

SAFETY DATA SHEET



VYTEGRIS-K

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	25.01.2024	50002848	Date of first issue: 25.01.2024

SECTION 1: Identification of the hazardous chemical and of the supplier

Product identifier

Product name : VYTEGRIS-K

Recommended use of the chemical and restrictions on use

Recommended use : A fertilizer with micronutrients for use in agriculture

Restrictions on use : Use as recommended by the label.
For professional users only.

Manufacturer or supplier's details

Principal Supplier : FMC Agro Ltd (UK)
Rectors Lane
Flintshire
Pentre
CH5 2DH
United Kingdom
SDS-Info@fmc.com

Local registrant : FMC Chemicals (Malaysia) Sdn Bhd
Level 16, 1 Sentral, Jalan Stesen Sentral 5, Kuala Lumpur Sentral
50470, Kuala Lumpur, Malaysia
Phone No: +60320929423
Fax No: +603-2092 9201

Emergency telephone : For leak, fire, spill or accident emergencies, call:
CHEMTREC (Asia-Pacific Regional Number): +65 3163 8374

Medical emergency:
All other countries: +1 651 / 632-6793 (Collect)
1 703 / 741-5970 (CHEMTREC - International)

SECTION 2: Hazards identification

Classification of the hazardous chemical

Skin corrosion/irritation : Category 1

Serious eye damage/eye irritation : Category 1

Specific target organ toxicity - : Category 3 (Respiratory system)

SAFETY DATA SHEET



VYTEGRIS-K

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	25.01.2024	50002848	Date of first issue: 25.01.2024

single exposure

Hazardous to the aquatic environment - chronic hazard : Category 3

Label elements

Hazard pictograms :



Signal Word : Danger

Hazard Statements : H314 Causes severe skin burns and eye damage.
H335 May cause respiratory irritation.
H412 Harmful to aquatic life with long lasting effects.

Precautionary Statements :

Prevention:
P261 Avoid breathing mist or vapors.
P264 Wash skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response:
P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304 + P340 + P310 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/ physician.
P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.
P363 Wash contaminated clothing before reuse.

Storage:
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards which do not result in classification

None known.

SECTION 3: Composition and information of the ingredients of the hazardous chemical

SAFETY DATA SHEET



VYTEGRIS-K

Version 1.1 Revision Date: 25.01.2024 SDS Number: 50002848 Date of last issue: -
Date of first issue: 25.01.2024

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
potassium carbonate	584-08-7	>= 30 -< 60

SECTION 4: First aid measures

- General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.
Do not leave the victim unattended.
- If inhaled : If unconscious, place in recovery position and seek medical advice.
If symptoms persist, call a physician.
- In case of skin contact : Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
If on skin, rinse well with water.
If on clothes, remove clothes.
- In case of eye contact : Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Continue rinsing eyes during transport to hospital.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
If eye irritation persists, consult a specialist.
- If swallowed : Keep respiratory tract clear.
Do NOT induce vomiting.
Do not give milk or alcoholic beverages.
Never give anything by mouth to an unconscious person.
If symptoms persist, call a physician.
Take victim immediately to hospital.
- Most important symptoms and effects, both acute and delayed : Causes serious eye damage.
May cause respiratory irritation.
Causes severe burns.
- Notes to physician : Treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media : Dry chemical, CO₂, water spray or regular foam.

Unsuitable extinguishing : High volume water jet

VYTEGRIS-K

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	25.01.2024	50002848	Date of first issue: 25.01.2024

media

Physicochemical hazards arising from the chemical

Specific hazards during fire fighting : Do not allow run-off from fire fighting to enter drains or water courses.

Hazardous combustion products : Ammonia
Carbon oxides
Sulfur oxides

Special protective equipment and precautions for fire-fighters

Special protective equipment for fire-fighters : Wear self-contained breathing apparatus for firefighting if necessary.

Specific extinguishing methods : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Hazchem Code : 2X

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Never return spills in original containers for re-use.
Mark the contaminated area with signs and prevent access to unauthorized personnel.
Only qualified personnel equipped with suitable protective equipment may intervene.
For disposal considerations see section 13.

Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.

Methods and materials for containment and cleaning up : Absorb spillage to prevent material damage.
Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage**Handling****Precautions for safe handling**

Advice on protection against fire and explosion : Normal measures for preventive fire protection.

Advice on safe handling : Avoid formation of aerosol.
Do not breathe vapors/dust.

VYTEGRIS-K

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	25.01.2024	50002848	Date of first issue: 25.01.2024

Avoid exposure - obtain special instructions before use.
Avoid contact with skin and eyes.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
To avoid spills during handling keep bottle on a metal tray.
Dispose of rinse water in accordance with local and national regulations.

