

SDS completed: 15/07/2015

Version No:

Supersedes: N/A

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Kick-Off

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

For use as a professional fertiliser.

1.3. Details of the supplier of the safety data sheet

Fielder (UK Ltd
The Paddocks, Longden,
Shrewsbury
Shropshire
SY5 8EX

Contact the Safety Officer

Telephone: + 44 (0) 01743 860924

Email: fielderag@farming.co.uk

1.4. Emergency telephone number

For urgent medical help or advice, contact the NHS by calling 111.

For product-related advice, call + 44 (0) 01743 860924 (0900-1700 Mon-Fri excl. Bank Holidays)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008:

Skin Irrit. 2; H315: Causes skin irritation

Eye Dam. 1; H318: Causes serious eye damage.

STOT RE 2; H373: May cause damage to organs through prolonged or repeated exposure.

Aquatic Chronic 2; H411: Toxic to aquatic life with long lasting effects.

2.2. Label elements

Label elements in accordance with Regulation (EC) No 1272/2008:

Contains manganese sulphate, orthophosphoric acid and phosphonic acid.

Hazard pictogram:

GHS05, GHS08, GHS09



Signal word:

Danger

Hazard statements:

H315: Causes skin irritation.

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:

P260: Do not breathe mist/vapours/spray.

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.

P310: Immediately call a POISON CENTER or doctor.

P391: Collect spillage

2.3. Other hazards

This mixture does not meet the criteria for PBT or vPvB

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components:

| Chemical Name | CAS/EC /REACH Number | Annex Index | Classification in accordance with Regulation (EC) No 1272/2008 | Concentration (%) |
|----------------------|---|--------------|--|-------------------|
| Manganese sulphate | 10034-96-5/ 232-089-9/ 01-2119456624-35 | 025-003-00-4 | Eye Dam. 1; H318 STOT RE 2; H373 Aquatic Chronic 2; H411 | 15.0 – 25.0 |
| Potassium dihydrogen | 13977-65-6 | - | Eye Irrit. 2; H319 | 5.0 – 15.0 |

| | | | | |
|---------------------------|--|--------------|--|-----------|
| phosphite | | | | |
| Ortho-phosphoric acid | 7664-38-2/ 231-633-2 | 015-011-00-6 | Met. Corr. 1; H290 Skin Corr. 1B; H314 | 5.0 – 9.9 |
| Zinc sulphate hexahydrate | 13986-24-8/ 231-793-3 / 01-2119474684-27 | 030-006-00-9 | Acute Tox. 4; H302 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 | 2.5 – 7.5 |
| Phosphonic Acid | 13598-36-2/ 237-066-7 / 01-2119488030-46 | 015-157-00-0 | Met. Corr. 1; H290 Acute Tox. 4; H302 Skin Corr. 1A; H314 Eye Dam. 1; H318 | ≤ 3.0 |

Please refer to section 16 for full text of hazard phrases if not displayed in section 2 or 3.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation: Remove from source of exposure to fresh air; seek medical attention.

Skin contact: Drench immediately with water. Remove any contaminated clothing and launder before re-use. Seek medical attention IMMEDIATELY.

Eye contact: Irrigate with copious amounts of clean water for at least 15 minutes. Remove contact lenses, if present and easy to do. Seek medical attention IMMEDIATELY.

Ingestion: Do not induce vomiting. Wash out mouth with water and give water to drink. Seek medical attention IMMEDIATELY.

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

Causes skin irritation. Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure.

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

Information not available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

The mixture is not classified as flammable. Use extinguishing media suitable for surrounding materials, e.g. foam, carbon dioxide, dry powder, sand.

5.2. Special hazards arising from the substance or mixture

Possible irritant fumes arising from combustion.

5.3. Advice for firefighters

Cool down containers/equipment exposed to heat with a water spray. Contain spread of extinguishing fluids (these fluids may be hazardous for the environment). Wear complete protective clothing and self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Prevent contact with skin and eyes. Wear protective goggles with side shields, protective gloves and protective clothing. Ensure adequate ventilation; wear a suitable respirator where necessary.

