

## 1. PRODUCT AND COMPANY IDENTIFICATION

### 1.1 Product identifiers

Product name : Potassium chloride  
 Trade name : Dyna-K Red  
 Other names : Potash, potassium muriate, potassium monochloride  
 Chemical Formula : KCl  
 CAS-No. : 7447-40-7

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

Identified uses : For use in animal feed applications.  
 Restrictions on use : Not intended for human consumption.

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

Distributed by : Pestell Minerals & Ingredients  
 141 Hamilton Rd  
 New Hamburg, ON  
 CANADA N3A 2H1  
 Telephone : +1 519 662-2877  
 Email : qa@pestell.com

### 1.4 Emergency telephone number

Emergency Phone # : +1 613 996-6666 CANUTEC +1-703-527-3887 (CHEMTREC)  
 (Can) (US)

## 2. HAZARDS IDENTIFICATION

### 2.1 Classification of the substance or mixture

Not a hazardous substance or mixture.

### 2.2 GHS Label elements, including precautionary statements

Not a hazardous substance or mixture.

### 2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Mixture

Substances	CAS-No.	EC-No.	Concentration	Formula
Potassium Chloride	7447-40-7	231-211-8	95 -99.5%	KCl
Sodium Chloride	7647-14-5		0.3 -3.7%	NaCl
Calcium and Magnesium Chlorides and Sulfates	Various		0.2-1.3%	

## 4. FIRST AID MEASURES

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled**

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**

Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed**

Direct contact with eyes may give temporary irritation.

**4.3 Indication of any immediate medical attention and special treatment needed**

No data available

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**5. FIREFIGHTING MEASURES****5.1 Extinguishing media****Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide for surrounding fire.

**Unsuitable extinguishing media**

Not applicable.

**5.2 Special hazards arising from the substance or mixture**

When subjected to high temperatures, could release small amounts of chlorine gas.

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information**

Not flammable.

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**6. ACCIDENTAL RELEASE MEASURES****6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapours, mist or gas. Avoid breathing dust. For personal protection see section 8.

**6.2 Environmental precautions**

Do not let product enter drains, sewers or water courses. Large spills can be hazardous for the environment.

**6.3 Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections**

For disposal see section 13.

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**7. HANDLING AND STORAGE****7.1 Precautions for safe handling**

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

For precautions see section 2.2.

**7.2 Conditions for safe storage, including any incompatibilities**

Keep container tightly closed in a dry and well-ventilated place.

Product is hygroscopic. Keep in a dry place.

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Exposure Guidelines:	OSHA Permissible Exposure Limits (PEL):	Particulates Not Otherwise Regulated: 5 mg/m <sup>3</sup> TWA (respirable); 15 mg/m <sup>3</sup> TWA (total)
	ACGIH Threshold Limit Value (TLV):	Particulates Not Otherwise Specified: 3 mg/m <sup>3</sup> TWA (respirable); 10 mg/m <sup>3</sup> TWA (inhalable)

### 8.2 Exposure controls

#### Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### Personal protective equipment

##### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

##### Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

##### Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

##### Control of environmental exposure

Do not let product enter drains, sewers or water courses.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

Note: Unless otherwise stated, values in this section are determined at 20°C (68°F) and 760 mm Hg (1 atm).

### 9.1 Information on basic physical and chemical properties

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|--|---|
| a) Appearance                              | Form: crystalline or granular<br>Colour: White to reddish-brown |
| b) Odour                                   | No data available   |
| c) Odour Threshold                         | No data available   |
| d) pH                                      | 5.4 – 10.0 in a 5% solution                                     |
| e) Melting point/freezing point            | 772 to 776°C (1423 to 1428°F)                                   |
| f) Initial boiling point and boiling range | Sublimes at 1500°C (2732°F)                                     |
| g) Flash point                             | No data available   |
| h) Evaporation rate                        | No data available   |

- i) Flammability (solid, gas) No data available
- j) Upper/lower flammability or explosive limits No data available
- k) Vapour pressure No data available
- l) Vapour density No data available
- m) Specific gravity 1.986 - 1.990
- n) Water solubility 99.5 - 99.999%; 34.2 g/100mL at 20°C
- o) Partition coefficient: n-octanol/water No data available
- p) Auto-ignition temperature No data available
- q) Decomposition temperature No data available
- r) Viscosity No data available
- s) Explosive properties No data available
- t) Oxidizing properties No data available
- u) Bulk density Loose 64 - 75 lbs/ft<sup>3</sup> (1025 - 1200 kg/m<sup>3</sup>);

## 9.2 Other safety information

No data available

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

KCl may react violently with bromine trifluoride and may explode if mixed with potassium permanganate and sulfuric acid. Under moist conditions, may be slightly corrosive to metals.

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

Exposure to moisture, incompatible materials.

### 10.5 Incompatible materials

Strong acids, Strong oxidizing agents. Avoid contact with hot nitric acid, may cause evolution of toxic nitrosyl chloride. Contact with other strong acids may produce irritating hydrogen chloride gas.

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas, Potassium oxides  
Other decomposition products - No data available

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity- KCl

LD50 Oral - Rat - 2,600 mg/kg

LD50(mouse oral) >1500mg/kg

Inhalation: No data available

Dermal: No data available

**Acute toxicity- NaCl**

LD50 (rat, oral) > 3000mg/kg

LD50(mouse oral) >4000mg/kg

Inhalation: LC50(rat) >42g/m<sup>3</sup>/ 1 hour

Dermal: No data available

**Skin corrosion/irritation**

No data available

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: slight irritation

**Respiratory or skin sensitisation**

No data available

**Germ cell mutagenicity**

No data available

**Carcinogenicity**

No data available

**Reproductive toxicity**

No data available

No data available

**Specific target organ toxicity - single exposure**

No data available

**Specific target organ toxicity - repeated exposure**

No data available

**Aspiration hazard**

No data available

**Additional Information**

Hyperkalemia, Nausea, Vomiting, Abdominal pain, Diarrhoea, Constipation., Paresthesia., Thirst, Dizziness, Rash, pruritus, Weakness, muscle cramps, minor psychiatric changes, minor visual changes

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

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**12. ECOLOGICAL INFORMATION****12.1 Toxicity**

Toxicity to fish	static test LC50 - Pimephales promelas (fathead minnow) - 880 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	static test EC50 - Daphnia magna (Water flea) - > 440 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	EC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test EC50 - activated sludge - > 1,000 mg/l - 3 h (OECD Test Guideline 209)

**12.2 Persistence and degradability**

The methods for determining biodegradability are not applicable to inorganic substances.

**12.3 Bioaccumulative potential**

No data available

#### 12.4 Mobility in soil

No data available

#### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

#### 12.6 Other adverse effects

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### 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

##### Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

##### Contaminated packaging

Dispose of as unused product.

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### 14. TRANSPORT INFORMATION

#### TDG (Canada)

Not dangerous goods

#### DOT (US)

Not dangerous goods

#### IMDG

Not dangerous goods

#### IATA

Not dangerous goods

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### 15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

FDA: Potassium Chloride used as a nutrient and/or dietary supplement in food for human consumption. FDA Food Substances Generally Recognized as Safe 21 CFR 184.1 (2010).

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### 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Pestell Minerals & Ingredients and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

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