

SAFETY DATA SHEET

Section 1: Identification

Product Identifier and Name: **Yardpack**

Chemical Name/Synonyms: Iron Oxide Pigment Blend for 1 Yard of Concrete

Application of the substance: Inorganic pigment used as a colorant for the construction industry: integral concrete colorant.

Uses advised against: Product cannot be used at all in: food, pharmaceutical, or cosmetic products, nor should ever be in direct or indirect contact with food under any circumstances.

Supplier:

DC Products

110 E. Main St.

Dalton, OH 44618 USA

(330) 930-0018

24 Hour Emergency Phone Number: (800) 535-5053 (Infotrac)

Section 2: Hazard(s) Identification

Emergency Overview:

Hazards: This product contains no substances which, at their given concentration, are considered to be hazardous to health.

Appearance: Powder **Physical State:** Powder **Odor:** Odorless

Hazard Classification: This product is not classified as a dangerous substance according to the Globally Harmonized System (GHS)

OSHA Regulatory Status: This substance is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.122)

GHS Label Elements:

Pictograms:



Signal Word(s): Danger

Hazard Statements: P202 – Do not handle until all safety precautions have been read and understood.

P260 – Do not breathe dust.

H350 – May cause cancer.

P280- Wear protective clothing, gloves, and eye protection.

Precautionary Statements - Prevention:

Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Do not breathe dust/fume/gas/mist/vapors/spray.
 Wash face, hands, and any exposed skin thoroughly after handling.
 Do not eat, drink, or smoke when using this product.
 Use personal protective equipment as required.
 In case of inadequate ventilation, wear respiratory protection.

Precautionary Statements - Response:

See Section 4: First Aid Measures.
 Get medical attention if you feel unwell.

Precautionary Statements - Storage:

See Section 7: Handling and Storage.
 Store in accordance with local regulations.
 Store in a well-ventilated place. Keep containers tightly sealed.

Precautionary Statements - Disposal:

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable.

Description of other hazards: Potential Health Effects according to Regulation 1994 OSHA Hazard Communication Standard, 29 CFR Part 1910.1200:

Routes of Exposure: Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Ingestion is not likely to be a primary route for occupational exposure.

Inhalation: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Skin: May cause mechanical irritation (abrasion)

Eyes: May cause mechanical irritation (abrasion)

Ingestion: No known significant effects or critical hazards.

Results of PBT and vPvB Assessment:

PBT: Not applicable

vPvB: Not applicable

Section 3: Composition/ Information on Ingredients

Chemical Name	Other Identifiers	CAS#	Conc.
Di-iron Trioxide (Iron Oxide Red)	RTECS: NO7400000 C.I. Pigment Red 101 (77491)	1309-37-1	<90%
Ferroso-ferric Oxide (Iron Oxide Black)	RTECS: NO7400000 C.I. Pigment Black 11 (77499)	1317-61-9	<90%
Iron Hydroxide Oxide (Iron Oxide Yellow)	RTECS: NO7400000 C.I. Pigment Yellow 42 (77492)	51274-00-1	<90%
Titanium Dioxide	RTECS: XR2275000 Index Number: 022-006-00-2	13463-67-7	<90%
Calcium Carbonate	RTECS: NO7400000 C.I. Pigment White 18 (77220)	1317-65-3	<90%

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.

Section 4: First-Aid Measures

Precautionary Statements – Response:

General Advice: In case of accident or unwellness, seek medical advice immediately (show directions for use and safety data sheet if possible.) Remove severely contaminated clothing and clean before reuse.

After Skin Contact: May cause mechanical irritation (abrasion.) Gently wash with plenty of soap and water. Continue to rinse for at least 10 minutes. In the event of any complaints or symptoms, avoid further exposure. If skin irritation or allergic reaction persists, consult a physician.

After Eye Contact: Direct contact with eyes may cause temporary irritation. Remove any contact lenses and rinse opened eye for several minutes with eye-wash bottle or under running water. If symptoms persists, consult a physician.

After Inhalation: Dust may cause irritation to the respiratory tract. If difficulties occur after dust has been inhaled, remove to fresh air and encourage comfortable breathing. If symptoms persist, consult a physician.

After Swallowing - Ingestion: Ingestion may cause gastrointestinal disturbances. Rinse mouth with plenty of water. Never give anything by mouth to an unconscious person. Do not induce vomiting unless instructed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. If symptoms persist, consult a physician.

