



**Altech, INC.**  
SAFETY DATA SHEET  
(Globally Harmonized System)

**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

- 1.1 Product identifier  
**ACID-PAK 4-WAY 2X®**
- 1.2 Other means of identification Not applicable
- 1.3 Recommended use of the chemical and restrictions on use  
**ACID-PAK 4-WAY 2X®** is an acidifier for pigs, calves, and poultry.
- 1.4 Details of the supplier of the safety data sheet  
Altech Inc.  
3031 Catnip Hill Pike  
Nicholasville, KY 40356  
Phone: (01) (859) 885-9613 [U.S.A.]  
Fax: (01) (859) 887-6736 [U.S.A.]
- 1.5 Emergency telephone number  
Chem Trec: 1-800-424-9300 24 hours

**SECTION 2: Hazards identification**

- 2.1 Classification of the substance or mixture Not applicable  
H Phrases: None listed  
P Phrases: None listed
- 2.2 GHS Label elements Not applicable
- 2.3 Other hazards
- Inhalation: Exposure to dust may cause irritation to the nose, throat or respiratory system. If application creates dust, use appropriate approved respiratory protection. Persons with allergies should avoid exposure.
- Skin Contact: Skin contact may cause a slight irritation. Symptoms may include redness, itching and pain. Persons with allergies should avoid exposure.
- Eye Contact: Product may cause slight irritation. Symptoms include redness, itching and pain.
- Ingestion: Not found to be toxic by oral exposure. Ingestion of this product may cause slight irritation.
- Chronic Health Effects: Not identified.

## SECTION 3: Composition/information of ingredients

- 3.1 Substances Not applicable
- 3.2 Mixtures

| CAS#:       | Component   | Weight %      |
|-------------|---|---------------|
| 77-92-9     | Citric acid   | Not disclosed |
| 7647-14-5   | Salt  | Not disclosed |
| 9050-36-6   | Maltodextrin  | Not disclosed |
| 7440-40-7   | Potassium chloride  | Not disclosed |
| 112926-00-8 | Silicon dioxide   | Not disclosed |
| NA          | Natural and artificial flavors                              | Not disclosed |
| 128-44-9    | Sodium saccharin  | Not disclosed |
| 110-44-1    | Sorbic acid (a preservative)                                | Not disclosed |
| 6132-04-3   | Sodium citrate  | Not disclosed |
| 7446-19-7   | Zinc sulfate  | Not disclosed |
| 7782-63-0   | Iron sulfate  | Not disclosed |
| 10034-99-8  | Magnesium sulfate   | Not disclosed |
| NA          | Dried <i>Aspergillus oryzae</i> fermentation extract        | Not disclosed |
| NA          | Dried <i>Bacillus subtilis</i> fermentation extract         | Not disclosed |
| NA          | Dried <i>Lactobacillus acidophilus</i> fermentation product | Not disclosed |
| NA          | Dried <i>Enterococcus faecium</i> fermentation product      | Not disclosed |

NA: Not applicable

## SECTION 4: First aid measures

## 4.1 Description of first aid measures

- Eyes:** Flush eyes immediately with copious amounts of clean water for 15 minutes. If irritation or redness persists, seek medical attention if allergic response exhibited.
- Skin:** Remove affected clothing immediately. Flush affected area(s) with copious amounts of soap and water. If skin surface is damaged, apply a clean dressing. Wash contaminated clothing before reuse. If irritation or redness develops, seek medical attention immediately.
- Inhalation:** Remove victim from source and allow to rest in well ventilated area. If breathing is difficult, obtain medical attention immediately.
- Ingestion:** Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Seek medical attention.

4.2 Most important symptoms and effects, both acute and delayed Not identified.

4.3 Indication of any immediate medical attention and special treatment needed Not identified.

## SECTION 5: Firefighting measures

## 5.1 Suitable extinguishing media

Use media that is appropriate to treat surrounding fire. Consider alcohol-resistant foam, carbon dioxide, regular dry chemical, or water spray. Avoid heavy stream of water. Self contained breathing apparatus is required.

- 5.2 Special hazards arising from the substance or mixture  
Evolves carbon dioxide, carbon monoxide or hydrocarbon fumes upon combustion.
- 5.3 Special protective actions for fire-fighters  
Move container from fire area if it can be done without risk. Do not scatter spilled material with high pressure water streams. Use extinguishing agents appropriate for surrounding fire. Avoid inhalation of material or combustion by-products.  
Fire fighters should wear self-contained breathing apparatus with full face piece operated in positive pressure mode and protective clothing to prevent contact with skin and eyes.