6.2. Environmental precautions

Do not allow to enter storm drains or water courses. If this product enters a water course or a sewer (including via contaminated soil & vegetation) contact local water authority and inform the Environment Agency.

6.3. Methods and material for containment and cleaning up

Use soil, sand or other absorbent material to soak up spill and place into suitable labelled containers. Contact specialist waste disposal contractor.

6.4. Reference to other sections

See section 8 for personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Prevent contact with skin and eyes. Wear protective gloves, eye protection and protective clothing. Ensure adequate ventilation; wear a suitable respirator where necessary. Wash hands thoroughly after handling. Do not eat, drink or smoke whilst using this product. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities

Store in a cool, dry atmosphere in original labelled containers. Refer to manufacturer for maximum safe stacking height. Keep away from heat sources, combustible materials.

7.3. Specific end use(s)

Read label before use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure Limits as defined by UK HSE in document EH40/2005 where available:

| Substance | CAS Number | Workplace exposure limit | | | |
|---|------------|--|--------------------|--|--------------------|
| | | Long-term exposure limit (8-hr TWA reference period) | | Short-term exposure limit (15 minute reference period) | |
| | | ppm | mg.m ⁻³ | ppm | mg.m ⁻³ |
| Manganese and its inorganic compounds (as Mn) | - | - | 0.5 | - | - |
| Orthophosphoric acid | 7664-38-2 | - | 1.0 | - | 2.0 |

Manganese sulphate:

DNEL

| | | | |
|----------|-------------|-----------|-------------------------|
| Industry | Dermal | Long Term | 4.14 µg/Kg/day |
| Industry | Inhalation. | Long Term | 0.2 mg/m ³ |
| Consumer | Dermal | Long Term | 2.1 µg/Kg/day |
| Consumer | Inhalation. | Long Term | 0.043 mg/m ³ |

DNELs for the oral route, all "acute effects" and for "long-term local-effects" were not calculated and are not required for the "identified uses" covered in this SDS and the Chemical Safety Report (CSR).

PNEC

| | |
|------------------------|-------------|
| Freshwater | 0.0128 mg/l |
| Marinewater | 0.4 µg/l |
| Spills(freshwater) | 30 µg/l |
| Sediment (Freshwater) | 11.4 µg/kg |
| Sediment (Marinewater) | 1.4 µg/kg |
| Soil | 25.1 mg/kg |
| STP | 56 mg/l |

Soil & sediment PNEC values are mg/kg wet weight.

Orthophosphoric acid:

DNEL/PNECs:

| Type: | Exposure: | Value: | Population: | Effect: |
|-------|------------|------------------------|-------------|---------|
| DNEL | Inhalation | 1 mg/m ³ | Workers | Local |
| PNEL | Inhalation | 0.73 mg/m ³ | Consumers | Local |

Zinc sulphate:

DNEL

| | | | | |
|--------------|------------|-----------|------------------|-----------------------|
| Industry | Inhalation | Long Term | Systemic Effects | 1 mg/m ³ |
| Industry | Dermal | Long Term | Systemic Effects | 8.3 mg/Kg/day |
| Consumer | Oral | Long Term | Systemic Effects | 0.83 mg/Kg/day |
| Professional | Inhalation | Long Term | Systemic Effects | 1.3 mg/m ³ |

| | | | | |
|----------|--------|-----------|------------------|---------------|
| Consumer | Dermal | Long Term | Systemic Effects | 8.3 mg/Kg/day |
|----------|--------|-----------|------------------|---------------|

The units are expressed in 'mg/μg' of: Zinc.

PNEC

| | |
|-------------------------|----------------|
| Freshwater | 0.0206 mg/l |
| Marine water | 0.0061 mg/l |
| Sediment (freshwater) | 235.6* mg/Kg |
| Sediment (Marine water) | 113* mg/Kg |
| Soil | 106.8** mg/Kg |
| STP | 0.0052*** mg/l |

The units are expressed in 'mg/μg' of: Zinc. These PNECs are added value PNECs- they are to be added to the natural background levels of: Zinc. - in the appropriate compartments (e.g. soils, sediments).

(*) A generic bioavailability factor of 0.5 is applied by default, according to the EU risk assessment (ECB 2008).

