



SAFETY DATA SHEET

Prestone Complete Cooling System Flush

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

1.1. Product identifier

Product name Prestone Complete Cooling System Flush

Product number PREP0002A

UFI UFI: WTQ6-T08G-M00F-4NEV

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

Identified uses Car maintenance product.

1.3. Details of the supplier of the safety data sheet

Supplier Holt Lloyd Services
52 Rue des 40 Mines, 60000 – Allonne, France
Phone: +33 (0)3 64 99 00 32
info@holtsauto.com

Contact person Contact email address: info@holtsauto.com

Manufacturer Holt Lloyd International Ltd
Barton Dock Road
Stretford
Manchester
M32 0YQ - England, UK
+44 (0) 161 866 4800
FAX +44 (0) 161 866 4854
www.holtsauto.com

1.4. Emergency telephone number

Emergency telephone UK - 00 44 (0) 161 866 4800 Office hrs = 0900 - 1700 hrs

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National emergency telephone number +43 1 31304 5620; chemikalien@umweltbundesamt.at (Austria)
 +32022649636; info@poisoncentre.be (Belgium)
 +359 2 9154 409; poison_centre@mail.orbitel.bg (Bulgaria)
 +38514686910; toksikologija@hzjz.hr (Croatia)
 +35722405611; cy-chemregistry@dli.mlsi.gov.cy (Cyprus)
 +420267082257; biocidy@mzcr.cz (Czech Republic)
 +45 72 54 40 00; mst@mst.dk (Denmark)
 +372 794 3500; clp@terviseamet.ee, info@terviseamet.ee (Estonia)
 +358 5052 000; kirjaamo@tukes.fi (Finland)
 + 33 3 83 85 21 92; bnpc@chru-nancy.fr (France)
 +49-30-18412-0; bfr@bfr.bund.de (Germany)
 +302106479250; +302106479450; devxp.gcs@aade.gr, environment.gcs@aade.gr (Greece)
 +36 (1) 476 1135; clp.ca@nnk.gov.hu (Hungary)
 +354 543 22 22; eitur@landspitali.is (Iceland)
 +353 (1) 809 2166 / +353 (1) 809 2566; chemicalsinfo@beaumont.ie (Ireland)
 +390649906140; inscweb@iss.it (Italy)
 +371 67032600; lvgmc@lvgmc.lv (Latvia)
 +370 70662008; aaa@aaa.am.lt (Lithuania)
 +320 22649636; +352 24785551; info@poisoncentre.be; direction-sante@ms.etat.lu (Luxembourg)
 +356 2395 2000; info@mccaa.org.mt (Malta)
 +31 88 75 585 61; productnotificatie@umcutrecht.nl (The Netherlands)
 +4573580500; produktregisteret@miljodir.no / +47 21 07 70 00; folkehelseinstituttet@fhi.no (Norway)
 +48 42 2538 400; biuro@chemikalia.gov.pl (Poland)
 +351 800 250 250; ciav.tox@inem.pt (Portugal)
 +40213183606; infotox@insp.gov.ro (Romania)
 +7 495 621 6885; +7 495 628 1687; rtiac@mail.ru; rtiac2003@yahoo.com (Russia)
 +421 2 5465 2307; ntic@ntic.sk (Slovakia)
 + 386 1 522 1293; gp.ukc@kclj.si (Slovenia)
 +34 917689800; intcf.doc@justicia.es (Spain)
 +46104566750; giftinformation@gic.se (Sweden)
 +44 121 507 4123; allistervale@npis.org, sallybradberry@npis.org (UK)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Not Classified
Health hazards	Skin Irrit. 2 - H315 Eye Dam. 1 - H318
Environmental hazards	Not Classified

2.2. Label elements

Hazard pictograms



Signal word	Danger
Hazard statements	H315 Causes skin irritation. H318 Causes serious eye damage.

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Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
 P102 Keep out of reach of children.
 P264 Wash contaminated skin thoroughly after handling.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P332+P313 If skin irritation occurs: Get medical advice/ attention.
 P337+P313 If eye irritation persists: Get medical advice/ attention.
 P501 Dispose of contents/ container in accordance with national regulations.