SECTION 6: Accidental release measures

- 6.1 Personal precautions, protective equipment and emergency procedures  
Ventilate the area. Wear appropriate protective equipment as specified in section 8. Avoid dust formation and avoid inhalation of dust. Use a respirator or a combination filter. Keep unnecessary personnel away.
- 6.2 Environmental precautions  
Place contaminated materials in disposal containers and dispose of in a manner consistent with applicable regulations. Contact local environmental or health authorities for approved disposal of this material. Do not dispose in canals, surface water, or ground water.
- 6.3 Methods and material for containment and cleaning up  
Sweep, shovel, or vacuum up the material. Avoid any excess dust formation. Use caution as product may be slippery when wet. Keep product out of sewage and drainage systems and all bodies of water. Clean spills immediately. Ventilate the contaminated area. Thoroughly wash the area with water after a spill.

SECTION 7: Handling and storage

- 7.1 Precautions for safe handling  
Avoid contact and inhalation. Do not get in eyes, on skin, on clothing. Wash thoroughly with soap and water after handling. The use of respiratory protection is advised when dust concentrations exceed any established exposure limits (see section 8).
- 7.2 Conditions for safe storage, including any incompatibilities  
Store in a cool, dry place. Open containers should be resealed. Shelf life under these conditions is 18 months.

SECTION 8: Exposure controls/personal protection

- 8.1 Control parameters  
Component (CAS#): Maltodextrin (CAS#: 9050-36-6)  
TLV: 10 mg/m<sup>3</sup>  
PEL: 15 mg/m<sup>3</sup>

Silicon dioxide (CAS#: 112926-00-8)  
 TLV: 10 mg/m<sup>3</sup>  
 PEL: 1.2 mg/m<sup>3</sup> (inhalation respirable)

### 8.2 Appropriate engineering controls:

Use process enclosure, general dilution ventilation, or local exhaust systems, where necessary to maintain airborne dust concentrations below the applicable regulations. A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits.

### 8.3 Individual protection measures

- Eye/face:** Protective goggles or face shields.
- Skin:** Wear impervious gloves and general purpose overalls with elasticized cuffs and leg bottoms. Persons with allergies should avoid exposure.
- Respiratory:** Protection is not normally required. Wear a dust mask or other appropriate approved respiratory protection when effective engineering controls are not feasible or during operations that generate airborne dust concentrations exceeding the relevant standards. A respiratory protection program that meets applicable requirements whenever workplace conditions warrant a respirator's use. Persons with allergies should avoid exposure.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|  |  |
|--|--|
| (a) Physical appearance                          | White, free-flowing powder                           |
| (b) Odour  | Pleasant   |
| (c) Odour Threshold                              | Not available  |
| (d) Bulk Density                                 | 64.54 lb/ft <sup>3</sup> (1035.8 kg/m <sup>3</sup> ) |
| (e) pH   | Not available  |
| (f) Melting point/freezing point                 | Not available  |
| (g) Initial boiling point                        | Not available  |
| (h) Flash point                                  | Not available  |
| (i) Evaporation rate                             | Not available  |
| (j) Flammability                                 | Not available  |
| (k) Upper/lower flammability or explosive limits | Not available  |
| (l) Vapour pressure                              | Not available  |
| (m) Vapour density                               | Not available  |
| (n) Relative density                             | Not available  |
| (o) Solubility                                   | Water soluble  |
| (p) Partition coefficient: n-octanol/water       | Not available  |
| (q) Auto ignition temperature                    | Not available  |
| (r) Decomposition temperature                    | Not available  |
| (s) Viscosity                                    | Not available  |

### 9.2 Other information

To the best of our knowledge the chemical, physical, and toxicological properties of this product have not been thoroughly investigated.

