



SAFETY DATA SHEET

Corguard RTU

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

1.1. Product identifier

Product name	Corguard RTU
Product number	PAFR0035A, PAFR0036A, PAF0037A, PAFR0038A, PAFR0039A, PAFR0041A, PAFR0051A, PAFR0052A, PAFR0053A
UFI	UFI: RVM6-K0T0-600N-N1MP
REACH registration notes	This is a MIXTURE; no registration information contained in this document . Holts are classed as Downstream User.

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

Identified uses	Antifreeze liquid.
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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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Corguard RTU

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@dlm.msi.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.gcsf@aade.gr, environment.gcsf@aade.gr (Greece)
 +36 (1) 476 1135; clp.ca@nnk.gov.hu (Hungary)
 +354 543 22 22; eiturf@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)
 +351213303271; 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	Acute Tox. 4 - H302 STOT RE 2 - H373
Environmental hazards	Not Classified

2.2. Label elements

Hazard pictograms



Signal word Warning

Hazard statements H302 Harmful if swallowed.
 H373 May cause damage to organs (Kidneys) through prolonged or repeated exposure if swallowed.

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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.
 P260 Do not breathe vapour/ spray.
 P264 Wash contaminated skin thoroughly after handling.
 P270 Do not eat, drink or smoke when using this product.
 P301+P312 IF SWALLOWED: Call a POISON CENTRE/doctor if you feel unwell.
 P314 Get medical advice/ attention if you feel unwell.
 P330 Rinse mouth.
 P501 Dispose of contents/ container in accordance with national regulations.

Contains

ETHANEDIOL

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

ETHANEDIOL			30-60%
CAS number: 107-21-1	EC number: 203-473-3	REACH registration number: 01-2119456816-28-XXXX	
Classification Acute Tox. 4 - H302 STOT RE 2 - H373			
2-Ethylhexanoic Acid			1-5%
CAS number: 149-57-5	EC number: 205-743-6	REACH registration number: 01-2119488942-23-XXXX	
Classification Repr. 2 - H361d			
SODIUM HYDROXIDE			<1%
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			
Neodecanoic acid			<1%
CAS number: 26896-20-8	EC number: 248-093-9	REACH registration number: 01-2119449554-33-XXXX	
Classification Not Classified			

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PHOSPHORIC ACID ...%			<1%
CAS number: 7664-38-2	EC number: 231-633-2	REACH registration number: 01-2119485924-24-XXXX	
Classification Skin Corr. 1B - H314 Eye Dam. 1 - H318			
PROPAN-1-OL			<1%
CAS number: 71-23-8	EC number: 200-746-9	REACH registration number: 01-2119486761-29-XXXX	
Classification Flam. Liq. 2 - H225 Eye Dam. 1 - H318 STOT SE 3 - H336			
sodium 4(or 5)-methyl-1H-benzotriazolidine			<1%
CAS number: 64665-57-2	EC number: 265-004-9	REACH registration number: 01-2119980062-42-XXXX	
Classification Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318			
Polypropylene Glycol			<1%
CAS number: 25322-69-4	EC number: 500-039-8	REACH registration number: 01-2119457556-29-XXXX	
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 STOT SE 3 - H335			
Denatonium Benzoate			<1%
CAS number: 3734-33-6	EC number: 223-095-2	REACH registration number: 01-2120102843-65-XXXX	
Classification Acute Tox. 4 - H302 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Dam. 1 - H318 Aquatic Chronic 3 - H412			

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D11014A CHROMATINT URANINE CONC (Yellow)			<1%
CAS number: 518-47-8	EC number: 208-253-0	REACH registration number: 01-2120115897-47-XXXX	
Classification Not Classified			

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	Treat symptomatically.
Inhalation	Unlikely route of exposure as the product does not contain volatile substances.
Ingestion	Rinse mouth thoroughly with water. Never give anything by mouth to an unconscious person. 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.
Skin contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing.
Eye contact	Remove any contact lenses and open eyelids wide apart. Rinse immediately with plenty of water. Continue to rinse for at least 10 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	Harmful if swallowed. May cause liver and/or renal damage.
Skin contact	May be slightly irritating to skin. Prolonged or repeated exposure may cause severe irritation.
Eye contact	May be slightly irritating to eyes. Prolonged or repeated exposure may cause severe irritation.

