


# SAFETY DATA SHEET

## *ARM U 16% DMPP*

| <b>SECTION 1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION</b> |   |
|--|---|
| <b>PRODUCT IDENTIFIER</b>                                      | <b>ARM U 16% DMPP</b>                           |
| <b>PRODUCT USE</b>   | Liquid nitrogen stabilizer for urea fertilizers |
| <b>MANUFACTURERS NAME</b>                                      | Active Agriscience Australia Pty Ltd.           |
| <b>DATE</b>  | August 31, 2022                                 |
| <b>EMERGENCY TELEPHONE</b>                                     | +1800 039 008                                   |
| <b>PREPARED BY</b>   | Active Agriscience Australia Pty Ltd.           |
| <b>USE RESTRICTIONS</b>  | For professional use only. Use only as labeled. |
| <b>DISTRIBUTORS NAME</b>                                       |   |
| <b>STREET ADDRESS</b>  |   |
| <b>CITY</b>  |   |
| <b>POSTAL CODE</b>   |   |
| <b>COUNTRY</b>   |   |
| <b>EMERGENCY TELEPHONE</b>                                     |   |

# SAFETY DATA SHEET

## ARM U 16% DMPP

| SECTION 2 – HAZARDS IDENTIFICATION   |  |
|--|--|
| GHS CLASSIFICATION   |  |
| HPR (WHMIS 2015)   | <p><b>Eye Damage / Irritation:</b> Category 1<br/> <b>Skin Corrosion / Irritation:</b> Category 2<br/> <b>Specific Target Organ Toxicity (STOT); Single exposure:</b> Category 3 (respiratory irritation)<br/> <b>Specific Target Organ Toxicity (STOT); Single exposure:</b> Category 2 (kidneys)<br/> <b>Reproductive toxicity:</b> Category 1B</p>  |
| OSHA Hazard Communication Standard (29 CFR 1910.1200)  | <p><b>Eye Damage / Irritation:</b> Category 1<br/> <b>Skin Corrosion / Irritation:</b> Category 2<br/> <b>Specific Target Organ Toxicity (STOT); Single exposure:</b> Category 3 (respiratory irritation)<br/> <b>Specific Target Organ Toxicity (STOT); Single exposure:</b> Category 2 (kidneys)<br/> <b>Reproductive toxicity:</b> Category 1B</p>  |
|  <p><b>DANGER</b></p> | <p><b>HAZARD STATEMENTS:</b> CAUSES SERIOUS EYE DAMAGE. CAUSES SKIN IRRITATION. MAY CAUSE RESPIRATORY IRRITATION. MAY DAMAGE FERTILITY OR THE UNBORN CHILD.<br/> <b>PRECAUTIONARY STATEMENTS:</b> Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear chemical resistant gloves, coveralls, goggles and face protection. Change gloves frequently. Wear air supplied respirator where airborne concentrations exceed recommended exposure limits or are unknown. Do not eat, drink or smoke when using this product. Wash up thoroughly before eating, drinking, smoking and leaving work. Keep livestock off treated areas until after 14 days or 2.5 cm of rainfall has accumulated.<br/> <b>FIRST AID: IF SWALLOWED:</b> Rinse mouth. Do NOT induce vomiting. <b>Immediately call a POISON CENTRE / doctor.</b> <b>IF ON SKIN:</b> Immediately take off all contaminated clothing. Rinse skin with water (or shower). Wash contaminated clothing before reuse. <b>Seek immediate medical attention.</b> <b>IF INHALED:</b> Remove person to fresh air and keep comfortable for breathing. <b>Immediately call a POISON CENTRE / doctor.</b> <b>IF IN EYES:</b> Immediately flush eyes with a gentle stream of water for 15 minutes while holding the upper and lower eyelids open. Remove contact lenses, if present and easy to do. <b>Seek immediate medical attention.</b><br/> <b>STORAGE:</b> KEEP OUT OF REACH OF CHILDREN. Store locked up in a cool, dry, well ventilated area away from food or feed storage. DO NOT FREEZE.<br/> <b>DISPOSAL:</b> Dispose of this product and its container in accordance with Federal, Provincial, and Local regulations.</p> |

