

# Apex 12-4-12 Palm K

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

#### 1.1. Product identifier

Product form : Mixture  
Product name : Apex 12-4-12 Palm K  
Product code : M74183

#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.3. Details of the supplier of the safety data sheet

JR Simplot Company  
Boise, ID 83707  
T 1-208-336-2110

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC 1-800-424-9300

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification (GHS-US)

Skin Irrit. 2 H315  
Eye Irrit. 2B H320  
STOT SE 3 H335

Full text of H-phrases: see section 16

#### 2.2. Label elements

##### GHS-US labeling

Hazard pictograms (GHS-US) :



GHS07

Signal word (GHS-US) :

Warning

Hazard statements (GHS-US) :

H315 - Causes skin irritation  
H320 - Causes eye irritation  
H335 - May cause respiratory irritation

Precautionary statements (GHS-US) :

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
P264 - Wash ... thoroughly after handling  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective gloves/protective clothing/eye protection/face protection  
P302+P352 - If on skin: Wash with plenty of water/...  
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P312 - Call a poison center/doctor/... if you feel unwell  
P321 - Specific treatment (see ... on this label)  
P332+P313 - If skin irritation occurs: Get medical advice/attention  
P337+P313 - If eye irritation persists: Get medical advice/attention  
P362 - Take off contaminated clothing and wash before reuse  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed  
P405 - Store locked up  
P501 - Dispose of contents/container to ... specify in accordance with local/regional/national regulations

#### 2.3. Other hazards

No additional information available

#### 2.4. Unknown acute toxicity (GHS-US)

No data available

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### SECTION 3: Composition/information on ingredients

#### 3.1. Substance

Not applicable

#### 3.2. Mixture

| Name                        | Product identifier  | % | Classification (GHS-US)                                       |
|-----------------------------|---------------------|---|---|
| Potassium Magnesium Sulfate | (CAS No) 13826-56-7 |   | Not classified  |
| ammonium sulfate            | (CAS No) 7783-20-2  |   | Eye Irrit. 2B, H320<br>STOT SE 3, H335                        |
| urea                        | (CAS No) 57-13-6    |   | Skin Irrit. 2, H315<br>Eye Irrit. 2B, H320<br>STOT SE 3, H335 |
| potassium sulfate           | (CAS No) 7778-80-5  |   | Not classified  |
| Polymer Coating             |                     |   | Not classified  |
| Monoammonium Phosphate      | (CAS No) 7722-76-1  |   | Eye Irrit. 2B, H320<br>STOT SE 3, H335                        |
| Iron Oxysulfate             |                     |   | Eye Irrit. 2B, H320   |
| Pacmix                      | (CAS No) None       |   | Skin Irrit. 2, H315<br>Eye Irrit. 2B, H320<br>STOT SE 3, H335 |
| Wax                         | (CAS No) 64771-72-8 |   | Not classified  |
| diatomaceous earth          | (CAS No) 61790-53-2 |   | Eye Irrit. 2B, H320<br>STOT SE 3, H335                        |
| Manganese Oxysulfate        |                     |   | Eye Irrit. 2B, H320   |

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Assure fresh air breathing. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

#### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

#### 4.3. Indication of any immediate medical attention and special treatment needed

No additional information available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

No additional information available

#### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

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### 6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.  
Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.  
Incompatible products : Strong bases. Strong acids.  
Incompatible materials : Sources of ignition. Direct sunlight.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Personal protective equipment : Avoid all unnecessary exposure.  
Hand protection : Wear protective gloves.  
Eye protection : Chemical goggles or safety glasses.  
Respiratory protection : Wear appropriate mask.  
Other information : Do not eat, drink or smoke during use.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Solid  
Appearance : Multicolored granules.  
Color : Multi-colored  
Odor : No data available on odour  
Odor threshold : No data available  
pH : No data available  
Relative evaporation rate (butyl acetate=1) : No data available  
Melting point : No data available  
Freezing point : No data available  
Boiling point : No data available  
Flash point : Non-flammable  
Auto-ignition temperature : No data available  
Decomposition temperature : No data available  
Flammability (solid, gas) : No data available  
Vapor pressure : No data available  
Relative vapor density at 20 °C : No data available  
Relative density : No data available

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|                      |  |
|----------------------|--|
| Solubility           | : Water: Solubility in water of component(s) of the mixture :<br>•: 100 g/100ml •: 77 g/100ml •: 38 g/100ml •: 11 g/100ml •: |
| Log Pow              | : No data available  |
| Log Kow              | : No data available  |
| Viscosity, kinematic | : No data available  |
| Viscosity, dynamic   | : No data available  |
| Explosive properties | : No data available  |
| Oxidizing properties | : No data available  |
| Explosive limits     | : No data available  |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable. Not established.

