I. IDENTIFICATION OF THE MIXTURE (PREPARATION) AND OF THE COMPANY/UNDERTAKING

1.1 PRODUCT IDENTIFIER

Product Name: Reboot Deep Scrub Cleaner

Product Number: 342

1.2 RELEVANT IDENTIFIED USES OF THE MIXTURE AND USES ADVISED AGAINST

Water-based deep scrub concentrate
Product intended for commercial and industrial use only.

1.3 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Manufacturer:
Amano Pioneer Eclipse Corporation
P.O. Box 909
1 Eclipse Road
Sparta, NC 28675 USA
Telephone: +1 336 372 8080
Internet: www.pioneereclipse.com
E-mail: msds@pioneer-eclipse.com

1.4 EMERGENCY TELEPHONE NUMBER

For Chemical Emergency - Spill, Leak, Fire, Exposure or Accident. Call CHEMTREC Day or Night.
Within USA and Canada 1 800 424 9300 Outside USA and Canada: +1 703 527 3887 (collect calls accepted)

2. HAZARDS IDENTIFICATION

2.1 CLASSIFICATION OF THE MIXTURE (PREPARATION)

This preparation has been classified and labeled according to 1999/45/EC.
EU Classification: Classified as Corrosive

2.2 LABEL ELEMENTS

Danger symbol:

Indication of Danger: Corrosive

Risk Phrases:
R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.
R35- Causes severe burns.
R36/37/38- Irritating to eyes, respiratory system and skin.

Safety Phrases:
S1/2- Keep locked up and out of the reach of children.
S13- Keep away from food, drink and animal feeding stuffs.
S24/25- Avoid contact with skin and eyes.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S45-In case of accident or if you feel unwell, seek medical advice immediately.

2.3 OTHER HAZARDS

Contains d-limonene. May produce an allergic reaction.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1/3.2 SUBSTANCES/MIXTURES

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>EC No.</th>
<th>Weight %</th>
<th>CAS No.</th>
<th>DSD Classification</th>
<th>CLP Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethylene glycol monobutyl ether</td>
<td>203-905-0</td>
<td>3 - 7</td>
<td>111-76-2</td>
<td>X (Harmful) X (Irritant)</td>
<td>R20/21/22 R36/38 Acute Tox 4 Eye Irrit 2 Skin Irrit 2 H302 H312 H332 H319 H315</td>
</tr>
<tr>
<td>sodium carbonate</td>
<td>207-838-8</td>
<td>1 – 5</td>
<td>497-19-8</td>
<td>XI (Irritant)</td>
<td>R36    Eye Irrit 2 H319</td>
</tr>
</tbody>
</table>
4. FIRST AID MEASURES

4.1 DESCRIPTION OF FIRST AID MEASURES

Inhalation: If breathing is difficult: Remove to fresh air. Seek medical attention immediately.
Ingestion: Call a physician or poison control center immediately. DO NOT induce vomiting unless directing to do so by medical personnel. Never give anything by mouth to an unconscious person.
Skin contact: Immediately wash off with plenty of water for at least 15 minutes. (Remove any contaminated clothing and shoes.) Seek medical attention immediately.
Eye contact: Immediately wash out with water for at least 15 minutes. (If easy to do, remove contact lenses, if worn.) Seek medical attention immediately.

4.2 MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Inhalation: May be harmful if inhaled. May cause irritation and corrosive effects to nose, throat and respiratory tract.
Ingestion: Harmful if swallowed. May cause burns to mouth, throat and stomach.
Skin contact: Harmful in contact with skin. May cause permanent damage.
Eye contact: Harmful in contact with eyes. May cause permanent damage.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

No information available.

5. FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA

Dry chemical, water spray, foam, carbon dioxide

5.2 SPECIAL HAZARDS ARISING FROM THE MIXTURE

Hazardous combustion products: None

5.3 ADVICE FOR FIRE FIGHTERS

Unusual fire and explosion hazards: Materials can splatter above 100°C/212°F.
Special firefighting procedures: Corrosive material (See Sections 8 & 10)

6. ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Refer to Section 8 for appropriate personal protective equipment.

6.2 ENVIRONMENTAL PRECAUTIONS

Keep spills and cleaning runoff out of sewers and open bodies of water.