Over/Prolonged Exposure Signs/Symptoms, Both Acute and Delayed:

See Section 11: Toxicological Information for more detailed information on health effects and symptoms.

Skin Contact: No specific data.

Eye Contact: No specific data.

Inhalation: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Ingestion: The ingestion of large doses may cause gastric distress, vomiting, and diarrhea.

Indication of Any Immediate Medical Attention and Special Treatment Needed:

Information for Physicians: Treat according to symptoms (decontamination, vital functions.) No known specific antidote.

Protection of First-Aiders: No special measures required.

Section 5: Fire-Fighting Measures

Extinguishing Media:

Suitable Extinguishing Agents: Use extinguishing measures that are appropriate to local circumstances and suitable to the surrounding environment.

Special Hazards Arising from the Substance: Not considered flammable, but packaging, i.e. paper bags, wooden pallets, and plastic wrap, will burn.

Advice for Firefighters: Promptly isolate the area by removing all persons from the vicinity of the fire. No action shall be taken involving any personal risk or without suitable training. Remove containers from the fire area without exposing personnel to risk of harm.

Special Protective Equipment for Firefighters: Firefighters should wear appropriate protective equipment, fully protective suit, and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive mode.

Specific Hazards Arising from this Chemical: No information available.

Explosion Data:

Sensitivity to Mechanical Impact: None

Sensitivity to Static Discharge: None

Additional Information: Collect contaminated fire-fighting water separately. It must not enter the sewage system. Dispose of fire debris and contaminated fire-fighting water in accordance with official regulations.

Section 6: Accidental Release Measures

Personal Precautions: No action shall be taken involving any personal risk without suitable training. Keep away unnecessary and unprotected personnel. Put on appropriate personal protective equipment as required (see Section 8: Exposure Controls/Personal Protection.) Avoid formation of dust. Ensure adequate ventilation. Avoid contact with skin. Avoid slipping hazard on spilled product.

Measures for Environmental Protection: Do not allow product to reach sewage system or any water recourse. Keep contaminated washing water and dispose of appropriately. Even in low concentrations, this product renders the discharge in liquid highly visible. Do not allow to enter sewer, surface, or ground water.

See Section 12: Ecological Information for additional information.

Measures for Containment and Cleanup: Use personal protective equipment as required. Ensure that there is adequate ventilation. Prevent further leakage or spills if safe to do so. Spilled product may be mixed with sand or other non-combustible absorbent material for easier clean-up. Vacuum or sweep up material, keeping dust as minimal as possible, and place in designated, labelled, and closed waste containers using dust pans or shovels. Move containers from spill area. Dispose of via a licensed disposal contractor. Clean contaminated objects and area using warm water and cleaning agent (soap) observing all environmental regulations.

References 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 protective 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

CAS: 1317-61-9 Ferroso-ferric oxide (Iron Oxide Black) C.I. Pigment Black 11 (77499): 21 mg/m³

PAC-2: CAS: 1309-37-1 Di-iron trioxide (Iron Oxide Red) C.I. Pigment Red 101 (77491): 360 mg/m³

CAS: 1317-61-9 Ferroso-ferric oxide (Iron Oxide Black) C.I. Pigment Black 11 (77499): 230 mg/m³

PAC-3: CAS: 1309-37-1 Di-iron trioxide (Iron Oxide Red) C.I. Pigment Red 101 (77491): 2,200 mg/m³

CAS: 1317-61-9 Ferroso-ferric oxide (Iron Oxide Black) C.I. Pigment Black 11 (77499): 1,400 mg/m³

Section 7: Handling and Storage

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.

Handle in accordance with good industrial hygiene and safety practices.

Information about Protection Against Explosions and Fires:

This 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:

Store in accordance with local regulations.

Store away from foodstuffs.

Store away from incompatible materials like strong oxidizing agents and strong acids.

Store in cool, dry conditions in well-sealed receptacles, and in well-ventilated places.

Additional Requirements for Storage:

Protect against physical damage.

Keep in the original container or an approved alternative made from a compatible material.

Pigments should not be stored in outside areas exposed to weather.

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Do not store in unlabeled containers.

