


Section 1. Identification

Product Identifier	Nashville Class A EQ Biosolid
Common Name/Synonym	Soil Amendment, Fertilizer, Alternative Fuel
Product Use/Restrictions	Granular fertilizer
Manufacturer Contact Information	Metropolitan Government of Nashville and Davidson County Department of Water and Sewerage Services 1600 Second Avenue North Nashville, TN 37208 615-862-4885
Distributor Contact Information	Tycowa, LLC 4714 Mt Zion Rd Springfield, TN 37172 615-533-3981 or 615-533-3980
Emergency Contact	Chemtrec 800-424-9300

Section 2. Hazard(s) Identification

Signal Word	Warning
Hazard Statements	Causes skin irritation Causes serious eye irritation May cause respiratory irritation
Symbol	
Precautionary Statements	Avoid breathing dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Wear protective gloves. Wear eye protection/face protection. Wash thoroughly after handling. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Specific treatment (see supplementary first aid instructions on this Safety Data Sheet). If inhaled: removed person to fresh air and keep comfortable for breathing. Call a poison center/doctor if you feel unwell. If skin irritation occurs: Get medical advice/attention If eye irritation persists: Get medical advice/attention If on skin: Wash with water. Store in well-ventilated place.

Section 3. Composition/Information on Ingredients

Chemical Name	% of Weight	CAS #
Heat Dried Anaerobically Digester Sewage Solids	90%-97%	None
Trace metals	Trace metals can be detected in quantities less than 1%, most less than 0.1%.	Varies
Water	Balance	7732-18-5

Section 4. First Aid Measures

First Aid Measures	
Eye Contact	Flush with water. Remove contact lenses. Continue flushing with water for 15 minutes. Seek medical attention if irritation persists.
Skin Contact	After skin contact, wash skin with soap and water.
Inhalation	If difficulty breathing should occur, immediately remove to fresh air. If symptoms persist, seek medical attention.
Ingestion	If digestion occurs, seek medical attention.
Most Important Symptoms	Difficulty breathing due to exposure to excess dust
Indication of Immediate Medical Attention	None

Section 5. Firefighting Measures

Suitable Extinguishing Media	Small Fires - Dry chemical, carbon dioxide, or water spray Large Fires - Water spray or alcohol-resistant foam
Specific Chemical Hazards	Bulk wetted material may generate heat, increasing the risk of a fire during storage. Fugitive dust can create an explosive atmosphere. Control dust through adequate ventilation or an approved oil coating, not water. Heated material may give off undefined fumes. Do not breathe fumes.
Special Protective Equipment and Precautions	Firefighters should wear normal fire protection gear. In case of fire an SCBA should be used to avoid breathing fumes. Do not breathe fumes. Control runoff and protect drains, sewers, and bodies of water. Material is slippery when wet.
Flash Point	Dust Deflagration Index (Kst): 118 to 182 +/- 12% bar-m/sec Maximum Explosion Overpressurer (Pmax): 7.1 +/- 10% bar Minimum Ignition Energy(MIE): 10mj to 30mj Hot Surface Ignition Temperature (LIT): 250°C Minimum Explosive Concentration (MEC): 90 to 100 g/ m ³
NFPA Rating	Health: 1 Fire: 1 Reactivity 0
Explosive Limits in Air	LEL: Not Determined UEL: Not Determined

Section 6. Accidental Release Measures.

Personal Precautions	Not Required.
Protective Equipment	Not Required.
Emergency Procedures	Prevent material from getting into drains, sewer, or bodies of water.
Containment and Clean up	Sweep, shovel, or use explosion resistant vacuum to clean up. Put in labeled container(s). If possible reuse product. Ensure that disposal is in compliance with local, state and federal regulations.

Section 7. Handling and Storage

Handling	Handle as fertilizer. Do not breathe dust or fumes. Wash hands after handling. Minimize dust generation. Avoid ingestion, inhalation, and contact with eyes and skin.
Storage	Store in a cool, dry area inaccessible by children and animals. Provide adequate ventilation. Prevent wetting material during storage. Bulk wetted material may generate heat. For more information on storage visit: https://www.epa.gov/biosolids/guide-field-storage-biosolids

Section 8. Exposure Control/Personal Protection

Exposure Limits (Biosolids)	OSHA PEL – No data ACGIH TLV – No data
Exposure Limits (Nuisance Dust)	OSHA Nuisance Dust Limit of 15 mg/m ³ (total) and 5 mg/m ³ (respirable) ACGIH Nuisance Dust Limit of 10 mg/ m ³ (total) and 3 mg/m ³ (respirable)
Engineering Controls	Provide adequate ventilation.
Individual Protection Measures/Personal Protective Equipment	
Eye Protection	Wear goggles or safety glasses when eye contact may occur. Avoid touching eyes or face after handling product.
Skin Protection	Skin protection and/or proper hygiene, including washing hands after contact.
Respiratory Protection	In confined spaces ensure proper ventilation to maintain dust levels below threshold values. Use a cartridge mask with a filter for particulate matter if dust level is above the threshold value.
Other	Wear appropriate safety equipment for hazards encountered. Product by itself presents no specific hazard

