



**SAFETY DATA SHEET**  
**14-14-14**  
**Longterm Flowering Fertilizer**

Version 1.0  
Version Date  
12/08/2015

**1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY UNDERTAKING**

**1.1 Product identifier**

Product name                      14-14-14 Longterm Flowering Fertilizer

**1.2 Relevant use of the product**

Applications                      Fertilizers

**1.3 Manufacturer, Importer or Responsible Party**

Name                                  FERTI TECHNOLOGIES  
Address                              560, Chemin Rhéaume, C.P 129  
   JOL 2J0  
   Saint-Michel, Québec, Canada  
Telephone                            450 454-7521  
Contact email                      astpierre@fertitechno.com

**1.4 Emergency phone number**

Telephone                            USA National Capital Poison Center: 1 800 222 1222

**2. HAZARDS IDENTIFICATION**

**2.1. The hazard classification of the chemical according to HCS 2012 (US-GHS)**

Acute Tox. 5	H303
Skin Irrit. 2	H315
Eye Irrit. 2A	H319
STOT SE 3	H335
Carc. 1	H350
STOT RE 1	H372

**2.2. Danger symbols**



**2.3. Signal word**

Danger

**2.4. Hazard and environmental statements**

H303 May be harmful if swallowed.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.  
H350 May cause cancer  
H372 May cause damage to organs (lungs) through prolonged or repeated exposure if inhaled.

**2.5. Precautionary statements**

Prevention                            P201 Obtain special instructions before use.



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Response	<p>P202 Do not handle until all safety precautions have been read and understood.</p> <p>P260 Do not breathe dust.</p> <p>P264 Wash hands thoroughly after handling.</p> <p>P270 Do not eat, drink or smoke when using this product.</p> <p>P271 Use only outdoors or in a well-ventilated area.</p> <p>P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.</p> <p>P330 Rinse mouth.</p> <p>P302+P352 IF ON SKIN: Wash with plenty of water.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P314 Get medical advice/attention if you feel unwell.</p>
Storage	P405 Store locked up.
Disposal	P501 Dispose of contents/container according to local regulations.
2.6. Description of any hazards not otherwise classified	Not applicable.
2.7. % ingredient(s) with unknown acute toxicity	Not applicable.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name		CAS-Nr.	Concentration %
Monoammonium phosphate		7722-76-1	C = 27.0%
Potassium sulfate		7778-80-5	C = 24.0%
Duration	Urea	57-13-6	C = 19.5%
	Polyurethane	68400-67-9	
	Imidodicarbonic diamide (biuret)	108-19-0	
	Methylene diurea	68611-64-3	
Calcitic lime		17069-72-6	C = 10.8%
Potassium and magnesium sulfate		13826-56-7	C = 9.2%
Urea		57-13-6	C = 5.7%
Turf mix reg	Iron oxide	1332-37-2	C = 2.0%
	Iron sulfate	7782-63-0	
	Copper oxysulfate	85080-52-0	
	Zinc oxysulfate	1319-33-1	
	Manganese oxide	1309-48-4	
	Manganese sulfate	10034-96-5	
Borax		1303-96-4	



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Sodium molybdate		7631-95-0	
Iron oxysulfate	Iron oxide	1332-37-2	C = 1.4%
	Iron sulfate	7782-63-0	
Manganese saccharated		7439-96-5	C = 0.4%

## 4. FIRST AID MEASURES

### 4.1 First Aid measures after Inhalation

Following inhalation      Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Use oxygen as required, provided by a qualified operator. Get medical attention if irritation develops and persists.

### 4.2 First Aid measures after Skin exposure

Following skin contact      Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Get medical attention if irritation develops and persists.

### 4.3 First Aid measures after Eye exposure

Following eye contact      Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if irritation develops and persists.

### 4.4 First Aid measures after Ingestion

Following ingestion      Induce vomiting, but only if victim is fully conscious. Never give anything by mouth to an unconscious person. Drink 1 or 2 glasses of water. Do not give milk or alcoholic beverages. Call a physician.