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

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is non-combustible. Use fire-extinguishing media suitable for the surrounding fire.
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5.2. Special hazards arising from the substance or mixture

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

5.3. Advice for firefighters

Protective actions during firefighting	No specific firefighting precautions known.
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Special protective equipment for firefighters Use protective equipment appropriate for surrounding materials.

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. Do not discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. 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.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep away from food, drink and animal feeding stuffs. Keep only in the original container. Store in a cool and well-ventilated place.

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

ETHANEDIOL

Long-term exposure limit (8-hour TWA): WEL 20 ppm 52 mg/m³ vapour

Short-term exposure limit (15-minute): WEL 40 ppm 104 mg/m³ vapour

Sk

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ particulate

Sk

SODIUM HYDROXIDE

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

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

PHOSPHORIC ACID ...%

Long-term exposure limit (8-hour TWA): WEL 1 mg/m³

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

PROPAN-1-OL

Long-term exposure limit (8-hour TWA): WEL 200 ppm(Sk) 500 mg/m³(Sk)

Short-term exposure limit (15-minute): WEL 250 ppm(Sk) 625 mg/m³(Sk)

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WEL = Workplace Exposure Limit.
Sk = Can be absorbed through the skin.

ETHANEDIOL (CAS: 107-21-1)

DNEL	<p>Workers - Inhalation; Long term local effects: 35 mg/m³</p> <p>Workers - Dermal; Long term systemic effects: 106 mg/kg/day</p> <p>General population - Inhalation; Long term local effects: 7 mg/m³</p> <p>General population - Dermal; Long term systemic effects: 53 mg/kg/day</p>
PNEC	<p>Fresh water; 10 mg/l</p> <p>marine water; 1 mg/l</p> <p>STP; 199.5 mg/l</p> <p>Sediment (Freshwater); 37 mg/kg</p> <p>Sediment (Marinewater); 3.7 mg/kg</p> <p>Soil; 1.53 mg/kg</p>

2-Ethylhexanoic Acid (CAS: 149-57-5)

DNEL	<p>Workers - Inhalation; Long term systemic effects: 14 mg/m³</p> <p>Workers - Dermal; Long term systemic effects: 2 mg/kg bw/day</p> <p>General population - Inhalation; Long term systemic effects: 3.5 mg/m³</p> <p>General population - Dermal; Long term systemic effects: 1 mg/kg bw/day</p> <p>General population - Oral; Long term systemic effects: 1 mg/kg bw/day</p>
PNEC	<p>Fresh water; 0.4 mg/l</p> <p>Intermittent release; 1 mg/l</p> <p>marine water; 0.04 mg/l</p> <p>STP; 71.7 mg/l</p> <p>Sediment (Freshwater); 4.74 mg/kg sediment dw</p> <p>Sediment (Marinewater); 0.74 mg/kg sediment dw</p> <p>Soil; 0.712 mg/kg soil dw</p>

SODIUM HYDROXIDE (CAS: 1310-73-2)

DNEL	<p>Workers - Inhalation; Long term local effects: 1 mg/m³</p> <p>General population - Dermal; Long term local effects: 1 mg/m³</p>
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PHOSPHORIC ACID ...% (CAS: 7664-38-2)

DNEL	<p>Workers - Inhalation; Long term systemic effects: 10.7 mg/m³</p> <p>Workers - Inhalation; Long term local effects: 1 mg/m³</p> <p>Workers - Inhalation; Short term local effects: 2 mg/m³</p> <p>General population - Inhalation; Long term systemic effects: 4.57 mg/m³</p> <p>General population - Inhalation; Long term local effects: 0.36 mg/m³</p> <p>General population - Oral; Long term systemic effects: 0.1 mg/kg bw/day</p>
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PROPAN-1-OL (CAS: 71-23-8)