UFI

UFI: WTQ6-T08G-M00F-4NEV

Contains

Alcohols, C12-16, ethoxylated, SODIUM HYDROXIDE

Detergent labelling

5 - < 15% non-ionic surfactants, < 5% anionic surfactants, Contains 1,2-BENZISOTHIAZOL-3(2H)-ONE, 2-Methylisothiazolin-3-one

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Citric Acid Monohydrate			5-10%
CAS number: 5949-29-1	EC number: 201-069-1	REACH registration number: 01-2119457026-42-XXXX	
Classification Eye Irrit. 2 - H319			
Alcohols, C12-16, ethoxylated			5-10%
CAS number: 68551-12-2			
Classification Acute Tox. 4 - H302 Eye Dam. 1 - H318 Aquatic Chronic 3 - H412			
SODIUM HYDROXIDE			1-5%
CAS number: 1310-73-2	EC number: 215-185-5	REACH registration number: 01-2119457892-27-XXXX	
Classification Skin Corr. 1A - H314 Eye Dam. 1 - H318			
Butyl diglycol			1-5%
CAS number: 112-34-5	EC number: 203-961-6	REACH registration number: 01-2119475104-44-XXXX	
Classification Eye Irrit. 2 - H319			

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1,2-BENZISOTHIAZOL-3(2H)-ONE			<1%
CAS number: 2634-33-5	EC number: 220-120-9	REACH registration number: 01-2120761540-60-XXXX	
M factor (Acute) = 1			
Classification Acute Tox. 4 - H302 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Skin Sens. 1 - H317 Aquatic Acute 1 - H400 Aquatic Chronic 2 - H411			

2-Methyl-4-isothiazolin-3-one			<1%
CAS number: 2682-20-4	EC number: 220-239-6	REACH registration number: 01-2120764690-50-XXXX	
M factor (Acute) = 1	M factor (Chronic) = 1		
Classification Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 2 - H330 Skin Corr. 1B - H314 Eye Dam. 1 - H318 Skin Sens. 1A - H317 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410			

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
Ingestion	Rinse mouth thoroughly with water. Give plenty of water to drink. Never give anything by mouth to an unconscious person. Get medical attention if any discomfort continues.
Skin contact	Wash skin thoroughly with soap and water. Get medical attention if any discomfort continues.
Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	This is unlikely to occur but symptoms similar to those of ingestion may develop.
Ingestion	May cause discomfort if swallowed.

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Skin contact Skin irritation. Prolonged skin contact may cause redness and irritation.

Eye contact Causes serious eye damage.

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

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards The product is not flammable.

Hazardous combustion products Thermal decomposition or combustion products may include the following substances: Toxic and corrosive gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting No specific firefighting precautions known.

Special protective equipment for firefighters Wear chemical protective suit.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections Wear protective clothing as described in Section 8 of this safety data sheet. See Section 11 for additional information on health hazards. For waste disposal, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid spilling. Avoid contact with skin and eyes. Provide adequate ventilation.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep away from food, drink and animal feeding stuffs.

Storage class Chemical storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

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SODIUM HYDROXIDE

Long-term exposure limit (8-hour TWA): WEL

Short-term exposure limit (15-minute): WEL 2 mg/m³

WEL = Workplace Exposure Limit.

Citric Acid Monohydrate (CAS: 5949-29-1)

PNEC

Fresh water; 0.44 mg/l
marine water; 0.044 mg/l
STP; 1000 mg/l
Sediment (Freshwater); 34.6 mg/kg sediment dry weight
Sediment (Marinewater); 3.46 mg/kg sediment dry weight
Soil; 33.1 mg/kg soil dry weight

SODIUM HYDROXIDE (CAS: 1310-73-2)

DNEL

Workers - Inhalation; Long term local effects: 1 mg/m³
General population - Dermal; Long term local effects: 1 mg/m³

Butyl diglycol (CAS: 112-34-5)

DNEL

Workers - Inhalation; Long term local effects: 67.5 mg/m³
Workers - Inhalation; Short term local effects: 101.2 mg/m³
Workers - Dermal; Long term systemic effects: 83 mg/kg bw/day
General population - Inhalation; Long term local effects: 40.5 mg/m³
General population - Inhalation; Short term local effects: 60.7 mg/m³
General population - Dermal; Long term systemic effects: 50 mg/kg bw/day
General population - Oral; Long term systemic effects: 5 mg/kg bw/day