## SECTION 10: Stability and reactivity

|      |                                    |  |
|------|------------------------------------|--|
| 10.1 | Reactivity                         | Not available  |
| 10.2 | Chemical stability                 | Product is stable under normal storage conditions (21 °C, 1atm). |
| 10.3 | Possibility of hazardous reactions | Not available  |
| 10.4 | Conditions to avoid                | Avoid moisture, heat and sources of ignition.                    |
| 10.5 | Incompatible materials             | Not available  |
| 10.6 | Hazardous decomposition products   | Not available  |

## SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

## (a) Acute toxicity

Citric acid (CAS#: 77-92-9)  
Oral[rat]: 3000 mg/kg  
Oral[mouse]: 5040 mg/kg

Salt (CAS#: 7647-14-5)  
Oral[rat]: 3000 mg/kg  
Oral[mouse]: 4000 mg/kg

Potassium chloride (CAS#: 7447-40-7)  
Oral[rat]: 2600 mg/kg  
Oral[mouse]: 1500 mg/kg

Sodium saccharin (CAS#: 128-44-9)  
Oral[rat]: 14200 mg/kg  
Oral[mouse]: 17500 mg/kg

Sorbic acid (CAS#: 110-44-1)  
Oral[rat]: 7360 mg/kg  
Dermal[rabbit]: >1000 mg/kg

## (b) Skin corrosion/irritation

Not expected to be toxic. Exposure may cause slight irritation.

(c) Serious eye damage/irritation Not available

(d) Respiratory or skin sensitization Not available

(e) Germ cell mutagenicity Not available

(f) Carcinogenicity Not applicable

(g) Reproductive toxicity Not applicable

(h) STOT-single exposure Not applicable

(i) STOT-repeated exposure Not applicable

(j) Aspiration hazard Not applicable

## 11.2 Information on the likely routes of exposure

Not applicable

## 11.3 Symptoms related to the physical, chemical and toxicological characteristics

Not applicable

## 11.4 Delayed and immediate effects and also chronic effects from short and long term exposure

Not applicable

## 11.5 Other information

Other toxicological information: To the best of our knowledge the chemical, physical and toxicological properties of this product have not been thoroughly investigated.

## SECTION 12: Ecological information

## 12.1 Toxicity

|                   |   |
|-------------------|---|
| Component (CAS#): | Citric acid (CAS#: 77-92-9)                   |
| Test & Species:   | LC50[Leuciscus idus melantus]: 440 mg/l - 48h |

|                            |                   |
|----------------------------|-------------------|
| Salt (CAS#: 7647-14-5)     |                   |
| LC50[Lepomis macrochirus]: | 1294.6 mg/l - 96h |
| LC50[Daphnia magna]:       | 343 mg/l - 48h    |

|                                      |                |
|--------------------------------------|----------------|
| Potassium chloride (CAS#: 7447-40-7) |                |
| LC50[Pimephales promelas]:           | 880 mg/l - 96h |
| EC50[Daphnia magna]:                 | 83 mg/l - 48h  |

|                                    |               |
|------------------------------------|---------------|
| 12.2 Persistence and degradability | Not available |
| 12.3 Bioaccumulative potential     | Not available |
| 12.4 Mobility in soil              | Not available |
| 12.6 Other adverse effects         | Not available |

## SECTION 13: Disposal considerations

|                              |                |
|------------------------------|----------------|
| 13.1 Waste treatment methods | Not identified |
|------------------------------|----------------|

Disposal Instructions: Consult local, state and/or provincial environmental regulatory authorities for acceptable disposal procedures and locations. Follow standard disposal procedures in accordance with Directive 2008/98/EC of the European Parliament and of the Council of the Member State.

## SECTION 14: Transport information

|  |                |
|--|----------------|
| 14.1 UN number   | Not applicable |
| 14.2 UN proper shipping name   | Not applicable |
| 14.3 Transport hazard class(es)  | Not applicable |
| 14.4 Packing group   | Not applicable |
| 14.5 Environmental hazards   | Not applicable |
| 14.6 Special precautions for user  | Not applicable |
| 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable |

## SECTION 15: Regulatory information

|   |               |
|---|---------------|
| 15.1 Safety, health, and environmental regulation/legislation specific for the substance or mixture | Not available |
|---|---------------|

## SECTION 16: Other information

|                      |                  |
|----------------------|------------------|
| Preparation Date:    | 21 February 2014 |
| Issue Date:          | 21 February 2014 |
| Previous Issue Date: | 06 December 2013 |

**ACID-PAK 4-WAY 2X®**

Completion Date: 06/12/2013  
Revision Date: 21/02/2014  
Version Number: 2

*The information herein has been compiled from sources believed to be reliable and is accurate to the best of our knowledge. However, Altech, Inc. cannot give any guarantees regarding information from other sources, and expressly does not make any warranties, nor assumes any liability, for its use.*