DNEL	<p>Workers - Inhalation; Long term systemic effects: 268 mg/m³</p> <p>Workers - Inhalation; Short term systemic effects: 1723 mg/m³</p> <p>Workers - Dermal; Long term systemic effects: 136 mg/kg/day</p> <p>General population - Inhalation; Long term systemic effects: 80 mg/m³</p> <p>General population - Dermal; Long term systemic effects: 81 mg/kg/day</p> <p>General population - Oral; Long term systemic effects: 61 mg/kg/day</p>
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PNEC	Fresh water; 6.83 mg/l
	marine water; 0.683 mg/l
	STP; 96 mg/l
	Sediment (Freshwater); 27.5 mg/kg
	Sediment (Marinewater); 2.75 mg/kg
	Soil; 1.49 mg/kg

sodium 4(or 5)-methyl-1H-benzotriazole (CAS: 64665-57-2)

DNEL	Workers - Inhalation; Long term systemic effects: 21.2 mg/m ³
	Workers - Dermal; Long term systemic effects: 0.3 mg/kg/day
	General population - Inhalation; Long term systemic effects: 350 µg/m ³
	General population - Dermal; Long term systemic effects: 0.01 mg/kg/day
	General population - Oral; Long term systemic effects: 0.01 mg/kg/day

PNEC	Fresh water; 0.008 mg/l
	marine water; 20 µg/l
	STP; 39.4 mg/l
	Sediment (Freshwater); 0.117 mg/kg
	Sediment (Marinewater); 0.292 mg/kg
	Soil; 18.7 µg/kg

Polypropylene Glycol (CAS: 25322-69-4)

DNEL	Workers - Inhalation; Long term local effects: 10 mg/m ³
	Workers - Dermal; Long term systemic effects: 84 mg/kg bw/day
	General population - Inhalation; Long term systemic effects: 10 mg/m ³
	General population - Dermal; Long term systemic effects: 51 mg/kg bw/day
	General population - Oral; Long term systemic effects: 24 mg/kg bw/day

PNEC	Fresh water; 0.1 mg/l
	marine water; 0.01 mg/l
	Intermittent release; 1 mg/l
	STP; 100 mg/l
	Sediment (Freshwater); 0.765 mg/kg sediment dw
	Sediment (Marinewater); 0.0765 mg/kg sediment dw
	Soil; 0.109 mg/kg soil dw

Denatonium Benzoate (CAS: 3734-33-6)

DNEL	Workers - Inhalation; Long term systemic effects: 4.99 mg/m ³
	Workers - Dermal; Long term systemic effects: 1.43 mg/kg/day
	General population - Inhalation; Long term systemic effects: 0.768 mg/m ³
	General population - Dermal; Long term systemic effects: 0.51 mg/kg/day
	General population - Oral; Long term systemic effects: 0.51 mg/kg/day

PNEC	Fresh water; 0.1 mg/l
	marine water; 10 µg/l
	Sediment (Freshwater); 25 mg/kg
	Sediment (Marinewater); 2.5 mg/kg
	Soil; 4.96 mg/kg

D11014A CHROMATINT URANINE CONC (Yellow) (CAS: 518-47-8)

Ingredient comments	WEL = Workplace Exposure Limits
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ACRYLIC ACID (CAS: 79-10-7)

DNEL

Workers - irritation (respiratory tract); Long term systemic effects: 30 mg/m³
 Workers - irritation (respiratory tract); Short term Acute: 30 mg/m³
 Workers - irritation (respiratory tract); Long term local effects: 30 mg/m³
 General population - irritation (respiratory tract); Long term systemic effects: 3.6 mg/m³
 General population - irritation (respiratory tract); Short term Acute: 3.6 mg/m³
 General population - irritation (respiratory tract); Long term local effects: 3.6 mg/m³
 General population - Oral; Long term systemic effects: 0.4 mg/kg/day
 General population - Oral; Short term Acute: 1.2 mg/kg/day

PNEC

Fresh water; 0.003 mg/l
 marine water; 0.3 µg/l
 STP; 0.9 mg/l
 Sediment (Freshwater); 0.024 mg/kg
 Sediment (Marinewater); 0.002 mg/kg
 Soil; 1.0 mg/kg

8.2. Exposure controls

Protective equipment



Appropriate engineering controls

No specific ventilation requirements.

