SAFETY DATA SHEET

1. Identification

Product identifier: Purkote 33-0-15

Other means of identification Product code:
Purkote 33-0-15; Nursery Pride 33-0-10

Recommended use: Fertilizer
Recommended restrictions: Professional Use

Manufacturer/Importer/Supplier/Distributor information Manufacturer/Supplier:
Pursell Agri-Tech LLC.
501 East 3rd Street
Sylacauga, AL 35150

Emergency:
CHEMTREC
USA/Canada – 1-800-424-9300

2. Hazard(s) identification

Classification of the substance or mixture:

Hazard classes and Hazard Categories: Toxic to reproduction cat. 1B

Label elements	
Hazard symbol	None
Signal word	
Hazard statement	
Precautionary statement	
Prevention	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear eye protection.
Response	If exposed or concerned: Get medical advice/attention. Dispose of contents/container according to local state/federal regulations
Storage	Store away from incompatible material
Disposal	Dispose of waste and residues in accordance with local authority requirements
Hazard(s) not otherwise classified (HNOC)	None
Supplemental information	Boric acid – Toxic to reproduction, Cat. 1B

3. Composition/information on ingredients

Mixtures

Chemical name	CAS Number	%
Potassium Nitrate	7757-79-1	33%
Urea	57-13-6	66%

4. First-aid measures

Inhalation Symptoms:	If inhaled, remove to fresh air. Get medical attention immediately. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. Irritation to respiratory tract. Delayed lung effects after short term exposure to thermal degradation products.
Skin contact Symptoms:	Wash with soap and water. Get medical attention if irritation develops. May cause redness and irritation
Eye contact Symptoms:	Immediately flush eyes with plenty of water for at least 15 minutes, keeping eyelids open. Check for and remove any contact lenses. Get medical attention immediately. May cause redness and irritation
Ingestion Symptoms:	Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give large amounts of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if you feel unwell. Stomach Pain
Immediate or special treatment needed:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
General Information:	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.
Inhalation Symptoms:	If inhaled, remove to fresh air. Get medical attention for any breathing difficulty.

	Irritation to respiratory tract. Delayed lung effects after short term exposure to thermal degradation products.

5. Fire-fighting measures

Suitable extinguishing media – Use any suitable mean for extinguishing surrounding fire. Spray water for small fires. For large fires flood with abundant water.

Unsuitable extinguishing media – None, but attention should be paid to compatibility with chemicals surrounding.

Specific hazards arising from the chemical – Oxidizer. Contact with combustible materials will not cause spontaneous ignition, however, potassium nitrate will enhance an existing fire.

Special protective equipment and precautions for firefighters – Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Keep upwind of fire.

Hazardous thermal decomposition products – Thermal decomposition can lead to the escape of toxic/corrosive gases and vapors.: Nitrous oxides, potassium nitrate and potassium oxide

6. Accidental release measures

For non-emergency personnel	No action shall be taken involving any personal risk or without suitable training. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
For emergency responders	If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
Personal precautions, protective equipment and emergency procedures	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
Methods and materials for containment and cleaning up Spill:	Take up mechanically, placing in appropriate containers for disposal or recovery. Do NOT absorb in saw dust or other combustible absorbents
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

7. Handling and storage

Precautions for safe handling	Avoid generation of dust. Provide adequate ventilation. Wear personal protective equipment. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Keep away from flammable, combustible and reducing substances.
Advice on general occupational hygiene	Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
Conditions for safe storage, including any incompatibilities	Keep/store only in original container. Wooden pallets are allowed for storage (see NFPA 430). Store in a well-ventilated place. Keep container tightly closed Do not store with flammable substance, reducing agents, empty wooden pallets

8. Exposure controls/personal protection

Occupational exposure limits:

OSHA	PEL	Not Established
	STEL	Not Established
ACGIH		
	TWA	2 mg/m³ (inhal. Fraction)
	STEL	6 mg/m³ (inhal. Fraction)

Derived No-Effect Level (DNEL) suggested by the manufacturer
Workers (Industrial/professional)

DNEL Human, dermal, long term (repeated):	20.8 mg/kg/day (systemic)
DNEL Human, inhalation, long term (repeated):	36.7 mg/m³ (systemic)

Appropriate engineering controls - If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls - Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual protection measures, such as personal protective equipment:

Eye/face protection - Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Recommended: Tightly-fitting goggles

Skin protection:

Hand protection - Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

> 8 hours (breakthrough time): Protective gloves should be worn under normal conditions of use.

Other - Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Body Protection: Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

Respiratory protection - Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Personal Protective Equipment (Pictograms):

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. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

Appearance: Physical state Form Color	Appearance Solid (Prills) Granular Solid Mix of Pink & white prills/granules coated with purple, pink, blue or orange polymer
Odor	Odorless
Odor threshold	Not available
pH	Not available]
Melting point/freezing point	725 °F
Evaporation rate	Not available
Flammability (solid, gas)	None Flammable
Upper/lower flammability or explosive limits Flammability limit - lower (%) Flammability limit - upper (%) Vapor pressure Vapor density Density	 Not available Not available Not available Not available 1.26 ton (metric)/m³ [Free Fall] 1.33 ton metric/m³ [Tapped]

Partition coefficient (n-octanol/water) Auto-ignition temperature Decomposition temperature Viscosity Other information: Explosive properties Oxidizing properties Solubility	 Not available Not available Not available Not available Not available Not available Not Explosive None Not available

10. Stability and reactivity

Reactivity - No specific test data related to reactivity available for this product or its ingredients.

Chemical stability – This product is stable under normal conditions.

Possibility of hazardous reactions - Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid – Keep away from flammable, combustible, and reducing substances

Incompatible materials – Flammable, combustible and reducing substances under specific conditions. These incompatible materials shall not include approved packaging materials, pallets, or other dunnage (NFPA 430/2004, Code for the Storage of Liquid and Solid Oxidizers, item 4.4.3.1)

Hazardous decomposition products – Nitrous oxides, nitrite and potassium oxide.

11. Toxicological information

Information on likely routes of exposure:
Inhalation – May cause irritation to respiratory system
Skin contact – May cause redness or irritation to skin.
Eye contact – May cause redness or irritation to eyes
Ingestion – ingestion of large amounts may cause gastrointestinal disturbances. May cause delayed lung effects after short term exposure to thermal degradation products.
Symptoms related to the physical, chemical and toxicological characteristics - Symptoms can include irritation, redness

Information on toxicological effects
Acute toxicity - May cause discomfort if swallowed.

Components	Species	Test Results
Potassium Nitrate (CAS: 7757-79-1) Acute Oral LD50	Rat/Rabbit Rat	 > 2,000 mg/kg OECD 425

Acute Dermal LD50 Acute Inhalation LC50	Rat Rat	> 5,000 mg/kg OECD 402 Does not contain acutely toxic ingredients/impurities

Skin corrosion/irritation - May cause irritation through mechanical abrasion.
Serious eye damage/eye - Symptoms may include the following: irritation, redness

Respiratory or skin sensitization:
Respiratory sensitization - Based on available data, the classification criteria are not met

Skin sensitization - Not a skin sensitizer

Germ cell mutagenicity - Based on available data, the classification criteria are not met
Carcinogenicity - This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

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

Specific target organ toxicity (single exposure) - No known significant effects or critical hazards.
Specific target organ toxicity (repeated exposure) - No known significant effects or critical hazards
Aspiration hazard - Not an aspiration hazard.
Chronic effects - No known significant effects or critical hazards
Further information - No other specific acute or chronic health impact noted.

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.

Components & Results	Species	Exposure
Potassium Nitrate (CAS: 7757-79-1)		
Acute LC50 1336 mg/L	Poecilia reticulata	96 h
Acute EC50 489 mg/L	Daphnia magna	24 h
Acute EC50 >1100 mg/L	Algae	72 h

Persistence and degradability – In aqueous solution, the product will produce nitrate ions. Under anoxic conditions, denitrification occurs and nitrate is ultimately converted into molecular nitrogen as part of the Nitrogen cycle.

Bioaccumulate potential –has a low potential for bioaccumulation based on physicochemical properties (high water solubility).

Mobility in soil – has a low potential for adsorption. Portion not taken up by plants, can leach to groundwater.

Other adverse effects – Excess nitrate leaching may enrich waters leading to eutrophication.

13. Disposal considerations

Disposal instructions - The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Hazardous waste code – It is the responsibility of the waste generator to determine the toxicity and physical properties of material generated to determine the proper waste identification and disposal method in compliance with applicable regulations. Potassium nitrate waste exhibiting the characteristic of ignitability has the EPA Hazardous Waste Number of D001 according to the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste from residues / unused products - Disposal recommendations are based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

Contaminated packaging - Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. Transport information

DOT		
	UN-NO	Non-dangerous good
	UN Proper Shipping Name	Not applicable
	Hazard Class	Not applicable
	Packing Group	Not applicable
	Special Marking	None Not applicable
	Special Provision	Not applicable
IATA		
	UN-NO	Not applicable
	UN Proper Shipping Name	Not applicable
	Hazard Class	Not applicable
	Packing Group	Not applicable
	Hazard Label	Not applicable
	Special Marking	Not applicable
	Special Provision	Not applicable
IMDG		
	UN-NO	Not applicable
	UN Proper Shipping Name	Not applicable
	Hazard Class	Not applicable
	Packing Group	Not applicable
	Special Marking	Not applicable
	Special Provision	Not applicable

15. Regulatory information

SARA Title III Rules

Section 311/312	
Acute Health Hazard	No
Chronic Health Hazard	No

Fire Hazard	No
Release of Pressure	No
Reactive Hazard	No

Section 313 Toxic Chemicals
N511 Nitrate compounds (water dissociable; reportable only when in aqueous solution)

Section 302 Extremely Hazardous Substances (EHS)/CERCLA Hazardous Substances
not listed

DHS Chemicals
It contains potassium nitrate

NFPA 704/2012: National Fire Protection Association

Health	1
Fire	0
Instability	0
Special	none

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

Issue date: 26-Sept-18
Revision date: -
Version # 01
Further information - HMIS® is a registered trade and service mark of the NPCA. A HMIS® Health rating including an * indicates a chronic hazard.

HMIS® ratings NFPA ratings
Health: 1
Flammability: 0
Physical hazard: 0
Special: none

List of abbreviations
References:

LC50: Lethal Concentration, 50%.
LD50: Lethal Dose, 50%.
ECHA CHEM
EPA: Acquire database
HSDB® - Hazardous Substances Data Bank RTECS

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