Recommended Storage Temperature: <40-100> °F

Storage Duration: 60 months

Specific End Use(s): Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

Section 8: Exposure Controls/Personal Protection

Exposure Control Parameters:

Regulatory Information:

PEL (Permissible Exposure Limit):

Guide to Occupational Exposure Values (OSHA PEL's)

REL (Recommended Exposure Limit):

Guide to Occupational Exposure Values (NIOSH PEL's)

TLV (Threshold Limit Value):

Guide to Occupational Exposure Values (ACGIH)

TWA (8 Hour Time-Weighted Average):

Measured in milligrams per cubic meter.

IDLH (Immediately Dangerous to Life or Health):

Measured in milligrams per cubic meter.

Components with Limit Values that Require Monitoring at the Workplace:

The following constituent is the only constituent of the product which has a PEL, TLV, or other exposure limit. At this time, the remaining constituents have no known exposure limits.

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

CAS: 1317-61-9 Ferroso-ferric Oxide (Iron Oxide Black) a.k.a. C.I. Pigment Black 11 (77499):

CAS: 51274-00-1 Iron Hydroxide Oxide (Iron Oxide Yellow) a.k.a. C.I. Pigment Yellow 42 (77492):

CAS: 13463-67-7 Titanium Dioxide:

ACGIH TLV Short-term Value: 10 mg/m³ per 8 hour period.

ACGIH TLV Long-term Value: 5 mg/m³

OSHA PEL Short-term Value: 5 mg/m³ per 8 hour period.

OSHA PEL Long-term Value: 5 mg/m³

TLV Long-term Value: 5 mg/m³ *As respirable fraction TWA per 8 hour period.

CAS: 1317-65-3 Calcium Carbonate (Limestone) a.k.a. C.I. Pigment White 18 (77220):

OSHA PEL: 15 mg/m³

Cal/OSHA PEL: 10 mg/m³ per 8 hour period.

NIOSH REL: 10 mg/m³ TWA per 8 hour period

ACGIH 2017 TLV: No Data

Recommended Monitoring Procedures:

If this product contains ingredients with exposure limits, personal and workplace atmospheric monitoring procedures 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.

Ingredients with Biological Limit Values:

This 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 of this SDS sheet were used as a basis.

Engineering Controls:

Ventilation Systems: Emissions from ventilation or work process equipment should be checked to be sure 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.

Eyewash Stations: Eyewash stations with eyewash fountains or eyewash bottles are recommended for alleviation of eye contamination.

Showers: Showers are recommended for alleviation of skin contamination.

General Protective and Hygienic Measures:

Handle in accordance with good industrial hygiene and safety practices.

Ensure that proper housekeeping measures are in place.

Keep away from foodstuffs, beverages, and feed.

Do not eat, drink, smoke, or sniff while working.

Wash hands before break and at the end of work.

Vacuum clean contaminated clothing. Do not blow or brush off contaminated clothing.

Do not inhale dust, smoke, or mist.

Avoid close or long-term contact with skin.

Avoid contact with eyes.

Ensure that washing facilities are available at the workplace.

Wash contaminated clothing before reusing.

Breathing Equipment:

Use suitable respiratory 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 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:

Wear protective gloves. Wash and dry hands. The glove material has to be impermeable and resistant to the product, substance, and the preparation. Selection of the glove material on the consideration of the penetration times, rates of diffusion, and the degradation of the material. Use equipment for hand protection that is tested and approved under appropriate government standards such as NIOSH.

Material of Gloves:

Butyl rubber, BR

Nitrile rubber, NBR

Chloroprene rubber, CR

PVC or PE gloves

Neoprene gloves

The selection of 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 cannot be calculated in advance, and therefore has to be checked prior to the application.

Penetration Time of Glove Material:

Minimum breakthrough time/glove: >480 minutes.

The exact breakthrough time has to be observed and recorded by the manufacturer.

Not Suitable are Gloves of the Following Materials:

Textile or leather gloves are completely unsuitable.

Eye Protection:

Safety glasses with side shields.

Wear face shield if splashing hazard exists.

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

Skin and Body Protection:

Wear protective work clothing, gloves, and boots.

Section 9: Physical and Chemical Properties

Form: Granulate

Color: Brown, Red/Brown, Orange/Brown, Green/Brown, Black/Brown

Odor: Odorless

Odor Threshold: Not applicable

pH-Value (100 g/l) at 25°C (77°F): 6.0 – 10.0 (ISO 787-9)

Melting Point/Melting Range: >1000°C (1832°F)

Boiling Point/Boiling Range: Not applicable

Flash Point: Not applicable

Evaporation Rate: This product is a non-volatile solid.

