SAFETY DATA SHEET

Hi Zink P

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

SDS # : NP-0149-5-A
Revision date: 2018-07-18
Format: EU
Version 1.01

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

Product Code(s) NP-0149-5-A

Product Name Hi Zink P

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

Recommended Use: A soluble micronutrient 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)

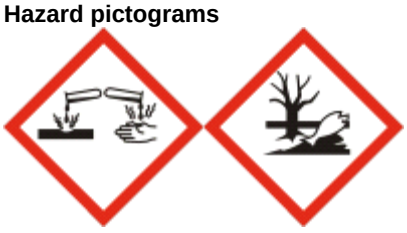
Section 2: HAZARDS IDENTIFICATION

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

Skin corrosion/irritation	Category 1 Sub-category B (H314)
Chronic aquatic toxicity	Category 2 (H411)

2.2. Label elements

Hazard pictograms



Signal Word
Danger

Hazard Statements
H314 - Causes severe skin burns and eye damage
H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements
P273 - Avoid release to the environment
P280 - Wear protective gloves/protective clothing/eye protection/face protection
P303 + P361 + P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
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 Mixtures

Chemical name	EC-No	CAS-No	Weight percent	Classification according to Regulation (EC) No. 1272/2008 [CLP]	REACH registration number
Orthophosphoric acid	231-633-2	7664-38-2	10 - 40	Skin Corr. 1B (H314)	01-2119485924-24-XXXX
ZINC PHOSPHATE	231-944-3	7779-90-0	10 - 40	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	01-2119485044-40-XXXX

Section 4: FIRST AID MEASURES

4.1. Description of first aid measures

Eye Contact — Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Transfer to hospital for specialist examination.

Skin Contact — Immediately remove all stained or splashed clothing that is not adhering to the skin. Wash off immediately with plenty of water for at least 15 minutes. Transfer to hospital if there are burns or symptoms of poisoning.

Inhalation — Remove person from exposure ensuring one's own safety while doing so. Call a doctor or poison control centre immediately.

Ingestion — Rinse mouth. Do NOT induce vomiting. Call a doctor or poison control centre immediately.

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

Most important symptoms and effects, both acute and delayed

Skin contact: Severe burns may occur. Progressive ulceration will occur if treatment is not immediate.

Eye contact: Corneal burns may occur. May cause permanent damage.

Ingestion: Corrosive burns may appear around the lips. Blood may be vomited. There may be difficulty swallowing.

Inhalation: There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.

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
Corrosive. Thermal decomposition can lead to release of irritating and toxic gases and vapours.

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
In case of spill, avoid contact. Isolate area and keep out animals and unprotected persons. Stop leak if you can do it without risk. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection see section 8. 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	Clean-up should be dealt with only by qualified personnel familiar with the specific substance.
Methods for cleaning up	Surface water drains within close vicinity of the spill should be covered. Absorb into dry earth or sand. Transfer to a closable, labelled 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

Avoid contact by using personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Do not handle in a confined space. Avoid the formation or spread of mists in the air.

Hygiene measures
Handle in accordance with good industrial hygiene and safety practice.

7.2. Conditions for safe storage, including any incompatibilities

Storage
Protect from freezing. 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. Store rooms or warehouses should be made of non-combustible materials with impermeable floors.

Packageing material Must only be kept in original packaging.

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
Orthophosphoric acid 7664-38-2	TWA 1 mg/m³ STEL 2 mg/m³	STEL 2 mg/m³ TWA 1 mg/m³	TWA 0.2 ppm TWA 1 mg/m³ STEL 0.5 ppm STEL 2 mg/m³	TWA 1 mg/m³ STEL 2 mg/m³	-
Chemical name	**Italy**	**Portugal**	**The Netherlands**	**Finland**	**Denmark**
Orthophosphoric acid 7664-38-2	TWA 1 mg/m³ STEL 2 mg/m³	TWA 1 mg/m³ STEL 3 mg/m³	STEL 2 mg/m³ TWA 1 mg/m³	TWA 1 mg/m³ STEL 2 mg/m³	TWA 1 mg/m³
Chemical name	**Austria**	**Switzerland**	**Poland**	**Norway**	**Ireland**
Orthophosphoric acid 7664-38-2	STEL 2 mg/m³ TWA 1 mg/m³	SS-C** TWA 1 mg/m³ STEL 2 mg/m³	TWA 1 mg/m³ STEL 2 mg/m³	TWA 1 mg/m³ STEL 2 mg/m³	TWA 1 mg/m³ STEL 2 mg/m³

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. The floor of the storage room must be impermeable to prevent the escape of liquids.