### 10.3. Possibility of hazardous reactions

Not established.

### 10.4. Conditions to avoid

Extremely high temperatures. Direct sunlight. Extremely high or low temperatures.

### 10.5. Incompatible materials

Oxidizing agent. Prolonged contact may cause oxidation of unprotected metals. Strong acids. Strong bases.

### 10.6. Hazardous decomposition products

Extremely high temperatures. The product may reach melting point and decompose to release NH<sub>3</sub>, SO<sub>x</sub>, PO<sub>x</sub>, or CN. fume. Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

| urea (57-13-6)     |                                 |
|--------------------|---------------------------------|
| LD50 oral rat      | 8471 mg/kg (Rat)                |
| LD50 dermal rat    | > 3200 mg/kg (Rat)              |
| LD50 dermal rabbit | > 21000 mg/kg (Rabbit)          |
| ATE US (oral)      | 8471.00000000 mg/kg body weight |

| ammonium sulfate (7783-20-2) |                                 |
|------------------------------|---------------------------------|
| LD50 oral rat                | 2840 mg/kg (Rat)                |
| LD50 dermal rat              | > 2000 mg/kg                    |
| ATE US (oral)                | 2840.00000000 mg/kg body weight |

| Monoammonium Phosphate (7722-76-1) |                                 |
|------------------------------------|---------------------------------|
| LD50 oral rat                      | 5750 mg/kg (Rat)                |
| LD50 dermal rat                    | > mg/kg                         |
| LD50 dermal rabbit                 | > 7940 mg/kg (Rabbit)           |
| ATE US (oral)                      | 5750.00000000 mg/kg body weight |

| potassium sulfate (7778-80-5) |                                 |
|-------------------------------|---------------------------------|
| LD50 oral rat                 | 6600 mg/kg (Rat)                |
| ATE US (oral)                 | 6600.00000000 mg/kg body weight |

| Manganese Oxysulfate |                                 |
|----------------------|---------------------------------|
| LD50 oral rat        | 2150 mg/kg                      |
| ATE US (oral)        | 2150.00000000 mg/kg body weight |

Skin corrosion/irritation : Causes skin irritation.

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|                                   |  |
|-----------------------------------|--|
| Serious eye damage/irritation     | : Causes eye irritation.   |
| Respiratory or skin sensitization | : Not classified   |
| Germ cell mutagenicity            | : Not classified   |
|                                   | Based on available data, the classification criteria are not met |
| Carcinogenicity                   | : Not classified   |

### diatomaceous earth (61790-53-2)

|   |   |
|---|---|
| IARC group  | 3 - Not classifiable  |
| Reproductive toxicity                               | : Not classified  |
|   | Based on available data, the classification criteria are not met    |
| Specific target organ toxicity (single exposure)    | : May cause respiratory irritation.                                 |
| Specific target organ toxicity (repeated exposure)  | : Not classified  |
|   | Based on available data, the classification criteria are not met    |
| Aspiration hazard                                   | : Not classified  |
|   | Based on available data, the classification criteria are not met    |
| Potential Adverse human health effects and symptoms | : Based on available data, the classification criteria are not met. |

## SECTION 12: Ecological information

### 12.1. Toxicity

#### urea (57-13-6)

|   |   |
|---|---|
| LC50 fish 1                               | > 6810 mg/l (96 h; <i>Leuciscus idus</i> )            |
| EC50 Daphnia 1                            | > 10000 mg/l (48 h; <i>Daphnia magna</i> )            |
| LC50 fish 2                               | 17500 mg/l (96 h; <i>Poecilia reticulata</i> )        |
| EC50 Daphnia 2                            | > 10000 mg/l (24 h; <i>Daphnia magna</i> )            |
| TLM fish 1                                | 17500 ppm (96 h; <i>Poecilia reticulata</i> )         |
| Threshold limit other aquatic organisms 1 | 120000 mg/l (16 h; Bacteria; Toxicity test)           |
| Threshold limit other aquatic organisms 2 | > 10000 mg/l ( <i>Pseudomonas putida</i> )            |
| Threshold limit algae 2                   | > 10000 mg/l (168 h; <i>Scenedesmus quadricauda</i> ) |

#### ammonium sulfate (7783-20-2)

|                |  |
|----------------|--|
| LC50 fish 1    | 126 mg/l (96 h; <i>Poecilia reticulata</i> )     |
| EC50 Daphnia 1 | 202 mg/l (96 h; <i>Daphnia magna</i> )           |
| LC50 fish 2    | 250 - 480 mg/l (96 h; <i>Brachydanio rerio</i> ) |
| EC50 Daphnia 2 | 433 mg/l (50 h; <i>Daphnia magna</i> )           |
| TLM fish 1     | 1290 ppm (96 h; <i>Gambusia affinis</i> )        |

#### Monoammonium Phosphate (7722-76-1)

|             |   |
|-------------|---|
| LC50 fish 1 | 155 ppm (96 h; <i>Pimephales promelas</i> ) |
|-------------|---|

#### potassium sulfate (7778-80-5)

|   |   |
|---|---|
| LC50 fish 1                               | 1692.4 mg/l (96 h; <i>Alburnus alburnus</i> )         |
| LC50 other aquatic organisms 1            | > 1000 mg/l (96 h)                                    |
| EC50 Daphnia 1                            | 890 mg/l (48 h; <i>Daphnia magna</i> ; Static system) |
| LC50 fish 2                               | 653 - 796 mg/l (96 h; <i>Lepomis macrochirus</i> )    |
| EC50 Daphnia 2                            | 1180 mg/l (96 h; Crustacea)                           |
| TLM fish 1                                | 3550 ppm (96 h; <i>Lepomis sp.</i> )                  |
| Threshold limit other aquatic organisms 1 | > 1000 mg/l (96 h)                                    |
| Threshold limit algae 1                   | 2900 mg/l (72 h; <i>Scenedesmus subspicatus</i> )     |

### 12.2. Persistence and degradability

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|                               |                  |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |
|-------------------------------|------------------|

#### urea (57-13-6)

|                               |   |
|-------------------------------|---|
| Persistence and degradability | Inherently biodegradable. Hydrolysis in water. Not established. |
| ThOD                          | 0.27 g O <sub>2</sub> /g substance                              |

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| <b>ammonium sulfate (7783-20-2)</b>             |  |
|---|--|
| Persistence and degradability                   | Biodegradability in water: no data available. Not established. |
| <b>Monoammonium Phosphate (7722-76-1)</b>       |  |
| Persistence and degradability                   | Biodegradability in water: no data available. Not established. |
| <b>potassium sulfate (7778-80-5)</b>            |  |
| Persistence and degradability                   | Biodegradability: not applicable. Not established.             |
| Biochemical oxygen demand (BOD)                 | Not applicable   |
| Chemical oxygen demand (COD)                    | Not applicable   |
| ThOD  | Not applicable   |
| BOD (% of ThOD)                                 | Not applicable   |
| <b>Potassium Magnesium Sulfate (13826-56-7)</b> |  |
| Persistence and degradability                   | Not established.   |
| <b>Iron Oxysulfate</b>                          |  |
| Persistence and degradability                   | Not established.   |
| <b>Pacmix (None)</b>                            |  |
| Persistence and degradability                   | Not established.   |
| <b>Wax (64771-72-8)</b>                         |  |
| Persistence and degradability                   | Not established.   |
| <b>diatomaceous earth (61790-53-2)</b>          |  |
| Persistence and degradability                   | Biodegradability: not applicable. Not established.             |
| Biochemical oxygen demand (BOD)                 | Not applicable   |
| Chemical oxygen demand (COD)                    | Not applicable   |
| ThOD  | Not applicable   |
| BOD (% of ThOD)                                 | Not applicable   |