(**) by default this value was multiplied by '3' to take into account "lab-to-field" differences in toxicity. (STP)

The PNEC for STP was derived by applying an assessment factor to the lowest relevant toxicity value (5.2mg Zn/L). (Dutka et al., 1983)

Phosphonic acid:

| Type | Exposure | Value | Population | Effect |
|------|-----------------------------|------------------------|--------------------|----------|
| DNEL | Hazard via inhalation route | 2.94 mg/m ³ | Workers | Systemic |
| DNEL | Hazard via dermal route | 0.83 mg/Kg bw/day | Workers | Systemic |
| DNEL | Hazard via inhalation route | 0.72 mg/m ³ | General population | Systemic |
| DNEL | Hazard via dermal route | 0.42 mg/Kg bw/day | General population | Systemic |
| DNEL | Hazard via oral route | 0.42 mg/Kg bw/day | General population | Systemic |

PNECs:

Aqua (fresh water): 0.1 mg/L

Aqua (marine water): 0.01 mg/L

Aqua (intermittent access): 1 mg/L

Oral: No potential for bioaccumulation.

8.2. Exposure controls

Engineering Measures: Ensure adequate ventilation. Ensure eye wash stations are available.

Respiratory Equipment: BS approved protection device with P3 filter.

Hand Protection: Gloves to BS EN374 – chemical protection.

Eye Protection: Goggles/face shield to BS EN166.

Skin Protection: Coveralls/apron to BS EN465/466/467

Hygiene Measures: Wash hands thoroughly after handling. Do not eat, drink or smoke whilst using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance: Clear pale pink solution

Odour: Slight, characteristic

Odour threshold: Information not available

pH: 2.0 – 3.0 (5% solution)

Melting point/freezing point: Information not available

Initial boiling point and boiling range: Information not available

Flash point: Not applicable – product not classified as flammable

Evaporation rate: Information not available

Flammability: Not flammable

Upper/lower flammability or explosive limits: Not applicable – product not classified as flammable or explosive

Vapour pressure: Information not available

Vapour density: Information not available

Relative density: Information not available

Specific gravity: 1.34 – 1.38

Solubility: Information not available

Partition coefficient: n-octanol/water: Information not available

Auto-ignition temperature: Information not available

Decomposition temperature: Information not available

Viscosity: Information not available

Explosive properties: Product not classified as explosive

Oxidising properties: Product not classified as oxidising

9.2. Other information

None specified.

SECTION 10: Stability and reactivity

10.1. Reactivity

May react with metals.

10.2. Chemical stability

Stable under normal conditions of storage and use.

10.3. Possibility of hazardous reactions

Information not available.

10.4. Conditions to avoid

Extremes of temperature.

10.5. Incompatible materials

None specified.

10.6. Hazardous decomposition products

Possible irritant fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

The mixture has not been assessed for toxicological effects, the mixture classification is given in section 2 based on individual component contents. Individual component hazards are given in section 3

Toxicological information on hazardous ingredients:

Manganese sulphate:

Acute toxicity:

Acute Toxicity (Oral LD50)

2150 mg/kg Rat

Test method(s): Indian Journal of Pharmacology, 23(3): 153-159. REACH dossier information

Based on available data the classification criteria are not met.

Acute Toxicity (Dermal LD50)

Not determined.

Dermal absorption is unlikely due to the physical-chemical properties of the substance.

Acute Toxicity (Inhalation LC50)

> 4.45 mg/l (dust/mist) Rat 4 hours

Test method(s): OECD 403.

Based on available data the classification criteria are not met.

Skin Corrosion/Irritation:

Erythema\eschar score

No erythema (0).

Oedema score

No oedema (0).

Test method(s): OECD 404.

Not irritating.

Serious eye damage/irritation:

Irritating. Test method(s): OECD 405. Irritation score: 36 / 110

Respiratory or skin sensitisation:

Skin sensitisation

Patch Test: Mouse

Not Sensitising.

REACH dossier information

Germ cell mutagenicity:

Genotoxicity - In Vitro

Gene Mutation:

REACH dossier information - A surrogate substance (Manganese chloride) was used. Test method(s): OECD 476. + 471.

