Safety Data Sheet
acc. to OSHA HCS

Printing date 04/17/2023 Reviewed on 04/17/2023

* 1 Identification

Product identifier

Trade name: CATHAYCOAT™ MEDIUM RED COLORS
Chemical Name: Red Iron Oxide

Article number:
RA/13/13-4/13A/13B/13E/14/14A/14AB/14B/15/15B/15SB
RS/13/13-4/13A/13B/14/14A/14AP/14B/15/15B
RC/13/13-4/13B/14/14B/14C/15/15EMR
Application of the substance / the preparation
Inorganic pigment used as a colorant in industrial applications.
Uses advised against :
Color Additive for use in Food as per 21 CFR 73.200.
Color Additive for use in Drugs as per 21 CFR 73.1200
Ingredient for cosmetic preparations as per 21 CFR 73.2250
Color Additive for Use in Medical Devices according to 21 CFR 73.3125

Details of the supplier of the safety data sheet
Manufacturer/Supplier:
OXERRA Americas, Inc.
2340 Kenyon Road
Bartlett, IL 60103
(USA)

Information department: sds.management@oxerra.com
Emergency telephone number:
Emergency Telephone of OXERRA Americas, LLC : 800.367.8462
PERS (Professional Emergency Resource Services) Customer Number 12060
Domestic & Canada 1-800-633-8253 International 1-801-629-0667

* 2 Hazard(s) identification

Classification of the substance or mixture
The product is not classified, according to the Globally Harmonized System (GHS).

Label elements
Hazard pictograms Void
Signal word Void
Hazard statements Void
Potential Health Effects
Inhalation
No adverse effects are anticipated from single exposure to dust.
Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
Skin May cause mechanical irritation (abrasion).
Eyes May irritate the eyes by mechanical effect.
Routes of exposure
Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact.
However, ingestion is not likely to be a primary route of occupational exposure.
Classification system:
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

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Trade name: CATHAYCOAT™ MEDIUM RED COLORS

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* 3 Composition/information on ingredients

CAS No. Description

CAS: 1309-37-1 Di-iron trioxide (Iron Oxide Red) <90-100%
RTECS: NO7400000 C.I.Pigment Red 101 (77491)
Chemical characterization: Mixtures
Dangerous components: Void
Additional information:
There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.
Occupational exposure limits, if available, are listed in Section 8.
For the wording of the listed hazard phrases refer to section 16.

* 4 First-aid measures

Description of first aid measures
General information: Remove severely contaminated clothing and clean before reuse.
After inhalation:
If difficulties occur after dust has been inhaled, remove to fresh air and seek medical attention.
After skin contact:
Gently wash with plenty of soap and water.
In the event of any complaints or symptoms, avoid further exposure.
After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing:
Rinse mouth with water, give subject liquids to drink and do not induce vomiting.
Never give anything by mouth to an unconscious person.
If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.
If symptoms persist consult doctor.
Information for doctor:
Most important symptoms and effects, both acute and delayed
See Section 11 for more detailed information on health effects and symptoms.
In case of inhalation: No adverse effects are anticipated from single exposure to dust.
In case of skin contact: May cause mechanical irritation (abrasion).
In case of eye contact: May irritate the eyes by mechanical effect.
In case of ingestion: No known significant effects or critical hazards.
Over/prolonged exposure signs/symptoms :
Eye contact : No specific data.
Inhalation : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
Skin contact : No specific data.
Ingestion : No specific data.
Indication of any immediate medical attention and special treatment needed
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.
Protection of first-aiders: No special measures required.

5 Fire-fighting measures

Extinguishing media
Suitable extinguishing agents: Use fire fighting measures that suit the environment.
Special hazards arising from the substance or mixture
Not considered flammable but packaging, i.e. paper bags, wooden pallets, and plastic wrap will burn.

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Advice for firefighters
No action shall be taken involving any personal risk or without suitable training.
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
Protective equipment:
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
Wear fully protective suit.
Additional information
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

* 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation
Avoid formation of dust.
Put on appropriate personal protective equipment (see Section 8).
Hazard of slipping on spilt product.
Environmental precautions:
Prevent seepage into sewage system, workpits and cellars.
Do not allow product to reach sewage system or any water course.
Keep contaminated washing water and dispose of appropriately.
Even at low concentration, the product renders the discharge in liquid effluent highly visible.
Methods and material for containment and cleaning up:
Small spill
Ensure adequate ventilation.
Stop leak if without risk.
Pick up and arrange disposal without creating dust.
Sweep up and shovel.
Keep in suitable, closed containers for disposal.
Dispose of via a licensed waste disposal contractor.
Large spill
Ensure adequate ventilation.
Avoid creating dusty conditions and prevent wind dispersal.
Stop leak if without risk.
Sweep up and shovel.
Move containers from spill area.
Pick up and arrange disposal without creating dust.
Clean the affected area carefully; suitable cleaners are:
Warm water and cleansing agent
Dispose of via a licensed waste disposal contractor.
Reference to other sections
See Section 1 for emergency contact information.
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:

CAS: 1309-37-1 Di-iron trioxide (Iron Oxide Red)
C.I.Pigment Red 101 (77491): 15 mg/m³

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PAC-2:

CAS: 1309-37-1 Di-iron trioxide (Iron Oxide Red)
C.I.Pigment Red 101 (77491): 360 mg/m³

PAC-3:

CAS: 1309-37-1 Di-iron trioxide (Iron Oxide Red)
C.I.Pigment Red 101 (77491): 2,200 mg/m³

* 7 Handling and storage

Handling:
Precautions for safe handling
Open and handle receptacle with care.
Prevent formation of dust.
Provide suction extractors if dust is formed.
Ensure good ventilation/exhaustion at the workplace.
Any deposit of dust which cannot be avoided must be regularly removed.
Information about protection against explosions and fires:
The product is not flammable.
Plastic wrap from palletized packages may bear significant static charge which can cause flash fire if near combustibles.

Conditions for safe storage, including any incompatibilities
Storage: Store in accordance with local regulations.
Requirements to be met by storerooms and receptacles:
Pigments should not be stored in outside areas exposed to the weather.
Do not store in unlabelled containers.
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
Keep in the original container or an approved alternative made from a compatible material.
Information about storage in one common storage facility:
Store away from foodstuffs.
Store away from incompatible materials (see section 10).
Further information about storage conditions:
Protect against physical damage.
Kept container tightly closed when not in use.
Recommended storage temperature: < 100ºF
Storage duration (months) : 120
Specific end use(s)
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.
No further relevant information available.

* 8 Exposure controls/personal protection

Recommended monitoring procedures :
If this product contains ingredients with exposure limits, personal, workplace procedures atmosphere monitoring may be required to determine the effectiveness of the ventilation or other control measures and/ or the necessity to use respiratory protective equipment.
Additional information about design of technical systems:
Mechanical ventilation may be required to maintain exposure levels below limits.

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Control parameters
Components with limit values that require monitoring at the workplace:

CAS: 1309-37-1 Di-iron trioxide (Iron Oxide Red)
C.I.Pigment Red 101 (77491)

PEL Long-term value: 10* mg/m³
*Fume

REL Long-term value: 5 mg/m³
Dust & fume, as Fe

TLV Long-term value: 5* mg/m³
*as respirable fraction, A4

Regulatory information
PEL: Guide to Occupational Exposure Values (OSHA PELs)
REL: Guide to Occupational Exposure Values (NIOSH RELs)
TLV: Guide to Occupational Exposure Values (TLV)
Ingredients with biological limit values:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: The lists that were valid during the creation were used as basis.

Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Handle in accordance with good industrial hygiene and safety practice.
Ensure that proper housekeeping measures are in place.
Do not eat, drink, smoke or sniff while working.
Wash hands before breaks and at the end of work.
Keep away from foodstuffs, beverages and feed.
Do not inhale dust.
Vacuum clean contaminated clothing. Do not blow or brush off contamination.
Ensure that washing facilities are available at the work place.
Wash contaminated clothing before reusing.
Breathing equipment:
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.


Dust-protection mask.

For nuisance exposures use type P95 (US) particle respirator.
For a higher level of protection use type OV/AG/P99 (US) respirator cartridges.
Use respirators and components tested and approved under appropriate government standards such as NIOSH.
Protection of hands:


Protective gloves

Wash and dry hands.

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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
Use equipment for hands protection tested and approved under appropriate government standards such as NIOSH.

Material of gloves
No special glove composition is required.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material
Minimum breakthrough time / gloves : > 480 min
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Not suitable are gloves made of the following materials:
Textile or leather gloves are completely unsuitable.

Eye protection:



Safety glasses with side shields.

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH.

Body protection:



Protective work clothing

Limitation and supervision of exposure into the environment
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

* 9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:

Form:	Powder
Color:	Red
Odor:	Odorless

pH-value (100 g/l) at 25 °C (77 °F): 6.0-9.0 (ISO 787-9)

Change in condition
Melting point/Melting range: > 1000 °C (> 1,832 °F)

Flash point: Not applicable.

Flammability (solid, gaseous): The product is not flammable.

Ignition temperature: Product is not selfigniting.