## SAFETY DATA SHEET

### ARM U 16% DMPP

| SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS |             |               |
|--|-------------|---------------|
| INGREDIENTS  | CAS#        | CONCENTRATION |
| Propylene glycol                                     | 57-55-6     | 15-30%        |
| N-methyl-2-pyrrolidone                               | 872-50-4    | 30-45%        |
| 3,4-Dimethylpyrazole Phosphate (DMPP)                | 202842-98-6 | 12-18%        |

| SECTION 4 – FIRST AID MEASURES                           |  |
|--|--|
| EYE CONTACT  | Immediately flush eyes with a gentle stream of water for 15 minutes while holding the upper and lower eyelids open. Remove contact lenses, if present and easy to do. <b>Seek immediate medical attention.</b> |
| SKIN CONTACT   | Immediately take off all contaminated clothing. Rinse skin with water (or shower). Wash contaminated clothing before reuse. <b>Seek immediate medical attention.</b>   |
| INHALATION   | Remove person to fresh air and keep comfortable for breathing. <b>Immediately call a POISON CENTRE / doctor.</b>   |
| INGESTION  | Rinse mouth. Do NOT induce vomiting. <b>Immediately call a POISON CENTRE/doctor.</b>   |
| <b>Most Important Symptoms, both acute &amp; delayed</b> | Causes serious eye damage. Causes skin irritation. May cause respiratory irritation. May damage fertility or the unborn child.   |

## SAFETY DATA SHEET

### *ARM U 16% DMPP*

| <b>SECTION 5 – FIRE FIGHTING MEASURES</b> |  |
|---|--|
| <b>FLAMMABLE</b>                          | Product will not burn or support combustion.   |
| <b>MEANS OF EXTINCTION</b>                | Use extinguishing methods appropriate for the surrounding fire.  |
| <b>FLASHPOINT &amp; METHOD</b>            | NAP  |
| <b>UPPER FLAMMABLE LIMIT</b>              | NAP  |
| <b>LOWER FLAMMABILITY LIMIT</b>           | NAP  |
| <b>AUTO IGNITION TEMPERATURE</b>          | NAP  |
| <b>SENSITIVITY TO IMPACT</b>              | NAP  |
| <b>SENSITIVITY TO STATIC DISCHARGE</b>    | NAP  |
| <b>HAZARDOUS COMBUSTION PRODUCTS</b>      | Toxic irritating and/or corrosive gases may be released during a fire: carbon oxides, nitrogen oxides, sulphur oxides. |

| <b>SECTION 6 – ACCIDENTAL RELEASE MEASURES</b> |   |
|--|---|
| <b>LEAK &amp; SPILL PROCEDURES</b>             | Wear personal protective equipment outlined in SECTION 8. Ventilate area of spill. Avoid breathing mists. Contain spill then adsorb with inert material and place into suitable clean containers for later disposal. Do not release into drains or the environment. |

| <b>SECTION 7 – HANDLING AND STORAGE</b> |  |
|---|--|
| <b>HANDLING</b>                         | Do not handle until all safety precautions have been read and understood. Do not breathe mist/spray. Do not get in eyes, or skin. Wear personal protective equipment outlined in SECTION 8. Wash hands and other exposed areas before eating, drinking, smoking and when leaving work. |
| <b>STORAGE</b>                          | KEEP OUT OF REACH OF CHILDREN. Store locked up in a cool, dry, well ventilated area away from food or feed storage. DO NOT FREEZE.   |

