

# SAFETY DATA SHEET

## KROWN

This safety data sheet complies with the requirements of:  
Regulation (EC) No. 453/2010 and Regulation (EC) No. 1272/2008



SDS #: NP-0183-A  
Revision date: 2018-07-20  
Format: EU  
Version 1.02

### Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product Code(s) NP-0183-A

Product Name KROWN

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

Recommended Use: A micronutrient suspension concentrate for use in agriculture

Restrictions on use Use as recommended by the label.

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

Manufacturer FMC Agro Limited  
Rectors Lane  
Pentre  
Flintshire  
CH5 2DH  
United Kingdom  
Tel: + 44 (0) 1244 537370  
E-mail: fmc.agro.uk@fmc.com

For further information, please contact:

Contact point Tel: +44(0)1244 537370  
Email: fmc.agro.uk@fmc.com

#### 1.4. Emergency telephone number

Emergency telephone Tel: +44(0)1244 537370 (Office hours only)

### Section 2: HAZARDS IDENTIFICATION

#### 2.1. Classification of the substance or mixture Regulation (EC) No 1272/2008

Skin corrosion/irritation	Category 2 (H315)
Serious eye damage/eye irritation	Category 2 (H319)
EUH208: Contains 1,2-Benzisothiazolin-3-one. May produce an allergic reaction.	

#### 2.2. Label elements

Hazard pictograms



**Signal Word**  
WARNING

#### **Hazard Statements**

H315 - Causes skin irritation

H319 - Causes serious eye irritation

#### **Precautionary Statements**

P264 - Wash hands thoroughly after handling

P337 + P313 - If eye irritation persists: Get medical advice/attention

P280 - Wear protective gloves/protective clothing/eye protection/face protection

P302 + P352 - IF ON SKIN: Wash with plenty of soap and water

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P332 + P313 - If skin irritation occurs: Get medical advice/attention

#### **2.3. Other hazards**

This product is not identified as a PBT/vPvB substance.

### **Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**

#### **3.1 Substances**

The product is a mixture, not a substance.

#### **3.2 Mixture containing the following hazardous ingredients:**

Chemical name	EC-No	CAS-No	Weight percent	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Sulphur powder (ground)	231-722-6	7704-34-9	30-50	Skin Irrit. 2 (H315)	01-2119487295-27-XXXX
ethane-1,2-diol	203-473-3	107-21-1	1-5	Acute Tox. 4 (H302) STOT RE 2: (H373)	01-2119456816-28-XXXX
NAPHTHALENESULFONIC ACID, METHYL-, POLYMER WITH FORMALDEHYDE, SODIUM SALT	-	81065-51-2	1-5	Eye Irrit. 1 (H318)	No data available
Xanthan Gum	234-394-2	11138-66-2	1-5	Not classified (Substance with a Community workplace exposure limit.)	REACH Exempt

#### **Additional Information**

For the full text of the H-, R- and EUH- phrases mentioned in this Section, see Section 16.

### **Section 4: FIRST AID MEASURES**

#### **4.1. Description of first aid measures**

##### **Eye Contact**

Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Call a doctor if irritation persists.

##### **Skin Contact**

Immediately remove all stained or splashed clothing that is not adhering to the skin. Wash off immediately with soap and plenty of water. If symptoms persist, call a doctor.

Inhalation	Remove person from exposure ensuring one's own safety while doing so. If symptoms persist, call a doctor.
Ingestion	Rinse mouth. Do not induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention. If vomiting does occur, rinse mouth and drink fluids again.

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

Most important symptoms and effects, both acute and delayed	Skin contact: There may be irritation and redness at the site of contact.
	Eye contact: There may be irritation and redness. The eyes may water profusely.
	Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting.
	Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.
	Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

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

Indication of immediate medical attention and special treatment needed, if necessary	Eye bathing equipment should be available on the premises. Show this safety data sheet to the doctor in attendance.
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**Section 5: FIREFIGHTING MEASURES****5.1. Extinguishing media****Suitable Extinguishing Media**

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Cool containers / tanks with water spray.

**Unsuitable extinguishing media**

No information available

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

Toxic fumes may be released in fire situations.

**Hazardous Combustion  
Products**

Sulphur oxides.

**5.3. Advice for firefighters**

As in any fire, wear self-contained breathing apparatus and full protective gear. Wear protective clothing to prevent contact with skin and eyes.

