

SAFETY DATA SHEET

KOSMAN

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



SDS #: NP-0164-A
Revision date: 2018-07-19
Format: EU
Version 1.02

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

Product Code(s) NP-0164-A

Product Name KOSMAN

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

Recommended Use: A soluble fertilizer for use in agriculture and horticulture

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*

Serious eye damage/eye irritation	Category 1 (H318)
Specific target organ toxicity — repeated exposure	Category 2 (H373)
Chronic aquatic toxicity	Category 2 (H411)
Oxidising Solids	Category 3 (H272)

2.2. Label elements

Hazard pictograms



Signal Word
Danger

Hazard Statements

H272 - May intensify fire; oxidiser
H318 - Causes serious eye damage
H373 - May cause damage to organs through prolonged or repeated exposure
H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements

P210 - Keep away from heat/sparks/open flames/hot surfaces. — No smoking
P220 - Keep/Store away from clothing/ combustible materials
P260 - Do not breathe dust
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P501: Dispose of contents/container as hazardous waste.

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
POTASSIUM NITRATE	231-818-8	7757-79-1	>60	Ox. Sol. 3 (H272)	No data available
MANGANESE SULPHATE MONOHYDRATE	232-089-9	10034-96-5	30-60	Eye Dam. 1: H318; STOT RE 2: H373; Aquatic Chronic 2: H411	01-2119456624-35-XXXX

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. Transfer to hospital for specialist examination.
Skin Contact	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.

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.

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

Oxidising. Toxic fumes may be released in fire situations.

Hazardous Combustion Products

Sulphur oxides, Nitrogen oxides (NOx).

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. Contaminated fire extinguishing water should not be discharged into drains, if preventable.

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

For personal protection see section 8. Avoid dust formation. 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. In the case of large spills (1 ton or more), alert the appropriate authorities.

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**

Cover powder spill with plastic sheet or tarp to minimise spreading.

Methods for cleaning up Transfer to a closable, labeled salvage container for disposal by an appropriate method. Refer to section 13 of SDS for suitable method of disposal.

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

Keep in a dry, cool and well-ventilated place. 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. Keep container tightly closed. Avoid contact with water or humidity.

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
POTASSIUM NITRATE 7757-79-1	5 mg/m ³ (8hr TWA) (respirable dust)	-	-	-	-
MANGANESE SULPHATE MONOHYDRATE 10034-96-5	TWA 0.5 mg/m ³	-	-	-	-
Chemical name	Italy	Portugal	The Netherlands	Finland	Denmark
MANGANESE SULPHATE MONOHYDRATE 10034-96-5	-	-	-	TWA 0.02 mg/m ³	-

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 Tightly fitting safety goggles. 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

Respiratory protective device with particle filter.

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

Physical State	Dry powder
Appearance	No information available
Odour	Mild chemical odor
Colour	Light brown
Odour threshold	No information available
pH	No information available
Melting point/freezing point	No information available
Boiling point/boiling range	No information available
Flash point	No information available
Evaporation Rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit	No information available
Vapour pressure	No information available
Vapour density	No information available
Specific gravity	No information available
Water solubility	Soluble in water
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Explosive properties	No information available
Oxidising properties	Strong oxidiser (by EC criteria)

9.2. Other information

Softening point	No information available
Molecular weight	No information available
VOC content (%)	No information available
Density	No information available
Bulk density	No information available
K_{st}	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, flames and sparks.

10.5. Incompatible materials

Strong reducing agents, Strong acids, Strong bases.