6.3 METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Small spills: Absorb spill on inert material (e.g. sand, earth) and dispose of as waste material in accordance with national and regional provisions.

Large spills: Keep spectators away. Floors may be slippery; use care to avoid falling. Neutralize spill area. Dike and contain spill with inert material (e.g. sand, earth). Transfer liquid to containers for recovery or disposal and solid diking material to separate containers for disposal.

6.4 REFERENCE TO OTHER SECTIONS: Refer to Section 8 of the SDS.

7. HANDLING AND STORAGE
7.1 PRECAUTIONS FOR SAFE HANDLING

Avoid contact with eyes, skin and clothing. Wash thoroughly after handling. Use only in well-ventilated areas. Avoid breathing vapours or spray mists. Remove and wash contaminated clothing and footwear before re-use.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Storage temperature (Max. 60°C/140°F) (Min. 1°C/34°F). Keep from freezing. Keep container sealed when not in use. Keep out of reach of children.

7.3 SPECIFIC END USE(S): No information available

8. EXPOSURE CONTROL/PERSONAL PROTECTION

8.1 CONTROL PARAMETERS

Occupational Exposure limits:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Source</th>
<th>TWA (8 hours)</th>
<th>STEL (Short term)</th>
<th>Note/Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>ppm</td>
<td>mg/m³</td>
<td>ppm</td>
</tr>
<tr>
<td>ethylene glycol monobutyl ether</td>
<td>ACGIH TLV</td>
<td>20</td>
<td>97</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>EU (2000/39/EC)</td>
<td>20</td>
<td>98</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>NO Administrative Norm</td>
<td>-</td>
<td>-</td>
<td>10</td>
</tr>
<tr>
<td></td>
<td>EH40</td>
<td>25</td>
<td>123</td>
<td>50</td>
</tr>
<tr>
<td>caustic soda</td>
<td>ACGIH TLV</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>NO Administrative Norm</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>EH40</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

8.2 EXPOSURE CONTROLS

Engineering controls: Ensure adequate general ventilation.
Environmental exposure controls: No specific environmental exposure controls required.

PERSONAL PROTECTION
Respiratory protection: Respiratory protection should be worn when there is potential to exceed the exposure limit requirements or guidelines.
Hand protection: Rubber gloves recommended
Eye protection: Safety glasses recommended
Skin protection: If major exposure is possible, wear suitable protective clothing such as rubber boots, apron, etc.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Appearance: clear, blue colored liquid
Odor threshold: N/E
Odor: lemon-lime fragrance
Melting point/Freezing Point: -3 °C
Flash point: > 93°C
Initial boiling point/boiling range: 100°C
Evaporation Rate: less than water
Upper/lower flammability/explosive limits: N/A
Vapor pressure: less than water
Vapor density: greater than air
Relative density: 1.05 kg/L @ 20°C
Solubility: 100% soluble in water
Partition coefficient (n-octanol/water): N/E
Auto-ignition temperature: N/A
Decomposition temperature: N/E
Viscosity: <5 centipoise @ 20°C
Explosive Properties: N/A
Oxidizing properties: Not an oxidizer

9.2 OTHER INFORMATION

VOC: 5%(as supplied), 0.08%(1:64)

10. STABILITY AND REACTIVITY

10.1 REACTIVITY: None known

10.2 CHEMICAL STABILITY: Stable under normal conditions.
10.3 **POSSIBILITY OF HAZARDOUS REACTIONS:** Product may react strongly with water. Care should be used if diluting; product should be slowly added to water.

10.4 **CONDITIONS TO AVOID:** None known.

10.5 **INCOMPATIBLE MATERIALS:** Strong acids, bases and oxidizing agents.

10.6 **HAZARDOUS DECOMPOSITION PRODUCTS:** None known.

