

SAFETY DATA SHEET

BAYFERROX 6622 T



Version 2.0 Revision Date: 11/30/2023 SDS Number: 203000003104 Date of last issue: 09/18/2020
Country / Language: US / EN

Precautionary Statements : **Prevention:**
Do not breathe dust.
Response:
Get medical advice/ attention if you feel unwell.
Disposal:
Dispose of contents/ container to an approved waste disposal plant.

Other hazards
None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Components

Chemical name	CAS-No.	Concentration (% w/w)
Manganese Ferrite Spinel	68186-94-7	>= 1 - < 5

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

SECTION 4. FIRST AID MEASURES

If inhaled : Get medical attention immediately.
Remove victim to fresh air and keep at rest in a position comfortable for breathing.
If unconscious, place in recovery position and get medical attention immediately.
Maintain open airway.
If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel.

In case of skin contact : Wash off with soap and water.
Get medical attention if symptoms occur.

In case of eye contact : Immediately flush eye(s) with plenty of water.
Remove contact lenses.
Get medical attention if symptoms appear.

If swallowed : Rinse mouth with water.
Do NOT induce vomiting.
Call a physician immediately.

Most important symptoms and effects, both acute and delayed

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- Use personal protective equipment.
- Environmental precautions : Prevent product from entering drains.
Prevent further leakage or spillage if safe to do so.
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up : Move containers from spill area.
Vacuum or sweep up material and place in a designated, labeled waste container.
Dispose of wastes in an approved waste disposal facility.
-

SECTION 7. HANDLING AND STORAGE

- Advice on safe handling : Remove contaminated clothing and protective equipment before entering eating areas.
Workers should wash hands and face before eating, drinking and smoking.
Put on appropriate personal protection equipment.
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.
- Conditions for safe storage : Store in accordance with local regulations.
Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
Do not store in unlabeled containers.
Use appropriate container to avoid environmental contamination.
Empty containers retain residue and can be dangerous.
Do not reuse container.
- Further information on storage stability : Keep in a dry place.
No decomposition if stored and applied as directed.
-

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

inert or nuisance dust	50 Million particles per cubic foot Value type (Form of exposure): TWA (total dust) Basis: OSHA Z-3
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15 mg/m³
Value type (Form of exposure): TWA (total dust)
Basis: OSHA Z-3

5 mg/m³
Value type (Form of exposure): TWA (respirable fraction)
Basis: OSHA Z-3

15 Million particles per cubic foot
Value type (Form of exposure): TWA (respirable fraction)
Basis: OSHA Z-3

Dust, nuisance dust and particulates 10 mg/m³
Value type (Form of exposure): PEL (Total dust)
Basis: CAL PEL

5 mg/m³
Value type (Form of exposure): PEL (respirable dust fraction)
Basis: CAL PEL

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Iron (III) Oxide	1309-37-1	TWA (Respirable particulate matter)	5 mg/m ³	ACGIH
		TWA (Fumes)	10 mg/m ³	OSHA Z-1
		TWA (total dust)	15 mg/m ³	OSHA Z-1
		TWA (respirable fraction)	5 mg/m ³	OSHA Z-1
Manganese Ferrite Spinel	68186-94-7	C	5 mg/m ³ (Manganese)	OSHA Z-1
		TWA (Inhalable particulate matter)	0.1 mg/m ³ (Manganese)	ACGIH
		TWA (Respirable particulate matter)	0.02 mg/m ³ (Manganese)	ACGIH

⚠. **Engineering measures** : Good general ventilation should be sufficient to control work-

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er exposure to airborne contaminants.

☑. Personal protective equipment

Respiratory protection : Dust-protection mask if there is a risk of dust formation.

Hand protection
Material : Gloves

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves. After contamination with product change the gloves immediately and dispose of them according to relevant national and local regulations

Eye protection : Safety glasses

Skin and body protection : Wear suitable protective clothing.

Hygiene measures : General industrial hygiene practice.
When using do not eat, drink or smoke.
Wash face, hands and any exposed skin thoroughly after handling.
Wash contaminated clothing before reusing.
Remove contaminated clothing and protective equipment before entering eating areas.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : powder

Physical state : solid

Color : red

Odor : odorless

Odor Threshold : No data available

pH : 4 - 8
Concentration: 5 %

Melting point/range : > 1,832 °F / > 1,000 °C

Boiling point/boiling range : No data available

Flash point : Not applicable

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tions

Conditions to avoid : No specific data.

Incompatible materials : No specific data.

Hazardous decomposition products : No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation
Eye contact
Skin contact

Acute toxicity

Not classified based on available information.

Components:

Manganese Ferrite Spinel:

Acute oral toxicity : LD50 (Rat, male): > 10,000 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Components:

Manganese Ferrite Spinel:

Result : No skin irritation

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Manganese Ferrite Spinel:

Result : No eye irritation

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

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Components:

Manganese Ferrite Spinel:

Result : Not a skin sensitizer.

Germ cell mutagenicity

Not classified based on available information.