### 4.5 Most important symptoms and effects, both acute and delayed

INHALATION	May cause respiratory irritation.
SKIN	Causes skin irritation.
EYES	Causes serious eye irritation.
INGESTION	Toxic if swallowed.

### 4.6 Indication of any immediate medical attention and special treatment needed

Notes to physician:      Treat symptomatically.

## 5. FIREFIGHTING MEASURES

### 5.1 Extinguishing media

Suitable:

Use extinguishing agent suitable for type of surrounding fire. Avoid excessive water to minimize runoff. Prevent firefighter water from entering the environment.

Small fires: Water spray, foam, dry chemical or CO<sub>2</sub>

Large fires: Water spray, fog or foam.

Unsuitable: Not applicable.

### 5.2 Special hazards arising from chemical or mixture during the fire

Container may rupture on heating. Cool closed containers exposed to fire with water spray. Do not allow run-off from firefighting to enter drains or water courses. Explosive reactions with oxidizing agents such as potassium chlorate



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and/or peroxides. In case of fire hazardous decomposition products may be produced such as:

- Sulphur oxides
- Ammonia
- Carbon monoxide
- Carbon dioxide (CO<sub>2</sub>)

### 5.3 Special Protective Precautions or equipment for firefighters

In the event of fire and/or explosion do not breathe fumes. In the case of respirable dust and/or fumes, use self-contained breathing apparatus and dust impervious protective suit.

## 6. ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment

Wear personal protective equipment.

### 6.2 Emergency procedures

Unprotected persons must be kept away.  
Evacuate personnel to safe areas.  
Provide adequate ventilation.  
Avoid dust formation.  
Avoid breathing dust.

### 6.3 Methods and materials used for containment

Avoid contact with skin, eyes and clothing.  
Do not flush into surface water or sanitary sewer system.  
Prevent further leakage or spillage if safe to do so.  
Do not let product enter drains.

### 6.4 Clean-up procedures

Use mechanical handling equipment.  
Clean contaminated surface thoroughly.  
Pick up and arrange disposal without creating dust.  
Use a suitable vacuum cleaner.

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Handle with care.  
Wear personal protective equipment.  
Use only in well-ventilated areas.  
Avoid dust formation.  
Provide exhaust ventilation if dust is formed.  
Dust must be extracted directly at the point of origin.  
Avoid breathing dust.  
Avoid contact with skin, eyes and clothing.

### 7.2 Conditions for safe storage

Keep containers tightly closed in a dry, cool and well-ventilated place.  
Containers should be protected against falling down.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Store away from incompatible substances.



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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 ACGIH-Threshold Limit Value (TLV)

Exposure limit values of the components:

Respirable crystalline silica dust: ACGIH TLV<sup>®</sup> = 0,05 mg/m<sup>3</sup>

Calcium carbonate: ACGIH TLV<sup>®</sup> = 10 mg/m<sup>3</sup>

Ammonia: ACGIH TLV<sup>®</sup> = 18 mg/m<sup>3</sup>

### 8.2 OSHA-Permissible Exposure Limit (PEL)

Exposure limit values of the components:

Component / CAS	8H (OSHA, PEL)
	mg/m <sup>3</sup>
Quartz (SiO <sub>2</sub> ) CAS N°: 14808-60-7	Total dust: 30 mg/m <sup>3</sup> / %SiO <sub>2</sub> +2 (OSHA Z-3) Respirable: 10 mg/m <sup>3</sup> / %SiO <sub>2</sub> +2 (OSHA Z-3) Respirable: 250 mppcf / %SiO <sub>2</sub> +5 (OSHA Z-3)
Limestone CAS N°: 1317-65-3	Total dust: 15 mg/m <sup>3</sup> (OSHA Z-1) Respirable: 5 mg/m <sup>3</sup> (OSHA Z-1)
Particulates Not Otherwise Regulated (PNOR) :	Total dust: 15 mg/m <sup>3</sup> (OSHA Z-1) Respirable: 5 mg/m <sup>3</sup> (OSHA Z-1)

### 8.3 Any other exposure limit used or recommended by chemical manufacturer

Non applicable

### 8.4 Engineering Controls

Provide exhaust ventilation if dust is formed. Dust must be extracted directly at the point of origin. Apply technical measures to comply with the occupational exposure limits.

