SYNTHETIC BLACK IRON OXIDE BK5099

Version	Revision Date:	SDS Number:	Date of last issue: 04/26/2017
3.0	04/26/2017	400000002801	Date of first issue: 01/25/2017

SECTION 1. IDENTIFICATION

Product name : SYNTHETIC BLACK IRON OXIDE BK5099

Manufacturer or supplier's details

Company name of supplier : Venator Materials Corporation
Address : P.O. Box 4980
The Woodlands,
TX 77387
United States of America (USA)
Telephone : TechInfo: (800) 367-8462

E-mail address of person responsible for the SDS : msds@venatorcorp.com

Emergency telephone number : Chemtrec: (800) 424-9300 or (703) 527-3887

Recommended use of the chemical and restrictions on use

Recommended use : Industrial use
Colouring agents, pigments

Restrictions on use : Do not use for cosmetics, food additives, drug additives, feed additives or permanent implant applications., Due to lack of related experience or data, the supplier cannot approve this use.

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Self-heating substances and mixtures : Category 2

GHS label elements

Hazard pictograms :

Signal word : Warning

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

Precautionary statements : **Prevention:**
Keep cool. Protect from sunlight.
P280 Wear protective gloves/ eye protection/ face protection.
Response:
Not available
Storage:
P407 Maintain air gap between stacks/ pallets.

P413 Store bulk masses greater than 450L at temperatures not exceeding 50 °C/ 122 °F.
P420 Store away from other materials.
Disposal:
Not available

Other hazards

Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

NOT CLASSIFIED Self-heating in packages less than 450L capacity.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance

Chemical nature : inorganic

Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
triiron tetraoxide	1317-61-9	90 - 100

The specific chemical identity and/or exact percentage (concentration) of composition may be withheld as a trade secret.

SECTION 4. FIRST AID MEASURES

General advice : Consult a physician.

If inhaled : If breathed in, move person into fresh air.
Get medical attention if symptoms occur.

In case of skin contact : Wash off with soap and water.
Call a physician if irritation develops or persists.

In case of eye contact : Rinse with water.
If eye irritation persists, consult a specialist.

If swallowed : Rinse mouth 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 to do so by a physician or poison control center.
If symptoms persist, call a physician.

Most important symptoms and effects, both acute and delayed : Eye contact
Dust contact with the eyes can lead to mechanical irritation.
Inhalation may provoke the following symptoms:
Symptoms of Overexposure
Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough.
Skin contact may provoke the following symptoms:
The product is not irritant but as with all fine powders can

absorb moisture and natural oils from the surface of the skin during prolonged exposure.
Individuals with sensitive skin may experience skin drying on prolonged or repeated exposure.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

Notes to physician : No specific measures identified.

SECTION 5. FIREFIGHTING MEASURES

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Water spray
Foam
Dry powder
Carbon dioxide (CO2)

Unsuitable extinguishing media : High volume water jet

Specific hazards during firefighting : Exposure to heat greater than 50ºC (122F) 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).

Hazardous combustion products : No hazardous combustion products are known

Specific extinguishing methods : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Further information : Standard procedure for chemical fires.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.
Ensure adequate ventilation.
Avoid dust formation.
Remove all sources of ignition.
Never return spills in original containers for re-use.
Treat recovered material as described in the section "Disposal considerations".
For disposal considerations see section 13.

Environmental precautions : No special environmental precautions required.

Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Keep in suitable, closed containers for disposal.
Sweep up or vacuum up spillage and collect in suitable container for disposal.
Avoid creating dusty conditions and prevent wind dispersal.
Clean contaminated floors and objects thoroughly while observing environmental regulations.

SECTION 7. HANDLING AND STORAGE

Advice on protection against fire and explosion : Avoid dust formation. Provide appropriate exhaust ventilation at places where dust is formed.

Advice on safe handling : Minimize dust generation and accumulation.
Avoid formation of respirable particles.
Avoid inhalation, ingestion and contact with skin and eyes.
Avoid exposure - obtain special instructions before use.
For personal protection see section 8.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
Dispose of rinse water in accordance with local and national regulations.

Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.
Observe label precautions.
Electrical installations / working materials must comply with the technological safety standards.
Avoid temperatures above 50°C, direct sunlight and contact with sources of heat.
Maintain air gap between stacks or pallets.

