SAFETY DATA SHEET

Prepared according to Annex II of EC Regulation 1907/2006

Radiator Flush

01. Identification of the substance/preparation and of the company/undertaking

Product name

Radiator Flush

Use of the substance / preparation

additive

Manufacturer/Supplier

SCT-Vertriebs GmbH
Wedel/Hamburg

Street/P.O.Box

Feldstrasse 154

Country code/Postal code/Town/City

22880 Wedel

Contact

email: info@sct-germany.de

Emergency information

+49 4103 1211 0 (08:00 - 17:00 h)

02. Composition/information on ingredients

To people

See point 11 and 15.
Preparation is classified as hazardous in the sense of directive 1999/45/EC.
36 Irritating to eyes.

To the environment

See point 12.

03. Hazard identification

Chemical			
content%	Symbol	R-phrases	EINECS, ELINCS
	Registration number(ECHA)		

Ethanediol			
1.-10	Xn	22	203-473-3

Fatty alcohol plyglycol ether			
1-<10	Xn/Xi	22-41	

Sodium alkane sulfonate			
1.-5	Xi	38-41	288-330-3

Sodium nitrite			
0,05 - <1	O/T/N	8-25-50	231-555-9

Disodium tetraborate pentahydrate			
0,1 - <1		60(Re. Ca.2)-61(Re.Ca.2)	215-540-4

For complete wording of the R-phrases, refer to point 16

04. First-aid measures

4.1 Inhalation

Remove person from danger area.
Supply person with fresh air and consult doctor according to symptoms.

4.2 Eye contact

Wash thoroughly for several minutes using copious water - call doctor immediately, have Data Sheet available.

4.3 Skin contact

Wash thoroughly with soap and copious water - remove contaminated clothing immediately. If skin irritation occurs (redness etc.), consult doctor.

4.4 Ingestion

Rinse the mouth thoroughly with water.
Do not induce vomiting - give copious water to drink. Consult doctor immediately.

4.5 Special resources necessary for first aid

Indications for the physician Symptomatic treatment

05. Fire-fighting measures

5.1 Suitable extinguishing media

Product is not combustible. Adapt to the nature and extent of fire.

5.2 Extinguishing media which shall not be used for safety reasons

High volume water jet

5.3 Special expsure hazards arising from the substance of preparation itself, combustion products, resulting gases

In case of fire the following can develop:
Oxides of carbon
Oxides of nitrogen
Oxides of sulphur

5.4 Special protective equipment for fire-fighters

In case of fire and/or explosion do not breathe fumes. Protective respirator with independent air supply.
Accordingto size of fire. Full protection, if necessary.

5.5 Further information

Dispose of contaminated extinction water according to official regulations.

Refer to point 13 and for personal protection refer to point 8

06. Accidental release measures

6.1 Personal precautions

Ensure sufficient supply of air. Avoid contact with eyes or skin. If applicable caution - risk of slipping

6.2 Enviromental precautions

If leakage occurs. dam up. Prevent from entering drainage system. Prevent surface and ground-water infiltration, as well as ground penetration

6.3 Methods for cleaning up

Collect using absorbant material (e.g. Universal binding medium, sand, kieselguhr) and dispose of according to point 13.

07. Handling and storage

7.1 Handling

Tips for safe handling:
See point 6.1
Ensure good ventilation. Wash hands beforebreaks and at end of work. Eating, drinking, smoking, as well as food-storage, is prohibited in work-room. Observe directions on label and instructions for use.
Use working methods according to operating instructions.

7.2 Storage

Reqiuirement for storage rooms and containers:
Store product closed and only in original packing Not to be stored in gangways or stair wells.
Special storage conditions:
See point 10
Store in a well ventilated place

08. Exposure controls/personal protection

Chemcial Name	Ethanediol	Content%: 1-10
WEL-TWA: 10mg/m³ (particulate, 52 mg/m³ (vapour) (WEL), 20ppm (52 mg/m³)(EC)	WEL-STEL: 104 mg/m³ (vapour) (WEL), 40 ppm (104 mg/m³) (EC)	----
BMGV: ---		Other informations: Sk (particulate)

Chemcial Name	Disodium tetraborate pentahydrate	Content%: 0,1 - <1
WEL-TWA: 1 mg/m³	WEL-STEL: ---	----
BMGV: ---		Other informations: ---

WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). | WEL-STEL = Workplace Exposure Limit - Short-terme exposure limit (15-minute reference period). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.
** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

8.2 Exposure controls

8.2.1 Occupational exposure controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing

protection should be worn. Applies only if maximum permissible exposure values are listed here.
Respiratory protection:
Normally not necessary. If OES or MEL is exceeded. Filter A P 3 (EN 141)
Hand protection: Solvent resistant protective gloves (EN 374). If applicable Protective nitrile gloves (EN 374) Protective hand cream recommended. Unsuitable material:
Cotton gloves
Eye protection:Tight fitting protective goggles with side protection (EN 166). Skin protection:Protective working garments (e.g. safety shoes EN 344, long-sleeved protective working garments) Additional information on hand protection - No tests have been performed.Selection made for preparations according to the best available knowledge and information on the ingredients. Selection of materials derived from glove manufacturer's indications.Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.In the case of preparations the resistance of glove materials cannot be calculated in advance so it has to be tested before use. The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.2 Environmental exposure control

n.a.v.