## SAFETY DATA SHEET

*ARM U 16% DMPP*

| <b>SECTION 8 – EXPOSURE CONTROL / PERSONAL PROTECTION</b> |   |
|---|---|
| <b>EXPOSURE LIMITS</b>                                    | Canada OEL: N-methyl-2-pyrrolidone: TWA 400 mg/m <sup>3</sup><br>OSHA: Not available  |
| <b>ENGINEERING CONTROLS</b>                               | Follow all label instructions. Follow manufacturers' instructions for cleaning / maintaining personal protective equipment.     |
| <b>PERSONAL PROTECTIVE EQUIPMENT</b>                      |   |
| <b>Skin</b>   | Wear chemical resistant gloves, coveralls and face protection when handling or applying this product. Change gloves frequently. |
| <b>Eyes</b>   | Wear chemical resistant goggles when handling or applying this product.   |
| <b>Respirator</b>   | Wear air supplied respirator where airborne concentrations exceed recommended exposure limits or are unknown.                   |

## SAFETY DATA SHEET

### ARM U 16% DMPP

| <b>SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES</b> |                              |
|---|------------------------------|
| PHYSICAL STATE                                      | Liquid                       |
| COLOUR  | Blue                         |
| BOILING POINT                                       | NAV                          |
| EVAPORATION RATE                                    | NAV                          |
| ODOUR   | NAV                          |
| SOLUBILITY IN WATER                                 | Miscible in water            |
| APPEARANCE  | Blue liquid                  |
| VISCOSITY   | 38 cPs at 10°C               |
| FREEZING POINT                                      | NAV                          |
| SPECIFIC GRAVITY                                    | 1.05 - 1.1 g/cm <sup>3</sup> |
| pH  | 4 - 6                        |
| ODOUR THRESHHOLD                                    | NAV                          |

| <b>SECTION 10 – STABILITY AND REACTIVITY</b> |  |
|--|--|
| CHEMICAL STABILITY                           | Stable under normal conditions of use and storage.   |
| INCOMPATIBLE WITH OTHER SUBSTANCES           | Acids, strong reducing agents, strong oxidizing agents.  |
| HAZARDOUS DECOMPOSING PRODUCTS               | Toxic irritating and/or corrosive gases may be released during a fire: carbon oxides, nitrogen oxides, sulphur oxides. |

## SAFETY DATA SHEET

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| <b>SECTION 11 – TOXICOLOGICAL INFORMATION</b> |   |
|---|---|
| <b>ACUTE TOXICITY</b>                         | Acute Oral: Does not meet criteria.<br>Acute Dermal: Does not meet criteria.  |
| <b>CHRONIC TOXICITY</b>                       | Based on the available information, product does not meet criteria for chronic toxicity.  |
| <b>EYE / SKIN IRRITATION</b>                  | Causes serious eye damage and skin irritation.  |
| <b>SENSITIZATION</b>                          | Not available.  |
| <b>CARCINOGENICITY</b>                        | No component of this product present at levels $\geq 0.1\%$ is identified as a probable, possible, or confirmed human carcinogen by IARC, or ACGIH. |
| <b>REPRODUCTIVE TOXICITY</b>                  | May damage fertility or unborn child.   |
| <b>MUTAGENICITY</b>                           | Not available.  |
| <b>Possible delayed effects</b>               | N-methyl-2-pyrrolidone: effects may be delayed. Animal studies show adverse effects to liver and kidneys.   |