Eye/face protection

Wear chemical splash goggles.

Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. To protect hands from chemicals, gloves should comply with European Standard EN374.

Other skin and body protection

Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures

Wash hands thoroughly after handling.

Respiratory protection

Respiratory protection not required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Yellow.
Odour	Characteristic. Mild.
pH	pH (diluted solution): 8.3
Melting point	-36.67 (50%)°C
Relative density	~ 1.07 @ 20°C
Solubility(ies)	Miscible with water.

9.2. Other information

Refractive index	1.38582
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Volatile organic compound This product contains a maximum VOC content of 8.5 %.

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 under the prescribed storage conditions.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Not applicable. Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid Avoid heat. Avoid freezing.

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 Does not decompose when used and stored as recommended. Thermal decomposition or combustion products may include the following substances: Oxides of carbon. Oxides of nitrogen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects No information available.

Acute toxicity - oral

Notes (oral LD₅₀) Harmful if swallowed.

ATE oral (mg/kg) 1,016.29

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 Based on available data the classification criteria are not met.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation No information available.

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.

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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 Contains an ingredient listed as: Repr. 2

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 Prolonged or repeated exposure may cause the following adverse effects: Liver and/or kidney damage.

Aspiration hazard

Aspiration hazard Not relevant.

Inhalation This is unlikely to occur but symptoms similar to those of ingestion may develop.

Ingestion Harmful if swallowed. May cause liver and/or renal damage.

Skin contact May be slightly irritating to skin. Prolonged or repeated exposure may cause severe irritation.

Eye contact May be slightly irritating to eyes. Prolonged or repeated exposure may cause severe irritation.

Toxicological information on ingredients.

ETHANEDIOL

Acute toxicity - oral

Notes (oral LD₅₀) Harmful if swallowed.

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 3500 mg/kg, Dermal, Mouse

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC50 > 2.5 mg/l, Inhalation, Rat

Skin corrosion/irritation

Skin corrosion/irritation Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

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

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Negative.

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Genotoxicity - in vivo Negative.

Carcinogenicity

Carcinogenicity No evidence of carcinogenicity in animal studies. Based on available data the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity - fertility Three-generation study - NOAEL > 1000 mg/kg bw/day, Oral, Rat F2 Fertility - NOEL 1000 mg/kg bw/day, Oral, Mouse F1

Reproductive toxicity - development No evidence of reproductive toxicity in animal studies.

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 Prolonged or repeated exposure may cause the following adverse effects: Liver and/or kidney damage.

Aspiration hazard

Aspiration hazard Not relevant.

Inhalation No specific health hazards known.

Ingestion Harmful if swallowed.

Skin contact May be slightly irritating to skin.

Eye contact May be slightly irritating to eyes.

2-Ethylhexanoic Acid

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 2043 mg/kg, Oral, Rat

Acute toxicity - dermal

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

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LC0 0.11 mg/m³, Inhalation, Rat

Skin corrosion/irritation

Skin corrosion/irritation Not irritating.

Serious eye damage/irritation

Serious eye damage/irritation Based on available data the classification criteria are not met.

Respiratory sensitisation

Respiratory sensitisation No information available.

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

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Genotoxicity - in vitro	Negative.
Genotoxicity - in vivo	Negative.
<u>Carcinogenicity</u>	
Carcinogenicity	No information available.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Fertility - NOAEL 800 mg/kg bw/day, Oral, Rat F2 Suspected of damaging fertility.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Based on available data the classification criteria are not met.
<u>Aspiration hazard</u>	
Aspiration hazard	Not relevant.

SODIUM HYDROXIDE

<u>Acute toxicity - oral</u>	
Acute toxicity oral (LD₅₀ mg/kg)	500.0
Species	Rat
Notes (oral LD₅₀)	Not applicable. REACH dossier information.
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	Not applicable. REACH dossier information.
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	Not applicable. REACH dossier information.
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Causes severe burns.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Causes serious eye damage.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	No information available.
<u>Skin sensitisation</u>	
Skin sensitisation	Not sensitising.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Negative.
Genotoxicity - in vivo	Negative.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.