### 8.5 Personal Protective Equipment

Hand protection: Gloves

Gloves must be inspected prior to use. Replace when worn.

Eye protection: Do not wear contact lenses.

Wear as appropriate: Safety glasses with side-shields

Body protection: Long sleeved clothing

Respiratory protection: A NIOSH approved air purifying respirator with a type 95 (R or P) particulate filter may be used under conditions where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited (see manufacturer's respirator selection guide). Use a positive pressure air supplied respirator if there is potential for uncontrolled release, exposure levels are not known or any other circumstances where air purifying respirators may not provide adequate protection. A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements must be followed if workplace conditions warrant a respirator use.

Hygiene measures: Wash hands before breaks and at the end of workday. Remove and wash contaminated clothing before re-use. Keep working clothes separately.



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**9. PHYSICAL AND CHEMICAL PROPERTIES**

**Information of basic physical and chemical properties**

Appearance (physical state, colour, etc.)	Multicolored granules, solid
Odour	Odourless
Odour threshold	Not applicable
pH	No data available
Melting point/freezing point;	No data available
Boiling point	Not applicable
Boiling Range	Not applicable
Flash point	No data available
Evaporation rate	Not applicable
Flammability	Not flammable
Upper/lower flammability or explosive limits	No data available
Oxidising properties	No data available
Vapour pressure	Not applicable
Vapour density	No data available
Density	66 lbs./ft <sup>3</sup>
Solubility in water	Partially soluble
Other Solvents	No data available
Partition coefficient (n-octanol/water)	No data available
Auto ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	Not applicable



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#### 10. STABILITY AND REACTIVITY

<b>10.1 Reactivity</b>	Contains Limestone which reacts with acids. It forms carbon dioxide (CO <sub>2</sub> ). This displaces the oxygen in the air in closed spaces. (danger of suffocation)
<b>10.2 Chemical stability</b>	Stable under recommended storage conditions.
<b>10.3 Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.
<b>10.4 Conditions to avoid</b>	Keep at temperatures below 5374 °F (190 °C)
<b>10.5 Incompatible materials</b>	Strong oxidizing agents, Chlorates and Hypochlorites
<b>10.6 Hazardous decomposition products</b>	If heated to the point of decomposition, Sulphur oxides, Carbon dioxide (CO <sub>2</sub> ), Carbon monoxide, oxides of nitrogen and Cyanuric acid may be released.

#### 11. TOXICOLOGICAL INFORMATION

##### 11.1 Measures of Toxicity

Acute toxicity:

Ingredients:

Urea:

Acute toxicity: LD<sub>50</sub> Oral (Rat): 8471 mg/kg

Calcium carbonate:

Acute toxicity: LC<sub>50</sub> Oral (Rat): >5000 mg/kg

Limestone:

Acute toxicity: LD<sub>50</sub> Oral (Rat): >5000 mg/kg

Monoammonium phosphate

Acute toxicity: LD<sub>50</sub> Oral (Rat): >2000 mg/kg

Potassium sulfate

Acute toxicity: LD<sub>50</sub> Oral (Rat): 6600 mg/kg

Skin corrosion/irritation:

Causes skin irritation

Serious eye damage/irritation:

Causes serious eye irritation

Respiratory or skin sensitisation:

No data available

##### 11.2 Listed in IARC or considered carcinogen by NTP or OSHA

Quartz (SiO<sub>2</sub>)

CAS N°: 14808-60-7

Group 1 (IARC), Volume 68, 100C

##### 11.3 Further information

This product contains prismatic tremolite (e.g., cleavage fragments) as an impurity. Sufficient exposure to respirable prismatic tremolite dust may cause serious lung problems.