Flammability: This product is not flammable.

Upper/Lower Flammability or Explosive Limits: Not flammable

Auto Ignition Temperature: This product is not self-igniting.

Danger of Explosion: This product does not present an explosion hazard.

Vapor Pressure: This product is a non-volatile solid.

Vapor Density: This product is a non-volatile solid.

Relative Density: Not determined

Solubility in/Miscibility with Water: Dispersible

Solubility in/Miscibility with Organic Solvents: Insoluble

Oxidizing Properties: No oxidizing properties

Specific Gravity at 20°C (68°F): c.a. 3.8-5.0 g/cm³ (c.a. 31.71-41.73 lbs/gal) (ISO 787-10)

Bulk Density at 20°C (68°F): 1000-1300 kg/m³ (ISO 787-11)

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

Iron Content (as Fe₂O₃): > 90% (BS1014)

Heating Loss at 110°C: < 1.5% (ISO 787-2)

Other Information: No further relevant information available.

Section 10: Stability and Reactivity

Reactivity: No hazardous reactions if stored and handled as prescribed/indicated.

Chemical Stability: Stable under normal conditions. No decomposition if used and stored according to specifications (see Section 7: Handling and Storage.)

Thermal Decomposition and Conditions to Avoid: No decomposition if used and stored according to specifications (see Section 7: Handling and Storage.)

Incompatible Materials: Avoid contact with strong oxidizing agents and strong acids.

Hazardous Decomposition Products: No hazardous decomposition products known.

Conditions to Avoid: Conditions which cause dusting of product.

Section 11: Toxicological Information

Acute toxicity:

LD/LC₅₀ Values that are Relevant for Classification:

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

CAS: 1317-61-9 Ferroso-ferric Oxide (Iron Oxide Black) a.k.a. C.I. Pigment Black 11 (77499):

CAS: 51274-00-1 Iron Hydroxide Oxide (Iron Oxide Yellow) a.k.a. C.I. Pigment Yellow 42 (77492):

Oral LD₅₀ >5,000 mg/kg (Rat) (EU B.1)
>10,000 mg/kg (Rat - male) (Standard acute method)

Inhalative LC₅₀/4 hr. >210,000 mg/lit (Rat - male) (OECD 412)
LC₅₀/4 hr. >7,000 mg/lit (Guinea pig)

CAS: 13463-67-7 Titanium Dioxide:

Oral LD₅₀ >5,000 mg/kg (Rat) (OECD 425)

Inhalative LC₀ >6.82 mg/kg (Rat)

CAS: 1317-65-3 Calcium Carbonate a.k.a. C.I. Pigments White 18 (77220):

Oral LD₅₀ >6,450 mg/kg (Rat) (EU B.1)

Repeated Dose Toxicity:

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

CAS: 1317-61-9 Ferroso-ferric Oxide (Iron Oxide Black) a.k.a. C.I. Pigment Black 11 (77499):

CAS: 51274-00-1 Iron Hydroxide Oxide (Iron Oxide Yellow) a.k.a. C.I. Pigment Yellow 42 (77492):

Inhalative NOAEL 4.7 mg/m³ (Rat) (OECD 413)
Read-across based on grouping of substances (category approach)
10.1 mg/m³ (Rat - male) (OECD 412)
Read-across based on grouping of substances (category approach)

CAS: 13463-67-7 Titanium Dioxide:

Oral NOAEL 24,000 mg/kg bw/day (Rat) OECD 407)

Irritation / Corrosion:

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

CAS: 1317-61-9 Ferroso-ferric Oxide (Iron Oxide Black) a.k.a. C.I. Pigment Black 11 (77499):

CAS: 51274-00-1 Iron Hydroxide Oxide (Iron Oxide Yellow) a.k.a. C.I. Pigment Yellow 42 (77492):

Irritation of skin In vivo (Rabbit) (OECD 404)

Not irritating

Irritation of eyes In vivo (Rabbit) (OECD 405)

Not irritating

Sensitization:

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

CAS: 1317-61-9 Ferroso-ferric Oxide (Iron Oxide Black) a.k.a. C.I. Pigment Black 11 (77499):

CAS: 51274-00-1 Iron Hydroxide Oxide (Iron Oxide Yellow) a.k.a. C.I. Pigment Yellow 42 (77492):

CAS: 13463-67-7 Titanium Dioxide:

Sensitization In vivo skin sensitization (Mouse) (Guinea pig) (Mauer Optimization Test)

Not sensitizing

Genetic Toxicity:

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

CAS: 1317-61-9 Ferroso-ferric Oxide (Iron Oxide Black) a.k.a. C.I. Pigment Black 11 (77499):

CAS: 51274-00-1 Iron Hydroxide Oxide (Iron Oxide Yellow) a.k.a. C.I. Pigment Yellow 42 (77492):

CAS: 13463-67-7 Titanium Dioxide:

In vitro Mammalian Chromosome Aberration Test: (Hamster) (OECD 473)

Negative (read-across based on grouping of substances (category approach))

Reverse mutation assay (Ames Test):

(Salmonella typhimurium) (OECD 471)

Negative (read-across based on grouping of substances (category approach))

In vitro mammalian cell gene mutation assay:

(Hamster) (OECD 476) **Negative**

Potential 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 Health Effects: Health injuries are not known or expected under normal use.

Skin: No known significant effects or critical hazards. Primary irritant effect on the skin: Sensitive individuals may develop dryness or irritation. Dry skin, irritation may arise in case of repeated or prolonged exposure.

Skin Sensitization: This product is not expected to cause skin sensitization.

Eye: No known significant effects or critical hazards. Primary irritant effect on the eye: Direct contact with eyes may cause temporary irritation.

Inhalation: No known significant effects or critical hazards. Primary irritant effect by inhalation: Dust may cause irritation to the respiratory tract.

Respiratory Sensitization: This product is not expected to cause respiratory sensitization.

Ingestion: Ingestion may cause gastrointestinal disturbances. The ingestion of large doses may cause gastric distress, vomiting, and diarrhea. Primary irritant effect by ingestion: May cause irritation of the digestion tract and may cause purging. Symptoms may include stomach cramps, stricture of the esophagus, nausea, and vomiting.

Specific Target Organ Toxicity:

Single Exposure: No significant effects or critical hazards.

Repeated Exposure: Inhalation: May cause respiratory irritation.

Subacute to Chronic Toxicity: Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation. Prolonged inhalation of iron oxide dust is known to produce a 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.

Carcinogenic Categories:

IARC (International Agency for Research on Cancer):

CAS: 1309-37-1 Di-iron Trioxide (Iron Oxide Red) a.k.a. C.I. Pigment Red 101 (77491): **Group 3**

CAS: 1317-61-9 Ferroso-ferric Oxide (Iron Oxide Black) a.k.a. C.I. Pigment Black 11 (77499): **Group 3**

CAS: 1309-37-1 Di-iron Trioxide (Iron Oxide Red) a.k.a. C.I. Pigment Red 101 (77491): **Group 3**

CAS: 13463-67-7 Titanium Dioxide: **Group 2B**

CAS: 1317-65-3 Calcium Carbonate: **Group 1A** H350: May cause cancer (Inhalation)

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 OSHA.

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.

Potential Chronic Health Effects:

Carcinogenicity:

CAS: 1317-65-3 Calcium Carbonate (Limestone) a.k.a. C.I. Pigment White 18 (77220):

May cause cancer (Inhalation)

CAS: 13463-67-7 Titanium Dioxide: In February 2006 IARC concluded, "There is inadequate evidence in humans for the carcinogenicity of titanium dioxide." Based on rat inhalation studies IARC concluded that there "sufficient evidence in experimental animals for the carcinogenicity of titanium dioxide." IARC's overall evaluation was that "Titanium dioxide is possibly carcinogenic to humans (Group 2B.)" This conclusion was based on IARC's guidelines which require such a classification if two or more independent studies in one species carried out at different times or in different laboratories or under different protocols show evidence of tumors. The conclusions of several epidemiology studies on more than 20,000 TiO₂ industry workers in Europe and USA did not suggest a carcinogenic effect on the human lung. Mortality from other chronic diseases, including other respiratory diseases, was also not associated with exposure to TiO₂ dust. The whole of the information assessable provides no indication of a carcinogenic effect.

Mutagenicity: No data available to indicate or any components present at greater than 0.1% are mutagenic or genotoxic.

Teratogenicity: No known significant effects or critical hazards.

Developmental Effects: This product is not expected to cause reproductive or developmental effects.

Fertility Effects: No known significant effects or critical hazards.