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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.

PHOSPHORIC ACID ...%

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 2,600.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,740.0

Species Rabbit

Skin corrosion/irritation

Skin corrosion/irritation Causes severe burns.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro Negative.

Carcinogenicity

Carcinogenicity There is no evidence that the product can cause cancer.

Reproductive toxicity

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

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

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Aspiration hazard Not relevant.

PROPAN-1-OL

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,400.0

Species Rat

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 4,032.0

Species Rabbit

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 33.8

Species Rat

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

sodium 4(or 5)-methyl-1H-benzotriazole

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 800.0

Species Rat

Notes (oral LD₅₀) LD₅₀ 735 mg/kg, Oral, Rat Harmful if swallowed.

ATE oral (mg/kg) 800.0

Acute toxicity - dermal

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

Acute toxicity - inhalation

Notes (inhalation LC₅₀) No information available.

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 Not sensitising. REACH dossier information.

Skin sensitisation

Skin sensitisation Not sensitising.

Germ cell mutagenicity

Corguard RTU

Genotoxicity - in vitro	Negative.
Genotoxicity - in vivo	Negative.
<u>Carcinogenicity</u>	
Carcinogenicity	No information available.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met. REACH dossier information.
Reproductive toxicity - development	Repr. 2
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Based on available data the classification criteria are not met.
<u>Aspiration hazard</u>	
Aspiration hazard	Not relevant.

Denatonium Benzoate

<u>Acute toxicity - oral</u>	
Notes (oral LD₅₀)	LD ₅₀ 749 mg/kg, Oral, Rat
<u>Acute toxicity - dermal</u>	
Notes (dermal LD₅₀)	LD ₅₀ > 2000 mg/kg, Dermal, Rat
<u>Acute toxicity - inhalation</u>	
Notes (inhalation LC₅₀)	LC50 0.2 mg/l, Inhalation, Rat
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Causes skin irritation.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Causes serious eye damage.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	No information available.
<u>Skin sensitisation</u>	
Skin sensitisation	Not sensitising.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Negative.
Genotoxicity - in vivo	Negative.
<u>Carcinogenicity</u>	
Carcinogenicity	NOAEL 16 mg/kg/day, Oral, Rat No evidence of carcinogenicity in animal studies.
<u>Reproductive toxicity</u>	

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Reproductive toxicity - fertility Two-generation study - NOAEL 60 mg/kg/day, Oral, Rat P, F1 No evidence of reproductive toxicity in animal studies.

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.

D11014A CHROMATINT URANINE CONC (Yellow)

Inhalation No specific health hazards known.

Ingestion May cause discomfort if swallowed. May cause stomach pain or vomiting.

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

Eye contact May cause eye irritation.

Acute and chronic health hazards This product has low toxicity. Only large quantities are likely to have adverse effects on human health.

SECTION 12: Ecological information

Ecotoxicity No negative effects on the aquatic environment are known.

Ecological information on ingredients.

sodium 4(or 5)-methyl-1H-benzotriazole

Ecotoxicity Toxic to aquatic life with long lasting effects.

D11014A CHROMATINT URANINE CONC (Yellow)

Ecotoxicity Not regarded as dangerous for the environment. The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Acute aquatic toxicity

Acute toxicity - fish No information available.

Acute toxicity - aquatic invertebrates Not available.

Acute toxicity - aquatic plants Not available.

Acute toxicity - microorganisms Not available.

Acute toxicity - terrestrial Not available.

Chronic aquatic toxicity

Chronic toxicity - fish early life stage Not available.

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

Chronic toxicity - aquatic invertebrates Not available.

Ecological information on ingredients.

ETHANEDIOL

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 72860 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: > 100 mg/l, Daphnia magna

Acute toxicity - aquatic plants IC₅₀, 96 hours: 10940 mg/l, Pseudokirchneriella subcapitata

Acute toxicity - microorganisms EC₂₀, 30 minutes: 1995 mg/l, Activated sludge
Read-across data.

