SAFETY DATA SHEET
Synthetic Black Iron Oxide (Group II)

1. Identification

Product identifier

Product name: Synthetic Black Iron Oxide (Group II)

Product number: 845,846,847,848,850,867,BLK,BLKSLE

Synonyms; trade names: Mapico Black Iron Oxide

Recommended use of the chemical and restrictions on use

Application: Industrial color

Details of the supplier of the safety data sheet

Supplier: Huntsman Pigments Americas LLC
P.O. Box 4980
The Woodlands, TX 77387
+1 301 210 3400 / +1 323 269 7311
MSDS@huntsman.com

Emergency telephone number

Emergency telephone: CHEMTREC: (800) 424-9300 (Contract No: 191118)

2. Hazard(s) identification

Classification of the substance or mixture

Physical hazards: Self-heat. 1 - H251

Health hazards: Not Classified

Environmental hazards: Not Classified

Label elements

Pictogram

Signal word: Danger

Hazard statements: H251 Self-heating: 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 \text{kg}/\text{lbs} at temperatures not exceeding °C/°F.
P420 Store away from other materials.

3. Composition/information on ingredients

Mixtures
Synthetic Black Iron Oxide (Group II)

C.I. Pigment Black 11 (Group II)  
CAS number: 1317-61-9  
REACH registration number: Proprietary  
99.0%  
Classification  
Self-heat. 1 - H251

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

Composition comments  
Black Iron Oxide, Fe3O4 / C.I. Pigment Black 11 : Alternative CAS No. 12227-89-3,  
Alternative EINECS No. 235-442-5

4. First-aid measures

Description of first aid measures

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

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.

Special hazards arising from the substance or mixture

Flammability Class  
No Uniform Fire Code noted.

Specific hazards  
Exposure to heat greater than 55C (130F) may cause this product to oxidize which can generate more heat. This heat may be sufficient to cause the product packaging or nearby combustible materials to ignite. The product may be quenched with water to stop the oxidation.

Advice for firefighters

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

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.

7. Handling and storage
Synthetic Black Iron Oxide (Group II)

Precautions for safe handling

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

Conditions for safe storage, including any incompatibilities

Storage precautions
Store at temperatures not exceeding 55°C/130°F. 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.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits
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/m³ Total Dust 5 mg/m³ respirable dust. ACGIH TLV-TWA 10mg/m³ Total dust or 5mg/m³ respirable dust.

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/m³ Total Dust 5 mg/m³ respirable dust. ACGIH TLV-TWA 10mg/m³ Total dust or 5mg/m³ 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.

pH
pH (diluted solution): 6-10 @ 10% suspension

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.
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<td>Decomposition Temperature</td>
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<tr>
<td>Viscosity</td>
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<td>Explosive properties</td>
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<td>Volatile organic compound</td>
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10. Stability and reactivity

**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 (Fe2O3).

**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**
From literature surveys undertaken re Iron oxides:
- LD50: > 5000 mg/kg, oral, rat
- Eyes: Non-irritant, rabbit
- Skin (24 hrs): Non-irritant, rabbit

**Other health effects**
This substance is not classifiable as a human carcinogen.

**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**
The product is not readily biodegradable.

**Bioaccumulative potential**
Bioaccumulation is unlikely to be significant because of the low water-solubility of this product.

**Partition coefficient**
Not available.

**Mobility in soil**
The product is insoluble in water.

**Results of PBT and vPvB assessment**
This product does not contain any substances classified as PBT or vPvB.
Synthetic Black Iron Oxide (Group II)

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

UN Number
UN No. (DOT) UN3190
UN No. (IMDG) 3190
UN No. (ICAO) 3190

UN proper shipping name
Proper shipping name (DOT) SELF-HEATING SOLID, INORGANIC, N.O.S.
Proper shipping name (IMDG) SELF-HEATING SOLID, INORGANIC, N.O.S.
Proper shipping name (ICAO) SELF-HEATING SOLID, INORGANIC, N.O.S.

Transport hazard class(es)
DOT hazard class 4.2
DOT hazard label Spontaneously Combustible
TDG class 4.2
TDG label 4.2
IMDG Class 4.2
IMDG subsidiary risk
ICAO class/division 4.2
ICAO subsidiary risk

Transport labels

Packing group
DOT pack group II
IMDG packing group II
ICAO packing group II

Special precautions for user
EmS F-A, S-J

15. Regulatory information
**Synthetic Black Iron Oxide (Group II)**

### US State Regulations

**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.

### 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**

- Yes

**US - TSCA 12(b) Export Notification**

- No.

**Australia - AICS**

- Yes

**Japan - MITI**

- Yes

**Korea - KECI**

- Yes

**China - IECSC**

- Yes

**Philippines - PICCS**

- Yes

**New Zealand - NZIOC**

- Yes

### 16. Other information

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<td>Hazard statements in full</td>
<td>H251 Self-heating: may catch fire.</td>
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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.