

Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 02/27/2018

Reviewed on 02/27/2018

1 Identification

- **Product Identifier**
- **Trade Name:** Florikan CRF Manganese Sulfate
- **Relevant identified uses of the substance or mixture and uses advised against:**
- **Product Description:** Fertilizer
- **Details of the Supplier of the Safety Data Sheet:**
- **Manufacturer/Supplier:**
Florikan ESA, LLC
6801 Energy Ct. Suite 100
Sarasota, FL 34234
Ph: 941-379-4048 ext 332
Fax: 941-377-3633
Email product info: Doug Cabe; dcabe@florikan.com
- **Emergency telephone number:** Chemtrec 1-800-424-9300 or outside USA 1-703-527-3887

www.Florikan.com

* 2 Hazard(s) Identification

- **Classification of the substance or mixture:**



GHS09 Environment

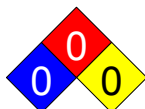
Aquatic Chronic 2 H411 Toxic to aquatic life with long lasting effects.

- **Label elements:**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
- **Hazard pictograms:**



GHS09

- **Signal word:** Non-Regulated Material
- **Hazard statements:**
H411 Toxic to aquatic life with long lasting effects.
- **Precautionary statements:**
P273 Avoid release to the environment.
P391 Collect spillage.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Unknown acute toxicity:**
This value refers to knowledge of known, established toxicological or ecotoxicological values.
9.4 % of the mixture consists of component(s) of unknown toxicity.
- **Classification system:** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme
- **NFPA ratings (scale 0 - 4)**



Health = 0
Fire = 0
Reactivity = 0

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· HMIS-ratings (scale 0 - 4)

HEALTH	1	Health = 1
FIRE	0	Fire = 0
REACTIVITY	0	Physical Hazard = 0

· Hazard(s) not otherwise classified (HNOC): None known

3 Composition/Information on Ingredients

· Non-hazardous components:

Polyurethane elastomer	5-10%
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· Chemical characterization: Mixtures

· **Description:** Mixture of substances listed below with non-hazardous additions.

· Dangerous Components:

7785-87-7	Manganese Sulphate	STOT RE 2, H373; Aquatic Chronic 2, H411	90-99%
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· Additional information:

The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

4 First-Aid Measures

· Description of first aid measures:

· General information:

Symptoms of poisoning may occur after exposure to dust, fumes or particulates; seek medical attention if feeling unwell.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:** If skin irritation occurs, consult a doctor.

· After eye contact:

If eye irritation occurs, consult a doctor.

Rinse opened eye for several minutes under running water.

· **After swallowing:** If swallowed and symptoms occur, consult a doctor.

· Information for doctor:

· **Most important symptoms and effects, both acute and delayed:** No further relevant information available.

· **Indication of any immediate medical attention and special treatment needed:**

No further relevant information available.

5 Fire-Fighting Measures

· Extinguishing media:

· **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

· **For safety reasons unsuitable extinguishing agents:** No further relevant information.

· **Special hazards arising from the substance or mixture:** No further relevant information available.

· Advice for firefighters:

· Protective equipment:

As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

6 Accidental Release Measures

· **Personal precautions, protective equipment and emergency procedures:** Not required.

· Environmental precautions:

Inform respective authorities in case of seepage into water course or sewage system.

Do not allow to enter sewers/surface or ground water.

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- **Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to section 13.
Dispose of the collected material according to regulations.
- **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.
- **Protective Action Criteria for Chemicals**

· PAC-1:		
7785-87-7	Manganese Sulphate	8.2 mg/m ³
· PAC-2:		
7785-87-7	Manganese Sulphate	14 mg/m ³
· PAC-3:		
7785-87-7	Manganese Sulphate	430 mg/m ³

7 Handling and Storage

- **Handling**
- **Precautions for safe handling:** Prevent formation of dust.
- **Information about protection against explosions and fires:** No special measures required.
- **Conditions for safe storage, including any incompatibilities:**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Specific end use(s):** No further relevant information available.

