1. Identification

Product identifier: Gunk 10 Minute Radiator Flush

Other means of identification:
- SDS number: C1412G
- Part No.: C1412G
- Tariff code: 3402.20.5100

Recommended use: Radiator Flush

Recommended restrictions: None known.

Manufacturer/Importer/Supplier/Distributor information
- Manufacturer: RSC Chemical Solutions
  - Address: 600 Radiator Road, Indian Trail, NC 28079, United States
  - Telephone: Customer Service: (704) 821-7643, Technical: (704) 684-1811
  - Website: www.rscbrands.com
  - E-mail: sds@rscbrands.com
  - Emergency phone number: Emergency Telephone: (303) 623-5716, Emergency Contact: RMPDC (877-740-5015)

2. Hazard(s) identification

Physical hazards: Not classified.

Health hazards: Acute toxicity, inhalation Category 4

Environmental hazards: Not classified.

OSHA defined hazards: Not classified.

Label elements

<table>
<thead>
<tr>
<th>Signal word</th>
<th>Hazard statement</th>
<th>Precautionary statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Warning</td>
<td>Harmful if inhaled.</td>
<td>Prevention: Avoid breathing vapors. Use only outdoors or in a well-ventilated area. Response: If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. Storage: Store away from incompatible materials. Disposal: Dispose of waste and residues in accordance with local authority requirements. Hazard(s) not otherwise classified (HNOC): None known. Supplemental information: None.</td>
</tr>
</tbody>
</table>

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>Common name and synonyms</th>
<th>CAS number</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol</td>
<td></td>
<td>111-76-2</td>
<td>3 - 5</td>
</tr>
</tbody>
</table>

Other components below reportable levels

90 - 100
4. First-aid measures

Inhalation
Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact
Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact
Rinse off with water. Get medical attention if irritation develops and persists.

Ingestion
Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed
Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed
Provide general supportive measures and treat symptomatically. Keep victim warm. Keep victim under observation. Symptoms may be delayed.

General information
Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media
Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media
Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical
During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

Fire fighting equipment/instructions
Move containers from fire area if you can do so without risk.

Specific methods
Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards
No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapors and spray mists. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up
Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.

Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Environmental precautions
Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

7. Handling and storage

Precautions for safe handling
Do not get in eyes, on skin, or on clothing. Avoid inhalation of vapors and spray mists. Avoid prolonged exposure. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities
Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol (CAS 111-76-2)</td>
<td>PEL</td>
<td>240 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>50 ppm</td>
</tr>
</tbody>
</table>

Material name: Gunk 10 Minute Radiator Flush

C1412G  Version #: 01  Issue date: 01-25-2016  SDS US
### US. ACGIH Threshold Limit Values

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol (CAS 111-76-2)</td>
<td>TWA</td>
<td>20 ppm</td>
</tr>
</tbody>
</table>

### US. NIOSH: Pocket Guide to Chemical Hazards

<table>
<thead>
<tr>
<th>Components</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol (CAS 111-76-2)</td>
<td>TWA</td>
<td>24 mg/m³</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 ppm</td>
</tr>
</tbody>
</table>

### Biological limit values

<table>
<thead>
<tr>
<th>ACGIH Biological Exposure Indices</th>
<th>Value</th>
<th>Determinant</th>
<th>Specimen</th>
<th>Sampling Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol (CAS 111-76-2)</td>
<td>200 mg/g</td>
<td>Butyoxacetic acid (BAA), with hydrolysis</td>
<td>Creatinine in urine</td>
<td>*</td>
</tr>
</tbody>
</table>

* - For sampling details, please see the source document.

### Exposure guidelines

#### US - California OELs: Skin designation
2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

#### US - Minnesota Haz Subs: Skin designation applies
2-Butoxyethanol (CAS 111-76-2) Skin designation applies.

#### US - Tennessee OELs: Skin designation
2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

#### US NIOSH Pocket Guide to Chemical Hazards: Skin designation
2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

#### US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)
2-Butoxyethanol (CAS 111-76-2) Can be absorbed through the skin.

