

## Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 07.04.2021

Version number 38

Revision: 07.04.2021

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

#### 1.1 Product identifier

Trade name: **Radiator Flush**

Article number: 84667

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

FOR PROFESSIONAL AND INDUSTRIAL USE ONLY

#### Application of the substance / the mixture

Cleaning agent / Cleaner

Descalant

#### 1.3 Details of the supplier of the safety data sheet

##### Manufacturer/Supplier:

KENT (United Kingdom) Ltd

Forsyth House

Pitreavie Drive

Pitreavie Business Park

Dunfermline

Fife

KY11 8US

Tel: +44 01383 723344 / 0800 136925 Monday - Thursday 8.30am - 5.30pm, Friday 9.00am - 3.00pm

Fax: +44 1383 620079

SDS@kenteurope.com

#### 1.4 Emergency telephone number:

Tel: +44 01383 723344 During normal office hours - Monday - Thursday 8.30am - 5.30pm, Friday 9.00am - 3.00pm

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008



Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

#### 2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 The product is classified and labelled according to the CLP regulation.

#### Hazard pictograms



GHS07

Signal word Warning

#### Hazard-determining components of labelling:

QUATERNARY AMMONIUM COMPOUNDS, C12-14-ALKYL(HYDROXYETHYL)DIMETHYL, ETHOXYLATED, CHLORIDES

Phosphoric acid

#### Hazard statements

H315 Causes skin irritation.

H319 Causes serious eye irritation.

#### Precautionary statements

P280 Wear protective gloves / eye protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and 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.

P337+P313 If eye irritation persists: Get medical advice/attention.

P402+P404 Store in a dry place. Store in a closed container.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

### SECTION 3: Composition/information on ingredients

#### 3.2 Chemical characterisation: Mixtures

· **Description:** Mixture of the substances listed below with harmless additions.

##### Dangerous components:

CAS: 5329-14-6 EINECS: 226-218-8 Reg.nr.: 01-2119488633-28	sulphamidic acid ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Aquatic Chronic 3, H412	5-10%
CAS: 7664-38-2 EINECS: 231-633-2 Reg.nr.: 01-2119485924-24	Phosphoric acid ⚠ Skin Corr. 1B, H314 Specific concentration limits: Skin Corr. 1B; H314: C ≥ 25 % Skin Irrit. 2; H315: 10 % ≤ C < 25 % Eye Irrit. 2; H319: 10 % ≤ C < 25 %	5-10%
CAS: 15543-25-0	QUATERNARY AMMONIUM COMPOUNDS, C12-14-ALKYL(HYDROXYETHYL)DIMETHYL, ETHOXYLATED, CHLORIDES ⚠ Eye Dam. 1, H318; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315	5-10%

· **Additional information** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

- **After inhalation** In case of unconsciousness bring patient into stable side position for transport.
- **After skin contact**  
Instantly remove any clothing soiled by the product.  
If skin irritation continues, consult a doctor.
- **After eye contact** Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.
- **After swallowing** Rinse out mouth.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.
- **5.2 Special hazards arising from the substance or mixture**  
Formation of toxic gases is possible during heating or in case of fire.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Do not inhale explosion gases or combustion gases.  
Wear self-contained breathing apparatus.  
Wear full protective suit.
- **Additional information** Collect contaminated fire fighting water separately. It must not enter drains.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:** Do not allow to enter drainage system, surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Send for recovery or disposal in suitable containers.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose of contaminated material as waste according to item 13.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling

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See Section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.

### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Open and handle container with care.  
Avoid contact with the eyes and skin.

· **Information about protection against explosions and fires:** No special measures required.

#### 7.2 Conditions for safe storage, including any incompatibilities

##### Storage

· **Requirements to be met by storerooms and containers:** Store in cool location.

· **Information about storage in one common storage facility:** Not required.

##### Further information about storage conditions:

Store in cool, dry conditions in well sealed containers.  
Protect from heat and direct sunlight.

· **Storage class** 12

· **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

· **Additional information about design of technical systems:** No further data; see item 7.

#### Components with limit values that require monitoring at the workplace:

##### 7664-38-2 Phosphoric acid

WEL	Short-term value: 2 mg/m <sup>3</sup> Long-term value: 1 mg/m <sup>3</sup>
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· **Regulatory information** WEL: EH40/2020

##### DNELs

##### 7664-38-2 Phosphoric acid

Inhalative	Acute local effect	2 mg/m <sup>3</sup> (Worker)
	Long term local effect	2.92 mg/m <sup>3</sup> (Worker)

##### PNECs

##### 5329-14-6 sulphamidic acid

PNEC	0.3 mg/l (Aqua (freshwater)) (short-term)
	0.03 mg/l (Aqua (marine water)) (short-term)
	0.3 mg/kg (Freshwater sediment) (short-term)
	0.03 mg/kg (Marine water sediment) (short-term)
	200 mg/l (Sewage treatment plant) (short-term)
	3 mg/kg (Soil) (short-term)

· **Additional information:** The lists that were valid during the compilation were used as basis.

#### 8.2 Exposure controls

##### Personal protective equipment

##### General protective and hygienic measures

Keep away from foodstuffs, beverages and food.  
Take off immediately all contaminated clothing  
Wash hands during breaks and at the end of the work.  
Avoid contact with the eyes and skin.

· **Breathing equipment:** Not necessary if room is well-ventilated.