PNEC

Fresh water; Long term 1.1 mg/l
Fresh water; Long term 0.11 mg/l
STP; Long term 200 mg/l
Sediment (Freshwater); Long term 4.4 mg/kg sediment dry weight
Sediment (Marinewater); Long term 0.44 mg/kg sediment dry weight
Soil; Long term 0.32 mg/kg soil dry weight

1,2-BENZISOTHIAZOL-3(2H)-ONE (CAS: 2634-33-5)

DNEL

Workers - Inhalation; Long term systemic effects: 6.81 mg/m³
Workers - Dermal; Long term systemic effects: 0.966 mg/kg bw/day
General population - Inhalation; Long term systemic effects: 1.2 mg/m³
General population - Dermal; Long term systemic effects: 0.345 mg/kg bw/day

PNEC

Fresh water; Long term 4.03 µg/l
Fresh water; Long term 0.403 µg/l
STP; Long term 1.03 mg/l
Sediment (Freshwater); Long term 49.9 µg/kg sediment dw
Sediment (Marinewater); Long term 4.99 µg/kg sediment dw
Soil; Long term 3 mg/kg soil dry weight

2-Methyl-4-isothiazolin-3-one (CAS: 2682-20-4)

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DNEL

Workers - Inhalation; Long term local effects: 0.021 mg/m³
 Workers - Inhalation; Short term local effects: 0.043 mg/m³
 General population - Inhalation; Long term local effects: 0.021 mg/m³
 General population - Inhalation; Short term local effects: 0.043 mg/m³
 General population - Oral; Long term systemic effects: 0.027 mg/kg bw/day

PNEC

Fresh water; Long term 3.39 µg/l
 marine water; Long term 3.39 µg/l
 STP; Long term 0.23 mg/l
 Soil; Long term 0.047 mg/kg soil dry weight

8.2. Exposure controls

Protective equipment



Eye/face protection

Tight-fitting safety glasses.

Hand protection

It is recommended that chemical-resistant, impervious gloves are worn. To protect hands from chemicals, gloves should comply with European Standard EN374.

Hygiene measures

Do not eat, drink or smoke when using this product. Good personal hygiene procedures should be implemented.

Respiratory protection

No specific requirements are anticipated under normal conditions of use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Green.
Odour	Characteristic.
pH	9.5
Flash point	Not applicable.
Relative density	1.063 @ 20°C
Solubility(ies)	Miscible with water.

9.2. Other information

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity

There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability

Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions

Not relevant.

10.4. Conditions to avoid

Conditions to avoid

There are no known conditions that are likely to result in a hazardous situation.

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10.5. Incompatible materials

Materials to avoid No specific material or group of materials is likely to react with the product to produce a hazardous situation.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Toxic and corrosive gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects Information given is based on data of the components and of similar products.

Acute toxicity - oral

Notes (oral LD₅₀) Based on available data the classification criteria are not met.

ATE oral (mg/kg) 10,000.0

Acute toxicity - dermal

Notes (dermal LD₅₀) Based on available data the classification criteria are not met.

Acute toxicity - inhalation

Notes (inhalation LC₅₀) Based on available data the classification criteria are not met.

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

Skin sensitisation

Skin sensitisation Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro Based on available data the classification criteria are not met.

Genotoxicity - in vivo Based on available data the classification criteria are not met.

Carcinogenicity

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

Reproductive toxicity

Reproductive toxicity - fertility Based on available data the classification criteria are not met.

Reproductive toxicity - development Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not relevant.

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Inhalation	Vapours may irritate throat/respiratory system.
Ingestion	Liquid irritates mucous membranes and may cause abdominal pain if swallowed. Fumes from the stomach contents may be inhaled, resulting in the same symptoms as inhalation.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye damage.
Route of exposure	Inhalation Skin and/or eye contact

Toxicological information on ingredients.

Citric Acid Monohydrate

Skin contact	Irritating to skin.
Eye contact	Irritating to eyes.

Alcohols, C12-16, ethoxylated

Acute toxicity - oral

ATE oral (mg/kg)	500.0
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SODIUM HYDROXIDE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg)	500.0
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Species	Rat
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Notes (oral LD₅₀)	Not applicable. REACH dossier information.
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Acute toxicity - dermal

Notes (dermal LD₅₀)	Not applicable. REACH dossier information.
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Acute toxicity - inhalation

Notes (inhalation LC₅₀)	Not applicable. REACH dossier information.
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Skin corrosion/irritation

Skin corrosion/irritation	Causes severe burns.
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Serious eye damage/irritation

Serious eye damage/irritation	Causes serious eye damage.
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Respiratory sensitisation

Respiratory sensitisation	No information available.
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Skin sensitisation

Skin sensitisation	Not sensitising.
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Germ cell mutagenicity

Genotoxicity - in vitro	Negative.
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Genotoxicity - in vivo	Negative.
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Carcinogenicity

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

Reproductive toxicity

Reproductive toxicity - fertility Scientifically unjustified. REACH dossier information.