### Appropriate engineering controls
Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

### Individual protection measures, such as personal protective equipment

#### Eye/face protection
wear safety glasses with side shields (or goggles)

#### Skin protection

##### Hand protection
Wear appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

##### Other
Wear suitable protective clothing.

#### Respiratory protection
Chemical respirator with organic vapor cartridge and full facepiece if threshold limits are exceeded.

#### Thermal hazards
Wear appropriate thermal protective clothing, when necessary.

### General hygiene considerations
Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

### 9. Physical and chemical properties

#### Appearance
Liquid. Clear.

#### Physical state
Liquid.

#### Form
Liquid.

#### Color
Fluorescent Light yellow.

#### Odor
Characteristic odor

#### Odor threshold
Not available.

#### pH
7 - 9

#### Melting point/freezing point
Not available.

#### Initial boiling point and boiling range
Not available.

#### Flash point
Not available.
### Evaporation rate
Not available.

### Flammability (solid, gas)
Not applicable.

#### Upper/lower flammability or explosive limits
- **Flammability limit - lower (%)**
  Not available.
- **Flammability limit - upper (%)**
  Not available.
- **Explosive limit - lower (%)**
  Not available.
- **Explosive limit - upper (%)**
  Not available.

#### Flammability limit - lower (%)
Not available.

#### Flammability limit - upper (%)
Not available.

#### Explosive limit - lower (%)
Not available.

#### Explosive limit - upper (%)
Not available.

### Vapor pressure
0.00001 hPa estimated

### Vapor density
Not available.

### Relative density
Not available.

#### Solubility(ies)
- **Solubility (water)**
  Not available.

#### Partition coefficient
- **(n-octanol/water)**
  Not available.

### Auto-ignition temperature
Not available.

### Decomposition temperature
Not available.

### Viscosity
Not available.

#### Other information
- **Density**
  8.34 lbs/gal
- **Explosive properties**
  Not explosive.
- **Oxidizing properties**
  Not oxidizing.
- **Percent volatile**
  99.74 % estimated
- **Specific gravity**
  1
- **VOC (Weight %)**
  3.5 %

### 10. Stability and reactivity

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

#### Chemical stability
Material is stable under normal conditions.

#### Possibility of hazardous reactions
No dangerous reaction known under conditions of normal use.

#### Conditions to avoid
Contact with incompatible materials.

#### Incompatible materials
Strong oxidizing agents.

#### Hazardous decomposition products
No hazardous decomposition products are known.

### 11. Toxicological information

#### Information on likely routes of exposure
- **Inhalation**
  Harmful if inhaled.
- **Skin contact**
  2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.
- **Eye contact**
  Direct contact with eyes may cause temporary irritation.
- **Ingestion**
  Expected to be a low ingestion hazard.

#### Symptoms related to the physical, chemical and toxicological characteristics
- **Direct contact with eyes may cause temporary irritation.**

#### Information on toxicological effects
- **Acute toxicity**
  Harmful if inhaled.
2-Butoxyethanol (CAS 111-76-2)

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Acute</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dermal</td>
<td>Rabbit</td>
<td>400 mg/kg</td>
</tr>
<tr>
<td><strong>Inhalation</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LC50</td>
<td>Mouse</td>
<td>700 ppm, 7 Hours</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>450 ppm, 4 Hours</td>
</tr>
<tr>
<td><strong>Oral</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LD50</td>
<td>Guinea pig</td>
<td>1.2 g/kg</td>
</tr>
<tr>
<td></td>
<td>Mouse</td>
<td>1.2 g/kg</td>
</tr>
<tr>
<td></td>
<td>Rabbit</td>
<td>0.32 g/kg</td>
</tr>
<tr>
<td></td>
<td>Rat</td>
<td>560 mg/kg</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

**Skin corrosion/irritation**
Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation**
Direct contact with eyes may cause temporary irritation.

**Respiratory or skin sensitization**
- **Respiratory sensitization**: Not a respiratory sensitizer.
- **Skin sensitization**: This product is not expected to cause skin sensitization.
- **Germ cell mutagenicity**: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity**
- **IARC Monographs. Overall Evaluation of Carcinogenicity**
  - 2-Butoxyethanol (CAS 111-76-2): Not classifiable as to carcinogenicity to humans.
  - Not listed.