09. Physical and chemical properties

Physical state:	Liquid
Colour:	Clear
Odour:	Characteristic
pH-value undiluted:	9,7
Boiling point/boling range (°C)	100
Melting point/melting range (°C)	n.av.
Flash point (°C)	n.c.
Oxidising properties:	No
Minimum limit of explosion:	n.a.
Maximum limit of explosion:	n.a.
Vapour pressure:	n.c.
Density (g/ml):	1,022 (20°C)
Water solubility:	Mixable
Vapour density (air=1)	n.c.
Viscosity:	7.3 mm 2/s (40°C)

10. Stability and reactivity

Conditions to avoid
See point 7
Stable when handled and stored correctly
Materials to avoid
See point 7
Avoid contact with strong oxidizing agents
Hazardous decompostion products
See point 5.3
No decomposition when used as directed.

11. Toxicological information

Acute toxicity and immediate effects

Ingestion, LD50 rat oral (mg/kg):	n.av.
Inhalation, LC50 rat inhal (mg/l/4h):	n.av.
Skin contact, LD50 rat dermal (mg/kg):	n.av.
Eye contact:	See point 15

Delayed and chronic effects

Sensitization:	n.c.
Carcinogenicity:	n.c.
Mutagenicity:	n.c.
Reproductive toxicity:	n.c.
Narcosis:	n.c.

Further information
Classification according to calculation procedure The following may occur:
Skin irritation possible with prolonged contact.

12. Ecological information

Water hazard class (Germany):	2
Self classification:	Yes (VwVwS)

Persistence and degradability:
100% OECD 301 E *
The surfactant(s) contained in this preparation complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No.648/2004 on detergents.
Supporting documents that confirm this are kept available for the competent authorities and will be provided by a detergent manufacturer upon
inquiry or demand.
Behaviour in sewage plants:
According to the recipe, contains no AOX.

Aquatic toxicity:	n.av.
Ecological toxicity:	n.av.
Accumulation:	n.av.

13. Disposal considerations

13.1. for the material / preparation / residue
EC disposal code no.:
The waste codes are recommendations based on the scheduled use of this product.
Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2001/118/EC, 2001/119/EC, 2001/573/EC)
07 06 01 aqueous washing liquids and mother liquors
20 01 29 detergents containing dangerous substances
Recommendation:
Pay attention to local and national official regulations
Implement substance recycling.
E.g. suitable incineration plant.
E.g. dispose at suitable refuse site.
Approved rubbish dump for special refuse
13.2 for contaminated packing material
See point 13.1
Pay attention to local and national official regulations
Empty container completely.
Uncontaminated packaging can be recycled.
Dispose of packaging that cannot be cleaned in the same manner as the substance.

14. Transport information

General statements

UN-Number:	n.a.

Road/Rail-transport (ADR/RID)

Class/packing group:	n.a.
Classification code:	n.a.
LQ:	n.a.
Tunnel restriction code:	

Transport by sea

IMDG-code:	n.a. (class/packing group)
Marine Pollutant:	n.a

Transport by air

IATA:	n.a. (class/secondary danger/packing group)

Additional information:
Non-dangerous material according to Transport Regulations.

15. Regulatory information

Classification according to Dangerous Product Regulations incl. EC Directives (67/548/EEC and 1999/45/EC)

Symbols: Xi
Indications of danger:
Irritant
R-phrases:
36 Irritating to eyes. S-phrases:
2 Keep out of the reach of children.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
46 If swallowed, seek medical advice immediately and show this container or label.
56 Dispose of this material and its container to hazardous or special waste collection point.
Additions: n.a.
Observe restrictions: Yes
Regulation (EC) No 1907/2006, Annex XVII.
VOC 1999/13/EC:
Not applicable

16. Other information

These details refer to the product as it is delivered.

Storage class VCI (Germany):	10/12
Revised points:	2, 15

The following phrases represent the prescribed R-phrases / H-phrases (GHS) for the ingredients (designated in point 3).
22 Harmful if swallowed.
41 Risk of serious damage to eyes.
38 Irritating to skin.
8 Contact with combustible material may cause fire.
25 Toxic if swallowed.
50 Very toxic to aquatic organisms.
60 May impair fertility.
61 May cause harm to the unborn child.

Legend

n.a. = not applicable / n.v., k.D.v. = n.av. = not available / n.g. = n.c. = not checked

WEL = Workplace Exposure Limit EH40, TWA = Long-term exposure limit (8-hour TWA (= time weighted average) reference period), STEL = Short-terme exposure limit (15-minute reference period) / BMGV = Biological monitoring guidance value EH40

AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany) / BGW = "Biologischer Grenzwert" (biological limit value, Germany) VbF = Regulations for flammable liquids (Austria)
WGK = water hazard class (Germany) - WGK 3 = very hazardous, WGK 2 = hazardous, WGK 1 = slightly hazardous to water
VOC = Volatile organic compounds / AOX = Adsorbable organic halogen compounds
VwVwS = Administrative Order relating to substances hazardous to water (Germany)

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge.