

# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>Pro Bupher</b>	
<b>Other means of identification</b>		
<b>Product code</b>	02001	
<b>Recommended use</b>	Agricultural/ Horticultural Use- Adjuvant- Refer to product label.	
<b>Recommended restrictions</b>	Refer to product label.	
<b>Manufacturer/Importer/Supplier/Distributor information</b>		
<b>Manufacturer</b>		
<b>Company name</b>	Integrated Agribusiness Professionals	
<b>Address</b>	7108 N Fresno St., Suite 150 Fresno, CA 93720 United States	
<b>Telephone</b>	1-559-440-1980	
<b>Website</b>	www.iapros.com	
<b>E-mail</b>	fertilizer@iapros.com	
<b>Contact person</b>	Fertilizer Department	
<b>Emergency phone number</b>	CHEMTREC (24 HOURS): US, Canada, Puerto Rico           1-800-424-9300 Virgin Islands                       1-800-424-9300 International Maritime           +1 (703)-527-3887	

## 2. Hazard(s) identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 2A
<b>Environmental hazards</b>	Not classified.	
<b>OSHA defined hazards</b>	Not classified.	
<b>Label elements</b>		



<b>Signal word</b>	Warning	
<b>Hazard statement</b>	Causes skin irritation. Causes serious eye irritation.	
<b>Precautionary statement</b>		
<b>Prevention</b>	Wear eye/face protection. Wash thoroughly after handling. Wear protective gloves.	
<b>Response</b>	If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (see this label). If skin irritation occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Take off contaminated clothing and wash before reuse.	
<b>Storage</b>	Store away from incompatible materials.	
<b>Disposal</b>	Dispose of waste and residues in accordance with local authority requirements.	
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.	
<b>Supplemental information</b>	None.	

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Citric Acid, Anhydrous		77-92-9	20 - < 30*
Potassium Nitrate		7757-79-1	5 - < 10*
Urea		57-13-6	5 - < 10*
Potassium Hydroxide (Caustic Potash)		1310-58-3	< 1*
Other components below reportable levels			50 - < 60

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

#### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Remove contaminated clothing. Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
<b>Eye contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause redness and pain. Severe eye irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

#### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. 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.
<b>Methods and materials for containment and cleaning up</b>	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. 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. Prevent entry into waterways, sewer, basements or confined areas. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground.

#### 7. Handling and storage

<b>Precautions for safe handling</b>	Avoid contact with eyes. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
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**Conditions for safe storage, including any incompatibilities**

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

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. ACGIH Threshold Limit Values

Components	Type	Value
Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3)	Ceiling	2 mg/m <sup>3</sup>

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3)	TWA	2 mg/m <sup>3</sup>

#### US. AIHA Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value	Form
Urea (CAS 57-13-6)	TWA	10 mg/m <sup>3</sup>	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** Face shield is recommended. Wear safety glasses with side shields (or goggles).

#### Skin protection

**Hand protection** Wear appropriate chemical resistant gloves.

#### Other

Wear appropriate chemical resistant clothing. Use of an impervious apron is recommended.

#### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Respiratory protection not required.

#### 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** Liquid. Clear.

**Physical state** Liquid.

**Form** Liquid.

**Color** Clear.

**Odor** Slight. Citrus

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** Not available.

**Initial boiling point and boiling range** 212 °F (100 °C)

**Flash point** Not available.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not available.

### Upper/lower flammability or explosive limits

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.

<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	760 mm Hg
<b>Vapor density</b>	< 1
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	70 cP
<b>Other information</b>	
<b>Density</b>	10.20 lbs/gal typical
<b>Specific gravity</b>	1.71 estimated
<b>VOC</b>	4.05 % estimated

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	Causes skin irritation.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Ingestion</b>	Expected to be a low ingestion hazard.
<b>Symptoms related to the physical, chemical and toxicological characteristics</b>	Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Skin irritation. Severe eye irritation. May cause redness and pain.

### Information on toxicological effects

#### Acute toxicity

Product	Species	Test Results
Pro Bupher		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD50	Rat	> 5000 mg/kg, 24 hours
<b>Oral</b>		
LD50	Mouse	20161 mg/kg estimated
	Rabbit	12146 mg/kg estimated
	Rat	> 5000 mg/kg

Components	Species	Test Results
Citric Acid, Anhydrous (CAS 77-92-9)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Mouse	5040 mg/kg
	Rat	6730 mg/kg
Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	273 mg/kg
Potassium Nitrate (CAS 7757-79-1)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rabbit	1166 mg/kg
Urea (CAS 57-13-6)		
<u>Acute</u>		
<b>Oral</b>		
LD50	Rat	8471 mg/kg
	Sheep	28500 mg/kg

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

<b>Skin corrosion/irritation</b>	Causes skin irritation.
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation.
<b>Conjunctival reddening value</b>	1.0000
<b>Recover days</b>	7
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization</b>	Not available.
<b>Skin sensitization</b>	This product is not expected to cause skin sensitization.
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
	Not listed.
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>	
	Not regulated.
<b>US. National Toxicology Program (NTP) Report on Carcinogens</b>	
	Not listed.
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not available.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

## 12. Ecological information

<b>Ecotoxicity</b>	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
Pro Bupher			
<b>Aquatic</b>			
Crustacea	EC50	Daphnia	61884.4883 mg/l, 48 hours estimated
Fish	LC50	Fish	2792.0906 mg/l, 96 hours estimated
<b>Components</b>	<b>Species</b>		<b>Test Results</b>
Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3)			
<b>Aquatic</b>			
Fish	LC50	Western mosquitofish ( <i>Gambusia affinis</i> )	80 mg/l, 96 hours
Potassium Nitrate (CAS 7757-79-1)			
<b>Aquatic</b>			
Fish	LC50	Bluegill ( <i>Lepomis macrochirus</i> )	1200 mg/l, 96 hours
<i>Acute</i>			
Fish	LC50	Fish	1378 - 3000 mg/l
Urea (CAS 57-13-6)			
<b>Aquatic</b>			
Crustacea	EC50	Water flea ( <i>Daphnia magna</i> )	3910 mg/l, 48 hours
Fish	LC50	Carp ( <i>Leuciscus idus melanotus</i> )	> 10000 mg/l, 48 hours
		Guppy ( <i>Poecilia reticulata</i> )	16200 - 18300 mg/l, 96 hours
		Harlequinfish, red rasbora ( <i>Rasbora heteromorpha</i> )	12000 mg/l, 96 hours
		Mozambique tilapia ( <i>Tilapia mossambica</i> )	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** Not available.

**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** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 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.

All components are on the U.S. EPA TSCA Inventory List.

This product is not known to be 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)

Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3) 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)

Chemical name	CAS number	% by wt.
Potassium Nitrate	7757-79-1	5 - < 10

### 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.

### US state regulations

#### US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

#### US. Massachusetts RTK - Substance List

Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3)

Potassium Nitrate (CAS 7757-79-1)

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

Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3)

Potassium Nitrate (CAS 7757-79-1)

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

Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3)

Potassium Nitrate (CAS 7757-79-1)

#### US. Rhode Island RTK

Potassium Hydroxide (Caustic Potash) (CAS 1310-58-3)

Potassium Nitrate (CAS 7757-79-1)

#### US. California Proposition 65



**WARNING:** This product can expose you to chemicals including arsenic, cadmium, and lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
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** 07-17-2015

**Revision date** 09-13-2018

**Version #** 06

### 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.

### Revision information

Toxicological Information: Toxicological Data  
 Transport Information: Material Transportation Information  
 Regulatory information: California Prop 65  
 GHS: Classification