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 > 3000 mg/kg (rat) (Calculated Estimated Acute Toxicity - EAT)

Chemical name	LD50 Oral	LD50 Dermal	Inhalation LC50
POTASSIUM NITRATE	3750 mg/kg (Rat) 1901 mg/kg (Rabbit)		
MANGANESE SULPHATE MONOHYDRATE	2400 mg/kg (Rat)		>4.98 mg/L (4 hr) (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**Ecotoxicity**ALGAE (*Desmodesmus subspicatus*) 72H ErC50 >100 mg/L (calculated)DAPHNIDS (*Daphnia magna*) 48H LC50 94.3 mg/L (calculated)RAINBOW TROUT (*Oncorhynchus mykiss*) 96H LC50 30.5 mg/L (calculated)

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
POTASSIUM NITRATE	-	96hr LC50: 180 mg/L	48hr EC50: 490 mg/L
MANGANESE SULPHATE MONOHYDRATE	ALGAE (<i>Desmodesmus subspicatus</i>): 72H ErC50 = 61.0 mg/L	RAINBOW TROUT (<i>Oncorhynchus mykiss</i>): 96H LC50 = 9.75 mg/L	DAPHNID (<i>Daphnia magna</i>): 48H LC50 = 30.1 mg/L

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.

Mobility

Soluble in water.

12.5. Results of PBT and vPvB assessment

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

12.6. Other adverse effects

Toxic to aquatic organisms.

Section 13: DISPOSAL CONSIDERATIONS

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

Transfer to a suitable container and arrange for collection by specialised disposal company. 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 08

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

IMDG/IMO

14.1 UN/ID no	UN1486
14.2 Proper Shipping Name	POTASSIUM NITRATE (POTASSIUM NITRATE; MANGANESE SULPHATE MONOHYDRATE)
14.3 Hazard class	5.1
14.4 Packing Group	III
14.5 Marine Pollutant	Yes
Environmental Hazard	Yes
14.6 Special Provisions	No special precautions. Tunnel code: E Transport category: 3
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	UN1486
14.2 Proper Shipping Name	POTASSIUM NITRATE (POTASSIUM NITRATE; MANGANESE SULPHATE MONOHYDRATE)
14.3 Hazard class	5.1
14.4 Packing Group	III
14.5 Environmental Hazard	Yes
14.6 Special Provisions	No special precautions. Tunnel code: E Transport category: 3

ADR/RID

14.1 UN/ID no	UN1486
14.2 Proper Shipping Name	POTASSIUM NITRATE (POTASSIUM NITRATE; MANGANESE SULPHATE MONOHYDRATE)
14.3 Hazard class	5.1
14.4 Packing Group	III
14.5 Environmental Hazard	Yes
14.6 Special Provisions	No special precautions. Tunnel code: E Transport category: 3

ICAO/IATA

14.1 UN/ID no	UN1486
14.2 Proper Shipping Name	POTASSIUM NITRATE (POTASSIUM NITRATE; MANGANESE SULPHATE MONOHYDRATE)
14.3 Hazard class	5.1
14.4 Packing Group	III
14.5 Environmental Hazard	Yes
14.6 Special Provisions	No special precautions. Tunnel code: E Transport category: 3

Section 15: REGULATORY INFORMATION

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

National regulations Seveso category in Annex I to Dir. 2012/18/EU: dangerous for the environment.
The substance is covered by EU chemical legislation.

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)
POTASSIUM NITRATE 7757-79-1	X	X	X	X	X	X	X	X
MANGANESE SULPHATE MONOHYDRATE 10034-96-5				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

H272 - May intensify fire; oxidiser

H318 - Causes serious eye damage

H373 - May cause damage to organs through prolonged or repeated exposure

H411 - Toxic to aquatic life with long lasting effects

Legend

ADR:	European Agreement concerning the International Carriage of Dangerous Goods by Road
CAS:	CAS (Chemical Abstracts Service)
Ceiling:	Maximum limit value:
DNEL:	Derived No Effect Level (DNEL)
EINECS:	EINECS (European Inventory of Existing Chemical Substances)
GHS:	Globally Harmonised System (GHS)
IATA:	International Air Transport Association (IATA)
ICAO:	International Civil Aviation Organization
IMDG:	International Maritime Dangerous Goods (IMDG)
LC50:	LC50 (lethal concentration)
LD50:	LD50 (lethal dose)
PBT:	Persistent, Bioaccumulative, and Toxic (PBT) Chemicals
RID:	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: 2018-07-19

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