Reproductive toxicity - development This substance has no evidence of toxicity to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not relevant.

Butyl diglycol

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 2410 mg/kg, Oral, Mouse LD₅₀ 6560 mg/kg, Oral, Rat LD₅₀ 2000 mg/kg, Oral, Guinea pig LD₅₀ 2200 mg/kg, Oral, Rabbit

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 2000 mg/kg, Dermal, Rat LD₅₀ 2764 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) inhalation risk test > 29 ppm, Inhalation, Rat

Skin corrosion/irritation

Skin corrosion/irritation No adverse effect observed (not irritating)

Serious eye damage/irritation

Serious eye damage/irritation No adverse effect observed (not irritating)

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro No adverse effects observed (negative)

Genotoxicity - in vivo No adverse effects observed (negative)

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility One-generation study - NOAEL > 1000 mg/kg/day, Oral, Rat P One-generation study - NOAEL > 2000 mg/kg/day, Dermal, Rat P

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Reproductive toxicity - development Developmental toxicity: - NOAEL: > 633 mg/kg/day, Oral, Rat Teratogenicity: - NOAEL: > 2000 mg/kg/day, Dermal, Rabbit Fetotoxicity: - NOAEL: > 2050 mg/kg/day, Oral, Rat No adverse effects observed.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not relevant.

1,2-BENZISOTHIAZOL-3(2H)-ONE

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 1,020.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 490 mg/kg, Oral, Rat

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 2000 mg/kg, Dermal, Rat NOAEL 2000 mg/kg, Dermal, Rat

Acute toxicity - inhalation

Notes (inhalation LC₅₀) No specific test data are available.

Skin corrosion/irritation

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation May cause an allergic skin reaction.

Germ cell mutagenicity

Genotoxicity - in vitro Negative.

Genotoxicity - in vivo Negative.

Carcinogenicity

Carcinogenicity No information available.

Reproductive toxicity

Reproductive toxicity - fertility Two-generation study - NOAEL 112 mg/kg/day, Oral, Rat P Based on available data the classification criteria are not met.

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Reproductive toxicity - development Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure No information available.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure No information available.

Aspiration hazard

Aspiration hazard Not relevant.

2-Methyl-4-isothiazolin-3-one

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 235.0

Species Rat

ATE oral (mg/kg) 235.0

Acute toxicity - dermal

ATE dermal (mg/kg) 300.0

Acute toxicity - inhalation

ATE inhalation (gases ppm) 100.0

ATE inhalation (vapours mg/l) 0.5

ATE inhalation (dusts/mists mg/l) 0.05

Skin corrosion/irritation

Skin corrosion/irritation Causes severe burns.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation May cause an allergic skin reaction.

Germ cell mutagenicity

Genotoxicity - in vitro Negative.

Genotoxicity - in vivo Negative.

Carcinogenicity

Carcinogenicity NOAEL 3.1 mg/kg/day, Oral, Rat NOAEL 400 mg/kg/day, Dermal, Mouse Based on available data the classification criteria are not met.

Reproductive toxicity

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Reproductive toxicity - fertility Two-generation study - NOAEL 69 mg/kg/day, Oral, Rat F0 Two-generation study - NOAEL 30 mg/kg/day, Oral, Rabbit Based on available data the classification criteria are not met.

Reproductive toxicity - development Developmental toxicity: - NOAEL: 40 mg/kg/day, Oral, Rat Maternal toxicity: - NOAEL: 10 mg/kg/day, Oral, Rabbit Developmental toxicity: - NOAEL: 30 mg/kg/day, Oral, Rabbit Does not contain any substances known to be toxic to reproduction.

Specific target organ toxicity - single exposure

STOT - single exposure Based on available data the classification criteria are not met.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Based on available data the classification criteria are not met.

Aspiration hazard

Aspiration hazard Not relevant.

