

United Nuclear

Scientific Equipment & Supplies

SAFETY DATA SHEET Synthetic Black Iron Oxide (Group III)

1. Identification

Product identifier

Product name Synthetic Black Iron Oxide (Group III)
Chemical name Black Iron Oxide (Fe₃O₄)
Product number BK4799,BK5000,BK5099,BK5099D,BK5599,BK5999,TB5600,TB5625,TB5645,TB5980

Recommended use of the chemical and restrictions on use

Application Industrial color

Details of the supplier of the safety data sheet

Supplier United Nuclear Scientific
125 N. 8th Street
Klamath Falls, OR 97601
+1 541-205-6855
sales@unitednuclear.com

Emergency telephone number

24 HR Emergency telephone VelocityEHS (USA) 800-255-3924

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards Self-heat. 2 - H252
Health hazards Not Classified
Environmental hazards Not Classified

Label elements

Pictogram



Signal word Warning

Hazard statements H252 Self-heating in large quantities; may catch fire.

Precautionary statements P235+P410 Keep cool. Protect from sunlight.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P407 Maintain air gap between stacks/pallets.
P413 Store bulk masses greater than kg/lbs at temperatures not exceeding °C/°F.
P420 Store away from other materials.

Other hazards

This product does not contain any substances classified as PBT or vPvB.

Synthetic Black Iron Oxide (Group III)

3. Composition/information on ingredients

Mixtures

| | |
|--|--|
| C.I. Pigment Black 11 (Group III) | 99.0% |
| CAS number: 1317-61-9 | REACH registration number: Proprietary |
| Classification Self-heat. 2 - H252 | |

The Full Text for all Hazard Statements are Displayed in Section 16.

4. First-aid measures

Description of first aid measures

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|---------------------|---|
| Inhalation | If exposed to excessive levels of dust or fumes, remove to fresh air. Get medical attention if cough or other symptoms develop. |
| Ingestion | Rinse mouth thoroughly with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed by medical personnel. Get medical attention if symptoms occur. |
| Skin Contact | Wash with soap and water. Get medical attention if irritation develops or persists. |
| Eye contact | Rinse with water. Get medical attention if any discomfort continues. |

5. Fire-fighting measures

Extinguishing media

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| Suitable extinguishing media | The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire. Extinguish with the following media: Water spray, foam, dry powder or carbon dioxide. |
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Special hazards arising from the substance or mixture

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|---------------------------|-----------------------------|
| Flammability Class | No Uniform Fire Code noted. |
|---------------------------|-----------------------------|

Advice for firefighters

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| Protective actions during firefighting | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. |
| Special protective equipment for firefighters | Wear self-contained breathing apparatus as combustion may produce hazardous fumes. |

6. Accidental release measures

Methods and material for containment and cleaning up

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| Methods for cleaning up | If dust is generated, use appropriate respiratory protection. Vacuum or sweep up material and place in a disposal container. Avoid generation and spreading of dust. Large Spillages: Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible. Flush contaminated area with plenty of water. Avoid runoff into storm sewers and ditches which lead to waterways. |
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7. Handling and storage

Precautions for safe handling

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| Usage precautions | Minimize dust generation and accumulation. Do not breathe dust. Avoid contact with skin and eyes. Wash contaminated skin thoroughly after handling. |
|--------------------------|---|

Synthetic Black Iron Oxide (Group III)

Conditions for safe storage, including any incompatibilities

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| Storage precautions | Store dry at ambient temperature away from food and beverages, excessive heat or flame sources (furnace, kilns, boilers etc.). Store away from substances subject to catalytic decomposition by dust, e.g. peroxides |
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8. Exposure Controls/personal protection

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| Ingredient comments | Although no exposure limit has been established by OSHA for this product, the limit for nuisance particulates should be followed: OSHA 8-hr TWA 10mg/m ³ Total Dust 5 mg/m ³ respirable dust. ACGIH TLV-TWA 10mg/m ³ Total dust or 5mg/m ³ respirable dust. |
|----------------------------|---|

9. Physical and Chemical Properties

Information on basic physical and chemical properties

| | |
|---|---------------------------|
| Appearance | Dusty powder. |
| Color | Black. |
| Odor | Odorless. |
| Odor threshold | Not available. |
| Melting point | > 1000 deg C / 1832 deg F |
| Initial boiling point and range | Not available. |
| Flash point | Not available. |
| Evaporation rate | Not available. |
| Evaporation factor | Not available. |
| Flammability (solid, gas) | Not available. |
| Upper/lower flammability or explosive limits | Not available. |
| Other flammability | Not available. |
| Vapour pressure | Not available. |
| Vapour density | Not available. |
| Relative density | Not available. |
| Bulk density | Not available. |
| Solubility(ies) | Insoluble in water. |
| Partition coefficient | Not available. |
| Auto-ignition temperature | Not available. |
| Decomposition Temperature | Not available. |
| Viscosity | Not available. |
| Explosive properties | Not available. |
| Volatile organic compound | None. |