Section 9. Physical and Chemical Properties

Description	Biosolids pellets
Appearance	Dark granules, 1mm to 4mm in diameter, free flowing
Odor	Earthy odor
Odor Threshold	None
pH	Slightly acidic
Melting Point/Freezing Point	Not Determined
Boiling Point	Not Determined
Flash Point	Not Determined
Evaporation Rate	Not Determined

Flammability	Not Determined
Upper/lower flammability or explosive limits	Not Determined
Vapor Pressure	Not Determined
Vapor Density	Not Determined
Bulk Density	35 to 55 pounds per cubic foot
Solubility	Slight solubility in water
Partition Coefficient	Not Determined
Auto-ignition Temperature	Not Determined
Decomposition Temperature	Not Determined
Viscosity	Not Applicable

Section 10. Stability and Reactivity

Reactivity	Non-reactive
Chemical Stability	Stable
Hazardous Reactions	None
Conditions to Avoid	Avoid high heat, sparks, open flame, moisture, and high humidity.
Incompatible Materials	Strong acid, strong alkali, and oxidizing agents
Hazardous Decomposition Products	Expected to emit same types of toxic smoke as would be released during combustion of other organic material.
Hazardous Polymerization	Will not occur.

Section 11. Toxicological Information

Primary Routes of Exposure	Skin Contact: Yes. Inhalation: Yes. Eye Contact: Yes. Ingestion No.
Symptoms / Delayed Effects / Chronic Effects	
Oral	No data
Dermal	May cause irritation.
Inhalation	May cause nasal and throat irritation.
Eye Contact	May cause irritation.
Other Effects	
Toxicity	No data
Carcinogen, Mutagen, Teratogen	Not listed by OSHA, IARC, or NTP
Other Information	
US EPA 40 CFR 503 The US Environmental Protection Agency [EPA] started developing US EPA 40 CFR Part 503 [The Part 503 Rule] in 1984 to address the reuse and disposal of wastewater residual solids from domestic sewage [biosolids]. Pulling from decades of research and testing hundreds of possible contaminants, the EPA evaluated which contaminants presented a risk based on levels found in domestic sewage, bioavailability, and soil loading rates. For information on the risk assessment, please visit: http://www.epa.gov/owm/mtb/biosolids/503rule/index.htm .	

For the EPA responses to several frequently asked questions please visit:

<http://www.epa.gov/biosolids/frequent-questions-about-biosolids>.

The Part 503 rule regulates the limits of pathogenic organisms, nine common metals, and compounds that attract vectors (nuisance animals which can carry diseases such as pigeons, rats, mice, cockroaches, etc) in biosolids. The rule also establishes different grades of biosolids where Class A Exceptional Quality [EQ] biosolids are material with particularly low pollutants, very stringent pathogen reductions (virtually absent of pathogens) and have a reduced level of compounds that attract vectors. For further information see the EPA publication "A Plain English Guide to the EPA 503 Biosolids Rule" available at: <https://www.epa.gov/biosolids/plain-english-guide-epa-part-503-biosolids-rule>.

The National Biosolids Partnership [NBP] has information and reference regarding the safe use of biosolids and links to applicable state regulations which may apply in your area.

<http://www.biosolids.org/>. This product will meet USEPA Class A Exceptional Quality Standards

US EPS 40 CFR 503 Metals Concentration Limits

Metals	Exceptional Quality Limits (mg/kg)
Arsenic (As)	41
Cadmium (Cd)	39
Chromium (Cr)	1200
Copper (Cu)	1500
Lead (Pb)	300
Mercury (Hg)	17
Nickel (Ni)	420
Molybdenum (Mo)*	N/A
Selenium (Se)	36
Zinc (Zn)	2800

*Molybdenum is only tracked for the ceiling concentration. There is not a separate level for EQ material

Section 12. Ecological Information

Ecotoxicity	Not Determined
Persistence and Degradability	Not Determined
Bioaccumulative Potential	Not Determined
Mobility in Soil	Not Determined
Other Adverse Effects	Not Determined
Notes	Keep out of bodies of water.