# ACID-PAK 4-WAY 2X®

Acidifier for pigs, calves and poultry

## Directions For Use

Add to drinking water at 0.5 lb (227 g) per 128 gallons (0.5 g/liter)

|                |  |   |
|----------------|--|---|
| <b>Pigs</b>    | Post-weaning                                       | First 5-7 days                                    |
|                | Moving/arrival                                     | First 3-8 days after relocation                   |
| <b>Calves</b>  | Milk replacer                                      | 0.17 oz/gallon                                    |
| <b>Poultry</b> | Newly-placed chicks, poult, broiler breeder, ducks | Days 1-5 plus 1 day per week to market (broilers) |
|                | Turkeys and Ostriches                              | Days 1-5 plus 1 day per week to 10 weeks          |
|                | Moving to grow-out                                 | 2 days before and 3 days after moving             |

## Storage

ACID-PAK 4-WAY 2X should be stored in a cool, dry place. Open containers should be resealed. Shelf life under these conditions is 18 months.

## Guaranteed Analysis

Salt Min. 9.0% Max. 10.8%  
Potassium Min. 2.2%  
pH 2.5 - 4.5\*

\*when diluted at 0.5 g/liter

## Ingredients

Citric acid, Salt, Maltodextrin, Potassium chloride, Silicon dioxide, Natural and artificial flavors, Sodium saccharin, Sorbic acid (a preservative), Sodium citrate, Zinc sulfate, Iron sulfate, Magnesium sulfate, Dried Aspergillus oryzae fermentation extract, Dried Bacillus subtilis fermentation extract, Dried Lactobacillus acidophilus fermentation product, and Dried Enterococcus faecium fermentation product.

Net Weight: 55.1 lbs (25 kg)

Item Number: 03.0013.067.011  
.USA.18

Manufactured by:

Alltech, Inc. • 3031 Camp Hill Pike • Nicholasville, Kentucky 40356-8700 • USA • Tel: +1 (859) 885-9613 • Fax: +1 (859) 885-6736 • www.alltech.com

REV 03/14 AJ

Expiration Date  
01/12/2014  
day/month/year

Batch Number  
419575-1

UPC  
0 0747301 00354 4  
(02)



# ACID-PAK 4-WAY 2X®

## Product Specifications

### Product Description

Acid-Pak 4-Way 2X is an acidifier for pigs, calves, and poultry.

### Label Information

| Guaranteed analysis |                     | Ingredients  |
|---------------------|---------------------|--|
| Salt                | Min. 9.0% Max 10.8% | Citric Acid, Salt, Maltodextrin, Potassium chloride, Silicon dioxide, Natural and Artificial Flavors, Sodium saccharin, Sorbic acid (a preservative), Sodium citrate, Zinc sulfate, Iron sulfate, Magnesium sulfate, Dried <i>Aspergillus oryzae</i> fermentation extract, Dried <i>Bacillus subtilis</i> fermentation extract, Dried <i>Lactobacillus acidophilus</i> fermentation product, and Dried <i>Enterococcus faecium</i> fermentation product. |
| Potassium           | Min. 2.2%           |  |
| *pH                 | 2.5 – 4.5           |  |

\*when diluted at 0.5 g/liter

### Physical Characteristics

**Appearance:** Acid-Pak 4-Way 2X is a white water soluble free flowing powder with a pleasant aroma.

**Bulk Density:** 64.54 lb/ft<sup>3</sup> (1035.8 kg/m<sup>3</sup>)

### Storage and Shelf Life

Acid-Pak 4-Way 2X should be stored in a cool, dry place. Open containers should be resealed. Shelf life under these conditions is 18 months.

### Packaging

Acid-Pak 4-Way 2X is available in 0.5 lb (227 gram) pouches, 2.2lb (1.0 kg) pouches, 2.5 lb (1.1 kg) pouches and 55.1lb (25 kg) bags.

### Directions for Use

Add Acid Pak 4-Way 2X to drinking water at 0.5 lb per 128 gallons (0.5 g/liter).

|                |  |   |
|----------------|--|---|
| <b>Pigs</b>    | Post-weaning   | First 5-7 days                                    |
|                | Moving/arrival   | First 3-5 days after relocation                   |
| <b>Calves</b>  | Milk replacer  | 0.17 oz/gallon                                    |
| <b>Poultry</b> | Newly-placed chicks, poults,<br>broiler breeder, ducks | Days 1-5 plus 1 day per week to market (broilers) |
|                | Turkeys and Ostriches                                  | Days 1-5 plus 1 day per week to 10 weeks          |
|                | Moving to grow-out                                     | 2 days before and 3 days after moving             |

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