Negative.

Genotoxicity - In Vivo

Chromosome aberration:

REACH dossier information - A surrogate substance (Manganese chloride) was used. Test method(s): OECD 474.

Negative.

Carcinogenicity:

Carcinogenicity

NOAEL (♂) 615 mg/kg Oral Rat

NOAEL (♀) 715 mg/kg Oral Rat

REACH dossier information - Test method(s): 70 male and 70 female rats were fed diets containing 0, 1, 500, 5, 000, or 15, 000 ppm manganese (II) sulphate monohydrate for 103 weeks. The level of manganese in the diet received by controls was approximately 92 ppm.

As many as 10 rats per group were evaluated after 9 months and 15 months of chemical exposure.

Based on available data the classification criteria are not met.

Reproductive Toxicity:

Reproductive Toxicity - Fertility

Endpoint waived according to REACH Annex VII, IX or XI.

Testing waived because a more severe health effect was found (STOT-RE class2). Controlling the risk of 'STOT-RE class 2' will control the risks for this endpoint.

Suspected reproductive toxicant based on limited evidence.

Reproductive Toxicity - Development

Endpoint waived according to REACH Annex VII, IX or XI.

Testing waived because a more severe health effect was found (STOT-RE class2). Controlling the risk of 'STOT-RE class 2' will control the risks for this endpoint.

Suspected reproductive toxicant based on limited evidence.

Specific target organ toxicity - single exposure:

STOT - Single exposure

Scientifically unjustified.

Specific target organ toxicity - repeated exposure:

STOT - Repeated exposure

Not determined.

Target Organs

Brain

MnSO₄ is already classified under Directive 67/548/EEC as R48/20/22 and under GHS as STOT RE2. Data exists showing some neurochemical changes at low levels after inhalation exposure for 90-days, together with locomotor changes, around 3 mg/m³ concentration, suggesting that significant toxicity could occur at the 20-200 mg/m³ concentration level, which supports the current classification of STOT RE 2 for the inhalation route.

Aspiration hazard:

Viscosity

Not applicable.

Inhalation

Prolonged inhalation of high concentrations may damage respiratory system.

Ingestion

May cause discomfort if swallowed.

Skin contact

Powder may irritate skin.

Eye contact

Particles in the eyes may cause irritation and smarting.

Route of entry

Inhalation.

Target Organs

Brain Eyes Respiratory system, lungs Skin

Orthophosphoric acid

Toxicity:

Oral (rat) LD50 1530 mg/Kg

Corrosivity: hazardous

Skin contact: Blistering 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 bleeding from the mouth or nose.

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

Potassium dihydrogen phosphite:

Acute toxicity: LD50 oral (female rat): 2000 - <5000 mg/Kg (ECHA website)

LD50 Inhalation: No information

LD50 Dermal: >5000 mg/Kg (ECHA website)

Local effects:

Causes eye irritation.

Zinc sulphate:

Acute toxicity:

Acute Toxicity (Oral LD50)

> 574 mg/kg Rat

Very soluble zinc sulphate (monohydrate, hexahydrate and heptahydrate) has LD50 oral values ranging from 574 to 2,949 mg/kg bw, 862 to 4,429 mg/kg bw and 920 to 4,725 mg/kg bw, respectively for the three forms of zinc sulphate. Tests conducted to standard protocols Litton (Bionetics, 1974, Courtois et al., 1978.)

Acute Toxicity (Dermal LD50) > 2000 mg/kg Rat

Test method(s): OECD 402. (Van Huygevoort 1999)

Acute Toxicity (Inhalation LC50) Rat 4 hours

Effects of inhalation exposure to zinc sulphate were limited to pulmonary effects only.

Skin Corrosion/Irritation:

Dose Rabbit

Primary dermal irritation index (PDI) 0

Erythema\eschar score

No erythema (0).

Oedema score

No oedema (0).

Not classified. Test method(s): OECD 404. (Van Huygevoort 1999)
Not irritating.

Serious eye damage/irritation:

Irritating. Test method(s): OECD 405. (Van Huygevoort 1999)

Respiratory or skin sensitisation:

Skin sensitisation

Patch Test: Mouse

(Van Huygevoort, 1999 i, Ikarashi et al, 1992)

Not Sensitising.