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

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8: Exposure controls and personal protection**Control parameters****Individual protection measures, such as personal protective equipment**

Eye/face protection	: Eye wash bottle with pure water Tightly fitting safety goggles Wear face-shield and protective suit for abnormal processing problems.
Skin protection	: Impervious clothing Choose body protection according to the amount and concentration of the dangerous substance at the work place.
Hand protection Material	: Wear chemical resistant gloves, such as barrier laminate, butyl rubber or nitrile rubber.
Remarks	: The suitability for a specific workplace should be discussed with the producers of the protective gloves.
Respiratory protection	: No personal respiratory protective equipment normally required.
Hygiene measures	: When using do not eat or drink. When using do not smoke. Wash hands before breaks and at the end of workday.

SAFETY DATA SHEET



VYTEGRIS-K

Version 1.1	Revision Date: 25.01.2024	SDS Number: 50002848	Date of last issue: - Date of first issue: 25.01.2024
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SECTION 9: Physical and chemical properties

Physical state	: liquid
Color	: brown
Odor	: Faint odour
Odor Threshold	: No data available
pH	: < 13.0 Concentration: 100 %
Melting point/freezing point	: No data available
Initial boiling point and boiling range	: No data available
Flash point	: No data available
Upper explosion limit / Upper flammability limit	: No data available
Lower explosion limit / Lower flammability limit	: No data available
Vapor pressure	: No data available
Relative vapor density	: No data available
Relative density	: No data available
Density	: No data available
Bulk density	: No data available
Solubility(ies)	
Water solubility	: No data available
Solubility in other solvents	: No data available
Partition coefficient: n-octanol/water	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	
Viscosity, dynamic	: No data available

SAFETY DATA SHEET



VYTEGRIS-K

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	25.01.2024	50002848	Date of first issue: 25.01.2024

Viscosity, kinematic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	Non-oxidizing
Particle size	:	No data available

SECTION 10: Stability and reactivity

Reactivity	:	No decomposition if stored and applied as directed.
Chemical stability	:	No decomposition if stored and applied as directed.
Possibility of hazardous reactions	:	No decomposition if stored and applied as directed.
Conditions to avoid	:	Heat.
Incompatible materials	:	Avoid strong acids, bases, and oxidizers.
Hazardous decomposition products	:	toxic fumes

SECTION 11: Toxicological information

Information on likely routes of exposure : None known.

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 4,000 mg/kg Method: Calculation method
Acute inhalation toxicity	:	Remarks: No data is available on the product itself.
Acute dermal toxicity	:	Remarks: No data is available on the product itself.

Components:

potassium carbonate:

Acute oral toxicity	:	LD0 (Rat, male and female): > 2,000 mg/kg Remarks: no mortality
Acute inhalation toxicity	:	LC0 (Rat, male and female): > 4.96 mg/l Exposure time: 4.5 h Test atmosphere: dust/mist Remarks: no mortality
Acute dermal toxicity	:	LD0 (Rabbit, male and female): > 2,000 mg/kg Remarks: no mortality

SAFETY DATA SHEET



VYTEGRIS-K

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	25.01.2024	50002848	Date of first issue: 25.01.2024

Skin corrosion/irritation

Causes severe burns.

Product:

Remarks : Causes skin burns.

Components:

potassium carbonate:

Result : Skin irritation

Species : Rabbit

Result : No skin irritation

Serious eye damage/eye irritation

Causes serious eye damage.

Product:

Remarks : May cause irreversible eye damage.

Components:

potassium carbonate:

Species : Rabbit

Result : Irritation to eyes, reversing within 21 days

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Product:

Remarks : No data is available on the product itself.

Components:

potassium carbonate:

Test Type : Buehler Test

Species : Guinea pig

Result : Does not cause skin sensitization.

Germ cell mutagenicity

Not classified based on available information.

Components:

potassium carbonate:

Genotoxicity in vitro : Test Type: In vitro mammalian cell gene mutation test

VYTEGRIS-K

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	25.01.2024	50002848	Date of first issue: 25.01.2024

Result: negative
Remarks: Based on data from similar materials

Test Type: reverse mutation assay
Result: negative

Test Type: Chromosome aberration test in vitro
Result: negative

Germ cell mutagenicity - Assessment : In vitro tests did not show mutagenic effects

Carcinogenicity

Not classified based on available information.

Components:**potassium carbonate:**

Species	: Rat, male
Application Route	: Oral
Dose	: 0, 1285, 2667 mg/kg bw/d
NOAEL	: 2,667 mg/kg bw/day
Result	: negative

Carcinogenicity - Assessment : Weight of evidence does not support classification as a carcinogen

Reproductive toxicity

Not classified based on available information.