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

For personal protection see section 8. Stop leak if you can do it without risk. In case of spill, avoid contact. Isolate area and keep out animals and unprotected persons. Keep people away from and upwind of spill/leak.

For further clean-up instructions, call Emergency Hotline number listed in Section 1 "Product and Company Identification" above.

**For emergency responders**

Use personal protection recommended in Section 8.

**6.2. Environmental precautions**

Do not discharge into drains or rivers. Contain the spillage using bunding. Accidental release into water courses must be alerted to the appropriate regulatory body.

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

**Methods for Containment** Surface drains within close vicinity of the spill should be covered. Dike to confine spill and absorb with non-combustible absorbent such as clay, sand or soil.

**Methods for cleaning up** Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local/national regulations (see Section 13).

### 6.4. Reference to other sections

See section 8 for more information. See section 13 for more information.

## Section 7: HANDLING AND STORAGE

### 7.1. Precautions for safe handling

#### Handling

Use only in area provided with appropriate exhaust ventilation. Avoid contact with skin, eyes and clothing.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

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

#### Storage

Store above 5°C. Keep in a dry, cool and well-ventilated place. Keep container tightly closed. Keep away from direct sunlight. Keep away from heat. Keep out of reach of children and animals. Keep away from food, drink and animal feedingstuffs.

### 7.3. Specific end use(s)

#### Specific Use(s)

No data available.

#### Risk Management Methods (RMM)

The information required is contained in this Safety Data Sheet.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1. Control parameters

Chemical name	European Union	The United Kingdom	France	Spain	Germany
ethane-1,2-diol 107-21-1	TWA 20 ppm TWA 52 mg/m <sup>3</sup> STEL 40 ppm STEL 104 mg/m <sup>3</sup> S*	STEL 40 ppm STEL 104 mg/m <sup>3</sup> STEL 30 mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup> TWA 20 ppm TWA 52 mg/m <sup>3</sup> Skin	TWA 20 ppm TWA 52 mg/m <sup>3</sup> STEL 40 ppm STEL 104 mg/m <sup>3</sup> P*	TWA 20 ppm TWA 52 mg/m <sup>3</sup> STEL 40 ppm STEL 104 mg/m <sup>3</sup> S*	-
Xanthan Gum 11138-66-2	-	Respirable dust: 4 mg/m <sup>3</sup> (8hr TWA)	-	-	-
Chemical name	Italy	Portugal	The Netherlands	Finland	Denmark
ethane-1,2-diol 107-21-1	TWA 20 ppm TWA 52 mg/m <sup>3</sup> STEL 40 ppm STEL 104 mg/m <sup>3</sup> Pelle*	TWA 20 ppm TWA 52 mg/m <sup>3</sup> STEL 40 ppm STEL 104 mg/m <sup>3</sup> Ceiling 100 mg/m <sup>3</sup> C(A4) P*	Huid* STEL 104 mg/m <sup>3</sup> TWA 52 mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup>	TWA 20 ppm TWA 50 mg/m <sup>3</sup> STEL 40 ppm STEL 100 mg/m <sup>3</sup> iho*	TWA 10 ppm TWA 26 mg/m <sup>3</sup> TWA 10 mg/m <sup>3</sup> H*
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
ethane-1,2-diol 107-21-1	H* STEL 20 ppm STEL 52 mg/m <sup>3</sup> TWA 10 ppm TWA 26 mg/m <sup>3</sup>	SS-C** H* TWA 10 ppm TWA 26 mg/m <sup>3</sup> STEL 20 ppm	TWA 15 mg/m <sup>3</sup> STEL 50 mg/m <sup>3</sup>	TWA 20 mg/m <sup>3</sup> TWA 52 ppm TWA 52 mg/m <sup>3</sup> S* STEL 104 mg/m <sup>3</sup>	TWA 10 mg/m <sup>3</sup> TWA 20 ppm TWA 52 mg/m <sup>3</sup> STEL 40 ppm STEL 104 mg/m <sup>3</sup>

		STEL 52 mg/m <sup>3</sup>		STEL 40 ppm	Skin
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**Derived No Effect Level (DNEL)** No information available.

