SAFETY DATA SHEET
brown iron oxide

1. Identification

Product identifier
Product name brown iron oxide
Product number 4155,4169,4171,4179

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 Not Classified
Health hazards Carc. 1A - H350 STOT RE 2 - H373
Environmental hazards Not Classified

Label elements
Pictogram

Signal word Danger

Hazard statements H350 May cause cancer.
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe vapor/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P308+P313 If exposed or concerned: Get medical advice/attention.
P314 Get medical advice/attention if you feel unwell.
P405 Store locked up.
P501 Dispose of contents/container in accordance with national regulations.

Contains CRYSTALLINE SILICA
brown iron oxide

3. Composition/information on ingredients

Mixtures

C.I. PIGMENT RED 101
CAS number: 1309-37-1  REACH registration number: Proprietary

Classification
Not Classified

Umber
CAS number: 12713-03-0  REACH registration number: Proprietary

Classification
Not Classified

C.I. PIGMENT YELLOW 42
CAS number: 51274-00-1  REACH registration number: Proprietary

Classification
Not Classified

CALCIUM CARBONATE
CAS number: 1317-65-3  REACH registration number: Proprietary

Classification
Not Classified

C.I. PIGMENT BLACK 11
CAS number: 1317-61-9  REACH registration number: Proprietary

Classification
Not Classified

CRYSSTALLINE SILICA
CAS number: 14808-60-7  REACH registration number: Proprietary

Classification
Carc. 1A - H350
STOT RE 2 - H373

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

Composition comments  'Burnt Umbers' / 'Raw Umbers' Naturally occurring mixture of Fe2O3/MnxOy/SiO2/Al2O3/H2O

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.
brown iron oxide

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
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.

Advice for firefighters
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

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 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
C.I. PIGMENT RED 101
Long-term exposure limit (8-hour TWA): OSHA 10 mg/m³ fume
Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ total dust
Long-term exposure limit (8-hour TWA): OSHA 5 mg/m³ respirable fraction
Long-term exposure limit (8-hour TWA): ACGIH 5 mg/m³ respirable fraction

CRYSSTALLINE SILICA
brown iron oxide

Long-term exposure limit (8-hour TWA): ACGIH 0.025 mg/m³ respirable fraction
A2

OSHA = Occupational Safety and Health Administration.
ACGIH = American Conference of Governmental Industrial Hygienists.
A4 = Not Classifiable as a Human Carcinogen.
A2 = Suspected Human Carcinogen.

### 9. Physical and Chemical Properties

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<td><strong>Color</strong></td>
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<tr>
<td><strong>Odor threshold</strong></td>
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<tr>
<td><strong>Melting point</strong></td>
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<td><strong>Initial boiling point and range</strong></td>
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<td><strong>Flash point</strong></td>
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<tr>
<td><strong>Evaporation rate</strong></td>
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<tr>
<td><strong>Evaporation factor</strong></td>
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<tr>
<td><strong>Flammability (solid, gas)</strong></td>
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<tr>
<td><strong>Upper/lower flammability or explosive limits</strong></td>
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<tr>
<td><strong>Other flammability</strong></td>
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<tr>
<td><strong>Vapour pressure</strong></td>
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<tr>
<td><strong>Vapour density</strong></td>
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<tr>
<td><strong>Relative density</strong></td>
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<tr>
<td><strong>Bulk density</strong></td>
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<tr>
<td><strong>Solubility(ies)</strong></td>
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<tr>
<td><strong>Partition coefficient</strong></td>
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<td><strong>Auto-ignition temperature</strong></td>
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<tr>
<td><strong>Decomposition Temperature</strong></td>
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<td><strong>Viscosity</strong></td>
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<td><strong>Explosive properties</strong></td>
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<td><strong>Volatile organic compound</strong></td>
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### 10. Stability and reactivity

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<tr>
<td><strong>Reactivity</strong></td>
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<tr>
<td><strong>Stability</strong></td>
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</table>
brown iron oxide

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
There are no data on the ecotoxicity of this product.

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.

Results of PBT and vPvB assessment
Results of PBT and vPvB assessment
This product does not contain any substances classified as PBT or vPvB.

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).

Transport hazard class(es)

Transport labels

15. Regulatory information
brown iron oxide

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
Manganese Compound
1.0 %

CAA Accidental Release Prevention
Manganese Compound
1.0 %

US State Regulations

Massachusetts "Right To Know" List

C.I. PIGMENT YELLOW 42
Not listed.

C.I. PIGMENT RED 101
Present.

C.I. PIGMENT BLACK 11
Not listed.

CRYSTALLINE SILICA
Present.

CALCIUM CARBONATE
Yes.

Umber
Not listed.

Rhode Island "Right To Know" List

C.I. PIGMENT YELLOW 42
Not listed.

C.I. PIGMENT RED 101
Present.

C.I. PIGMENT BLACK 11
Not listed.

CRYSTALLINE SILICA
Present.

CALCIUM CARBONATE
Yes.

Umber
Not listed.

Minnesota "Right To Know" List

C.I. PIGMENT YELLOW 42
Not listed.

C.I. PIGMENT RED 101
Present.
brown iron oxide

C.I. PIGMENT BLACK 11
Not listed.

CRYSTALLINE SILICA
Present.

CALCIUM CARBONATE
Yes.

Umber
Not listed.

New Jersey "Right To Know" List
C.I. PIGMENT YELLOW 42
Not listed.

C.I. PIGMENT RED 101
Present.

C.I. PIGMENT BLACK 11
Not listed.

CRYSTALLINE SILICA
Present.

CALCIUM CARBONATE
Yes.

Umber
Not listed.

Pennsylvania "Right To Know" List
C.I. PIGMENT YELLOW 42
Not listed.

C.I. PIGMENT RED 101
Present.

C.I. PIGMENT BLACK 11
Not listed.

CRYSTALLINE SILICA
Present.

CALCIUM CARBONATE
Yes.

Umber
Not listed.

Inventories
EU - EINECS/ELINCS
EINECS
All the ingredients are listed or exempt.

Canada - DSL/NDSL
C.I. PIGMENT YELLOW 42
Domestic Substance List

C.I. PIGMENT RED 101
DSL
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C.I. PIGMENT BLACK 11
DSL

CRYSTALLINE SILICA
DSL

CALCIUM CARBONATE
Non Domestic Substance List

Umber
Domestic Substance List

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

C.I. PIGMENT YELLOW 42
No.

C.I. PIGMENT RED 101
Yes

C.I. PIGMENT BLACK 11
Yes

CRYSTALLINE SILICA

CALCIUM CARBONATE
No.

Umber
No.

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
All the ingredients are listed or exempt.

16. Other information

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<tbody>
<tr>
<td>Revision date</td>
<td>6/15/2015</td>
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<tr>
<td>Revision</td>
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<tr>
<td>SDS No.</td>
<td>21051</td>
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brown iron oxide

H251 Self-heating: may catch fire.
H350 May cause cancer.
H373 May cause damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs (Lungs) through prolonged or repeated exposure.

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.