Recommended storage temperature : < 50 °C

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection : Use respiratory protection unless adequate local exhaust ventilation is provided or exposure assessment demonstrates that exposures are within recommended exposure guidelines

Hand protection
Remarks : For prolonged or repeated contact use protective gloves.

Eye protection : Safety glasses
Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection	:	Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Protective measures	:	Wear suitable protective equipment.
Hygiene measures	:	Wash hands before breaks and immediately after handling the product. Remove contaminated clothing and protective equipment before entering eating areas. Barrier creams may help to protect the exposed areas of skin, they should however not be applied once exposure has occurred.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	powder
Colour	:	black
Odour	:	odourless
Odour Threshold	:	No data is available on the product itself.
pH	:	No data is available on the product itself.
Freezing point	:	No data is available on the product itself.
Melting point		No data is available on the product itself.
Boiling point		No data is available on the product itself.
Flash point	:	No data is available on the product itself.
Evaporation rate	:	No data is available on the product itself.
Flammability (solid, gas)	:	No data is available on the product itself.
Flammability (liquids)	:	No data is available on the product itself.
Upper explosion limit	:	No data is available on the product itself.
Lower explosion limit	:	No data is available on the product itself.
Vapour pressure	:	No data is available on the product itself.
Relative vapour density	:	No data is available on the product itself.
Relative density	:	No data is available on the product itself.
Density	:	No data is available on the product itself.
Solubility(ies)		

Water solubility	:	insoluble
Solubility in other solvents	:	No data is available on the product itself.
Partition coefficient: n-octanol/water	:	No data is available on the product itself.
Auto-ignition temperature	:	No data is available on the product itself.
Decomposition temperature	:	> 50 °C
Self-Accelerating decomposition temperature (SADT)	:	No data is available on the product itself.
Viscosity	:	No data is available on the product itself.
Explosive properties	:	No data is available on the product itself.
Oxidizing properties	:	No data is available on the product itself.
Self-heating substances	:	Self-heating in large quantities; may catch fire.
Particle size	:	No data is available on the product itself.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Self-heating in large quantities; may catch fire.
Chemical stability	:	Exposure to heat greater than 50ºC (122F) 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).
Possibility of hazardous reactions	:	Stable under recommended storage conditions.
Conditions to avoid	:	Avoid temperatures above 50°C, direct sunlight and contact with sources of heat.
Incompatible materials	:	peroxides, e.g. hydrogen peroxide aluminum dust calcium hypochlorite hydrazine Ethylene oxide caesium carbide
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure	:	No data is available on the product itself.

Acute toxicity

Acute oral toxicity	:	No data available

Acute inhalation toxicity	:	No data available
Acute dermal toxicity	:	No data available
Acute toxicity (other routes of administration)	:	No data available

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitisation

No data available

Assessment: No data available

Germ cell mutagenicity

Genotoxicity in vitro	:	No data available
Genotoxicity in vivo	:	No data available

Carcinogenicity

No data available

Carcinogenicity - Assessment	:	No data available

IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH	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.
OSHA	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.
NTP	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.

Reproductive toxicity

Effects on fertility	:	No data available
Effects on foetal development	:	No data available

Reproductive toxicity - Assessment : No data available

STOT - single exposure

No data available

STOT - repeated exposure

No data available

Repeated dose toxicity

No data available

Repeated dose toxicity - Assessment : No data available

Aspiration toxicity

No data available

Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

Toxicology, Metabolism, Distribution

No data available

Neurological effects

No data available

Further information

Ingestion: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxicity to fish : No data available

Toxicity to daphnia and other aquatic invertebrates	:	No data available
Toxicity to algae	:	No data available
M-Factor (Acute aquatic toxicity)	:	No data available
Toxicity to fish (Chronic toxicity)	:	No data available
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	No data available
M-Factor (Chronic aquatic toxicity)	:	No data available
Toxicity to microorganisms	:	No data available
Toxicity to soil dwelling organisms	:	No data available
Plant toxicity	:	No data available
Sediment toxicity	:	No data available
Toxicity to terrestrial organisms	:	No data available
Ecotoxicology Assessment		
Acute aquatic toxicity	:	No data available
Chronic aquatic toxicity	:	No data available
Toxicity Data on Soil	:	No data available
Other organisms relevant to the environment	:	No data available

