



# SAFETY DATA SHEET

## Kristalon Special

### 1. Identification of the substance/preparation and of the company/undertaking

#### Identification of the substance or mixture

**Product name** : Kristalon Special

**Use of the substance/mixture** : Fertiliser.

#### Company/undertaking identification

**Manufacturer / Supplier** : Yara Australia Pty Ltd  
201 Miller Street, Mezzanine Level  
North Sydney  
NSW 2060 Australia

Tel: +61 2 9959 4266

Fax: +61 2 9959 4050

**e-mail address of person responsible for this SDS** : yaraasiapacific@yara.com

**Emergency telephone number** : +61 4 1722 3075 (24h)

### 2. Hazards identification

The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

See Section 11 for more detailed information on health effects and symptoms.

### 3. Composition/information on ingredients

**Substance/preparation** : Preparation

Ingredient name	CAS number	%	EC number	Classification
Potassium nitrate	7757-79-1	0 - 40	231-818-8	O; R8
Ammonium nitrate	6484-52-2	0 - 40	229-347-8	O; R8
Mn-EDTA, Na	15375-84-5	3.108	239-407-5	Not classified. [2]
boric acid	10043-35-3	1.464	233-139-2	Repr. Cat. 2; [1] [2] R60, R61
See Section 16 for the full text of the R-phrases declared above.				

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

Contains some or all of the following in addition to ammonium nitrate and/or potassium nitrate:- mono and di ammonium phosphate, potassium sulphate, potassium phosphate, ammonium sulphate, urea, secondary nutrients and micro nutrients.

Total: 0% < Ammonium nitrate + potassium nitrate < 40%

## 4. First-aid measures

- Inhalation** : Avoid breathing dust. If inhaled, remove to fresh air.
- Ingestion** : If large quantities of this material are swallowed, call a physician immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
- Skin contact** : Avoid prolonged or repeated contact with skin. After handling, always wash hands thoroughly with soap and water. Get medical attention if irritation develops.
- Eye contact** : In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if irritation occurs.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.
- See Section 11 for more detailed information on health effects and symptoms.

## 5. Fire-fighting measures

- Extinguishing media** : Use water in flooding quantities for extinction.
- Hazardous thermal decomposition products** : These products are  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides  
phosphorus oxides  
metal oxide/oxides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
- Remark** : The product itself is not combustible but it can support combustion, even in absence of air. On heating it melts and further heating can cause decomposition, releasing toxic fumes containing nitrogen oxides and ammonia.

## 6. Accidental release measures

- Personal precautions** : If released in large quantities: Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment (section 8). Follow all fire-fighting procedures (section 5). Do not touch or walk through spilt material.
- Environmental precautions and clean-up methods** : Avoid contact of spilt material and runoff with soil and surface waterways.
- : Use a tool to scoop up solid or absorbed material and place into appropriate labelled waste container. Avoid all possible sources of ignition (spark or flame). Avoid creating dusty conditions and prevent wind dispersal.

**Note:** see section 8 for personal protective equipment and section 13 for waste disposal.

## 7. Handling and storage

- Handling** : Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Avoid contamination by any source including metals, dust and organic materials.
- Storage** : Store and use away from heat, sparks, open flame, or any other ignition source. Avoid contact with combustible materials. Prevent moisture pick-up in handling and storage.
- Packaging materials**
- Recommended** : Use original container.

## 8. Exposure controls/personal protection

### Ingredient name

Mn-EDTA, Na  
boric acid

### Occupational exposure limits

**ACGIH TLV (United States, 2/2010). Notes: as Mn**

TWA: 0,2 mg/m<sup>3</sup>, (as Mn) 8 hour(s).

**ACGIH TLV (United States, 2/2010).**

STEL: 6 mg/m<sup>3</sup> 15 minute(s). Form: Inhalable fraction. See Appendix C, paragraph A. Inhalable Particulate Mass TLVs (IPM-TLVs) for those materials that are hazardous when deposited anywhere in the respiratory tract.

TWA: 2 mg/m<sup>3</sup> 8 hour(s). Form: Inhalable fraction. See Appendix C, paragraph A. Inhalable Particulate Mass TLVs (IPM-TLVs) for those materials that are hazardous when deposited anywhere in the respiratory tract.

### Exposure controls

#### Respiratory protection

:  Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Recommended: If dust is generated and ventilation is inadequate, use respirator that will protect against dust/mist.

#### Hand protection

: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.: PVC , butyl rubber , nitrile rubber , natural rubber (latex)

#### Eye protection

: Recommended: Use dust goggles if high dust concentration is generated.

#### Skin protection

:  Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period.

## 9. Physical and chemical properties

### General information

#### Appearance

**Physical state** :  Solid. [Crystalline solid.]

### Important health, safety and environmental information

**pH** :  3 to 6 [Conc. (% w/w): 1%]

**Melting/freezing point** :  170°C

**Density (g/cm<sup>3</sup>)** :  0,8 to 1,3 g/cm<sup>3</sup>

**Solubility** : Easily soluble in the following materials: cold water, hot water

## 10. Stability and reactivity

**Stability** : Stable under recommended storage and handling conditions (see section 7).

#### Materials to avoid

:  Extremely reactive or incompatible with the following materials: alkalis.  
Reactive or incompatible with the following materials: reducing materials, combustible materials, organic materials and acids.

#### Hazardous decomposition products

:  These products are  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
sulfur oxides  
phosphorus oxides  
metal oxide/oxides

## 11. Toxicological information

### Potential acute health effects

Adverse health effects are considered unlikely, when the product is used according to directions.