**Predicted No Effect Concentration (PNEC)** No information available.

## **8.2. Exposure controls**

**Engineering measures** Ensure adequate ventilation, especially in confined areas.

## **Personal protective equipment**

**Eye/Face Protection** Safety glasses with side-shields. Provide emergency on-site eyewash.

**Hand Protection** Protective gloves. Impervious butyl rubber gloves. Wear chemical protective gloves made of materials such as nitrile or neoprene.

**Skin and Body Protection** Wear protective gloves/clothing.

**Respiratory Protection** Not required under normal use.

**Environmental exposure controls** Refer to specific Member State legislation for requirements under Community environmental legislation.

# **Section 9: PHYSICAL AND CHEMICAL PROPERTIES**

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

<b>Physical State</b>	Liquid
<b>Appearance</b>	No information available
<b>Odour</b>	Barely perceptible
<b>Colour</b>	Yellow
<b>Odour threshold</b>	No information available
<b>pH</b>	6.5 - 8.5
<b>Melting point/freezing point</b>	No information available
<b>Boiling point/boiling range</b>	No information available
<b>Flash point</b>	No information available
<b>Evaporation Rate</b>	No information available
<b>Flammability (solid, gas)</b>	No information available
<b>Flammability Limit in Air</b>	
Upper flammability limit:	No information available
Lower flammability limit	No information available
<b>Vapour pressure</b>	No information available
<b>Vapour density</b>	No information available
<b>Specific gravity</b>	1.43 - 1.46
<b>Water solubility</b>	Dispersible in water
<b>Solubility in other solvents</b>	No information available
<b>Partition coefficient</b>	No information available
<b>Autoignition temperature</b>	No information available
<b>Decomposition temperature</b>	No information available
<b>Viscosity, kinematic</b>	No information available
<b>Viscosity, dynamic</b>	No information available
<b>Explosive properties</b>	No information available
<b>Oxidising properties</b>	Non-oxidizing (by EC criteria)

## **9.2. Other information**

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC content (%)</b>	No information available
<b>Density</b>	No information available
<b>Bulk density</b>	No information available
<b>K<sub>st</sub></b>	No information available

## Section 10: STABILITY AND REACTIVITY

### 10.1. Reactivity

None under normal use conditions

### 10.2. Chemical stability

Stable under recommended storage conditions.

#### Explosion data

**Sensitivity to Mechanical Impact** No information available.

**Sensitivity to Static Discharge** No information available.

### 10.3. Possibility of hazardous reactions

#### **Hazardous polymerisation**

Hazardous polymerization does not occur.

#### **Hazardous reactions**

None under normal processing. Decomposition may occur on exposure to conditions or materials listed below.

### 10.4. Conditions to avoid

Heat.

### 10.5. Incompatible materials

Strong oxidising agents, Strong acids.

### 10.6. Hazardous decomposition products

May emit toxic fumes under fire conditions. See Section 5.2 for more information.

## Section 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on toxicological effects

#### **Acute toxicity**

#### Product Information

**LD50 Oral** > 4000 mg/kg (rat) (Calculated Estimated Acute Toxicity - EAT)

Chemical name	LD50 Oral	LD50 Dermal	Inhalation LC50
Sulphur powder (ground)	> 2000 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	> 9.23 mg/L ( Rat ) 4 h
NAPHTHALENESULFONIC ACID, METHYL-, POLYMER WITH FORMALDEHYDE, SODIUM SALT	4786 mg/kg (rat)		

**Skin corrosion/irritation** No information available.  
**Serious eye damage/eye irritation** No information available.  
**Sensitisation** No information available.  
**Mutagenicity** No information available.  
**Carcinogenicity** No information available.

**Reproductive toxicity** No information available.

STOT - single exposure No information available.  
STOT - repeated exposure No information available.

**Symptoms**

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat. Nausea and stomach pain may occur. There may be vomiting.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

**Aspiration hazard**

No information available.

## Section 12: ECOLOGICAL INFORMATION

**12.1. Toxicity**

There is no data available for this product.

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Sulphur powder (ground)	-	96 h LC50: = 866 mg/L (Brachydanio rerio) static 96 h LC50: < 14 mg/L (Lepomis macrochirus) static 96 h LC50: > 180 mg/L (Oncorhynchus mykiss) static	-

**12.2. Persistence and degradability**

No information available.

**12.3. Bioaccumulative potential**

No information available.

