

1. Identification

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|---|--|----------------|
| Product identifier | Brandt Steric NP 5-6-0 | |
| Other means of identification | | |
| Product code | 27075 | |
| Recommended use | Agricultural/ Horticultural Use- NPK Fertilizer- Refer to product label. | |
| Recommended restrictions | Refer to product label. | |
| Manufacturer/Importer/Supplier/Distributor information | | |
| Manufacturer | | |
| Company name | Brandt Consolidated, Inc. | |
| Address | 2935 South Koke Mill Road Springfield, IL 62711 United States | |
| Telephone | Corporate Office | 1-217-547-5800 |
| Website | www.brandt.co | |
| E-mail | msds@brandt.co | |
| Contact person | EH&S / Regulatory Department | |
| Emergency phone number | CHEMTREC (24 hours): USA, Canada, Puerto Rico 1-800-424-9300 Virgin Islands 1-800-424-9300 International Maritime +1 (703) 527-3887 | |

2. Hazard(s) identification

| | | |
|-----------------------|-----------------------------------|-------------|
| Physical hazards | Not classified. | |
| Health hazards | Skin corrosion/irritation | Category 1A |
| | Serious eye damage/eye irritation | Category 1 |
| Environmental hazards | Not classified. | |
| OSHA defined hazards | Not classified. | |
| Label elements | | |



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| Signal word | Danger |
| Hazard statement | Causes severe skin burns and eye damage. Causes serious eye damage. |
| Precautionary statement | |
| Prevention | Do not breathe mist or vapor. Wash thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. |
| Response | If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. Wash contaminated clothing before reuse. |
| Storage | Store locked up. |
| Disposal | Dispose of contents/container in accordance with local/regional/national/international regulations. |
| Hazard(s) not otherwise classified (HNOC) | None known. |
| Supplemental information | None. |

3. Composition/information on ingredients

Mixtures

| Chemical name | Common name and synonyms | CAS number | % |
|--|--------------------------|------------|------------|
| Urea | | 57-13-6 | 10 - < 20* |
| Phosphoric Acid | | 7664-38-2 | 1 - < 3* |
| Organo-Phosphonic Acid Derivative | | 6419-19-8 | < 0.2* |
| Other components below reportable levels | | | 80 - < 90 |

*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

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| Inhalation | Move to fresh air. Call a physician if symptoms develop or persist. |
| Skin contact | Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician or poison control center immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse. |
| Eye contact | Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control center immediately. |
| Ingestion | Call a physician or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. |
| Most important symptoms/effects, acute and delayed | Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. |
| Indication of immediate medical attention and special treatment needed | Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital. 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

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| 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

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| 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. Do not breathe mist or vapor. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. 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. 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. Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. |
| Environmental precautions | Avoid discharge into drains, water courses or onto the ground. |

7. Handling and storage

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| Precautions for safe handling | Do not breathe mist or vapor. Do not get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. |
|--------------------------------------|---|

Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

| Components | Type | Value |
|---------------------------------|------|---------|
| Phosphoric Acid (CAS 7664-38-2) | PEL | 1 mg/m3 |

US. ACGIH Threshold Limit Values

| Components | Type | Value |
|---------------------------------|------|---------|
| Phosphoric Acid (CAS 7664-38-2) | STEL | 3 mg/m3 |
| | TWA | 1 mg/m3 |

US. NIOSH: Pocket Guide to Chemical Hazards

| Components | Type | Value |
|---------------------------------|------|---------|
| Phosphoric Acid (CAS 7664-38-2) | STEL | 3 mg/m3 |
| | TWA | 1 mg/m3 |

US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

| Components | Type | Value | Form |
|---|------|----------|--------------------|
| Organo-Phosphonic Acid Derivative (CAS 6419-19-8) | TWA | 10 mg/m3 | Aerosol. |
| Urea (CAS 57-13-6) | TWA | 10 mg/m3 | Total particulate. |

Biological limit values

No biological exposure limits noted for the ingredient(s).

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. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

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

Other Wear appropriate chemical resistant clothing.

Respiratory protection In case of insufficient ventilation, wear suitable respiratory equipment.

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

Physical state Liquid.
Form Liquid.
Color Clear colorless or nearly colorless

Odor Not available.