11. **TOXICOLOGICAL INFORMATION**

11.1 **INFORMATION ON TOXICOLOGICAL EFFECTS**

**PREPARATION SUMMARY**
Toxicity testing has not been completed on the mixture.

**LOCAL EFFECTS**

<table>
<thead>
<tr>
<th>COMPONENT SUMMARY *</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>disodium metasilicate CAS# 6834-92-0</strong></td>
</tr>
<tr>
<td>LD₅₀: (oral, rat) 1500-3200 mg/kg</td>
</tr>
<tr>
<td>Potential Health Effects</td>
</tr>
<tr>
<td>Eye: Corrosive. Causes skin burns.</td>
</tr>
<tr>
<td>Skin: Corrosive. Causes skin burns.</td>
</tr>
<tr>
<td>Ingestion: Causes burns to mouth, esophagus, and stomach.</td>
</tr>
<tr>
<td>Inhalation: Dust corrosive to respiratory tract.</td>
</tr>
<tr>
<td>Chronic: None expected</td>
</tr>
<tr>
<td>Carcinogenicity: Not listed as a carcinogen.</td>
</tr>
</tbody>
</table>

| **sodium carbonate CAS# 497-19-8** |
| LD₅₀: (oral, rat) 5000 mg/kg |
| Potential Health Effects |
| Eye: Causes irritation of the eyes. |
| Skin: Continuous contact may cause skin irritation. |
| Ingestion: May be harmful if swallowed. Symptoms may include nausea and vomiting. |
| Inhalation: May irritate the mucous membranes and upper respiratory tract. |
| Chronic: No data available. |
| Carcinogenicity: Not listed as a carcinogen. |

| **ethylene glycol monobutyl ether CAS# 111-76-2** |
| LD₅₀: (Oral, rat) 470 mg/kg – 1746 mg/kg |
| Potential Health Effects |
| Eye: May cause severe eye irritation. |
| Skin: May cause slight skin irritation with local redness. Repeated exposure may cause a burn |
| Ingestion: Moderate toxicity if swallowed. Causes irritation to the gastrointestinal tract. |
| Inhalation: May cause irritation to upper respiratory tract (nose and throat). |
| Chronic: Prolonged or repeated exposure can cause damage to the liver, kidneys, lymphoid system, blood and blood-forming organs. |
| Carcinogenicity: Not listed as a carcinogen. |

| **caustic soda CAS# 1310-73-2** |
| LD₅₀: (Oral, rat) (50%soln) 220 mg/kg |
| Potential Health Effects |
| Eye: May cause irritation (possibly severe), chemical burns and eye damage. |
| Skin: May cause irritation (possibly severe) and chemical burns. |
| Ingestion: May cause irritation (possibly severe), chemical burns, nausea and vomiting. |
| Inhalation: May cause irritation (possibly severe), chemical burns and pulmonary edema. |
| Chronic: Chronic effects due to long-term irritation and over-exposure. May produce inflammation of the eyes, skin and mucous membranes. |
| Carcinogenicity: Not listed as a carcinogen. |

| **d- limonene CAS# 5989-27-5** |

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Page 4 of 7
LD₅₀: (oral, rat) 4400 mg/kg

Potential Health Effects
Eye: Causes eye irritation.
Skin: Causes skin irritation.
Ingestion: May cause digestive tract disturbances.
Inhalation: May cause respiratory tract irritation.
Chronic: No data available.
Carcinogenicity: Not listed as a carcinogen

*Component data recorded from available sources pertaining to individual component CAS number.

12. ECOLOGICAL INFORMATION

PREPARATION SUMMARY
Ecological testing has not been completed on the mixture.

12.1 TOXICITY: No data available.

12.2 PERSISTANCE AND DEGRADABILITY: No data available.

12.3 BIOACCUMULATIVE POTENTIAL: No data available.

12.4 MOBILITY IN SOIL: No data available.

12.5 RESULTS OF PBT AND vPvB ASSESSMENT: No data available.

12.6 OTHER ADVERSE EFFECTS: No data available.

COMPONENT SUMMARY*

disodium metasilicate CAS# 6834-92-0
LC₅₀, 96 hr Gambusia affinis 2320 ppm
LC₅₀, 96 hr Daphnia magna 247 ppm
Environmental Fate: This material is not persistent in aquatic systems. Not expected to bioconcentrate.

sodium carbonate CAS# 497-19-8
LC₅₀, 96 hr Bluegill sunfish 300-320 mg/l
LC₅₀, 96 hr Daphnia magna 265-565 mg/l
Environmental Fate: Inorganic substance. No significant toxicity to aquatic organisms is expected.