**12.4. Mobility in soil****Mobility in soil**

No information available.

**12.5. Results of PBT and vPvB assessment**

This product is not identified as a PBT/vPvB substance.

**12.6. Other adverse effects**

Negligible

## Section 13: DISPOSAL CONSIDERATIONS

**13.1. Waste treatment methods****Waste from residues / unused**

Transfer to a suitable container and arrange for collection by specialised disposal company.

products	Do not contaminate ponds, waterways or ditches with chemical or used containers. Do not discharge to sewer systems.
Contaminated Packaging	Clean container with water. Dispose of rinse water in accordance with local and national guidelines. Empty containers should be taken to an approved waste handling site for recycling or disposal.
EWC Waste Disposal No	02 01 09
OTHER INFORMATION	NOTE : The user's attention is drawn to the possible existence of specific European, national or local regulations regarding disposal.

## Section 14: TRANSPORT INFORMATION

### NOTE

NOT CLASSIFIED AS DANGEROUS IN THE MEANING OF TRANSPORT REGULATIONS.

### IMDG/IMO

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard class	Not regulated
14.4 Packing Group	Not regulated
14.5 Marine Pollutant	Not applicable
14.6 Special Provisions	None
14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code	The product is not transported in bulk tankers.

### RID

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard class	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental Hazard	Not applicable
14.6 Special Provisions	None

### ADR/RID

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard class	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental Hazard	Not applicable
14.6 Special Provisions	None

### ICAO/IATA

14.1 UN/ID no	Not regulated
14.2 Proper Shipping Name	Not regulated
14.3 Hazard class	Not regulated
14.4 Packing Group	Not regulated
14.5 Environmental Hazard	Not applicable
14.6 Special Provisions	None

## Section 15: REGULATORY INFORMATION

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations	Not applicable
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European Union



**Authorisations and/or restrictions on use:**

This product does not contain substances subject to authorisation (Regulation (EC) No. 1907/2006 (REACH), Annex XIV)  
This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII)

**Persistent Organic Pollutants**

Not Applicable

**Ozone-depleting substances (ODS) regulation (EC) 1005/2009**

Not Applicable

**International Inventories**

Chemical name	TSCA (United States)	DSL (Canada)	EINECS/ELINCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Sulphur powder (ground) 7704-34-9	X	X	X		X	X	X	X
ethane-1,2-diol 107-21-1	X	X	X	X	X	X	X	X
NAPHTHALENESULFONIC ACID, METHYL-, POLYMER WITH FORMALDEHYDE, SODIUM SALT 81065-51-2	X	X		X	X			X
Xanthan Gum 11138-66-2	X	X	X	X	X	X	X	X

**15.2. Chemical safety assessment**

A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

## Section 16: OTHER INFORMATION

**Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of R-phrases referred to under sections 2 and 3**

Not applicable

**Full text of H-Statements referred to under sections 2 and 3**

EUH208 - May produce an allergic reaction

H302 - Harmful if swallowed

H315 - Causes skin irritation

H318 - Causes serious eye damage

H319 - Causes serious eye irritation

**Legend**

<b>ADR:</b>	European Agreement concerning the International Carriage of Dangerous Goods by Road
<b>CAS:</b>	CAS (Chemical Abstracts Service)
<b>Ceiling:</b>	Maximum limit value:
<b>DNEL:</b>	Derived No Effect Level (DNEL)
<b>EINECS:</b>	EINECS (European Inventory of Existing Chemical Substances)
<b>GHS:</b>	Globally Harmonised System (GHS)
<b>IATA:</b>	International Air Transport Association (IATA)
<b>ICAO:</b>	International Civil Aviation Organization
<b>IMDG:</b>	International Maritime Dangerous Goods (IMDG)
<b>LC50:</b>	LC50 (lethal concentration)
<b>LD50:</b>	LD50 (lethal dose)
<b>PBT:</b>	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
<b>RID:</b>	Regulations Concerning the International Transport of Dangerous Goods by Rail

STEL: Short term exposure limit  
SVHC: SVHC: Substances of Very High Concern for Authorisation:

TWA: time weighted average  
vPvB: very Persistent and very Bioaccumulative

Revision date: 2018-07-20

Reason for revision: Format Change.

Disclaimer

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

Prepared By

FMC Corporation

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**End of Safety Data Sheet**