Components:**potassium carbonate:**

Effects on fetal development	: Test Type: reproductive and developmental toxicity study
	Species: Rat
	Application Route: Oral
	Dose: 1.8,8.4,38.8,180.0mg/kgbw/day
	Duration of Single Treatment: 20 d
	General Toxicity Maternal: NOEL: 180 mg/kg bw/day
	Embryo-fetal toxicity.: NOEL: 180 mg/kg bw/day
	Result: negative

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity

STOT-single exposure

May cause respiratory irritation.

Components:**potassium carbonate:**

Assessment : May cause respiratory irritation.

SAFETY DATA SHEET



VYTEGRIS-K

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	25.01.2024	50002848	Date of first issue: 25.01.2024

STOT-repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

potassium carbonate:

Species	: Rat, male
NOAEL	: 2667 mg/kg bw/day
Application Route	: Oral - feed
Exposure time	: 130 w
Dose	: 0, 1285, 2667 mg/kg bw/d

Species	: Rat, male and female
NOAEC	: 0.4 mg/l
Application Route	: Inhalation
Test atmosphere	: dust/mist
Exposure time	: 21 d
Dose	: 0, 0.1, 0.2, 0.4 mg/L

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks	: No data available
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SECTION 12: Ecological information

Ecotoxicity

Components:

potassium carbonate:

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 68 mg/l Exposure time: 96 h Method: FIFRA Guideline 72-1
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Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia pulex (Water flea)): 200 mg/l Exposure time: 48 h Test Type: static test
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Toxicity to soil dwelling organisms	: LC50 (Eisenia andrei (red worm)): 5,595 mg/kg Exposure time: 14 d Method: OECD Test Guideline 207 Remarks: Based on data from similar materials
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Persistence and degradability

No data available

SAFETY DATA SHEET



VYTEGRIS-K

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	25.01.2024	50002848	Date of first issue: 25.01.2024

Bioaccumulative potential

Components:

potassium carbonate:

Bioaccumulation : Remarks: Does not bioaccumulate.

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.
Harmful to aquatic life with long lasting effects.

SECTION 13: Disposal information

Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.
Do not re-use empty containers.

SECTION 14: Transport information

International Regulations

UNRTDG

UN number : UN 1760
Proper shipping name : CORROSIVE LIQUID, N.O.S.
(Potassium carbonate solution)
Class : 8
Packing group : II
Labels : 8

IATA-DGR

UN/ID No. : UN 1760
Proper shipping name : Corrosive liquid, n.o.s.
(Potassium carbonate solution)
Class : 8
Packing group : II
Labels : Corrosive
Packing instruction (cargo aircraft) : 855
Packing instruction (passenger aircraft) : 851

SAFETY DATA SHEET



VYTEGRIS-K

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	25.01.2024	50002848	Date of first issue: 25.01.2024

IMDG-Code

UN number	: UN 1760
Proper shipping name	: CORROSIVE LIQUID, N.O.S. (Potassium carbonate solution)
Class	: 8
Packing group	: II
Labels	: 8
EmS Code	: F-A, S-B
Marine pollutant	: no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Hazchem Code	: 2X
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Special precautions for user

Remarks	: Not classified as dangerous in the meaning of transport regulations.
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The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

SECTION 15: Regulatory information

Safety, health, and environmental regulations specific for the hazardous chemical

Occupational Safety and Health (Classification, Labelling and Safety Data Sheet of Hazardous Chemicals) Regulations 2013.

Occupational Safety and Health (Use and Standards of Exposure of Chemicals Hazardous to Health) Regulations 2000.

The ingredients of this product are reported in the following inventories:

TCSI	: On the inventory, or in compliance with the inventory
TSCA	: All substances listed as active on the TSCA inventory
AIIC	: On the inventory, or in compliance with the inventory
DSL	: All components of this product are on the Canadian DSL
ENCS	: On the inventory, or in compliance with the inventory
ISHL	: On the inventory, or in compliance with the inventory
KECI	: On the inventory, or in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
NZIoC	: Not in compliance with the inventory

SAFETY DATA SHEET



VYTEGRIS-K

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	25.01.2024	50002848	Date of first issue: 25.01.2024

TECI : On the inventory, or in compliance with the inventory

SECTION 16: Other information

Revision Date : 25.01.2024

Date format : dd.mm.yyyy

Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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SAFETY DATA SHEET



VYTEGRIS-K

Version	Revision Date:	SDS Number:	Date of last issue: -
1.1	25.01.2024	50002848	Date of first issue: 25.01.2024

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