8 Exposure Controls/Personal Protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters:**

· Components with occupational exposure limits:	
7785-87-7 Manganese Sulphate	
PEL	Ceiling limit value: 5 mg/m ³ as Mn
REL	Short-term value: 3 mg/m ³ Long-term value: 1 mg/m ³ as Mn
TLV	Long-term value: 0.02* 0.1** mg/m ³ as Mn; *respirable **inhalable fraction

- **Additional information:** The lists that were valid during the creation of this SDS were used as basis.
- **Exposure controls:**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
- **Breathing equipment:** Not required.
- **Protection of hands:** Not required.
- **Material of gloves:** Not applicable.

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- **Penetration time of glove material:** Not applicable.
- **Eye protection:** Not required.
- **Limitation and supervision of exposure into the environment:**
Keep away from drains, surface and ground waters.
Avoid release into the environment.

9 Physical and Chemical Properties

· Information on basic physical and chemical properties

· General Information

· Appearance:

- Form:** Granulate
- Color:** Light red
- Odour:** Slight
- Odor threshold:** Not determined.

- **pH-value:** Not applicable.

· Change in condition

- Melting point/Melting range:** Not determined.
- Boiling point/Boiling range:** $\geq 850^{\circ}\text{C}$ ($\geq 1,562^{\circ}\text{F}$)

- **Flash point:** None

- **Flammability (solid, gaseous):** Not determined.

- **Ignition temperature:** Not applicable

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not self-igniting.

- **Danger of explosion:** Product does not present an explosion hazard.

· Explosion limits:

- Lower:** Not determined.
- Upper:** Not determined.

- **Vapor pressure:** Not applicable.

- **Density @ 20 °C (68 °F):** 2.776 g/cm^3 (23.166 lbs/gal)

- **Bulk density:** $2,719.7\text{ kg/m}^3$

- **Relative density:** Not determined.

- **Vapor density:** Not applicable.

- **Evaporation rate:** Not applicable.

· Solubility in / Miscibility with:

- Water:** Insoluble.

- **Partition coefficient (n-octanol/water):** Not determined.

· Viscosity:

- Dynamic:** Not applicable.
- Kinematic:** Not applicable.

· Solvent content:

- VOC content:** 0.00 %

- Solids content:** 100.0 %

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· **Other information:** No further relevant information available.

10 Stability and Reactivity

- **Reactivity:** No further relevant information available.
- **Chemical stability:** Stable under normal conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No dangerous reactions known.
- **Conditions to avoid:** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological Information

· **Information on toxicological effects:**

· **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

7785-87-7 Manganese Sulphate

Oral	LD50	2,150 mg/kg (Rat)
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· **Primary irritant effect:**

· **On the skin:** No irritating effect.

· **On the eye:** No irritating effect.

· **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

· **Carcinogenic categories:**

· **IARC (International Agency for Research on Cancer):**

None of the ingredients are listed.

· **NTP (National Toxicology Program):**

None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**

None of the ingredients are listed.

12 Ecological Information

· **Toxicity:**

· **Aquatic toxicity:**

Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

· **Persistence and degradability:** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential:** No further relevant information available.

· **Mobility in soil:** No further relevant information available.

· **Ecotoxicological effects:**

· **Remark:** Toxic for fish

· **Additional ecological information:**

· **General notes:**

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Poisonous for fish and plankton in water bodies.

Toxic for aquatic organisms

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- **Results of PBT and vPvB assessment:**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

13 Disposal Considerations

- **Waste treatment methods:**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Observe all federal, state and local environmental regulations when disposing of this material.
- **Uncleaned packagings**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport Information