##### Protection of hands:



Protective gloves.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

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**Material of gloves**

Nitrile rubber, NBR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material**

Value for the permeation: Level 6 &gt; 480 minutes

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

**Eye protection:**

Safety glasses (EN 166)

Tightly sealed safety glasses. (EN 166)

**Body protection:** Protective work clothing (EN-13034/6)**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance:****Form:** Fluid**Colour:** Red**Odour:** Light**Odour threshold:** Not determined.**pH-value:** ~2**Change in condition****Melting point/freezing point:** Not determined**Initial boiling point and boiling range:** 100 °C**Flash point:** Not applicable**Inflammability (solid, gaseous)** Not applicable.**Decomposition temperature:** Not determined.**Self-inflammability:** Product is not selfigniting.**Explosive properties:** Product is not explosive.**Critical values for explosion:****Lower:** Not determined.**Upper:** Not determined.**Vapour pressure:** Not determined.**Density** Not determined**Relative density at 20 °C** 1.08**Vapour density** Not determined.**Evaporation rate** Not determined.**Solubility in / Miscibility with****Water:** Not miscible / difficult to mix**Partition coefficient: n-octanol/water:** Not determined.**Viscosity:****dynamic:** Not determined.**kinematic:** Not determined.**Solvent content:****Organic solvents:** NIL VOC**9.2 Other information** No further relevant information available.

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### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** Heat. Hot surfaces. Sources of ignition. Flames.
- **10.5 Incompatible materials:**  
Alkali (lyes)  
Strong oxidising agents
- **10.6 Hazardous decomposition products:** Formation of toxic gases is possible during heating or in case of fire.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
  - **Acute toxicity** Based on available data, the classification criteria are not met.
  - **LD/LC50 values that are relevant for classification:**
- |                                   |      |                        |  |
|-----------------------------------|------|------------------------|--|
| <b>5329-14-6 sulphamidic acid</b> |      |                        |  |
| Oral                              | LD50 | 3160 mg/kg (Rat)       |  |
| <b>7664-38-2 Phosphoric acid</b>  |      |                        |  |
| Oral                              | LD50 | 2600 mg/kg (Rat)       |  |
| Dermal                            | LD50 | 2740 mg/kg (Rabbit)    |  |
|                                   | IC50 | 270 (Activated sludge) |  |
- **Primary irritant effect:**
  - **Skin corrosion/irritation**  
Causes skin irritation.
  - **Serious eye damage/irritation**  
Causes serious eye irritation.
  - **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
  - **Additional toxicological information:**
  - **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)**
  - **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
  - **Carcinogenicity** Based on available data, the classification criteria are not met.
  - **Reproductive toxicity** Based on available data, the classification criteria are not met.
  - **STOT-single exposure** Based on available data, the classification criteria are not met.
  - **STOT-repeated exposure** Based on available data, the classification criteria are not met.
  - **Aspiration hazard** Based on available data, the classification criteria are not met.

### SECTION 12: Ecological information

- **12.1 Toxicity**
  - **Aquatic toxicity:**
- |   |                                       |
|---|---------------------------------------|
| <b>5329-14-6 sulphamidic acid</b>   |                                       |
| EC50 (96 hr)  | 71.6 mg/l (Daphnia magna)             |
| EC50 (48 hr)  | 48 mg/l (Desmodesmus subspicatus)     |
| LC50 (96 hr)  | 70.3 mg/l (Pimephales promelas)       |
| <b>7664-38-2 Phosphoric acid</b>  |                                       |
| EC50 (24 hr)  | 29 mg/l (Daphnia magna) (ISO 6341 15) |
| EC50 (72 hr)  | >100 mg/l (Algae)                     |
| LC50 (24 hr)  | 245 mg/l (Brachydanio rerio)          |
| LC50  | >100 ug/l (Fish) (OECD 203)           |
| LC50 (96 hr)  | 75.1 mg/l (Oryzias latipes)           |
|   | 98-106 mg/l (Fish)                    |
| <b>15543-25-0 QUATERNARY AMMONIUM COMPOUNDS, C12-14-ALKYL(HYDROXYETHYL)DIMETHYL, ETHOXYLATED, CHLORIDES</b> |                                       |
| EC50 (48 hr)  | >1-10 mg/l (Algae)                    |
|   | >1-10 mg/l (Daphnia magna)            |
| LC50 (96 hr)  | >10-100 mg/l (Fish)                   |

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- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** Does not accumulate in organisms
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**  
This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them, at their direct request or at the request of a detergent manufacturer.  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.  
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleaning agent:** Diluted caustic solution.

### SECTION 14: Transport information

- |  |  |
|--|--|
| · <b>14.1 UN-Number</b>  |  |
| · <b>ADR, ADN, IMDG, IATA</b>  | Void   |
| · <b>14.2 UN proper shipping name</b>  |  |
| · <b>ADR, ADN, IMDG, IATA</b>  | Void   |
| · <b>14.3 Transport hazard class(es)</b>   |  |
| · <b>ADR, ADN, IMDG, IATA</b>  |  |
| · <b>Class</b>   | Void   |
| · <b>14.4 Packing group</b>  |  |
| · <b>ADR, IMDG, IATA</b>   | Void   |
| · <b>14.5 Environmental hazards:</b>   |  |
| · <b>Marine pollutant:</b>   | No   |
| · <b>14.6 Special precautions for user</b>                                       | Not applicable.                                      |
| · <b>14.7 Transport in bulk according to Annex II of Marpol and the IBC Code</b> | Not applicable.                                      |
| · <b>Transport/Additional information:</b>                                       | Not dangerous according to the above specifications. |
| · <b>UN "Model Regulation":</b>  | Void   |

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **National regulations**
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

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**SECTION 16: Other information**

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant phrases**

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.

H412 Harmful to aquatic life with long lasting effects.

· **Department issuing data specification sheet:** Environment protection department· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· **Data compared to the previous version altered. \***