Chronic aquatic toxicity

Chronic toxicity - fish early life stage LC₅₀, 28 days: > 1500 mg/l, Menidia peninsulae (Tidewater silverside)

Chronic toxicity - aquatic invertebrates EC₅₀, 21 days: > 100 mg/l, Daphnia magna

2-Ethylhexanoic Acid

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: > 100 mg/l, Oryzias latipes (Red killifish)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 85.4 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 485.1 mg/l, Pseudokirchneriella subcapitata

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates EC₁₀, LC₁₀, NOEC, 21 days: 19.9 mg/l, Daphnia magna

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

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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.

PHOSPHORIC ACID ...%

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 138 mg/l, *Gambusia affinis*
LC₅₀, 96 hours: 3-3.25 mg/l, *Lepomis macrochirus* (Bluegill)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: > 100 mg/l, *Daphnia magna*

Acute toxicity - aquatic plants ErC₅₀, 72 hours: > 100 mg/l, *Desmodesmus subspicatus*
NOEC, 72 hours: 100 mg/l, *Desmodesmus subspicatus*

Acute toxicity - microorganisms EC₅₀, : 270 mg/l, Activated sludge

PROPAN-1-OL

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 4555 mg/l, *Pimephales promelas* (Fat-head Minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 3644 mg/l, *Daphnia magna*
NOEC, 21 days: > 100 mg/l, *Daphnia magna*

Acute toxicity - aquatic plants IC₅₀, 72 hours: > 1000 mg/l, Algae

sodium 4(or 5)-methyl-1H-benzotriazole

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 180 mg/l, *Brachydanio rerio* (Zebra Fish)
LC₅₀, 96 hours: 55 mg/l, *Cyprinodon variegatus* (Sheepshead minnow)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 8.58 mg/l, *Daphnia galeata*
LC₅₀, 48 hours: 55 mg/l, *Acartia tonsa*

Acute toxicity - aquatic plants ErC₅₀, 72 hours: 75 mg/l, *Pseudokirchneriella subcapitata*
EC₁₀, 72 hours: 1.18 - 2.86 mg/l, *Desmodesmus subspicatus*
EC₅₀, 72 hours: 52 mg/l, *Skeletonema costatum*
EC₁₀, 72 hours: 36 mg/l, *Skeletonema costatum*
EC₉₀, 72 hours: 83 mg/l, *Skeletonema costatum*
NOEC, 72 hours: 30 mg/l, *Skeletonema costatum*
EC₁₀, 7 days: 2.11 mg/l, *Lemna minor*

Acute toxicity - microorganisms EC₅₀, 3 hours: 1060 mg/l, Activated sludge
EC₁₀, NOEC, 3 hours: 394 mg/l, Activated sludge

Chronic aquatic toxicity

Corguard RTU

Chronic toxicity - aquatic invertebrates

EC₅₀, 21 days: > 37.6 mg/l, Daphnia magna
 NOEC, 21 days: 18.4 mg/l, Daphnia magna
 EC₁₀, 21 days: 0.4 - 0.97 mg/l, Daphnia galeata

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Acute aquatic toxicity

Acute toxicity - fish

LC₅₀, 96 hours: > 100 mg/l, Brachydanio rerio (Zebra Fish)

Acute toxicity - aquatic invertebrates

EC₅₀, 48 hours: > 500 mg/l, Daphnia magna

Acute toxicity - aquatic plants

EC₅₀, 72 hours: 281.556 mg/l, Chlorella vulgaris

Acute toxicity - microorganisms

EC₅₀, 15 minutes: 511.58 mg/l, Vibrio fischeri

12.2. Persistence and degradability

Persistence and degradability Ethanediol (Ethylene glycol): Rapid biodegradation Expected to be readily biodegradable.

Ecological information on ingredients.

ETHANEDIOL

Persistence and degradability

10 days 90-100% Rapidly degradable

SODIUM HYDROXIDE

Persistence and degradability

No data available.

Stability (hydrolysis)

Scientifically unjustified.
 REACH dossier information.