Personal protective equipment

Eye/Face Protection Tightly fitting safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

Hand Protection Gloves (acid resistant).

Skin and Body Protection Acid-resistant protective 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

Physical State	Liquid
Appearance	Liquid
Odour	Barely perceptible
Colour	Colourless
Odour threshold	No information available
pH	0.25 - 1.25
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	1.61 - 1.63
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	Non-oxidizing (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

Stable under recommended storage 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 bases.

10.6. Hazardous decomposition products

May emit toxic fumes under fire conditions.

Section 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute toxicity

Product Information
Product does not present an acute toxicity hazard based on known or supplied information.

Chemical name	LD50 Oral	LD50 Dermal	Inhalation LC50
Orthophosphoric acid	> 2000 mg/kg (Rat)	2740 mg/kg (Rabbit)	> 850 mg/m^3 (Rat) 1 h
ZINC PHOSPHATE	> 5000 mg/kg (Rat)		

Skin corrosion/irritation See classification in Section 2.
Serious eye damage/eye irritation See classification in Section 2.
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: Severe burns may occur. Progressive ulceration will occur if treatment is not immediate.

Eye contact: Corneal burns may occur. May cause permanent damage.

Ingestion: Corrosive burns may appear around the lips. Blood may be vomited. There may be difficulty swallowing.

Inhalation: There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.

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

RAINBOW TROUT (Oncorhynchus mykiss): 96H LC50 = 0.920 (calculated) mg/L

DAPHNIDS (Daphnia magna): 48H EC50 = 20.7 (calculated) mg/L

ALGAE (Pseudokirchneriella subcapitata): 72H IC50 = 1.54 (calculated) mg/L

.

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Orthophosphoric acid	-	96 h LC50: 3 - 3.5 mg/L (Gambusia affinis)	12 h EC50: = 4.6 mg/L (Daphnia magna)
ZINC PHOSPHATE	Raphidocelis subcapitata: 72H IC50 = 0.268 mg/L (ZnO data)	Oncorhynchus mykiss: 96H LC50 = 0.160 mg/L (ZnCl2 data)	Daphnia magna: 48H EC50 = 2.13 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
Readily absorbed to soil.

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 — Empty containers should be taken to an approved waste handling site for recycling or disposal. Containers must be disposed of in accordance with local regulations. Refer to the product label for container disposal instructions.

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 — UN1760
14.2 Proper Shipping Name — CORROSIVE LIQUID, N.O.S. (ORTHOPHOSPHORIC ACID, ZINC PHOSPHATE)
14.3 Hazard class — 8
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 This product is not transported in bulk containers.

RID

14.1 UN/ID no	UN1760
14.2 Proper Shipping Name	CORROSIVE LIQUID, N.O.S. (ORTHOPHOSPHORIC ACID, ZINC PHOSPHATE)
14.3 Hazard class	8
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	UN1760
14.2 Proper Shipping Name	CORROSIVE LIQUID, N.O.S. (ORTHOPHOSPHORIC ACID, ZINC PHOSPHATE)
14.3 Hazard class	8
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	UN1760
14.2 Proper Shipping Name	CORROSIVE LIQUID, N.O.S. (ORTHOPHOSPHORIC ACID, ZINC PHOSPHATE)
14.3 Hazard class	8
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

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)
Orthophosphoric acid	X	X	X	X	X	X	X	X

7664-38-2								
ZINC PHOSPHATE 7779-90-0	X	X	X	X	X	X	X	X

15.2. Chemical safety assessment

A chemical safety assessment is not required to be included for this product.

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
H314 - Causes severe skin burns and eye damage
H410 - Very toxic to aquatic life with long lasting effects
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:	2018-07-18
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

End of Safety Data Sheet