

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.04.2017

Revision: 11.04.2017

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

- **1.1 Product identifier**
- **Trade name:** Maxwell Bullet Soluble Iron
- **CAS Number:**
13463-43-9
- **EC number:**
231-753-5
- **Registration number** 01-2119513203-57
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
- **Sector of Use** SU1 Agriculture, forestry, fishery
- **Product category** PC12 Fertilisers
- **Application of the substance / the mixture** Horticultural product
- **Uses advised against**
Any use involving aerosol formation or vapour or dust release in excess of the assigned workplace exposure limits where workers are exposed without suitable respiratory protective equipment (RPE).
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Maxwell Amenity Ltd
Allscott Park
Allscott
Telford
Shropshire
TF6 5DY

Tel: +44 (0)1952 897910
- **Further information obtainable from:** Product safety department.
- **1.4 Emergency telephone number:** Tel: +44 (0)1952 897910 (not 24 hours)

SECTION 2: Hazards identification

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



GHS07

- | | | |
|-------------------|------|--|
| Acute Tox. 4 | H302 | Harmful if swallowed. |
| Skin Irrit. 2 | H315 | Causes skin irritation. |
| Eye Irrit. 2 | H319 | Causes serious eye irritation. |
| | | |
| Aquatic Chronic 3 | H412 | Harmful to aquatic life with long lasting effects. |

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms** GHS07
- **Signal word** Warning
- **Hazard-determining components of labelling:**
Ferrous sulphate heptahydrate
- **Hazard statements**
H302 Harmful if swallowed.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H412 Harmful to aquatic life with long lasting effects.
- **Precautionary statements**
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection / face protection.

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- P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P330 Rinse mouth.
- **2.3 Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.
 - **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

- **3.1 Chemical characterisation: Substances**
- **CAS No. Description**
13463-43-9 Ferrous sulphate heptahydrate
- **Identification number(s)**
- **EC number:** 231-753-5

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately rinse with water.
If skin irritation continues, consult a doctor.
- **After eye contact:**
DO NOT DELAY!
Check for and remove any contact lenses.
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
DO NOT DELAY!
Wash mouth out with water
Drink plenty of water and provide fresh air. Call for a doctor immediately.
Do not induce vomiting; call for medical help immediately.
If vomiting occurs spontaneously, keep head below hips to prevent aspiration.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Information for doctor:** Treat symptomatically and supportively.
- **4.3 Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **5.2 Special hazards arising from the substance or mixture** Sulphur dioxide (SO₂)
- **5.3 Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.
Do not inhale explosion gases or combustion gases.

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- **Additional information**
- Non-combustible substance.
- Freely soluble in water.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
 - Avoid formation of dust.
 - Ensure adequate ventilation
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**
 - Pick up mechanically.
 - Send for recovery or disposal in suitable receptacles.
- **6.4 Reference to other sections**
 - See Section 7 for information on safe handling.
 - See Section 8 for information on personal protection equipment.
 - See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
 - Prevent formation of dust.
 - Ensure good ventilation/exhaustion at the workplace.
 - Avoid direct contact (skin/eye contact, ingestion and/or inhalation of fume/mist/dust) with the product in the undiluted form.
 - Take note of assigned workplace exposure levels.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
 - Store in a cool location.
 - Do not store in aluminium or galvanised containers.
- **Information about storage in one common storage facility:**
 - Store away from foodstuffs.
 - Store away from metals.
- **Further information about storage conditions:**
 - Store in cool, dry conditions in well sealed receptacles.
 - Protect from humidity and water.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **8.1 Control parameters**

Ingredients with limit values that require monitoring at the workplace:
7720-78-7 Iron sulphate

WEL	Short-term value: 2 mg/m ³ Long-term value: 1 mg/m ³ as Fe
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- **DNELs**
- WORKERS**
- Acute / short-term exposure - systemic effects
- Dermal DN(M)EL
 - DNEL (Derived No Effect Level): 0.57 mg/kg bw/day
- Inhalation DN(M)EL

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- DNEL (Derived No Effect Level): 2.01 mg/m³
Long-term exposure - systemic effects
Dermal DN(M)EL
- DNEL (Derived No Effect Level): 0.57 mg/kg bw/day
Inhalation DN(M)EL
- DNEL (Derived No Effect Level): 2.01 mg/m³

GENERAL POPULATION

- Acute / short-term exposure - systemic effects
Dermal DN(M)EL
- DNEL (Derived No Effect Level): 0.29 mg/kg bw/day
Inhalation DN(M)EL
- DNEL (Derived No Effect Level): 0.5 mg/m³
Oral DN(M)EL
- DNEL (Derived No Effect Level): 0.29 mg/kg bw/day
Long-term exposure - systemic effects
Dermal DN(M)EL
- DNEL (Derived No Effect Level): 0.29 mg/kg bw/day
Inhalation DN(M)EL
- DNEL (Derived No Effect Level): 0.5 mg/m³
Oral DN(M)EL
- DNEL (Derived No Effect Level): 0.29 mg/kg bw/day

· **PNECs**

- PNEC STP: 500 mg/L
- PNEC sediment (freshwater): 49.5 mg/kg sediment dw
- PNEC sediment (marine water): 49.5 mg/kg sediment dw
- PNEC soil: 55.5 mg/kg soil dw
- PNEC oral: No potential for bioaccumulation

· **Additional information:** The lists valid during the making were used as basis.· **8.2 Exposure controls**· **Personal protective equipment:**

Select PPE appropriate for the operations taking place taking into account the product properties.