ethylene glycol monobutyl ether CAS# 111-76-2
LC₅₀, 96 hr bluegill (Lepomis macrochirus) 820 – 1490 mg/l
LC₅₀, water flea (Daphnia magna) 835 mg/l
Environmental Fate: Material is readily biodegradable. Bioconcentration potential is low.

cauistic soda CAS# 1310-73-2
LC₅₀, 24 hr brook trout 25 ppm
EC₅₀, Daphnia magna 100 ppm
Environmental Fate: This material is inorganic and not subject to biodegradation. Not expected to bioconcentrate.

d- limonene CAS# 5989-27-5
LC₅₀, 96 hr fathead minnow 702 mg/l (flow-through)
Environmental Fate: May cause long-term adverse effects on the environment.

*Component data recorded from available sources pertaining to individual component CAS number.

13. DISPOSAL CONSIDERATIONS

13.1 WASTE TREATMENT METHODS
Disposal of this material should be in accordance with local, regional and national regulations.
European Waste Catalogue: 20 01 15* alkalines

14. TRANSPORT INFORMATION

*Package volumes < 1L are shipped as Limited Quantity; as permitted by hazard class and quantity limits.*

14.1 UN NUMBER: UN1760

14.2 UN PROPER SHIPPING NAME: Corrosive liquid, n.o.s. (contains disodium trioxosilicate)
14.3 TRANSPORT HAZARD CLASSES: 8
14.4 PACKING GROUP: II
14.5 ENVIRONMENTAL HAZARDS: N/A
14.6 SPECIAL PRECAUTIONS FOR USER:

IMDG
Emergency Schedules (EmS): Fire F-A, Spillage S-B
Stowage and Segregation: Category B. Clear of living quarters.
Marine Pollutant: none

ADR/RID
Class: 8
Item Number: 80
Classification Code: C9

14.7 TRANSPORT IN BULK ACCORDING TO ANNEX II OF MAPROL73/78 AND THE IBC CODE: N/A

15. REGULATORY INFORMATION
15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE MIXTURE

EINECS STATUS: Ingredients are included in the EINECS/ELINCS/NLP inventories.

NATIONAL REGULATIONS:
648/2004 - The surfactants contained in this preparation comply with the biodegradation criteria 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 the detergent manufacturer.

No additional national regulations are known to the supplier.

15.2 CHEMICAL SAFETY ASSESSMENT: No information available.

16. OTHER INFORMATION

REVISION INFORMATION:
03/06/2014 – SDS issue

ABBREVIATIONS:
N/A = Not Applicable
N/E = Not Established
N/L = Not Listed

FULL TEXT OF R-PHRASES:
R10 - Flammable.
R20/21/22- Harmful by inhalation, in contact with skin and if swallowed.
R34- Causes burns.
R35- Causes severe burns.
R36/37- Irritating to eyes and respiratory system.
R38- Irritating to the skin.
R43 - May cause sensitization by skin contact.
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

FULL TEXT OF HAZARD STATEMENTS:
H226 – Flammable liquid and vapour.
H302 – Harmful if swallowed.
H312 – Harmful in contact with skin.
H314 – Causes severe skin burns and eye damage.
H317 – May cause an allergic skin reaction.
H315 – Causes skin irritation.
H319 – Causes serious eye irritation.
H332 – Harmful if inhaled.
H335 – May cause respiratory irritation.
H400 – Very toxic to aquatic life.
H410 – Very toxic to aquatic life with long lasting effects.

FULL TEXT OF S-PHRASES:
S1/2- Keep locked up and out of the reach of children.
S13-Keep away from food, drink and animal feeding stuffs.
S22-Do not breathe dust.
S24/25-Avoid contact with skin and eyes.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
S45-In case of accident or if you feel unwell, seek medical advice immediately.
S46- If swallowed, seek medical advice immediately and show this container or label.
S60 -This material and its container must be disposed of as hazardous waste.
S61- Avoid release to the environment. Refer to special instructions/Safety Data sheets.

DETERGENT/CLEANER LABELING (EC/648/2004):
(<5%) anionic surfactant
(<5%) Non-ionic surfactant
(<5%) EDTA
(<5%) perfume (containing >0.1% <0.15% d-limonene, >0.01% <0.05% geraniol)

ISSUED BY:
Chemical/R&D Department
Amano Pioneer Eclipse Corporation