SECTION 12: Ecological information

Ecotoxicity The product contains substances which are toxic to aquatic organisms and which may cause long-term adverse effects in the aquatic environment.

12.1. Toxicity

Ecological information on ingredients.

Citric Acid Monohydrate

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 400-706 mg/l, Fish

SODIUM HYDROXIDE

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 33-189 hours: 96 mg/l, Fish
LC₅₀, 45.5 hours: 96 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates LC₅₀, 48 hours: 30 - < 1000 mg/l, Daphnia magna

Acute toxicity - aquatic plants Scientifically unjustified.

Acute toxicity - microorganisms EC₁₀, 2 minutes: 161 mg/l, Tetrahymena Thermophila
EC₅₀, 15 minutes: 22 mg/l, Photobacterium phosphoreum luminescence inhibition study

Chronic aquatic toxicity

Chronic toxicity - fish early life stage Not available.

Short term toxicity - embryo and sac fry stages Not available.

Chronic toxicity - aquatic invertebrates Not applicable.

Butyl diglycol

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Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: 1300 mg/l, <i>Lepomis macrochirus</i> (Bluegill)
	LC ₅₀ , 96 hours: > 2000 mg/l, <i>Menidia beryllina</i>
	ELC ₅₀ , 96 hours: 2400 mg/l, <i>Pimephales promelas</i> (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 96 hours: > 100 mg/l, <i>Daphnia magna</i>
Acute toxicity - aquatic plants	EC ₀ , EC ₅₀ , 96 hours: > 100 mg/l, <i>Scenedesmus subspicatus</i>
Acute toxicity - microorganisms	EC ₁₀ , NOEC, 30 minutes: 1995 mg/l, Activated sludge

Chronic aquatic toxicity

Chronic toxicity - fish early life stage	ChV, NOEC, 30 days: 369 mg/l, QSAR
Chronic toxicity - aquatic invertebrates	EC ₅₀ , 14 days: 112 mg/l, QSAR

1,2-BENZISOTHIAZOL-3(2H)-ONE

Acute aquatic toxicity

LE(C)₅₀	0.1 < L(E)C ₅₀ ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC ₅₀ , 96 hours: 2.15 mg/l, <i>Cyprinodon variegatus</i> (Sheepshead minnow)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 2.94 mg/l, <i>Daphnia magna</i>
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 110 µg/l, <i>Selenastrum capricornutum</i>
	NOEC, 72 hours: 40.3 µg/l, <i>Selenastrum capricornutum</i>
Acute toxicity - microorganisms	EC ₅₀ , 3 hours: 13 mg/l, Activated sludge
	NOEC, 3 hours: 11 mg/l, Activated sludge
Acute toxicity - terrestrial	EC ₅₀ , 14 days: 410.6 mg/kg/day, <i>Eisenia Fetida</i> (Earthworm)
	NOEC, 14 days: 234.5 mg/kg/day, <i>Eisenia Fetida</i> (Earthworm)

2-Methyl-4-isothiazolin-3-one

Acute aquatic toxicity

LE(C)₅₀	0.1 < L(E)C ₅₀ ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LC ₅₀ , 96 hours: 4.77 mg/l, <i>Oncorhynchus mykiss</i> (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 0.934 mg/l, <i>Daphnia magna</i>
	NOEC, 48 hours: < 0.275 mg/l, <i>Daphnia magna</i>
	LC ₅₀ , 96 hours: 1.81 mg/l, Marinewater invertebrates, Mysid shrimp, <i>Americamysis bahia</i>
	NOEC, 96 hours: 1.3 mg/l, Marinewater invertebrates, Mysid shrimp, <i>Americamysis bahia</i>

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Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 0.103 mg/l, Selenastrum capricornutum NOEC, 72 hours: 0.05 mg/l, Selenastrum capricornutum EC ₅₀ , 72 hours: 0.072 mg/l, Marinewater algae, Skeletonema costatum NOEC, 72 hours: 0.072 mg/l, Marinewater algae, Skeletonema costatum
Acute toxicity - microorganisms	EC ₅₀ , 3 hours: 41 mg/l, Activated sludge
<u>Chronic aquatic toxicity</u>	
M factor (Chronic)	1
Chronic toxicity - fish early life stage	NOEC, 33 days: 2.1 mg/l, Pimephales promelas (Fat-head Minnow)
Chronic toxicity - aquatic invertebrates	NOEC, 21 days: 0.044 mg/l, Daphnia magna

12.2. Persistence and degradability

Ecological information on ingredients.

