SAFETY DATA SHEET
NataStat

Section 1: Product and Company Identification

NATASTAT
Product No. 74635
1 Quart Package Maximum (Poly bottle)

Chemical Family: Biguanide
Description/Use: Industrial Biocide

Manufacturer Information:
Natare Corporation
5905 West 74th Street
Indianapolis, IN 46278
USA

Telephone Number for Information:
(800) 336-8828

Emergency Number INFOTRAC:
(800) 535-5053

Date Prepared: 04/15/13

Section 2: Hazards Identification

GHS Label Elements

Symbols:

<table>
<thead>
<tr>
<th>Polyaminopropyl Biguanide</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health 2</td>
</tr>
<tr>
<td>Flammability 0</td>
</tr>
<tr>
<td>Physical Hazard 0</td>
</tr>
<tr>
<td>Personal Protection H</td>
</tr>
</tbody>
</table>

National Fire Protection Association Classifications (NFPA)

Signal Word: Warning

OSHA Hazard Classification: Eye, skin and respiratory irritant. Possible skin sensitizer.

Routes of Entry: Skin, Eyes, Inhalation, Ingestion

Medical Conditions Aggravated: None known

Human Threshold Response Data

Odor Threshold: Not established for product.

Irritation Threshold: Not established for product.

Immediate (Acute) Health Effects

Inhalation Toxicity: Not expected to be toxic by inhalation. Vapors and/or aerosols which may be formed at elevated temperatures may be irritating to eyes and upper respiratory tract.

Skin Toxicity: Not expected to be absorbed through the skin. Skin contact may cause moderate irritation consisting of transient redness and swelling. This irritant effect would not be expected to result in permanent damage.

Eye Toxicity: Contact may cause moderate irritation consisting of transient redness, swelling, and mucous membrane discharge to the conjunctiva. Any visual impairment or corneal damage (opacity) would be expected to clear within several days.

Ingestion Toxicity: Moderately toxic if swallowed. Ingestion may cause irritation of the gastrointestinal tract and gastrointestinal discomfort with any or all of the following symptoms: nausea, vomiting or diarrhea.

Acute Target Organ Toxicity: May cause skin, eye and mucous membrane irritation (includes upper respiratory tract). Ingestion may cause gastrointestinal discomfort.

Prolonged (Chronic) Health Effects

Carcinogenicity: This product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.

Reproductive & Developmental Toxicity: No reproductive or developmental risk to humans is expected from exposure to this product. The active ingredient in this product has been tested in laboratory animals and no evidence of teratogenicity or reproductive toxicity was seen.

Inhalation: There are no known or reported effects from chronic exposure.

Skin Contact: Repeated or prolonged skin contact may cause some individuals to develop skin rash and other skin complications due to allergic skin sensitization. PHMB when tested at 1.0% in the GriPT, PHMB did not produce irritation or allergic skin reactions.

Ingestion: There are no known or reported effects from chronic ingestion except for effects similar to those experienced from single exposure.

Sensitization: Possible skin sensitizer based on animal tests PHMB when tested at 1.0% in the HRIPT, PHMB did not produce irritation or allergic skin reactions.

Chronic Target Organ Toxicity: There are no known or reported effects to humans from repeated exposure to this product.
Supplemental Health Hazard Information: Polyaminopropyl Biguanide, the biocidal active in this product, has been extensively studied for its toxicity to mammalian systems. Repeated inhalation exposure in rats over a period of 4 weeks resulted in eye and respiratory irritation and pneumonitis. Long term feeding studies in dogs show that the liver and kidney are target organs and the effect occur only at very high doses. Polyaminopropyl Biguanide has been shown in animal studies to produce skin sensitization. Polyaminopropyl Biguanide is not readily bioavailable in ingested and is not well absorbed through the skin. PHMB when tested at 1.0% in the HRIPT, PHMB did not produce irritation or allergic skin reactions.

### Section 3: Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Hazardous Components</th>
<th>CAS#</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
<th>Other Limits Recommended</th>
<th>% (optional)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td></td>
<td></td>
<td></td>
<td>80%</td>
</tr>
<tr>
<td>Polyaminopropyl Biguanide</td>
<td>27083-27-8</td>
<td>Not Listed</td>
<td>Not Listed</td>
<td></td>
<td>20%</td>
</tr>
<tr>
<td>Inert Ingredients are Proprietary and Non-Hazardous</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

### Section 4: First Aid Measures

#### Emergency and First Aid Procedures:

**INHALATION:** If overcome by exposure, move victim to fresh air immediately. If person is not breathing, call 911 or an ambulance, and then give artificial respiration as needed, preferably mouth-to-mouth if possible.

