

SAFETY DATA SHEET

BAYFERROX TAN 223 PIGMENT

Version 1.0 Revision Date: 10/26/2020 SDS Number: 203000002210 Date of last issue: -
Country / Language: US / EN

SECTION 1. IDENTIFICATION

Product name : BAYFERROX TAN 223 PIGMENT

Product code : 000000000005545021

Manufacturer or supplier's details

Company : LANXESS Corporation
Product Safety & Regulatory Affairs
111 RIDC Park West Drive
15275-1112 Pittsburgh, United States of America

Responsible Department : +1800LANXESS

Emergency telephone : CHEMTREC: +1 (800) 424 9300
International: +1 (703) 527 3887
LANXESS Emergency Phone: +1 (866) 673 6350

Recommended use of the chemical and restrictions on use

Recommended use : Colorants (pigments and dyestuffs), inorganic

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Specific target organ toxicity : Category 2 (Central nervous system)
- repeated exposure (Inhalation)

GHS label elements

Hazard pictograms :



Signal Word : Warning

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

Precautionary Statements : **Prevention:**
Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.

Response:
Get medical advice/ attention if you feel unwell.

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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	75864-23-2	>= 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 : Move to fresh air.
Get medical attention if symptoms occur.
- In case of skin contact : Wash off with plenty of water.
Continue to rinse for at least 10 minutes.
Wash contaminated clothing before re-use.
- In case of eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids.
If easy to do, remove contact lens, if worn.
Continue to rinse for at least 10 minutes.
Get medical attention if symptoms appear.
- If swallowed : Get medical attention if symptoms occur.

Most important symptoms and effects, both acute and delayed

- Symptoms : See Section 11 for more detailed information on health effects and symptoms.
Skin: May cause irritation with symptoms of reddening and itching.
Eye: Causes irritation with symptoms of reddening, tearing, stinging, and swelling.
- Effects : See Section 11 for more detailed information on health effects and symptoms.
May cause mechanical irritation (abrasion).

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- Notes to physician : May cause damage to organs through prolonged or repeated exposure if inhaled.
- Notes to physician : See Section 11 for more detailed information on health effects and symptoms.
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SECTION 5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : In case of fire, use water spray (fog), foam, dry chemical or CO₂.
- Unsuitable extinguishing media : None known.
- Specific hazards during fire fighting : No information available.
- Hazardous combustion products : The product itself does not burn.
- Further information : Standard procedure for chemical fires.
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
- Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
-

SECTION 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions, protective equipment and emergency procedures : No action shall be taken involving any personal risk or without suitable training.
Keep unnecessary and unprotected personnel from entering.
Avoid breathing dust.
Use personal protective equipment.
Avoid dust formation.
- Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- 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.
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SECTION 7. HANDLING AND STORAGE

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- Advice on safe handling : For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
- Workers should wash hands and face before eating, drinking and smoking.
- 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.
Electrical installations / working materials must comply with the technological safety standards.
- Materials to avoid : No materials to be especially mentioned.
- Further information on storage stability : Keep in a dry place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
limestone (Dust containing < 1% SiO ₂)	1317-65-3	TWA (total dust)	15 mg/m ³	OSHA Z-1
		TWA (respirable fraction)	5 mg/m ³	OSHA Z-1
diiron trioxide (Dust and fume)	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
Manganese Ferrite Spinel	75864-23-2	TWA (respirable fraction)	5 mg/m ³	OSHA Z-1
		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

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Engineering measures	:	Good general ventilation should be sufficient to control worker 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	:	Permeation resistant clothing and foot protection.		
Eye protection	:	Safety glasses with side-shields		
Skin and body protection	:	Permeation resistant clothing and foot 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.		

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	solid, powder
Color	:	brown, tan
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
Evaporation rate	:	No data available
Self-ignition	:	Autoignition temperature

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Not applicable

Burning number : No data available

Upper explosion limit / Upper flammability limit : No data available

Lower explosion limit / Lower flammability limit : No data available

Vapor pressure : Not applicable

Relative density : No data available

Density : No data available

Bulk density : 300 - 1,000 kg/m³

Solubility(ies)
Water solubility : insoluble

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : No data available

Decomposition temperature : No data available

Viscosity
Viscosity, dynamic : Not applicable

Viscosity, kinematic : No data available

Explosive properties : No data available

Oxidizing properties : No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is chemically stable.

Possibility of hazardous reactions : No dangerous reaction known under conditions of normal use.

Conditions to avoid : No data available

Incompatible materials : No specific data.

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

SECTION 11. TOXICOLOGICAL INFORMATION

The most important known symptoms and effects are described in Section 2 and/or Section 4.