Components:

Manganese Ferrite Spinel:

Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster fibroblasts
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Test Type: In vitro mammalian cell gene mutation test
Test system: Chinese hamster fibroblasts
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Carcinogenicity

Not classified based on available information.

IARC No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

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STOT-single exposure

Not classified based on available information.

STOT-repeated exposure

May cause damage to organs (Central nervous system) through prolonged or repeated exposure if inhaled.

Components:

Manganese Ferrite Spinel:

Routes of exposure : Inhalation
Target Organs : Central nervous system
Assessment : May cause damage to organs through prolonged or repeated exposure.

Repeated dose toxicity

Product:

Remarks : Long-term exposure to high concentrations of dust containing iron oxide can cause a benign condition termed "pulmonary siderosis". This condition is not associated with any physical impairment of lung function.

Components:

Manganese Ferrite Spinel:

Species : Rat, male
NOAEL : 10,1 mg/m³
Application Route : inhalation (dust/mist/fume)
Exposure time : 28 d
Number of exposures : 6 hours/day
Method : OECD Test Guideline 412
GLP : yes
Remarks : Subacute toxicity

Species : Rat, male and female
NOAEL : 4,7 mg/m³
Application Route : inhalation (dust/mist/fume)
Exposure time : 91 d
Number of exposures : 6 hours/day
Method : OECD Test Guideline 413
GLP : yes
Remarks : Subchronic toxicity

Aspiration toxicity

Not classified based on available information.

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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Manganese Ferrite Spinel:

- Toxicity to fish : LC50 (Danio rerio (zebra fish)): $\geq 100,000$ mg/l
Exposure time: 96 h
GLP: no
Remarks: Fresh water
- Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): $\geq 10,000$ mg/l
Exposure time: 48 h
Method: Regulation (EC) No. 440/2008, Annex, C.2
GLP: no
Remarks: Fresh water
- Toxicity to algae/aquatic plants : EC50 (Pseudokirchneriella subcapitata (microalgae)): > 100 mg/l
Exposure time: 72 h
Method: Regulation (EC) No. 440/2008, Annex, C.2
Remarks: Fresh water
- Toxicity to microorganisms : EC50 (activated sludge): $\geq 10,000$ mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Fresh water

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Other adverse effects

Product:

- Additional ecological information : Ecotoxicological data are not available.
No known significant effects or critical hazards.

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SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

RCRA - Resource Conservation and Recovery Authorization Act : If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

Waste from residues : The generation of waste should be avoided or minimized wherever possible.
This material and its container must be disposed of in a safe way.
Empty containers retain product residue; observe all precautions for product.
Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
Waste disposal should be in accordance with existing federal, state, provincial and/or local environmental controls.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

Not regulated as a dangerous good

Hazard and Handling Notes.

Not dangerous cargo

Keep separated from foodstuffs

SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

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SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Specific target organ toxicity (single or repeated exposure)

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Manganese Ferrite Spinel	68186-94-7	>= 1 - < 5 %
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US State Regulations

Massachusetts Right To Know

Iron (III) Oxide	1309-37-1	90 - 100
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Pennsylvania Right To Know

Iron (III) Oxide	1309-37-1	90 - 100
Manganese Ferrite Spinel	68186-94-7	1 - 5

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

TSCA inventory

TSCA : All substances listed as active on the TSCA inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Further information

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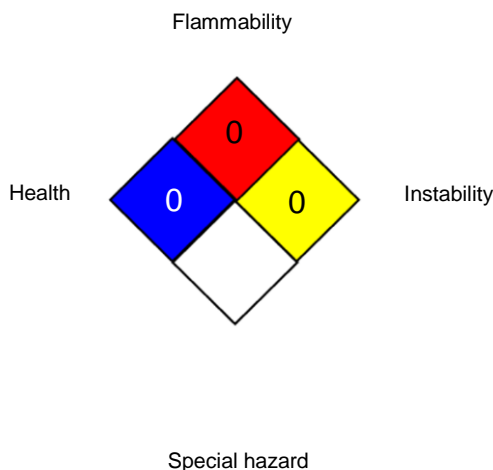
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NFPA 704:



HMIS® IV:

HEALTH	/	0
FLAMMABILITY		0
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
CAL PEL	:	California permissible exposure limits for chemical contaminants (Title 8, Article 107)
OSHA Z-1	:	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
OSHA Z-3	:	USA. Occupational Exposure Limits (OSHA) - Table Z-3 Mineral Dusts
ACGIH / TWA	:	8-hour, time-weighted average
CAL PEL / PEL	:	Permissible exposure limit
OSHA Z-1 / TWA	:	8-hour time weighted average
OSHA Z-1 / C	:	Ceiling
OSHA Z-3 / TWA	:	8-hour time weighted average

AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to

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50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TECL - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

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The data contained in this Safety Data Sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered to be a guidance for processing and does not contain any warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. It is the responsibility of the recipient of the product to ensure that any proprietary rights and existing laws and legislation are observed.

Relevant changes from the previous version are marked on the left side of the Safety Data Sheet with a black double bar in appropriate places.