**EYE CONTACT:** In case of eye contact, rinse eye immediately slowly and gently with water for 15-20 minutes. Be sure to hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eye and lids with water. Remove contact lenses, if present, after the first 5 minutes, and then continue rinsing the eye. Obtain emergency medical attention.

**SKIN CONTACT:** Remove contaminated clothing as needed. Wash skin thoroughly with mild soap and plenty of water for 15-20 minutes. Avoid repeated contact. Seek medical attention if skin irritation develops.

**INGESTION:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow and is conscious/alert. DO NOT INDUCE VOMITING. Do not give anything by mouth to an unconscious person. Obtain emergency medical attention if symptoms develop.

**NOTE TO PHYSICIAN:** Since methemoglobin spontaneously reverts to hemoglobin after termination of exposure, a moderate degree of cyanosis needs to be treated only by supportive measures which include bed rest and oxygen inhalation. If cyanosis is severe, intravenous administration of 1% methylene blue 1-2 mg/kg body weight over a 5 minute interval may be of value. If cyanosis persists after 1 hour, repeat the treatment, but do not exceed 7 mg/kg total dose.

### Section 5: Fire Fighting Measures

**Flammability Summary (OSHA):** Combustible above 93°C / 200°F

**Flash Point:** > 93°C / 200°F

**Auto-Ignition Temperature:** Not applicable

**Upper Flammable/Explosive Limit % in Air (UEL):** Not Applicable

**Lower Flammable/Explosive Limit % in Air (LEL):** Not Applicable

**Unusual Fire and Explosion Hazards:** No unusual fire or explosion hazards. Material may be ignited only if preheated to high temperatures, for example in a fire.

**Hazardous Combustion Products:** Carbon monoxide, Carbon dioxide

**Extinguishing Media:**

USE WATER FOG, WATER SPRAY, FOAM, CARBON DIOXIDE (CO₂), HALOGENATED AGENTS OR DRY CHEMICAL.

Fight fires as appropriate for surrounding materials.

**Special Fire Fighting Procedures:**

In case of fire, use normal fire-fighting equipment and the personal protective equipment recommended in Section 8 to include a NIOSH approved self-contained breathing apparatus. Use water to cool containers. Do not enter fire area without proper protection.

### Section 6: Accidental Release Measures

**Steps to Be Taken in Case Material Is Released or Spilled**

**Air Release:** Hazardous concentrations in air may be found in local spill area and immediately downwind. Contain all liquids for treatment or disposal.

**Water Release:** Notify all downstream users of possible contamination. Divert water flow around spill if possible and safe to do so. Contain all liquids for treatment or disposal.

**Land Release:** Create a dike or trench to contain materials. Absorb spill with inert material (e.g., dry sand, clay, earth or commercial absorbent), then place in a chemical waste container. Contain all liquids for treatment or disposal. Avoid runoff into storm sewers and ditches which lead to waterways.
**SAFETY DATA SHEET**  
**NataStat**

**Additional Spill Information:** Utilize emergency response personal protection equipment prior to the start of any response. Evacuate all non-essential personnel. Stop source of spill as soon as possible and notify appropriate personnel. Dispose of spill residues per guidelines under Section 13, Disposal Consideration.

**Section 7: Handling and Storage**

**Handling:**
Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash off with water. Avoid breathing (dust, vapor, mist, gas).

**Storage:**
Store in a cool dry ventilated location, away from sources of ignition or other incompatible conditions and chemicals. Keep container(s) closed. Store only in an upright position. Carefully vent any internal pressure when opening.

**Empty Container Warning:**
Empty containers retain product residue (liquids and/or vapor) and can be dangerous.

**Section 8: Exposure Controls/Personal Protection**

**No Personal Exposure Limit (PEL)/Threshold Limit Valve (TLV) assigned to this product.**

**Respiratory Protection:**
Minimize exposure and practice good hygiene. Control or eliminate exposure to aerosol. Use NIOSH approved disposable P95 Acid Gases Respirator with Exhalation Valve and with high efficiency filter approved for ammonia and methylamine.

**Ventilation:**
Local exhaust ventilation is recommended if vapors, mists or aerosols are generated. Otherwise, use general exhaust ventilation.

**Eye Protection:**
Eye protection such as chemical splash goggles and/or face shields must be worn when the possibility exists for eye contact due to splashing or spraying liquid, airborne particles, or vapor.

**Skin Protection:**
Use impervious gloves. When exposure to high concentrations are prolonged or repeated use protective gloves, apron, boots, head and face protection should be worn. This equipment must be thoroughly cleaned after each use. Provide water source/shower/eyewash in work area during use.

**Work/Hygienic Practices:**
Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet facilities. Promptly remove soiled clothing and wash thoroughly before reuse. Shower after work using plenty of soap and water.