Germ cell mutagenicity:

Genotoxicity - In Vitro

Gene Mutation:

In vitro genotoxicity studies indicate that zinc compounds do not have genotoxic activity [Zinc CSR(s), 2010].

This conclusion is in line with those achieved by other regulatory reviews of the genotoxicity of zinc compounds (WHO, 2001; EU RAR, 2004, MAK, 2009).

Negative.

Genotoxicity - In Vivo

Chromosome aberration:

In vivo genotoxicity studies indicate that zinc compounds do not have genotoxic activity [Zinc CSR(s), 2010].

This conclusion is in line with those achieved by other regulatory reviews of the genotoxicity of zinc compounds (WHO, 2001; EU RAR, 2004, MAK, 2009).

Negative.

Carcinogenicity:

Carcinogenicity

No experimental or epidemiological evidence exists to justify classification of zinc compounds for carcinogenic activity (based on cross-reading between Zn compounds; no classification for carcinogenicity required) (Chemical Safety report (CSR) zinc oxide. 2010).

Reproductive Toxicity:

Reproductive Toxicity - Fertility -

No experimental or epidemiological evidence exists to justify classification of zinc compounds for reproductive or developmental toxicity (based on cross-reading between Zn compounds; no classification for reproductive toxicity required) (Chemical Safety Report (CSR) for zinc compounds. 2010)

Specific target organ toxicity - single exposure:

STOT - Single exposure -

No experimental or epidemiological sufficient evidence for specific target organ toxicity (single exposure) (based on cross-reading from ZnO; no classification for target organ toxicity (single exposure: STOT-SE) required) (Heydon and Kagan, 1990; Gordon et al., 1992; Mueller and Seger, 1985 [Cited in Chemical Safety report (CSR) zinc sulphate. 2010])).

Specific target organ toxicity - repeated exposure:

STOT - Repeated exposure -

No experimental or epidemiological sufficient evidence for specific target organ toxicity (repeated exposure) (no classification for specific target organ toxicity (repeated exposure: STOT-RE) required) (Lam et al, 1985, 1988; Conner et al. , 1988 [Cited in Chemical Safety Report (CSR) for zinc(s). 2010])).

Aspiration hazard:

Viscosity

No data available.

Health Warnings

INHALATION. Prolonged inhalation of high concentrations may damage respiratory system. SKIN CONTACT. Acts as a defatting agent on skin. May cause cracking of skin, and eczema. Prolonged or repeated exposure may cause severe irritation. EYE CONTACT. May cause severe irritation to eyes. INGESTION. The product causes irritation of mucous membranes and may cause abdominal discomfort if swallowed.

Target Organs

Skin Eyes Respiratory system, lungs

Phosphonic acid

Acute toxicity

Acute oral toxicity: LD50: 1560 mg/kg – rat

Primary irritant effect:

On the skin: Strong caustic effect on skin and mucous membranes.

On the eye: Strong caustic effect

Sensitisation: No sensitising effects known.

Additional toxicological information:

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

Harmful

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach.

SECTION 12: Ecological information

12.1. Toxicity

Product is classified as toxic to aquatic life with long lasting effects.

Toxicity of ingredients where available:

Manganese sulphate:

Acute Toxicity - Fish

LC50 96 hours 14.5 mg/l Onchorhynchus mykiss (Rainbow trout)

REACH dossier information

Acute Toxicity - Aquatic Invertebrates

EC50 48 hours 9.8 mg/l Daphnia magna

A surrogate substance (Manganese chloride) was used. The units are expressed in 'mg/µg' of: Manganese.

REACH dossier information

Acute Toxicity - Aquatic Plants

EC50 72 hours 61 mg/l

Desmodesmus subspicatus (algae). Test method(s): OECD 201. REACH dossier information

Chronic Toxicity - Aquatic Invertebrates

Not applicable.

A variety of tests have indicated that a classification more severe than Aquatic Chronic 2 is not required (CSR 2010). REACH dossier information.