Persistence and degradability

Biodegradability - Product	:	Result: Not readily biodegradable.
Biochemical Oxygen Demand (BOD)	:	No data available
Chemical Oxygen Demand (COD)	:	No data available
BOD/COD	:	No data available
ThOD	:	No data available

BOD/ThOD	:	No data available
Dissolved organic carbon (DOC)	:	No data available
Physico-chemical removability	:	No data available
Stability in water	:	No data available
Photodegradation	:	No data available
Impact on Sewage Treatment	:	No data available

Bioaccumulative potential

Bioaccumulation - Product	:	Remarks: Bioaccumulation is unlikely.
Partition coefficient: n-octanol/water	:	No data available

Mobility in soil

Mobility	:	No data available
Distribution among environmental compartments	:	No data available
Stability in soil	:	No data available

Other adverse effects

Environmental fate and pathways	:	No data available
Results of PBT and vPvB assessment - Product	:	This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.
Endocrine disrupting potential	:	No data available
Adsorbed organic bound halogens (AOX)	:	No data available

Hazardous to the ozone layer

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information	:	No data available
Global warming potential (GWP)	:	No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	Do not dispose of waste into sewer. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of wastes in an approved waste disposal facility.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers.

SECTION 14. TRANSPORT INFORMATION

International Regulations

IATA

UN/ID No.	:	UN 3190
Proper shipping name	:	Self-heating solid, inorganic, n.o.s. (TRIIRON-TETRAOXIDE)
Class	:	4.2
Packing group	:	III
Labels	:	Spontaneously Combustible
Packing instruction (cargo aircraft)	:	471
Packing instruction (passenger aircraft)	:	469

IMDG

UN number	:	UN 3190
Proper shipping name	:	SELF-HEATING SOLID, INORGANIC, N.O.S. (TRIIRON-TETRAOXIDE)
Class	:	4.2
Packing group	:	III
Labels	:	4.2
EmS Code	:	F-A, S-J
Marine pollutant	:	no

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National Regulations

DOT Classification

UN/ID/NA number	:	UN 3190
Proper shipping name	:	SELF-HEATING SOLID, INORGANIC, N.O.S. (TRIIRON-TETRAOXIDE)
Class	:	4.2
Packing group	:	III
Labels	:	SPONTANEOUSLY COMBUSTIBLE
ERG Code	:	135
Marine pollutant	:	no
Remarks	:	This product is NOT REGULATED for transport when the individual package size is less than 450L in volume. OTHERWISE, this product is regulated as specified in this section of the SDS.

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know Act

SARA 313 : This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

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), birth defects (M) or other reproductive (R) harm.

The components of this product are reported in the following inventories:

CH INV	:	On the inventory, or in compliance with the inventory
TSCA	:	On the inventory, or in compliance with the inventory
DSL	:	All components of this product are on the Canadian DSL
AICS	:	On the inventory, or in compliance with the inventory
NZIoC	:	On the inventory, or in compliance with the inventory
ENCS	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
TCSI	:	On the inventory, or in compliance with the inventory

Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

TSCA - 5(a) Significant New Use Rule List of Chemicals

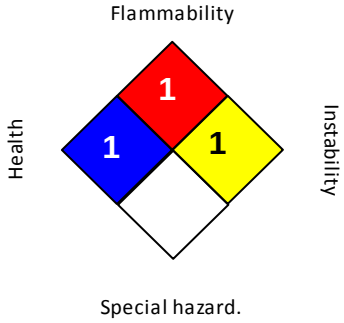
No substances are subject to a Significant New Use Rule.

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
No substances are subject to TSCA 12(b) export notification requirements.

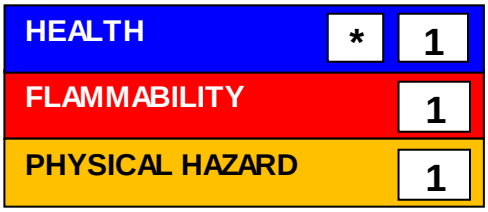
SECTION 16. OTHER INFORMATION

Further information

NFPA:



HMIS® IV:



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.

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LABEL CODE :

For individual packaging less than 450L in volume : N/A

For individual packaging greater than or equal to 450L in volume : 0012

Sources of key data used to compile the Safety Data Sheet	:	Information taken from reference works and the literature., Information derived from practical experience.
Revision Date	:	04/26/2017

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THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

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