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Danger of explosion:	The product does not present an explosion hazard.
Upper:	
Oxidizing properties	No oxidizing properties.
Vapor pressure:	Not applicable.
Specific gravity at 20 °C (68 °F):	≈ 5.0 g/cm³ (≈ 41.73 lbs/gal) (ISO 787-10)
Bulk density at 20 °C (68 °F):	800-1,000 kg/m³ (ISO 787-11)
Relative density (Water = 1)	Not determined.
Vapor density (air = 1)	The product is a non-volatile solid.
Evaporation rate	The product is a non-volatile solid.
Solubility in / Miscibility with	
Water:	Insoluble.
Organic solvents:	Insoluble.
Viscosity:	
Dynamic:	Not applicable due to the nature of the product (solid).
Kinematic:	Not applicable due to the nature of the product (solid).
Other analytical data :	
VOC content:	None.
Other information	No further relevant information available.

* 10 Stability and reactivity

Reactivity No hazardous reactions if stored and handled as prescribed/indicated.
Chemical stability
No decomposition if used and stored according to specifications (see Storage, Section 7).
Thermal decomposition / conditions to be avoided:
No decomposition if used and stored according to specifications (see Storage, Section 7).
Possibility of hazardous reactions
No hazardous reactions if stored and handled as prescribed/indicated.
Conditions to avoid Situations which cause dusting.
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:
Based on available data the classification criteria are not met.
Repeated dose toxicity : Based on available data, the classification criteria are not met.
Irritation / Corrosion : Based on available data, the classification criteria are not met.
Sensitization : Based on available data, the classification criteria are not met.
Carcinogenicity : Based on available data, the classification criteria are not met.
Genetic toxicity : Based on available data, the classification criteria are not met.
Toxicity to reproduction :
Toxicity to reproduction: No data available.
Teratogenicity : No data available.
Neurotoxicity : No data available.

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Primary routes of exposure
Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. However, ingestion is not likely to be a primary route of occupational exposure.
Potential acute health effects : Health injuries are not known or expected under normal use.
Inhalation : No adverse effects are anticipated from single exposure to dust.
Ingestion : Not known significant effects or critical hazards.
Skin : Not known significant effects or critical hazards.
Primary irritant effect:
on the skin: May cause mechanical irritation (abrasion).
on the eye: Solid or dust may cause irritation or corneal injury due to mechanical action.
by inhalation: Dust may cause irritation to the respiratory tract.
Skin sensitization : This product is not expected to cause skin sensitization.
Respiratory sensitization : This product is not expected to cause respiratory sensitization.
Specific target organ toxicity

Single exposure No significant effects or critical hazards.
Repeated exposure Inhalation - May cause respiratory irritation.
Subacute to chronic toxicity:
Prolonged inhalation of iron oxide dust is known to produce condition given as siderosis. On X-rays it appears to be pneumoconiosis and it is not associated with pulmonary fibrosis or disability unless there is concurrent exposure to other fibrosis-producing materials such as silica.
Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Carcinogenic categories
IARC (International Agency for Research on Cancer)

CAS: 1309-37-1 Di-iron trioxide (Iron Oxide Red)
C.I.Pigment Red 101 (77491): 3

NTP (National Toxicology Program)

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

OSHA-Ca (Occupational Safety & Health Administration)

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
ACGIH (American Conference of Governmental Industrial Hygienists) :
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

* 12 Ecological information

Aquatic toxicity:
Based on the high insolubility of the pigment under environmental conditions, no reversible or irreversible adverse toxicological effects on aquatic or terrestrial organisms are expected.
Short- term toxicity : Based on available data, the classification criteria are not met.
Long-term toxicity : No data available.
Sediment toxicity : No data available.
Terrestrial toxicity :
Toxicity to terrestrial plants : No data available.
Toxicity to terrestrial arthropods No data available.
Toxicity to soil microorganisms : No data available.
Toxicity to birds : No data available.
Persistence and degradability Based on previous experience, this product is inert and non-degradable.

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Behavior in environmental systems:
Bioaccumulative potential
Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.
Mobility in soil
Insoluble. Expected to remain on soil surface.
No further relevant information available.
Ecotoxical effects:
Remark:
The product does not contain heavy metals in concentrations of concern for waste water.
The product does not release nitrogen which can contribute to eutrophication.
The product does not contain phosphates or organophosphorus compounds.
Behavior in sewage processing plants:
Remark:
The product is easily emovable from water by physico-chemical processes.
The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.
Incidental down-the-drain disposal of small quantities of product will not affect the performance of wastewater treatment systems.
Additional ecological information:
General notes: Not hazardous for water.
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:
Dispose of in accordance with local, state, and federal regulations.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Contact waste processors for recycling information.
Incineration or landfill should only be considered when recycling is not feasible.
Hazardous waste :
Disposal should be made in accordance with federal, state and local regulations.
This product is not considered as hazardous waste per 40 CFR 261.24 or 261.33. However, the user should consult with the state regulatory agency before disposing of the material.
Waste disposal key:
As sold, this product is not classified as a RCRA hazardous waste as defined by 40CFR261.
It is the responsibility of the user to determine RCRA classification of any product containing this iron oxide.