Zinc sulphate:

The reference values for acute aquatic toxicity, based on the lowest observed EC50 values of the corresponding databases at different pH and expressed as Zn⁺⁺ ion concentration are:

- for pH <7: 0.413 mg Zn⁺⁺/l (48 hr - Ceriodaphnia dubia test according to US EPA 821-R-02-012 standard test protocol; reference: Hyne et al 2005)

- for pH >7-8.5: 0.136 mg Zn⁺⁺/l (72 hr - Selenastrum capricornutum (=Pseudokirchneriella subcapitata) test according to OECD 201 standard protocol; reference: Van Ginneken, 1994)

After applying the molecular weight correction (transformation/dissolution testing is not relevant since this zinc compound is readily soluble), the specific reference values for acute aquatic toxicity of the different zinc sulphates are:

For zinc monohydrate (a ZnSO₄.H₂O/Zn molecular weight ratio of 2.74):

- for pH <7: 1.13 mg Zn/l (based on 48 hr Ceriodaphnia dubia test cfr above)

- for pH >7-8.5: 3.73 mg Zn/l (based on 72 hr Selenastrum capricornutum test cfr above)

For zinc hexahydrate (a ZnSO₄.6H₂O/Zn molecular weight ratio of 4.12):

- for pH <7: 1.70 mg Zn/l (based on 48 hr Ceriodaphnia dubia test cfr above)

- for pH >7-8.5: 0.56 mg Zn/l (based on 72 hr Selenastrum capricornutum test cfr above)

For zinc heptahydrate (a ZnSO₄.7H₂O/Zn molecular weight ratio of 4.4):

- for pH <7: 1.82 mg Zn/l (based on 48 hr Ceriodaphnia dubia test cfr above)

- for pH >7-8.5: 0.60 mg Zn/l (based on 72 hr Selenastrum capricornutum test cfr above)

M-factor: 1

CHRONIC AQUATIC TOXICITY:

The chronic freshwater aquatic toxicity database on zinc contains high quality chronic NOEC/EC10 values on 23 species (8 taxonomic groups) obtained under a variety of conditions.

The chronic marine-water aquatic toxicity database on zinc contains high quality chronic NOEC/EC10 values on 39 species (9 taxonomic groups) obtained under a variety of conditions.

These data, outlined in the CSR, were compiled in a species sensitivity distribution, from which the PNECs for freshwater and marine-water were derived (expressed as Zn⁺²ion concentration).

12.2. Persistence and degradability

Readily biodegradable.

12.3. Bioaccumulative potential

Information not available.

12.4. Mobility in soil

Information not available.

12.5. Results of PBT and vPvB assessment

Not classified.

12.6. Other adverse effects

None specified.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Use only licensed waste disposal companies. Do not re-use empty containers for any purpose.

SECTION 14: Transport information

14.1. UN number

UN3082

14.2. UN proper shipping name

Environmentally hazardous substance, Liquid N.O.S. (contains: Manganese sulphate E.C. 232-089-9, Ortho-phosphoric acid E.C. 231-633-2, Phosphonic Acid E.C. 237-066-7)

14.3. Transport hazard class(es)

9

14.4. Packing group

III

14.5. Environmental hazards

Product is classified as toxic to aquatic life with long lasting effects.

14.6. Special precautions for user

Information not available.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Applicable for Maritime bulk transport only. Check with carrier.

SECTION 15: Regulatory information

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

This mixture is classified and labelled in accordance with Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures and Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

15.2. Chemical safety assessment

Chemical safety assessment not undertaken for this product.

SECTION 16: Other information

Full text of hazard statements not displayed in section 2 or 3:

H290: May be corrosive to metals.

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H319: Causes serious eye irritation.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

This Safety Data Sheet is compiled using data submitted for raw materials and practical experience. This product is intended for professional users only.

This Safety Data Sheet is prepared in compliance with Regulation (EC) 1272/2008 and Annex I of the REACH regulation as amended by Regulation 453/2010.

THE INFORMATION GIVEN HEREIN IS, TO THE BEST OF OUR KNOWLEDGE, CORRECT AND IS PRESENTED IN GOOD FAITH BUT NO WARRANTY, EXPRESSED OR IMPLIED, IS GIVEN.