Section 12: Ecological Information

Ecotoxicity:

Aquatic Toxicity – Short Term:

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

CAS: 1317-61-9 Ferroso-ferric Oxide (Iron Oxide Black) a.k.a. C.I. Pigment Black 11 (77499):

CAS: 51274-00-1 Iron Hydroxide Oxide (Iron Oxide Yellow) a.k.a. C.I. Pigment Yellow 42 (77492):

EC₅₀/96 hr. (static) >5,000 mg/lit (Bacteria)

EC₅₀/3 hr. (static) >10,000 mg/lit (activated sludge) (ISO 8192)

EC₅₀/48 hr. (static) >100 mg/lit (Daphnia magna) (OECD 202)

LC₅₀/96 hr. (static) >10,000 mg/lit (Fish) (OECD 209)

CAS: 13463-67-7 Titanium Dioxide:

EC₅₀/96 hr. (static) >5,000 mg/lit (Bacteria)

EC₅₀/3 hr. (static) >1,000 mg/lit (Activated Sludge) (OECD 209)

EC₅₀/48 hr. (static) >100 mg/lit (Daphnia magna) (OECD 202)

LC₅₀/96 hr. (static) >10,000 mg/lit (Fish) (OECD 203)

NOEC/96 hr. (static) >1,000 mg/lit (Fish) (EPA-540/9-85-006)

EC₁₀/72 hr. (static) 12.7 mg/lit (Algae) (EPA-600/9-78-018)

EC₅₀/72 hr. (static) >10,000 mg/lit (Algae) (ISO 10253)

Sediment Toxicity:

CAS: 13463-67-7 Titanium Dioxide:

NOEC/56 d. >100,000 mg/kg sediment d (Hyalella azteca) (ASTM E1706)

Toxicity to Terrestrial Plants:

CAS: 13463-67-7 Titanium Dioxide:

NOEC/21 d. >100,000 mg/kg soil dw (Dycotyledonae) (ISO 11269-2)

>100,000 mg/kg soil dw (Monocotyledonae) (ISO 11269-2)

Toxicity to Terrestrial Arthropods:

CAS: 13463-67-7 Titanium Dioxide:

NOEC >3,000 mg/kg diet (Crustacea)

>1,000 mg/kg diet (Folsomia candida) (ISO 11267)

Toxicity to Soil Microorganisms:

CAS: 13463-67-7 Titanium Dioxide:

NOEC/56 d. >100,000 mg/kg soil dw (Soil) (ISO 14238)

Biodegradation:

Persistence and Degradability:

The contained surfactants are not rapidly degradable. The inorganic component of this product is not removable by a biological cleaning agent.

Behavior in Environmental Systems:

Bioaccumulation: Accumulation in organisms is not expected.

Mobility in Soil: No data available

Ecotoxicological Effects – Remark:

This product does not contain heavy metals in concentrations of concern for waste water.

This product does not release nitrogen which can contribute to eutrophication.

This product does not contain phosphates or organophosphorous compounds.

Behavior in Sewage Processing Plants:

Remark: This product is easily removable 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 appropriately low concentrations, i.e. incidental down-the-drain disposal of small quantities of product will not affect the performance of wastewater treatment systems.

Additional Ecological Information:

General Notes:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

This statement was deduced from the properties of the single components.

This product may not be released into the environment without control.

Do not allow undiluted product, or large quantities of it, to reach ground water, water course, or sewage system.

Results of PBT and vPvB Assessment:

PBT: Not applicable

vPvB: Not applicable

Section 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:

This product is not considered 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.

Disposal should be made in accordance with federal, state, and local regulations.

Waste Disposal Key:

As sold, this product is not classified as an RCRA hazardous waste as defined by 40 CFR 261.

It is the responsibility of the user to determine the RCRA classification of any product containing this material.

Uncleaned Packaging:

Recommendation:

The generation of waste should be avoided or minimized wherever possible. Dispose of packaging according to regulations on the disposal of packaging. Packaging can be reused or recycled after cleaning. Paper bags may be incinerated or disposed of in an appropriate landfill in accordance with national and local laws.

Recommended Cleaning Agent:

Use water with a cleaning agent (soap) if necessary to clean up product. A diluted, caustic solution will also work to clean up product.

Special Precautions:

Empty containers or liners may retain some product residues. Avoid dispersal of spilled material as well as runoff and contact with soil, waterways, drains, and sewers.