10. Stability and reactivity

Synthetic Black Iron Oxide (Group III)

| | |
|---------------------------|--|
| Stability | Exposure to heat greater than 55C (130F) can cause this product to slowly auto-oxidize, which generates additional heat. Under certain circumstances, this heat may be sufficient to cause the bag or combustible materials stored nearby to ignite. Once oxidized, the material will be a brown ferric oxide (Fe ₂ O ₃). |
| Materials to avoid | Substances subject to catalytic decomposition caused by dust such as peroxides. Further avoid contact with aluminum dust, calcium hypochlorite, hydrazine, ethylene oxide, caesium carbide. |

11. Toxicological information

Information on toxicological effects

Toxicological effects No specific toxicity tests have been carried out on this product.

Inhalation Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

Ingestion No harmful effects expected from quantities likely to be ingested by accident.

Skin Contact Substance may cause slight skin irritation.

Eye contact May cause slight irritation.

12. Ecological Information

Ecotoxicity The product is not expected to be hazardous to the environment.

Persistence and degradability

Persistence and degradability The product is not readily biodegradable.

Bioaccumulative potential

Bio-Accumulative Potential Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.

Partition coefficient Not available.

Mobility in soil

Mobility The product is insoluble in water.

Other adverse effects

Other adverse effects None known.

13. Disposal considerations

Waste treatment methods

General information Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

14. Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DoT).

UN Number

UN No. (DOT) 3190

UN No. (IMDG) 3190

Synthetic Black Iron Oxide (Group III)

UN No. (ICAO) 3190

UN proper shipping name

Proper shipping name (DOT) SELF-HEATING SOLID, INORGANIC, N.O.S. (CONTAINS C.I. Pigment Black 11 (Group III))

Proper shipping name (IMDG) SELF-HEATING SOLID, INORGANIC, N.O.S. (CONTAINS C.I. Pigment Black 11 (Group III))

Proper shipping name (ICAO) SELF-HEATING SOLID, INORGANIC, N.O.S. (CONTAINS C.I. Pigment Black 11 (Group III))

Transport hazard class(es)

DOT hazard class 4.2

DOT hazard label Spontaneously Combustible

IMDG Class 4.2

ICAO class/division 4.2

Transport labels



Packing group

DOT pack group III

IMDG packing group III

ICAO packing group III

Environmental hazards

Environmentally Hazardous Substance

No.

Special precautions for user

EmS F-A, S-J

Transport in bulk according to Not applicable.

Annex II of MARPOL 73/78

and the IBC Code

15. Regulatory information

US Federal Regulations

SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

None of the ingredients are listed or exempt.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

None of the ingredients are listed or exempt.

SARA 313 Emission Reporting

None of the ingredients are listed or exempt.

CAA Accidental Release Prevention

None of the ingredients are listed or exempt.

US State Regulations

Synthetic Black Iron Oxide (Group III)

State Regulations Comments California Prop 65 Warning: This product contains chemicals, as trace impurities and not intentionally added, known to the state of California to cause cancer (C) and birth defects or other reproductive (R) harm.

Massachusetts "Right To Know" List

C.I. Pigment Black 11 (Group III)
Not listed.

Rhode Island "Right To Know" List

C.I. Pigment Black 11 (Group III)
Not listed.

Minnesota "Right To Know" List

C.I. Pigment Black 11 (Group III)
Not listed.

New Jersey "Right To Know" List

C.I. Pigment Black 11 (Group III)
Not listed.

Pennsylvania "Right To Know" List

C.I. Pigment Black 11 (Group III)
Not listed.

Inventories

EU - EINECS/ELINCS

EINECS
All the ingredients are listed or exempt.

Canada - DSL/NDSL

DSL
All the ingredients are listed or exempt.

US - TSCA

All the ingredients are listed or exempt.

US - TSCA 12(b) Export Notification

No.

Australia - AICS

All the ingredients are listed or exempt.

Japan - MITI

All the ingredients are listed or exempt.

Korea - KECI

All the ingredients are listed or exempt.

China - IECSC

All the ingredients are listed or exempt.

Philippines - PICCS

All the ingredients are listed or exempt.

New Zealand - NZIOC

Synthetic Black Iron Oxide (Group III)

All the ingredients are listed or exempt.

16. Other information

| | |
|----------------------------------|--|
| Revision date | 7/14/2015 |
| Revision | 9 |
| Supersedes date | 6/4/2015 |
| SDS No. | 18367 |
| SDS status | Approved. |
| Hazard statements in full | H252 Self-heating in large quantities; may catch fire. |

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.