**Section 9: Physical and Chemical Properties**

<table>
<thead>
<tr>
<th>Physical State:</th>
<th>Liquid</th>
</tr>
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<table>
<thead>
<tr>
<th>pH:</th>
<th>5.0-6.0</th>
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<table>
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<tr>
<th>Solubility in Water:</th>
<th>Soluble in water</th>
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**Boiling Point:**
AP 210°F / 98°C

**Color:**
Pale Yellow

**Evaporation Rate (Butyl Acetate = 1):**
No Data

**Freezing Point:**
No Data

**Melting Point:**
No Data

**Odor:**
None

**Vapor Density (AIR = 1):**
No Data

**Vapor Pressure (mm Hg):**
No Data

**Section 10: Stability and Reactivity**

**Stability:**
Stable under normal conditions.

**Conditions to Avoid:**
Avoid contamination.

**Chemical Incompatibility (Materials to Avoid):**
Copper, silver, sodium hydroxide, most metals

**Hazardous Decomposition or Byproducts:**
Incomplete combustion may produce carbon monoxide, carbon dioxide, nitrogen oxides, ammonia, halogens, halogen acids, possible trace amounts of carbonyl halide.

**Hazardous Polymerization:**
Product will not undergo hazardous polymerization.
Decomposition Temperature:
No Data

Section 11: Toxicological Information

Component Animal Toxicology:
- Polyaminopropyl Biguanide:
  - Oral LD50 value: LD50 Approximately 501 mg/kg Female Rat
  - Oral LD50 value: LD50 Approximately 549 mg/kg Male Rat
  - Dermal LD50 value: LD50 > 5,000 mg/kg Rat
  - Inhalation LC50 value: This product has been tested for acute inhalation toxicity. However, due to the physical nature of the product, an aerosol dust of desired particle size could not be generated. Therefore, no animals could be exposed and no LC50 could be obtained.

Product Animal Toxicity:
- Oral LD50 value: LD50 Approximately 2,500 mg/kg Female Rat
- Oral LD50 value: LD50 Approximately 2,700 mg/kg Male Rat
- Dermal LD50 value: LD50 > 2,000 mg/kg Rabbit

Skin Irritation:
- Moderate Skin Irritant

Eye Irritation:
- This material is expected to be moderately irritating.

Skin Sensitization:
- Possible skin sensitizer based on animal tests, PHMB when tested at 1.0% in the HRIPT, PHMB did not produce irritation or allergic skin reactions.

Acute Toxicity:
- May cause skin, eye and mucous membrane irritation (includes upper respiratory tract.) Ingestion may cause gastrointestinal discomfort.

Sub-chronic/Chronic Toxicity:
- Not known or reported to cause sub-chronic or chronic toxicity.

Reproductive and Developmental Toxicity:
- No reproductive or developmental risk to humans is expected from exposure to this product. The active ingredient in this product has been tested in laboratory animals and no evidence of teratogenicity or reproductive toxicity was seen.
- Polyaminopropyl Biguanide: This chemical has been tested in laboratory animals and there was no evidence of reproductive toxicity or teratogenicity.

Mutagenicity:
- Not known or reported to be mutagenic. The active ingredient in this product has been tested in a battery of mutagenicity assays and was found to be non-mutagenic under the conditions of the tests.
- Polyaminopropyl Biguanide: This chemical has been tested in a battery of mutagenicity/genotoxicity assays and the results were negative.

Carcinogenicity:
- This material product is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP or EPA.
- Polyaminopropyl Biguanide: PHMB, when administered to mice at very high doses, induced an increased incidence of cancer in mice. Under the conditions of anticipated use of this product, PHMB does not represent a risk to man.

Section 12: Ecological Information

Ecotoxicity Overview:
- Polyaminopropyl Biguanide is highly/very toxic to aquatic species. It is unlikely to bio accumulate or persist in the aquatic environment.

Environmental Fate:
- Polyaminopropyl Biguanide will be predominantly absorbed onto sludge solids; the remainder is unlikely to be readily or inherently biodegraded or abiotically degraded with the exception of low molecular weight species. Polyaminopropyl Biguanide could be slightly inhibitory to sewage treatment systems. However, at the low concentrations typically discharged to and received by treatment systems, adverse impacts are unlikely. Polyaminopropyl Biguanide is unlikely to adversely affect plants or soil indigenous species.