Citric Acid Monohydrate

Persistence and degradability	COD 665mg O ₂ /g; BOD ₅ 481 mg O ₂ /g; >98% biodegradable after 2 days
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SODIUM HYDROXIDE

Persistence and degradability	No data available.
Stability (hydrolysis)	Scientifically unjustified. REACH dossier information.

Butyl diglycol

Persistence and degradability	85% 28 days Rapidly degradable
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1,2-BENZISOTHAZOL-3(2H)-ONE

Persistence and degradability	Not readily biodegradable.
Phototransformation	Calculation method. - Half-life, DT ₅₀ : 7,568 hours

2-Methyl-4-isothiazolin-3-one

Persistence and degradability	Not readily biodegradable.
Phototransformation	Calculation method. - Half-life : 14.35 hours

12.3. Bioaccumulative potential

Ecological information on ingredients.

SODIUM HYDROXIDE

Prestone Complete Cooling System Flush

Bioaccumulative potential	No potential for bioaccumulation.
Partition coefficient	No information required. REACH dossier information.

Butyl diglycol

Bioaccumulative potential	The study does not need to be conducted because the substance has a low potential for bioaccumulation based on log Kow / log Pow <=3
Partition coefficient	Log Kow (Log Pow): 1.0 @ 20 deg C

1,2-BENZISOTHIAZOL-3(2H)-ONE

Bioaccumulative potential	Bioaccumulation is unlikely.
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2-Methyl-4-isothiazolin-3-one

Bioaccumulative potential	Bioaccumulation is unlikely.
Partition coefficient	log Kow: -0.486

12.4. Mobility in soil

Mobility	The product is miscible with water and may spread in water systems.
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Ecological information on ingredients.

Citric Acid Monohydrate

Mobility	Mobile.
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Butyl diglycol

Henry's law constant	15.2 E-5 atm m ³ /mol @ 25°C
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1,2-BENZISOTHIAZOL-3(2H)-ONE

Adsorption/desorption coefficient	Soil - Log Koc: 9.33 @ 20°C
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2-Methyl-4-isothiazolin-3-one

Adsorption/desorption coefficient	- Koc: 6 - 10 @ 20 - 25°C
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12.5. Results of PBT and vPvB assessment

Ecological information on ingredients.

SODIUM HYDROXIDE

Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB according to current EU criteria.
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Butyl diglycol

Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB according to current EU criteria.
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1,2-BENZISOTHIAZOL-3(2H)-ONE

Prestone Complete Cooling System Flush

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

2-Methyl-4-isothiazolin-3-one

Results of PBT and vPvB assessment This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

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 specific for the substance or mixture

National regulations The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
The Aerosol Dispensers Regulations 2009 (SI 2009 No. 2824).

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EU legislation

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).

Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents (as amended).

Commission Regulation (EU) No 453/2010 of 20 May 2010.

Commission Regulation (EU) No 2015/830 of 28 May 2015.

Authorisations (Annex XIV Regulation 1907/2006)

No specific authorisations are known for this product.

Restrictions (Annex XVII Regulation 1907/2006)

No specific restrictions on use are known for this product.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.
 CAS: Chemical Abstracts Service.
 DNEL: Derived No Effect Level.
 EC₅₀: 50% of maximal Effective Concentration.
 GHS: Globally Harmonized System.
 IATA: International Air Transport Association.
 ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air.
 IMDG: International Maritime Dangerous Goods.
 LC₅₀: Lethal Concentration to 50 % of a test population.
 LD₅₀: Lethal Dose to 50% of a test population (Median Lethal Dose).
 NOAEL: No Observed Adverse Effect Level.
 NOEC: No Observed Effect Concentration.
 NOAEC: No Observed Adverse Effect Concentration.
 PBT: Persistent, Bioaccumulative and Toxic substance.
 PNEC: Predicted No Effect Concentration.
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.
 vPvB: Very Persistent and Very Bioaccumulative.

Classification procedures according to Regulation (EC) 1272/2008

Skin Irrit. 2 - H315: Calculation method. Eye Dam. 1 - H318: Calculation method.

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Prestone Complete Cooling System Flush

Hazard statements in full

H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
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.
H330 Fatal if inhaled.
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.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.