**Reproductive toxicity**
This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure**
Not classified.

**Specific target organ toxicity - repeated exposure**
Not classified.

**Aspiration hazard**
Not an aspiration hazard.

**Chronic effects**
May be harmful if absorbed through skin. Prolonged inhalation may be harmful.

- 2-Butoxy ethanol may be absorbed through the skin in toxic amounts if contact is repeated and prolonged. These effects have not been observed in humans.

**12. Ecological information**

**Ecotoxicity**
The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

<table>
<thead>
<tr>
<th>Components</th>
<th>Species</th>
<th>Test Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aquatic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>LC50</td>
<td>1250 mg/l, 96 hours</td>
</tr>
</tbody>
</table>

* Estimates for product may be based on additional component data not shown.

**Persistence and degradability**
No data is available on the degradability of this product.

**Bioaccumulative potential**
- **Partition coefficient n-octanol / water (log Kow)**
  - 2-Butoxyethanol: 0.83

**Mobility in soil**
No data available.
Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions
Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations
Dispose in accordance with all applicable regulations.

Hazardous waste code
The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging
Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT
Not regulated as dangerous goods.

IATA
Not regulated as dangerous goods.

IMDG
Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not established.

15. Regulatory information

US federal regulations
This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)
2-Butoxyethanol (CAS 111-76-2) Listed.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)
Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories
Immediate Hazard - Yes
Delayed Hazard - No
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - No

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous chemical
No

SARA 313 (TRI reporting)

<table>
<thead>
<tr>
<th>Chemical name</th>
<th>CAS number</th>
<th>% by wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Butoxyethanol</td>
<td>111-76-2</td>
<td>3 - &lt; 5</td>
</tr>
</tbody>
</table>

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA)
Not regulated.
US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)
Not listed.

US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))
2-Butoxyethanol (CAS 111-76-2)

US. Massachusetts RTK - Substance List
2-Butoxyethanol (CAS 111-76-2)

US. New Jersey Worker and Community Right-to-Know Act
2-Butoxyethanol (CAS 111-76-2)

US. Pennsylvania Worker and Community Right-to-Know Law
2-Butoxyethanol (CAS 111-76-2)

US. Rhode Island RTK
2-Butoxyethanol (CAS 111-76-2)

US. California Proposition 65
California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

<table>
<thead>
<tr>
<th>Country(s) or region</th>
<th>Inventory name</th>
<th>On inventory (yes/no)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>Australian Inventory of Chemical Substances (AICS)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Domestic Substances List (DSL)</td>
<td>No</td>
</tr>
<tr>
<td>Canada</td>
<td>Non-Domestic Substances List (NDSL)</td>
<td>No</td>
</tr>
<tr>
<td>China</td>
<td>Inventory of Existing Chemical Substances in China (IECSC)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European Inventory of Existing Commercial Chemical Substances (EINECS)</td>
<td>No</td>
</tr>
<tr>
<td>Europe</td>
<td>European List of Notified Chemical Substances (ELINCS)</td>
<td>No</td>
</tr>
<tr>
<td>Japan</td>
<td>Inventory of Existing and New Chemical Substances (ENCS)</td>
<td>No</td>
</tr>
<tr>
<td>Korea</td>
<td>Existing Chemicals List (ECL)</td>
<td>No</td>
</tr>
<tr>
<td>New Zealand</td>
<td>New Zealand Inventory</td>
<td>No</td>
</tr>
<tr>
<td>Philippines</td>
<td>Philippine Inventory of Chemicals and Chemical Substances (PICCS)</td>
<td>No</td>
</tr>
<tr>
<td>United States &amp; Puerto Rico</td>
<td>Toxic Substances Control Act (TSCA) Inventory</td>
<td>Yes</td>
</tr>
</tbody>
</table>

*A “Yes” indicates that all components of this product comply with the inventory requirements administered by the governing country(s) A “No” indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date: 01-25-2016
Version #: 01

HMIS® ratings
Health: 2
Flammability: 0
Physical hazard: 0

NFPA ratings
Health: 2
Flammability: 0
Instability: 0

Disclaimer
The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.