Uncleaned packagings:
Recommendation:
Dispose of packaging according to regulations on the disposal of packagings.
Packaging can be reused or recycled after cleaning.
Packagings that cannot be cleansed are to be disposed of in the same manner as the product.
Paper bags may be incinerated or disposed of in an appropriate landfill in accordance with national and local laws.
The generation of waste should be avoided or minimized wherever possible.
Special precautions :
Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

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* 14 Transport information

UN-Number	
DOT, ADR, ADN, IMDG, IATA	Void
UN proper shipping name	
DOT, ADR	Void
ADN, IMDG, IATA	Void
Transport hazard class(es)	
DOT, ADR, ADN, IMDG, IATA	
Class	Void
Packing group	
DOT, ADR, IMDG, IATA	Void
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Not applicable.
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
Transport/Additional information:	Keep separated from foodstuffs.
UN "Model Regulation":	Void

* 15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
Sara
Section 355 (extremely hazardous substances):

None of the ingredient is listed.
CERCLA Hazardous Substances

None of the ingredients is listed.
CERCLA Reportable Quantities

None of the ingredients is listed.
Hazard Communication Standard (HCS)

None of the ingredients is listed.
SARA 302 Components : Substance is not listed.
Section 313 (Specific toxic chemical listings):

None of the ingredients is listed.
Sara (311, 312) hazard Class : Delayed (chronic) health hazard.
TSCA (Toxic Substances Control Act):

All components have the value ACTIVE.
Volatile Organic Compounds (VOC) : None.
Ozone Depleting Substances (ODS) :
This product neither contains nor was manufactured with a Class I or Class II ozone depleting substance as defined by 40 CFR 82, Subpart A, Appendices A and B.
Clean Air Act - Hazardous Air Pollutants (HAP)

None of the ingredients is listed.
Clean Water Act – Priority Pollutants (PP)

This product does not contain any priority pollutants defined by 40 CFR 401.15.
Resource Conservation and Recovery Act (RCRA):
This product is not a hazardous waste as defined by 40 CFR 261.33

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Proposition 65
Chemicals known to cause cancer:

None of the ingredients is listed.
Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed.
Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed.
Chemicals known to cause developmental toxicity:

None of the ingredients is listed.
Massachusetts Right To Know :

CAS: 1309-37-1 Di-iron trioxide (Iron Oxide Red)
C.I.Pigment Red 101 (77491)
Minnesota Right To Know :

CAS: 1309-37-1 Di-iron trioxide (Iron Oxide Red)
C.I.Pigment Red 101 (77491)
New Jersey Right-to-Know List:

CAS: 1309-37-1 Di-iron trioxide (Iron Oxide Red)
C.I.Pigment Red 101 (77491)
New Jersey Special Hazardous Substance List:

None of the ingredients is listed.
Pennsylvania Right-to-Know List:

CAS: 1309-37-1 Di-iron trioxide (Iron Oxide Red)
C.I.Pigment Red 101 (77491)
Pennsylvania Special Hazardous Substance List:

None of the ingredients is listed.
Rhode Island Right to know :

CAS: 1309-37-1 Di-iron trioxide (Iron Oxide Red)
C.I.Pigment Red 101 (77491)
Florida Right To Know : Substance is not listed.
Michigan Critical Materials Register : Substance is not listed.

Cancerogenity categories
EPA (Environmental Protection Agency)

None of the ingredients is listed.
IARC (International Agency for Research on Cancer) The substance is listed (Cat. 3)
TLV (Threshold Limit Value)

CAS: 1309-37-1 Di-iron trioxide (Iron Oxide Red)
C.I.Pigment Red 101 (77491): A4
NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.
Hazard pictograms Void
Signal word Void
Hazard statements Void

National regulations:

Information about limitation of use:
Chemical Weapons Convention List Schedule I : Not listed.
Chemical Weapons Convention List Schedule II : Not listed.

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Chemical Weapons Convention List Schedule III : Not listed.
U.S. Department of Homeland Security This product does not contain chemicals regulated under DHS.

* 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: EHS Department.
Date of preparation / last revision 04/17/2023
Abbreviations and acronyms:
ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NOAEL : Non Observed Adverse Effects Level
LOAEL : Lowest observed adverse effect level
EC50 : Maximal effective concentration, 50 percent
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
BEI: Biological Exposure Limit
NOAEC : No Observed Adverse Effect Concentration
NOEC : No Observed Effect Concentration
*** Data compared to the previous version altered.**