Odor threshold Not available.

pH 4.5 10% Solution

Melting point/freezing point 270.86 °F (132.7 °C) estimated

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. |
| 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 | 1.00 - 1.20 g/cm3 estimated |
| Explosive properties | Not explosive. |
| Oxidizing properties | Not oxidizing. |
| Percent volatile | 79.95 % estimated |
| Pounds per gallon | 8.9 typical |
| VOC | 5.1 % estimated |

10. Stability and reactivity

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| 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

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| Inhalation | May cause irritation to the respiratory system. Prolonged inhalation may be harmful. |
| Skin contact | Causes severe skin burns. |
| Eye contact | Causes serious eye damage. |
| Ingestion | Causes digestive tract burns. |
| Symptoms related to the physical, chemical and toxicological characteristics | Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. |

Information on toxicological effects

Acute toxicity

| Product | Species | Test Results |
|------------------------|---------|-----------------------|
| Brandt Steric NP 5-6-0 | | |
| <u>Acute</u> | | |
| Oral | | |
| LD50 | Rat | 43109 mg/kg estimated |

| Components | Species | Test Results |
|---------------------------------|---------|--------------|
| Phosphoric Acid (CAS 7664-38-2) | | |
| Acute | | |
| Dermal | | |
| LD50 | Rabbit | 2740 mg/kg |
| Oral | | |
| LD50 | Rat | 1530 mg/kg |
| Urea (CAS 57-13-6) | | |
| Acute | | |
| Oral | | |
| LD50 | Rat | 8471 mg/kg |
| | Sheep | 28500 mg/kg |

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

| | |
|---|--|
| Skin corrosion/irritation | Causes severe skin burns and eye damage. |
| Serious eye damage/eye irritation | Causes serious eye damage. |
| 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 | This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. |
| IARC Monographs. Overall Evaluation of Carcinogenicity | |
| Not listed. | |
| OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) | |
| Not regulated. | |
| US. National Toxicology Program (NTP) Report on Carcinogens | |
| 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 | Prolonged inhalation may be harmful. |

12. Ecological information

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| 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. |
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| Product | | Species | Test Results |
|------------------------|------|---------------------------------|-------------------------------------|
| Brandt Steric NP 5-6-0 | | | |
| Aquatic | | | |
| Crustacea | EC50 | Daphnia | 49161.7656 mg/l, 48 hours estimated |
| Fish | LC50 | Fish | 76813.7266 mg/l, 96 hours estimated |
| Components | | Species | Test Results |
| Urea (CAS 57-13-6) | | | |
| Aquatic | | | |
| Crustacea | EC50 | Water flea (Daphnia magna) | 3910 mg/l, 48 hours |
| Fish | LC50 | Carp (Leuciscus idus melanotus) | > 10000 mg/l, 48 hours |
| | | Guppy (Poecilia reticulata) | 16200 - 18300 mg/l, 96 hours |

| Components | Species | Test Results |
|------------|---|--------------------------|
| | Harlequinfish, red rasbora (Rasbora heteromorpha) | 12000 mg/l, 96 hours |
| | Mozambique tilapia (Tilapia mossambica) | 590 - 730 mg/l, 96 hours |

* 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)

Urea -2.11

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.

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)

Phosphoric Acid (CAS 7664-38-2) Listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not regulated.

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)

Not regulated.

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.**FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace**

Phosphoric Acid (CAS 7664-38-2)

High priority

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))

Phosphoric Acid (CAS 7664-38-2)

US. Massachusetts RTK - Substance List

Phosphoric Acid (CAS 7664-38-2)

US. New Jersey Worker and Community Right-to-Know Act

Phosphoric Acid (CAS 7664-38-2)

US. Pennsylvania Worker and Community Right-to-Know Law

Phosphoric Acid (CAS 7664-38-2)

US. Rhode Island RTK

Phosphoric Acid (CAS 7664-38-2)

US. California Proposition 65

WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm. 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

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

*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 | 03-08-2017 |
| Revision date | 03-08-2017 |
| Version # | 02 |

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of Manufacturer's knowledge, information and belief at the date of its publication; however, it is provided only as a guidance for safe handling, use, processing, storage, transportation, disposal and release of the Product. No warranties of any kind, either expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made with respect to the Product or the information provided herein, or that the Product or information herein may be used without infringing the intellectual property rights of others. The information provided in this Safety Data Sheet relates only to the specific Product designated and may not be valid if the Product is used in combination with other materials or in any other process, unless specified herein. The user assumes all risk and liability for loss, injury, damage or expense due to any use, handling, storage or disposal of the Product, and Manufacturer recommends that the user conducts its own tests of the Product to determine suitability of the Product for user's particular use. Brandt Consolidated, Inc. cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.