### 12.3. Bioaccumulative potential

| <b>Apex 12-4-12 Palm K</b>                      |   |
|---|---|
| Bioaccumulative potential                       | Not established.                                  |
| <b>urea (57-13-6)</b>                           |   |
| BCF fish 1                                      | 1 (72 h; Brachydanio rerio; Fresh water)          |
| BCF other aquatic organisms 1                   | 11700 (Chlorella sp.)                             |
| Log Pow   | -2.59 - -1.59                                     |
| Bioaccumulative potential                       | Bioaccumulation: not applicable. Not established. |
| <b>ammonium sulfate (7783-20-2)</b>             |   |
| Log Pow   | -5.1  |
| Bioaccumulative potential                       | Bioaccumulation: not applicable. Not established. |
| <b>Monoammonium Phosphate (7722-76-1)</b>       |   |
| Bioaccumulative potential                       | Not bioaccumulative. Not established.             |
| <b>potassium sulfate (7778-80-5)</b>            |   |
| Bioaccumulative potential                       | Not bioaccumulative. Not established.             |
| <b>Potassium Magnesium Sulfate (13826-56-7)</b> |   |
| Bioaccumulative potential                       | Not established.                                  |
| <b>Iron Oxysulfate</b>                          |   |
| Bioaccumulative potential                       | Not established.                                  |
| <b>Pacmix (None)</b>                            |   |
| Bioaccumulative potential                       | Not established.                                  |
| <b>Wax (64771-72-8)</b>                         |   |
| Bioaccumulative potential                       | Not established.                                  |

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### diatomaceous earth (61790-53-2)

Bioaccumulative potential : No bioaccumulation data available. Not established.

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Other adverse effects

Effect on ozone layer : No additional information available  
Effect on the global warming : No known ecological damage caused by this product.  
Other information : Avoid release to the environment.

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.  
Ecology - waste materials : Avoid release to the environment.

### SECTION 14: Transport information

In accordance with DOT  
Not regulated for transport

#### Additional information

Other information : No supplementary information available.

#### ADR

Transport document description :

#### Transport by sea

No additional information available

#### Air transport

No additional information available

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

##### Apex 12-4-12 Palm K

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

All components of this product are listed on the Toxic Substances Control Act (TSCA) inventory except for:

|                             |                   |
|-----------------------------|-------------------|
| Potassium Magnesium Sulfate | CAS No 13826-56-7 |
| Iron Oxysulfate             | CAS No            |
| Manganese Oxysulfate        | CAS No            |
| Pacmix                      | CAS No None       |
| Polymer Coating             | CAS No            |

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

##### Potassium Magnesium Sulfate (13826-56-7)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

##### Iron Oxysulfate

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

##### Pacmix (None)

Not listed on the United States TSCA (Toxic Substances Control Act) inventory

#### 15.2. International regulations

##### CANADA

No additional information available

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### EU-Regulations

No additional information available

### Classification according to Regulation (EC) No. 1272/2008 [CLP]

### Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

### 15.2.2. National regulations

No additional information available

### 15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

### diatomaceous earth (61790-53-2)

U.S. - New Jersey - Right to Know Hazardous Substance List

## SECTION 16: Other information

Data sources :  
: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H-phrases: see section 16:

|               |   |
|---------------|---|
| Eye Irrit. 2B | Serious eye damage/eye irritation Category 2B               |
| Skin Irrit. 2 | Skin corrosion/irritation Category 2                        |
| STOT SE 3     | Specific target organ toxicity (single exposure) Category 3 |
| H315          | Causes skin irritation                                      |
| H320          | Causes eye irritation                                       |
| H335          | May cause respiratory irritation                            |

SDS US (GHS HazCom 2012)

*Disclaimer: This information relates to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is to the best of our knowledge and belief, accurate and reliable as of the date compiled. However, no representation, warranty or guarantee is made as to its accuracy, reliability or completeness. NO WARRANTY OF MERCHANTABILITY, FITNESS FOR ANY PARTICULAR PURPOSE, OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, IS MADE CONCERNING THE INFORMATION HEREIN PROVIDED. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for his own particular use. We do not accept liability for any loss or damage that may occur from the use of this information nor do we offer warranty against patent infringement.*