## SAFETY DATA SHEET

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| <b>SECTION 12 – ECOLOGICAL INFORMATION</b>                      |   |
|---|---|
| <b>ECO TOXICITY</b>   | Aquatic Toxicity                                    |
| <b><i>N-methyl-2-pyrrolidone (CAS 872-50-4)</i></b>             |   |
| <b>Acute Toxicity</b>   | Crustacea   |
|   | Algae   |
|   | Crustacea   |
|   | Fish  |
| <b>Test</b>   | LC <sub>50</sub>                                    |
|   | EC <sub>50</sub>                                    |
|   | EC <sub>50</sub>                                    |
|   | LC <sub>50</sub>                                    |
| <b>Species</b>  | <i>Palaemonetes vulgaris</i>                        |
|   | <i>Scenedesmus subspicatus</i>                      |
|   | <i>Daphnia magna</i>                                |
|   | <i>Oncorhynchus mykiss</i>                          |
| <b>Test Results</b>   | 1107 mg/l, 96 hours                                 |
|   | > 500 mg/l, 72 hours                                |
|   | > 1000 mg/l, 24 hours                               |
|   | > 500 mg/l, 96 hours                                |
| <b>Chronic Toxicity</b>   | Crustacea   |
| <b>Test</b>   | LC <sub>50</sub>                                    |
| <b>Species</b>  | <i>Daphnia magna</i>                                |
| <b>Test Results</b>   | 25 mg/l, 21 days                                    |
| <b><i>Propylene Glycol (CAS 57-55-6)</i></b>                    |   |
| <b>Acute Toxicity</b>   | Crustacea   |
| <b>Test</b>   | LC <sub>50</sub>                                    |
| <b>Species</b>  | <i>Ceriodaphnia</i>                                 |
| <b>Test Results</b>   | 18340 mg/l, 48 hours                                |
| <b>Persistence and Degradability</b>                            | This product is not readily biodegradable.          |
| <b>Bioaccumulation potential</b>                                | Not available.                                      |
| <b><i>Partition coefficient n-octanol / water (log Kow)</i></b> |   |
| <b>N-methyl-2-pyrrolidone (CAS 872-50-4)</b>                    | -0.54   |
| <b>Propylene Glycol (CAS 57-55-6)</b>                           | -0.92   |
| <b>Ethylene Glycol (CAS 107-21-1)</b>                           | -1.36   |
| <b>Mobility in soil</b>   | Product is water soluble and may move through soil. |



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### SECTION 13 – DISPOSAL CONSIDERATIONS

|                       |   |
|-----------------------|---|
| <b>WASTE DISPOSAL</b> | Dispose of this product and its container in accordance with Federal, Provincial, and Local regulations. Do not allow this product to enter drains or drinking water sources. |
|-----------------------|---|

### SECTION 14 – TRANSPORT INFORMATION

|                 |   |
|-----------------|---|
| <b>SHIPPING</b> | <p>TDG: Not a dangerous good for transport.</p> <p>DOT: Not a dangerous good for transport.</p> <p>IATA: Not regulated as dangerous goods.</p> <p>IMDG: Not regulated as dangerous goods.</p> |
|-----------------|---|

### SECTION 15 – REGULATORY INFORMATION

This SDS is prepared to comply with the Global Harmonized System of Chemical Classification and Labeling (GHS) and conforms to the requirements of HPR (WHMIS 2015) & OSHA Hazard Communication Standard (29 CFR 1910.1200).

**US federal regulations:** All components of this product are listed on the U.S. EPA TSCA Inventory.

N-(n-butyl)-thiophosphoric triamide (NBPT) is subject to a Significant New Use Rule (SNUR) codified in 40 CFR 721.6090

**Canadian federal regulations:** All components if this product listed on Canada’s DSL Inventory.

### SECTION 16 – OTHER INFORMATION

To the best of our knowledge, the information contained herein is current and correct as of the date of this SDS, however, the information and recommendations are presented without warranty, representation or license of any kind, with respect to their accuracy, or completeness, and the seller, supplier and manufacturer (Supplier) of this material or their affiliates, disclaim all liability for reliance on such information and recommendations.

Final determination of the suitability of any material is the sole responsibility of the buyer or the user (recipient). All materials may present unknown hazards and should be used with caution. The recipient assumes all risk in connection with the use of this material and assumes all responsibility for ensuring the material is used in a safe manner in compliance with applicable environmental, health and safety laws.

The supplier does not warrant the merchantability of this material or the fitness of the material for any particular use and assumes no responsibility for injury or damage caused directly or indirectly by the use of this material.