Product/ingredient name	Result	Species	Dose	Exposure	References
Potassium nitrate	LD50 Dermal	Rat	>5000 mg/kg	-	potassium nitrate
	LD50 Oral	Rat	>2000 mg/kg	-	
Ammonium nitrate	LD50 Oral	Rat	2217 mg/kg	-	ammonium nitrate
	TDL <sub>o</sub> Oral	Rat	10 mg/kg	-	

### Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
Potassium nitrate	Chronic NOAEL	Oral Rat	>1500 mg/kg	-
			Repeated dose	

Product/ingredient name	gggbh	Experiment	Result
Potassium nitrate	-	Experiment: In vitro Subject: Mammalian-Animal Cell: Germ	Negative

Product/ingredient name	Maternal toxicity	Fertility	Developmental toxin	Species	Dose	Exposure
Potassium nitrate	Negative	Negative	Negative	Rat	Oral: ≥1500 mg/kg Repeated dose	28 days

- Chronic effects** :  No known significant effects or critical hazards.
- Carcinogenicity** : No known significant effects or critical hazards.
- Mutagenicity** : No known significant effects or critical hazards.
- Teratogenicity** : No known significant effects or critical hazards.
- Developmental effects** :  No known significant effects or critical hazards.
- Fertility effects** :  No known significant effects or critical hazards.

### Over-exposure signs/symptoms

- Inhalation** :  No specific data.
- Ingestion** :  No specific data.
- Skin** :  No specific data.
- Eyes** :  No specific data.
- Target organs** :  Contains material which may cause damage to the following organs: blood, kidneys, upper respiratory tract, eyes, central nervous system (CNS).

## 12. Ecological information

- Environmental effects** :  No known significant effects or critical hazards.

### Aquatic ecotoxicity

Product/ingredient name	gggbh	Result	Species	Exposure	References
Potassium nitrate		EC50 >1700 mg/l Marine water	Algae	10 days	Admiraal W. (1977)
		Acute LC50 490 mg/L Fresh water	Daphnia - Daphnia magna	48 hours	J.Water Pollut.Control Fed. 37(9):1308-1316
		Acute LC50 1378 mg/L Fresh water	Fish - Poecilia reticulata	96 hours	Rubin, A.J. and Elmaraghy, G.A.
Boric acid		Acute EC50 133 to 153 ppm Fresh water	Daphnia - Daphnia magna - <24 hours	48 hours	Environmental Fate and Effects Division, U.S.EPA, Washington, D.C.
		Acute LC50 89,07 to 100,7 mg/L Marine water	Crustaceans - Americamysis bahia - Juvenile (Fledgling,	48 hours	Lab.Proj.ID No.3903004000-0215- 3140, ESE, Gainesville, FL :44 p.

## 12. Ecological information

Acute LC50 50 to 100 ppm Fresh water	Hatchling, Weanling) - <24 hours Fish - Onchorhynchus mykiss	96 hours	Environmental Fate and Effects Division, U.S.EPA, Washington, D.C.
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### Other ecological information

#### Bioaccumulative potential

<u>Product/ingredient name</u>	<u>LogP<sub>ow</sub></u>	<u>BCF</u>	<u>Potential</u>
Potassium nitrate	<1	-	low
Ammonium nitrate	-3,1	-	low

**Conclusion/Summary** :  Most inorganic compounds are not biodegradable. The product does not show any bioaccumulation phenomena.

**Other adverse effects** :  No known significant effects or critical hazards.

## 13. Disposal considerations

**Methods of disposal** :  Empty containers or liners may retain some product residues. Do not empty into drains; dispose of this material and its container in a safe way. Dispose of in accordance with all applicable local and national regulations

**Hazardous waste** : Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive 91/689/EEC..

## 14. Transport information

Not regulated.

Not classified as hazardous material according to UN Orange Book and international transport codes e.g. ADR (road), RID (rail), ADN (inland waterways) and IMDG (sea).

## 15. Regulatory information

### EU regulations

**Risk phrases** : This product is not classified according to EU legislation.

**Product use** : Industrial applications.

Classification and labelling have been performed according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and the intended use.

**Additional warning phrases** : Safety data sheet available for professional user on request.

## 16. Other information

**Full text of R-phrases referred to in sections 2 and 3 - Europe** :  R8- Contact with combustible material may cause fire.  
R60- May impair fertility.  
R61- May cause harm to the unborn child.

**Full text of classifications referred to in sections 2 and 3 - Europe** :  - Oxidising  
Repr. Cat. 2 - Toxic to reproduction category 2

**References** : Regulation (EC) No 1272/2008 Annex VI  
EU REACH IUCLID5 CSR  
National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda  
Registry of Toxic Effects of Chemical Substances  
Atrion International Inc. 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada

### History

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## 16. Other information

**Date of issue/Date of revision** : 10/12/2010.

**Date of previous issue** : 05/09/2005.

**Version** : 2

**Prepared by** : Yara Product Classification and Regulations

▣ Indicates information that has changed from previously issued version.

### Notice to reader

*To the best of our knowledge, the information provided in this Safety Data Sheet is accurate as at the date of its issue. The information it contains is being given for safety guidance purposes and relates only to the specific material and uses described in it. This information does not necessarily apply to that material when combined with other material(s) or when used otherwise than as described herein. Final determination of the suitability of any material is the sole responsibility of the user. All materials may represent unknown hazards and should be used with caution. Yara International ASA disclaims any liability for loss or damage resulting from the use of any data, information or recommendations set out in this Safety Data Sheet.*

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