PROPAN-1-OL

Persistence and degradability

The substance is readily biodegradable. 83%; 28 days

sodium 4(or 5)-methyl-1H-benzotriazole

Persistence and degradability

Not readily biodegradable.

Phototransformation

Air - Half-life : 3.9 days

Stability (hydrolysis)

pH4, pH7, pH9 - Degradation 0: 5 days @ 50 +/- 0.5°C

Biodegradation

Soil - Half-life : 180 days

Denatonium Benzoate

Persistence and degradability

Not readily biodegradable.

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Stability (hydrolysis)

pH4, pH7, pH9 - Degradation 10%: ~ 5 days @ 50°C
 pH 5, pH7, pH9 - Degradation 10%: ~ 5 days @ 25°C
 pH 5 -10 - Half-life : ~ 1 year @ 25-50°C

12.3. Bioaccumulative potential

Bioaccumulative potential Bioaccumulation is unlikely.

Ecological information on ingredients.

ETHANEDIOL

Partition coefficient log Pow: -1.36 QSAR data.

SODIUM HYDROXIDE

Bioaccumulative potential No potential for bioaccumulation.

Partition coefficient No information required. REACH dossier information.

PHOSPHORIC ACID ...%

Bioaccumulative potential Not relevant.

PROPAN-1-OL

Partition coefficient log Pow: 0.25

sodium 4(or 5)-methyl-1H-benzotriazole

Bioaccumulative potential BCF: 2.422 L/kg, QSAR Bioaccumulation is unlikely. REACH dossier information.

Partition coefficient log Pow: 1.087

12.4. Mobility in soil

Ecological information on ingredients.

sodium 4(or 5)-methyl-1H-benzotriazole

Adsorption/desorption coefficient - Koc: 110 @ 20°C

Denatonium Benzoate

Adsorption/desorption coefficient Soil - Koc: 2466.04 @ 20°C

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

ETHANEDIOL

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

2-Ethylhexanoic Acid

Corguard RTU

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

SODIUM HYDROXIDE

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

PHOSPHORIC ACID ...%

Results of PBT and vPvB assessment Not relevant.

sodium 4(or 5)-methyl-1H-benzotriazole

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

Denatonium Benzoate

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

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

Corguard RTU

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).
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). Commission Regulation (EU) No 2015/830 of 28 May 2015.
Health and environmental listings	None of the ingredients are listed.
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.

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

Canada - DSL/NDL

All the ingredients are listed or exempt.

US - TSCA

All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification

Not applicable.

Australia - AICS

All the ingredients are listed or exempt.

Japan - ENCS

All the ingredients are listed or exempt.

Korea - KECI

All the ingredients are listed or exempt.

China - IECSC

All the ingredients are listed or exempt.

Philippines – PICCS

All the ingredients are listed or exempt.

Corguard RTU

New Zealand - NZIOC

All the ingredients are listed or exempt.

Taiwan - TCSI

All the ingredients are listed or exempt.

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet

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.
 BOD: Biochemical Oxygen Demand.
 CAS: Chemical Abstracts Service.
 DNEL: Derived No Effect Level.
 EC₅₀: 50% of maximal Effective Concentration.
 GHS: Globally Harmonized System.
 IARC: International Agency for Research on Cancer.
 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).
 LOAEC: Lowest Observed Adverse Effect Concentration.
 LOAEL: Lowest Observed Adverse Effect Level.
 NOAEC: No Observed Adverse Effect Concentration.
 NOAEL: No Observed Adverse Effect Level.
 NOEC: No Observed 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.
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.
 SVHC: Substances of Very High Concern.
 UVCB - Unknown or variable composition, complex reaction products or Biological materials.
 vPvB: Very Persistent and Very Bioaccumulative.

Revision date	19/04/2021
Revision	4
Supersedes date	23/02/2021
SDS number	21557

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Hazard statements in full

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H361d Suspected of damaging the unborn child.
H373 May cause damage to organs (Kidneys) through prolonged or repeated exposure if swallowed.
H412 Harmful to aquatic life with long lasting effects.