Ecological Toxicity Values:
- Rainbow Trout: 96h LC50 = 0.026 mg/l
- Bluegill Sunfish: 96h LC50 = 0.11 mg/l
- Fish: Chronic toxicity The No Observable Effect Concentration (NOEC) = 0.010 mg/l
- Fish: Chronic toxicity The No Observable Effect Concentration (LOEC) = 0.010 mg/l
- Daphnia Magna: 48h EC50 = 0.04 mg/l
- Brown Shrimp: 96h LC50 = 9 mg/l
- Daphnia Magna: 21 day NOEC (chronic toxicity) The No Observable Effect Concentration (NOEC) = 0.0036 mg/l
- Green Algae: 96h EC50 = 0.49-0.87 mg/l In an assessment of the effect of PHMB on nitrification of activated sludge micro-organisms the 4hr EC50 was 38 mg/l and the NOEC = 12 mg/l.
Section 13: Disposal Considerations

Care must be taken to prevent environmental contamination from the use of the material. The user of the material has the responsibility to dispose of unused material, residues and containers in compliance with all relevant local, state and federal laws and regulations regarding treatment, storage and disposal for hazardous and nonhazardous wastes.

Waste Disposal Summary:

If this product becomes a waste, it will be a nonhazardous waste according to U.S. RCRA regulations. Dispose of in accordance with all Local, State and Federal regulations.

Waste Disposal Method:

As a nonhazardous waste, it should be disposed of in accordance with local, state and federal regulations. However, this material is toxic to fish. Do not contaminate waterways by cleaning of equipment or by disposal of wastes. To deactivate this material, adjust pH of solution to 6.8 - 7.0. Add a 5% solution of sodium hypochlorite (household bleach), 5 parts sodium hypochlorite solution to 1 part NataStat. Let stand for 48 hours. Dilute deactivated solution with plenty of water and discharge to a sewer serviced by a wastewater treatment facility.

Container Disposal:

Empty container retains product residue. Observe all hazard precautions. Do not distribute, make available, furnish or reuse empty container except for storage and shipment of original product. Remove all hazardous residues from container using appropriate solvents (e.g. triple rinsing). Then puncture or otherwise destroy empty container and dispose of in facility permitted for non-hazardous waste.

Potential US EPA Waste Codes: Not Applicable

Section 14: Transportation Information

Land (US DOT):

UN3082 Environmentally Hazardous Substance, Liquid, NOS (polyaminopropyl biguanide) , 9, III

Water (IMDG):

UN3082 Environmentally Hazardous Substance, Liquid, NOS (polyaminopropyl biguanide) , 9, III, Marine Pollutant

Air (IATA):

UN3082 Environmentally Hazardous Substance, Liquid, NOS (polyaminopropyl biguanide) , 9, III, Marine Pollutant

Emergency Response Guide Number: ERG #171

Transportation Notes:

Material is not regulated for ground transportation within the US if shipped in non-bulk packages. Material is not regulated as a marine pollutant for ground transportation within the US if shipped in non-bulk packages.

EMS: F-A, S-F

Section 15: Regulatory Information

TSCA (Toxic Substances Control Act) Regulations, 40 CFR 180:

TSCA: This is an EPA registered pesticide.

EPA Pesticide Registration Number: 1258-1253

FIFRA Listing of Pesticide Chemicals (40 CFR 180): This product is regulated under the Federal Insecticide, Fungicide and Rodenticide Act. It must be used for purposes consistent with its labeling.

Superfund Amendments & Reauthorization Act (SARA) Title III:

Hazard Categories: Sections 311 / 312 (40 CFR 370.2)

Health: Immediate (Acute) Health Hazard

Physical: None

Emergency Planning & Community Right to Know (40 CFR 355, App. A)

Extremely Hazardous Substance Section 302 – Threshold Planning Quantity

ZUS_SAR302 TPQ(threshold planning quantity) None Established

Reportable Quantity (49 CFR 172.101 Appendix):

ZUS_CERCLA Reportable Quantity None Established

ZUS_SAR302 Reportable Quantity None Established

Supplier Notification Requirements (40 CFR 372.45), 313 Reportable Components:

ZUS_SAR313 De minimis concentration None Established

Clean Air Act Toxic ARP Section 112r:

CAA 112R None established

Clean Air Act Socmi:

HON SOC None established

Clean Air Act VOC Section 111:

CAA 111 None established
Clean Air Act Haz. Air Pollutants Section 112:
- ZUS_CAAHAP  None established
- ZUS_CAAHRP  None established
- CAA AP   None established

State of Right-to-Know Regulations Status of Ingredients
Pennsylvania:  ZUSPA_RTK  None Established
New Jersey:     ZUSNJ_RTK  None Established
Massachusetts:  ZUSMA_RTK  None Established
California Proposition 65:  ZUSCA_P65  None Established

Canada Regulations:
WHMIS (Canadian Workplace Hazardous Materials Information System) Hazard Classification:

D2B: Toxic; Material Causing; Other Toxic Effects

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

Section 16: Other Information
General Comments:
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