

SAFETY DATA SHEET

Proleaf Pulse

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



SDS # : NP-0033-2-A
Revision date: 2019-11-18
Format: EU
Version 1

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

Product Code(s) NP-0033-2-A

Product Name Proleaf Pulse

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

Recommended Use: A fertilizer with micronutrients 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 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 Medical emergencies:

Austria: +43 1 406 43 43
Belgium: +32 70 245 245
Bulgaria: +359 2 9154 409
Cyprus: 1401
Czech Republic: +420 224 919 293, +420 224 915 402
Denmark: +45 82 12 12 12
France: +33 (0) 1 45 42 59 59
Finland: +358 9 471 977
Greece: 30 210 77 93 777
Hungary: +36 80 20 11 99
Ireland (Republic): +352 1 809 2166
Italy: +39 02 6610 1029
Lithuania: +370 523 62052, +370 687 53378
Luxembourg: +352 8002 5500
Netherlands: +31 30 274 88 88
Norway: +47 22 591300
Poland: +48 22 619 66 54, +48 22 619 08 97
Portugal: 800 250 250 (in Portugal only), +351 21 330 3284
Romania: +40 21318 3606

Slovakia: +421 2 54 77 4 166
Slovenia: +386 41 650 500
Spain: +34 91 562 04 20
Sweden: +46 08-331231112
Switzerland: 145
United Kingdom: 0870 600 6266 (in the UK only)
U.S.A. & Canada: +1 800 / 331-3148
All other countries: +1 651 / 632-6793 (Collect)

Section 2: HAZARDS IDENTIFICATION

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

Skin corrosion/irritation	Category 1 Sub-category C (H314)
Specific target organ toxicity — repeated exposure	Category 2 (H373)
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

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

H411 - Toxic to aquatic life with long lasting effects

Precautionary Statements

P260 - Do not breathe spray

P264 - Wash hands thoroughly after handling

P273 - Avoid release to the environment

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
Manganese (II) sulfate	Present	7785-87-7	10-20	STOT RE 2 (H373) Aquatic Chronic 2 (H411)	01-2119456624-35-XXXX

Zinc sulfate	Present	7733-02-0	1-10	Eye Dam. 1 (H318) Acute Tox. 4 (H302) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)	01-2119474684-27-XXXX
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Additional Information

For the full text of the H- 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. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Transfer to hospital for specialist examination.
Skin Contact	Wash skin with plenty of water and soap for at least 15 minutes. Remove all contaminated clothing and shoes. Do not try to pull on clothes that stick to the skin. If necessary, seek medical advice immediately.
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	<p>Skin contact: Severe burns may occur. Progressive ulceration will occur if treatment is not immediate.</p> <p>Eye contact: Corneal burns may occur. May cause permanent damage.</p> <p>Ingestion: Corrosive burns may appear around the lips. Blood may be vomited. There may be difficulty swallowing.</p> <p>Inhalation: There may be shortness of breath with a burning sensation in the throat. Exposure may cause coughing or wheezing.</p> <p>Delayed / immediate effects: Immediate effects can be expected after short-term exposure.</p>
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4.3. Indication of any immediate medical attention and special treatment needed

Indication of immediate medical attention and special treatment needed, if necessary	Treat symptomatically.
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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

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

**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. 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**

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	Italy	Portugal	The Netherlands	Finland	Denmark
Manganese (II) sulfate 7785-87-7	-	-	-	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. 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 Protective gloves. Impervious butyl rubber gloves. Wear chemical protective gloves made of materials such as nitrile or neoprene.

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	Light pink
Odour threshold	No information available
pH	1.0 - 2.0
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)	
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	1.30 - 1.35
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

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, 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 > 7000 mg/kg (rat) (Calculated Estimated Acute Toxicity - EAT)

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 STOT - single exposure STOT - repeated exposure	No information available. No information available. 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 (<i>Oncorhynchus mykiss</i>): 96H LC50 = 2.06 mg/L (calculated) DAPHNIDS (<i>Daphnia magna</i>): 48H EC50 = 17.0 mg/L (calculated) GREEN ALGAE: 72H IC50 = 2.86 mg/L (calculated)
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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	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.
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	UN1760
14.2 Proper Shipping Name	CORROSIVE LIQUID, N.O.S. (MANGANESE SULPHATE; ZINC SULPHATE)
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. (MANGANESE SULPHATE; ZINC SULPHATE)
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. (MANGANESE SULPHATE; ZINC SULPHATE)
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. (MANGANESE SULPHATE; ZINC SULPHATE)
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

National regulations Not applicable

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/ELINC S (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines)	AICS (Australia)
Manganese (II) sulfate 7785-87-7	X	X	X	X	X	X	X	X
Zinc sulfate 7733-02-0	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 H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

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

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: 2019-11-18

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

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End of Safety Data Sheet