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Wash hands before breaks and at the end of work.
- Avoid contact with the eyes.
- Avoid close or long term contact with the skin.
- Do not eat, drink, smoke or sniff while working.
- Do not inhale dust / smoke / mist.
- Ensure that eyewash stations and safety showers are close to the workstation location.
- Take note of assigned Workplace Exposure Limits.

· **Respiratory protection:**

- Use suitable respiratory protective device in case of insufficient ventilation.
- Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

· **Protection of hands:**

- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves** PVC, Neoprene or Natural rubber· **Penetration time of glove material**

- The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Safety glasses· **Body protection:**

- Protective work clothing

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Body protection must be chosen depending on product properties, activity and possible exposure.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

· Form:	Solid
· Colour:	Light green
· Odour:	Mild

· pH-value (50 g/l) at 20 °C:	3-4
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· Change in condition

· Melting point/freezing point:	64 °C
· Initial boiling point and boiling range:	decomp

· Flash point:	Not applicable.
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· Flammability (solid, gas):	Product is not flammable.
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· Explosive properties:	Product does not present an explosion hazard.
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· Density at 20 °C:	1.9 g/cm ³
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· Solubility in / Miscibility with water at 20 °C:	>1000 g/l
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· 9.2 Other information	No further relevant information available.
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SECTION 10: Stability and reactivity

· 10.1 Reactivity	No further relevant information available.
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· 10.2 Chemical stability	
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· Thermal decomposition / conditions to be avoided:	
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No decomposition if used and stored according to specifications.

· 10.3 Possibility of hazardous reactions	No dangerous reactions known.
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· 10.4 Conditions to avoid	No further relevant information available.
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· 10.5 Incompatible materials:	
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Strong oxidising agents, bases, lead acetate, silver salts, carbonates, potassium tartrate, gold salts, potassium iodide, sodium borate, sodium tartrate, tannin.

Non acid-proof metals (such as aluminium, copper and iron), unalloyed steel, galvanised surfaces.

· 10.6 Hazardous decomposition products:	Sulphur oxides (SO _x)
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· Additional information:	
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Non-combustible substance.

Freely soluble in water.

Hygroscopic.

Aqueous solution reacts acidic.

SECTION 11: Toxicological information

· 11.1 Information on toxicological effects	
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· Acute toxicity	
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Harmful if swallowed.

· Primary irritant effect:	
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· Skin corrosion/irritation	
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Causes skin irritation.

· Serious eye damage/irritation	
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Causes serious eye irritation.

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- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Subacute to chronic toxicity:**
Repeated exposure may increase iron levels in the liver, spleen and lymphatic system. Damage may occur in the spleen and liver.
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** Product is not expected to bioaccumulate.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Recommended Hierarchy of Controls:
 - Minimise waste;
 - Reuse if not contaminated;
 - Recycle, if possible; or
 - Safe disposal (if all else fails).
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.
Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.
- **European waste catalogue**
Waste key numbers in accordance with the European Waste Catalogue (EWC) are origin-referred defined. Since this product is used in several industries, no waste key can be provided by the supplier. The waste key number should be determined in arrangement with your waste disposal partner or the responsible authority.
- **Uncleaned packaging:**
- **Recommendation:**
Disposal must be made according to official regulations.
Container remains hazardous when empty. Continue to observe all precautions.
Containers, even those that are "empty," may contain residues that can develop hazardous gases and vapours upon heating. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

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SECTION 14: Transport information

· 14.1 UN-Number · ADR, ADN, IMDG, IATA	Void
· 14.2 UN proper shipping name · ADR, ADN, IMDG, IATA	Void
· 14.3 Transport hazard class(es) · ADR, ADN, IMDG, IATA · Class	Void
· 14.4 Packing group · ADR, IMDG, IATA	Void
· 14.5 Environmental hazards: · Marine pollutant:	No
· 14.6 Special precautions for user	Not applicable.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.
· UN "Model Regulation":	Void

SECTION 15: Regulatory information

- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Product safety department.
- **Abbreviations and acronyms:**
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 DNEL: Derived No-Effect Level (REACH)
 PNEC: Predicted No-Effect Concentration (REACH)
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Acute Tox. 4: Acute toxicity – Category 4
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3