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### 12. ECOLOGICAL INFORMATION

<b>12.1 Toxicity</b>	<p>May be toxic to aquatic life. In sufficient quantity may deplete oxygen required by aquatic life. May cause eutrophication of ponds and lakes. Carbonate calcium:</p> <p><u>Toxicity to fish :</u> LC<sub>50</sub>: &gt; 10000 mg/l Exposure time: 96 h Species: <i>Oncorhynchus mykiss</i> (rainbow trout)</p> <p><u>Toxicity to daphnia and other aquatic invertebrates:</u> EC<sub>50</sub>: &gt; 1000 mg/l (Exposure time: 48 h) Species: <i>Daphnia magna</i> (Water flea)</p> <p>Silica:</p> <p><u>Toxicity to Algae and Crustacea</u> IC<sub>50</sub>: 440 mg/L (Exposure time: 72 Hours) Species: <i>Algae</i> EC<sub>50</sub>: 7600 mg/L (Exposure time: 48 Hours) Species: <i>Daphnia sp</i></p>
<b>12.2 Persistence and degradability</b>	No data available
<b>12.3 Bioaccumulative potential</b>	No data available
<b>12.4 Mobility in soil</b>	No data available
<b>12.5 Other adverse effects</b>	May release ammonium ions that are toxic to fish. Un-ionized ammonia concentrations above 0.02 mg/l are considered toxic in fresh water. May release phosphates which will result in algae growth, increased turbidity, and depleted oxygen. At extremely high concentrations, this may be hazardous to fish or other marine organisms. Release to watercourses may cause effects downstream. Fish 96 hour LC <sub>50</sub> , OECD Guidelines 203 (rainbow trout): >86mg/L.

### 13. DISPOSAL CONSIDERATIONS

<b>13.1 Disposal methods to employ</b>	Recover or recycle if possible. Properly characterize all waste materials. Consult federal, state/provincial and local regulations regarding the proper disposal of this material. Prevent material from entering sewers, storm drains, other unauthorized treatment drainage systems, and natural waterways. Empty containers should be taken to an approved waste handling site for recycling or disposal.
<b>13.2 Description of appropriate disposal containers to use</b>	No data available





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**13.3 Description of the physical and chemical properties that may affect disposal activities** No data available

**13.4 Language discouraging sewage disposal.** No data available

**13.5 Any special precautions for landfills or incineration activities** No data available

**14. TRANSPORT INFORMATION**

**UN Number** .....

**UN proper shipping name** .....

**Transport hazard classes** .....

**Packing group** .....

**Environmental hazards** .....

**Guidance On transport in bulk** .....

**Special precautions for user** .....

**15. REGULATORY INFORMATION**

**National and/or regional regulatory information of the chemical or mixtures**

Inventories:

US. Toxic Substances Control Act: No data available

OSHA Hazards: Carcinogen

Clean Air Act: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B). This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 12 (40 CFR 61).

**16. OTHER INFORMATION**

**Indications on the revision**



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First edition: 08/10/2015

Addition of all fields as required by regulation (US) HCS 1910.1200 [HCS 2012].

Update of the classification information and update of related sections accordingly.

#### Abbreviations and acronyms used

ACGIH: American conference of governmental and industrial hygienist

CAS N<sup>o</sup>.: Chemical Abstract Service Number

CFR: Code of Federal Regulations

EC50: Half maximal effective concentration

HCS: Hazard communication standard

LC50: Half maximal lethal concentration

LD50: Half maximal lethal dose

OSHA: Occupational safety and health administration

STOT SE: Specific target organ toxicity Single exposure

STOT RE: Specific target organ toxicity Repeated exposure

UN N<sup>o</sup>.: United Nations Number

#### Methods of evaluation for the classification of mixtures

The classification of the mixture was set based on the regulation (US) HCS 1910.1200 [HCS 2012].

#### Other information

This information is based on our present knowledge and is provided according to the relevant national regulations. This information is intended as a characterization of the product in order to provide guidance for the relevant safety issues. However, this document does not provide any warranty, expressed or implied, regarding the properties of the product.