Section 14: Transport Information

- **UN-Number (DOT, ADR, AND, IMDG, IATA):** Void
- **UN Proper Shipping Name (DOT, ADR, ADN, IMDG, IATA):** Void
- **Transport Hazard Class(es) (DOT, ADR, ADN, IMDG, IATA):** 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 food
- **UN "Model Regulation":** Void

Section 15: Regulatory Information

US Federal Regulations:

SARA 302 Components: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311, 312 Hazard Class: No SARA Hazards.

SARA Section 355 (extremely hazardous substances): None of the ingredients is listed.

SARA Section 313 (specific toxic chemical listings): None of the ingredients is listed.

Clean Air Act - Section 112 Hazardous Air Pollutants (HAPs): None of the ingredients is listed.

Clean Water Act - Priority Pollutants (PP): This product does not contain any priority pollutants as defined by 40 CFR 401.15.

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.

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.

Resource Conservation and Recovery Act (RCRA): This product is not a hazardous waste as defined by 40 CFR 261.33.

Carcinogenicity Categories EPA (Environmental Protection Agency): None of the ingredients is listed.

TLV (Threshold Limit Value est. by ACGIH):

CAS: 1309-37-1 Di-iron Trioxide (Iron Oxide Red) a.k.a. C. I. Pigment Red 101 (77491): **A4**

CAS: 13463-67-7 Titanium Dioxide: **A4**

NIOSH-Ca (National Institute for Occupational Safety & Health): None of the ingredients listed.

Hazard Pictograms:



Signal Word(s): Danger

Hazard Statements: P202 – Do not handle until all safety precautions have been read and understood.

P260 – Do not breathe dust.

H350 – May cause cancer.

P280- Wear protective clothing, gloves, and eye protection.

Other Regulations, Limitations, and Prohibitive Regulations:

Chemical Weapons Convention List Schedule I: None of the ingredients is listed.

Chemical Weapons Convention List Schedule II: None of the ingredients is listed.

Chemical Weapons Convention List Schedule III: None of the ingredients is listed.

U.S. Department of Homeland Security:

Component: None of the ingredients is listed.

U.S. State Regulations:

California Proposition 65:

Chemicals Known to Cause Cancer:

CAS: 13463-67-7 Titanium Dioxide: airborne, unbound particles of respirable size

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.

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

Massachusetts Right To Know:

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

CAS: -00-1 Iron Hydroxide Oxide (Iron Oxide Yellow) a.k.a. C. I. Pigment Yellow 42 (77492)

CAS: 1317-65-3 Calcium Carbonate (Limestone) a.k.a. C.I. Pigment White 18 (77220)

CAS: 13463-67-7 Titanium Dioxide:

Minnesota Right To Know:

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

New Jersey Right To Know:

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

CAS: -00-1 Iron Hydroxide Oxide (Iron Oxide Yellow) a.k.a. C. I. Pigment Yellow 42 (77492)

CAS: 1317-65-3 Calcium Carbonate (Limestone) a.k.a. C.I. Pigment White 18 (77220)

CAS: 13463-67-7 Titanium Dioxide

New Jersey Special Hazardous Substances:

None of the ingredients is listed.

Pennsylvania Right To Know:

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

CAS: -00-1 Iron Hydroxide Oxide (Iron Oxide Yellow) a.k.a. C. I. Pigment Yellow 42 (77492)

CAS: 13463-67-7 Titanium Dioxide:

Pennsylvania Special Hazardous Substances:

None of the ingredients is listed.

Rhode Island Right To Know:

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

Florida Right To Know:

None of the ingredients is listed.

International Inventories:**TSCA (U.S. Toxic Substances Control Act):** All components have the value ACTIVE.**DSL/NDSL (Canadian Domestic Substances List/ Non-Domestic Substances List):** Complies**EINECS/ELINCS (Euro Inventory of Existing/ List of Notified Chem Substances):** Complies**ENCS (Japan Existing and New Chemical Substances):** Does Not Comply**IECSC (China Inventory of Existing Chemical Substances):** Complies**KECL (Korean Existing and Evaluated Chemical Substances):** Complies**PICCS (Philippines Inventory of Chemicals and Chemical Substances):** Complies**AICS (Australian Inventory of Chemical Substances):** Complies**Section 16: Other Information****HMIS (Hazardous Material Identification System):**

HEALTH	1
FLAMMABILITY	0
REACTIVITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	E

SDS Date of Preparation/Update: 09-13-2021

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.