Section 13. Disposal Considerations

Waste Disposal	Sweep, shovel, or use explosion resistant vacuum to clean up. Put in labeled container(s). Prevent material from getting into drains, sewer, or bodies of water. If possible reuse product. Material is a fertilizer, use as such. Ensure that disposal is in compliance with local, state and federal regulations. Keep material dry. Bulk wetted material may generate heat during storage.
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Section 14. Transportation Information

UN Identification Number	Not Applicable
Proper Shipping Name	Not Applicable
Hazard Class	Not Applicable
Packing Group	Not Applicable
Environmental Hazards	Not Applicable
Transport in Bulk	Not Applicable
Special Precautions	Not Applicable

Section 15. Regulatory Information

SARA Information	
Immediate (Acute) Health	No
Delayed (Chronic) Health	No
Sudden Release of Pressure	No
Reactivity	No
Fire	Yes
Section 302	Not Listed
Section 304	Not Listed
Section 313	Not Listed
CERCLA	Not Listed
CAA	Not Listed
TSCA	Not Listed

Section 16. Other Information

SDS Prepared by	Revision 1. Roy Denney. October 24, 2008 Revision 2. Taft McNeal. July 23, 2018 Revision 3. Taft McNeal. November 21, 2018
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Disclaimer:

This information related to this specific product for its specified uses as listed in Section 1 and may not apply to this product used in combination with other products or for other purposes. The information provided is believed to be correct as of the date compiled. No warranty, expressed or implied, regarding the merchantability, or suitability, or fitness for a particular purpose or of any other nature is provided here in. We do not accept liability for any loss or damage that may occur from the use of this information. Individuals receiving this information are expected to exercise independent judgement in determining the appropriateness for a particular use in accordance with any applicable local, state, and federal laws and regulations.

Some state and local regulations may apply to the use of this material. It is the end users responsibility to ensure safe use in compliance with all local, state, and federal laws.

CHAPTER 5 – RECOMMENDED MANAGEMENT PRACTICES

Biosolids Hauler Spill Response Procedure³

1. General

- A. Biosolids are non-hazardous and non-toxic. If a spill occurs, there is no need for special equipment or emergency protocol beyond that outlined in this procedure. Biosolids are primarily processed solids produced by sewage treatment plants.
- B. Biosolids spilled onto pavement pose a potential road hazard because they can create wet, slick surfaces for motor vehicles, and/or can obstruct traffic flow. If biosolids remain on the surface for a sufficient time, they could be a source of potential contamination of nearby storm drains, waterways, or ground water. Biosolids should be thoroughly removed so that no significant residues remain to be washed into any storm drain or waterway by surface water. All spilled biosolids must be returned to the trailer from which they spilled, or be loaded into another appropriate transport vehicle.

2. Biosolids Characteristics and Personal Hygiene Procedures

- A. Biosolids are processed organic residual solids from domestic sewage treatment, containing nitrogen, phosphorus, trace metals, and some pathogenic (disease-causing) organisms. Biosolids being transported are typically 97 % total solids, with a PELLET consistency (Fill in description). Biosolids become dirt-like when solids exceed 45%. The material contains x % volatile solids, with a pH of 2.5.
- B. Personnel cleaning up a spill of biosolids should:
- Wear gloves for shoveling, sweeping or handling biosolids.
 - Not eat, drink, smoke or chew while working directly with biosolids
 - Wash hands (and as necessary all other exposed parts of the body) with waterless hand cleaner, or soap and water, following spill clean-up and prior to eating, drinking, smoking or chewing.

3. Over-the-Road Spill Response Procedures

- A. Park the truck on the side of the road and place traffic cones, reflectors and/or flares to divert traffic around the spill. Remain with the truck and spilled materials, unless it is necessary to leave temporarily to contact emergency services.
- B. Drivers shall notify their Supervisor as soon as possible by radio or by phone (Area code & phone number) _____. Give the location and amount of biosolids spilled. Also notify the California Highway Patrol by telephone [911], if the spill has occurred on a public right of way.

³ Procedure courtesy of Los Angeles County Sanitation District

CHAPTER 5 – RECOMMENDED MANAGEMENT PRACTICES

- C. Inform the authorities that you are hauling biosolids which is non-hazardous and non-toxic.
- D. Cooperate with the authorities, assist with traffic control and clean-up.
- E. Do not leave the scene of any spill, even a small one, until it is cleaned up. You may clean up small spills first and then report the spill.

4. Spill Response Procedures

- A. Load spilled biosolids back into the vehicle if it is operable. If the vehicle is disabled, the spill must be loaded into an alternate vehicle.
- B. Spilled biosolids must be prevented from migrating off the incident site, into storm drains, or into surface waters. This is especially important if an incident occurs in rain conditions. Biosolids spills may be diked or controlled with sand, sand bags, straw, absorbents, or other blocking material.
- C. Two people working with shovels can load a small spill into a vehicle. A large spill must be loaded into the vehicle by an appropriate rubber tired loader. The scene coordinator is best suited to choose the appropriate loading option to deal with the spill, based on equipment availability and spill size.
- D. After the spill has been loaded, the incident site must be cleaned. Spills may be cleaned by sweeping the site free of remaining debris. Do not wash off tools or trucks at the spill location; return tools and trucks to the wastewater treatment plant for cleaning.
- E. Cleaned up spills should either be taken to the original destination or to a landfill permitted to receive biosolids. They may also be accepted by the originating sewage treatment plan.
- F. Spill response drills should be conducted periodically.