

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Results of PBT assessment : Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

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12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %.

12.7. Other adverse effects

Additional information : No other effects known

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
European List of Waste (LoW, EC 2000/532) : According to the European Waste Catalogue (EWC), Waste Codes are not product specific, but application specific Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number or ID number				
Not regulated for transport				
14.2. UN proper shipping name				
Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.3. Transport hazard class(es)				
Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.4. Packing group				
Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
14.5. Environmental hazards				
Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
No supplementary information available				

14.6. Special precautions for user

Overland transport

Not regulated.

Transport by sea

Not regulated.

Air transport

Not regulated.

Inland waterway transport

Not regulated.

Rail transport

Not regulated.

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14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

VOC Directive (2004/42)

VOC content : 0 g/l

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level

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Abbreviations and acronyms:	
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disruptor

Full text of H- and EUH-statements:	
Acute Tox. 2 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 2
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment – Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment – Chronic Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment – Chronic Hazard, Category 3
EUH208	Contains 1,2-benzisothiazol-3(2H)-one; 1,2-benzisothiazolin-3-one (2634-33-5). May produce an allergic reaction.
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.

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Full text of H- and EUH-statements:

H318	Causes serious eye damage.
H330	Fatal if inhaled.
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.
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1A	Skin sensitisation, category 1A

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