- **UN-Number:**
 - **DOT**
 - **ADR/ADN, IMDG, IATA**
 - **UN proper shipping name:**
 - **DOT**
 - **ADR/ADN**
 - **IMDG**
 - **IATA**
 - **Transport hazard class(es):**
 - **DOT**
 - **Class:**
 - **ADR/ADN**
 - **Class:**
 - **Label:**
 - **IMDG, IATA**
 - **Class:**
 - **Label:**
 - **Packing group:**
 - **DOT**
 - **ADR/ADN, IMDG, IATA**
 - **Environmental hazards:**
 - **Special marking (ADR/ADN):**
- Non-Regulated Material
UN3077
- Non-Regulated Material
UN3077 Environmentally hazardous substances, solid, n.o.s. (Manganese Sulphate)
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Manganese Sulphate), MARINE POLLUTANT
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Manganese Sulphate)
- Non-Regulated Material
- 9 (M7) Miscellaneous dangerous substances and articles
9
- 9 Miscellaneous dangerous substances and articles
9
- Non-Regulated Material
III
Product contains environmentally hazardous substances: Manganese Sulphate
Symbol (fish and tree)

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- **Special marking (IATA):** Symbol (fish and tree)
- **Special precautions for user:** Warning: Miscellaneous dangerous substances and articles
- **Danger code (Kemler):** 90
- **EMS Number:** F-A,S-F
- **Stowage Category** A
- **Stowage Code** SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
- **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.
- **Transport/Additional information:**
- **ADR/ADN**
- **Excepted quantities (EQ):** Code: E1
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 1000 g
- **IMDG**
- **Limited quantities (LQ):** 5 kg
- **Excepted quantities (EQ):** Code: E1
Maximum net quantity per inner packaging: 30 g
Maximum net quantity per outer packaging: 1000 g
- **UN "Model Regulation":** UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (MANGANESE SULPHATE), 9, III

* 15 Regulatory Information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
- **SARA (Superfund Amendments and Reauthorization):**

- **Section 355 (extremely hazardous substances):**

None of the ingredients are listed.

- **Section 313 (Specific toxic chemical listings):**

7785-87-7 Manganese Sulphate

- **TSCA (Toxic Substances Control Act):**

7785-87-7 Manganese Sulphate

- **California Proposition 65:**

- **Chemicals known to cause cancer:**

None of the ingredients are listed.

- **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

- **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

- **Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

- **New Jersey Right-to-Know List:**

None of the ingredients are listed.

- **New Jersey Special Hazardous Substance List:**

None of the ingredients are listed.

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· Pennsylvania Right-to-Know List:	
None of the ingredients are listed.	
· Pennsylvania Special Hazardous Substance List:	
None of the ingredients are listed.	
· Carcinogenic categories:	
· EPA (Environmental Protection Agency):	
7785-87-7 Manganese Sulphate	D
· TLV (Threshold Limit Value established by ACGIH):	
None of the ingredients are listed.	
· NIOSH-Ca (National Institute for Occupational Safety and Health):	
None of the ingredients are listed.	
· GHS label elements	
The product is classified and labeled according to the Globally Harmonized System (GHS).	
· Hazard pictograms:	
	
GHS09	
· Signal word: Non-Regulated Material	
· Hazard statements:	
H411 Toxic to aquatic life with long lasting effects.	
· Precautionary statements:	
P273 Avoid release to the environment.	
P391 Collect spillage.	
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.	
· National regulations:	
None of the ingredients are listed.	
· Chemical safety assessment: A Chemical Safety Assessment has not been carried out.	

16 Other Information

The information and recommendations in this safety data sheet are, to the best of our knowledge, accurate as of the date of issue. Nothing herein shall be deemed to create warranty, expressed or implied, and shall not establish a legally valid contractual relationship. It is the responsibility of the user to determine applicability of this information and the suitability of the material or product for any particular purpose.

· **Date of preparation / last revision:** 02/27/2018 / 1

· **Abbreviations and acronyms:**

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
 ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 ACGIH: American Conference of Governmental Industrial Hygienists
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 VOC: Volatile Organic Compounds (USA, EU)
 LC50: Lethal concentration, 50 percent

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LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety and Health

OSHA: Occupational Safety & Health Administration

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2

· *** Data compared to the previous version altered.**SDS created by MSDS Authoring Services www.msdsauthoring.com +1-877-204-9106