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
Remarks: Test results on an analogous product

Skin corrosion/irritation

Not classified based on available information.

Components:

Manganese Ferrite Spinel:

Result : No skin irritation
Remarks : Test results on an analogous product

Serious eye damage/eye irritation

Not classified based on available information.

Components:

Manganese Ferrite Spinel:

Result : No eye irritation
Remarks : Test results on an analogous product

Respiratory or skin sensitization

Skin sensitization

Not classified based on available information.

Respiratory sensitization

Not classified based on available information.

Components:

Manganese Ferrite Spinel:

Result : Not a skin sensitizer.

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Remarks : Test results on an analogous product

Germ cell mutagenicity

Not classified based on available information.

Components:

Manganese Ferrite Spinel:

Genotoxicity in vitro : Test system: Bacteria
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 471
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Test system: Mammalian-Animal
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 476
Result: negative
GLP: yes
Remarks: Test results on an analogous product

Test system: Mammalian-Animal
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
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.

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.

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Components:

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Routes of exposure : Inhalation
Target Organs : Central nervous system
Assessment : The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

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
Test atmosphere : dust/mist
Exposure time : 4 Weeks
Number of exposures : daily
Method : OECD Test Guideline 412
GLP : yes
Remarks : Subacute toxicity
Test results on an analogous product

Species : Rat, male and female
NOAEL : 4.7 mg/m³
Application Route : Inhalation
Test atmosphere : dust/mist
Exposure time : 13 Weeks
Number of exposures : daily
Method : OECD Test Guideline 413
GLP : yes
Remarks : Subchronic toxicity
Test results on an analogous product

Aspiration toxicity

Not classified based on available information.

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SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Manganese Ferrite Spinel:

Toxicity to fish : NOAEL (No observed adverse effect level) (Danio rerio (zebra fish)): $\geq 100,000$ mg/l
Exposure time: 96 h
GLP: no
Remarks: Test results on an analogous product

Toxicity to daphnia and other aquatic invertebrates : NOAEL (No observed adverse effect level) (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: Test results on an analogous product

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
Test results on an analogous product

Remarks: Test results on an analogous product

Toxicity to microorganisms : EC50 (activated sludge): $\geq 10,000$ mg/l
Exposure time: 3 h
Method: OECD Test Guideline 209
Remarks: Test results on an analogous product

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 : Examine possibilities for re-utilisation. Product residues and uncleaned empty containers should be packaged, sealed, labelled, and disposed of or recycled according to relevant national and local regulations. When uncleaned empty containers are passed on, the recipient must be warned of any possible hazard that may be caused by 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

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SECTION 15. REGULATORY INFORMATION

CERCLA Reportable Quantity

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

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:

C.I. Pigment Yellow 119	68187-51-9	>= 30 - < 50 %
Manganese Ferrite Spinel	75864-23-2	>= 1 - < 5 %

US State Regulations

Massachusetts Right To Know

limestone (Dust containing < 1% SiO ₂)	1317-65-3	> 1
diron trioxide (Dust and fume)	1309-37-1	> 1
Crystalline Quartz Silica	14808-60-7	> 1

Pennsylvania Right To Know

C.I. Pigment Yellow 119	68187-51-9	> 30 - < 50
limestone (Dust containing < 1% SiO ₂)	1317-65-3	> 1
diron trioxide (Dust and fume)	1309-37-1	> 1
Manganese Ferrite Spinel	75864-23-2	>= 1 - < 5

California Prop. 65

WARNING: This product can expose you to chemicals including Crystalline Quartz Silica, which is/are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

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.

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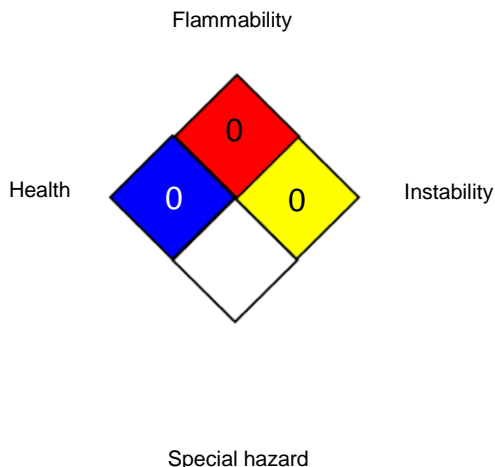


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SECTION 16. OTHER INFORMATION

Further information

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)
- OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
- ACGIH / TWA : 8-hour, time-weighted average
- OSHA Z-1 / TWA : 8-hour time weighted average
- OSHA Z-1 / C : Ceiling

AICS - Australian Inventory of Chemical Substances; 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 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

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tion; 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; 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

Revision Date : 10/26/2020

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.