

DAVIS COLORS SYNTHETIC IRON OXIDE BUFF 5237

Version 3.0 Revision Date: 07/16/2019 SDS Number: 400000004433 Date of last issue: 03/14/2018
Date of first issue: 11/09/2016

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 : Dust contact with the eyes can lead to mechanical irritation.
Inhalation of dust may cause shortness of breath, tightness of the chest, a sore throat and cough.
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.
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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 : Cool closed containers exposed to fire with water spray.
- Hazardous combustion products : No hazardous combustion products are known

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- 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.
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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.
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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.

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Further information on storage stability : Keep in a dry place.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
diiron trioxide	1309-37-1	TWA (Respirable fraction)	5 mg/m ³	ACGIH
		TWA (Fumes)	10 mg/m ³	OSHA Z-1
		TWA (total dust)	15 mg/m ³	OSHA Z-1
		TWA (respirable fraction)	5 mg/m ³	OSHA Z-1

Engineering measures : Maintain air concentrations below occupational exposure standards.

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
 Directive : Use gloves approved to relevant standards e.g. EN 374 (Europe), F739 (US).

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.

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SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	: powder
Colour	: yellow
Odour	: odourless
Odour Threshold	: No data is available on the product itself.
pH	: 4 - 8 Concentration: 10 %
Melting point	: > 1,832 °F / > 1,000 °C
Boiling point/boiling range	: Not applicable
Flash point	: Not applicable
Evaporation rate	: Not applicable
Flammability (solid, gas)	: Will not burn
Flammability (liquids)	: Not applicable
Upper explosion limit / Upper flammability limit	: Not applicable
Lower explosion limit / Lower flammability limit	: Not applicable
Vapour pressure	: Not applicable
Relative vapour density	: Not applicable
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	: Not applicable
Thermal decomposition	: No data is available on the product itself.
Self-Accelerating decomposition temperature (SADT)	: No data is available on the product itself.

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Viscosity
Viscosity, kinematic : Not applicable

Explosive properties : Not expected to form explosive dust-air mixtures.

Oxidizing properties : No data is available on the product itself.

Particle size : No data is available on the product itself.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : No dangerous reaction known under conditions of normal use.

Chemical stability : From ca. 60°C, transformation of black iron oxide to Fe₂O₃ will occur as an exothermic reaction. Yellow iron oxide will lose water of hydration at 180°C and convert to Fe₂O₃.

Possibility of hazardous reactions : Stable under recommended storage conditions. No hazards to be specially mentioned.

Conditions to avoid : No data available

Incompatible materials : peroxides, for example hydrogen peroxide
aluminum dust
calcium hypochlorite
hydrazine
Ethylene oxide
caesium carbide

Hazardous decomposition products : No hazardous decomposition products are known.

SECTION 11. TOXICOLOGICAL INFORMATION

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

Acute toxicity**Components:**

diiron trioxide:

Acute oral toxicityComponents : LD50 (Rat, male and female): > 5,000 mg/kg
Method: EC Directive 92/69/EEC B.1 Acute Toxicity (Oral)

LD50 (Rat, male): > 10,000 mg/kg
Method: OECD Test Guideline 401

Components:

diiron trioxide:

Acute inhalation toxicity : LC50 (Rat, male and female): 5 mg/l
Exposure time: 4 h
Test atmosphere: dust/mist
Method: OECD Test Guideline 403

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Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : No data available

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

Skin corrosion/irritation**Components:**

diiron trioxide:
Species: Rabbit
Exposure time: 4 h
Assessment: No skin irritation
Method: OECD Test Guideline 404
Result: No skin irritation

Serious eye damage/eye irritation**Components:**

diiron trioxide:
Species: Rabbit
Result: No eye irritation
Exposure time: 24 h
Assessment: No eye irritation
Method: OECD Test Guideline 405

Respiratory or skin sensitisation**Components:**

diiron trioxide:
Exposure routes: Dermal
Species: No information available.
Assessment: Did not cause sensitisation on laboratory animals.
Method: Other guidelines
Result: Does not cause skin sensitisation.

Exposure routes: Skin
Species: Mouse
Method: OECD Test Guideline 429
Result: Does not cause skin sensitisation.

Assessment: No data available

Germ cell mutagenicity**Components:**

diiron trioxide:
Genotoxicity in vitro : Test Type: Ames test
Test system: Salmonella typhimurium
Concentration: 8 - 40 - 200 - 1000 - 5000 µg/
Metabolic activation: with and without metabolic activation
Method: reverse mutation assay

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Result: negative

Test Type: Chromosome aberration test in vitro
Test system: Chinese hamster lung cells
Concentration: 0, 6.25, 12.5 and 25 µg/ml
Metabolic activation: with and without metabolic activation
Method: OECD Test Guideline 473
Result: negative

Components:

diiron trioxide:
Genotoxicity in vivo

: Test Type: in vivo assay
Species: Rat (female)
Dose: 0, 500, 1000, or 2000 mg/kg bw
Result: negative

Test Type: in vivo assay
Species: Rat (male)
Dose: 3.75 mg/kg bw
Result: negative

Carcinogenicity**Components:**

diiron trioxide:
Species: Rat, male and female
Application Route: Intraperitoneal injection
Exposure time: 790 - 914 days
Result: negative

Species: Rat, male and female
Application Route: Intraperitoneal injection
Exposure time: 798 days
Result: negative

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 on OSHA's list of regulated carcinogens.

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

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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**Components:**

diiron trioxide:

Species: Rat, male

>= 30 mg/m³

Application Route: inhalation (dust/mist/fume)

Test atmosphere: dust/mist

Exposure time: 5 days

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

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Ingestion: No data available

SECTION 12. ECOLOGICAL INFORMATION**Ecotoxicity****Components:**

diiron trioxide:
Toxicity to fish : EC50 (Brachydanio rerio (zebrafish)): > 50,000 mg/l
Exposure time: 96 h
Test Type: static test

Components:

diiron trioxide:
Toxicity to daphnia and other : EC50: > 100 mg/l
aquatic invertebrates Exposure time: 48 h
Test Type: static test
Method: OECD Test Guideline 202

Components:

diiron trioxide:
Toxicity to algae/aquatic : EC50 (Other): > 100 mg/l
plants
M-Factor (Acute aquatic : No data available
toxicity)

Toxicity to fish (Chronic : No data available
toxicity)

Toxicity to daphnia and other : No data available
aquatic invertebrates
(Chronic toxicity)

M-Factor (Chronic aquatic : No data available
toxicity)

Components:

diiron trioxide:
Toxicity to microorganisms : EC50 (activated sludge): > 10,000 mg/l
Exposure time: 3 h
Test Type: static test
Method: ISO 8192

Toxicity to soil dwelling : No data available
organisms

Plant toxicity : No data available

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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.

Components:

Iron trioxide:
Biochemical Oxygen Demand (BOD) : 0 mgO₂/g

Components:

Iron trioxide:
Chemical Oxygen Demand (COD) : 0 mgO₂/g
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

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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 layerOzone-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.

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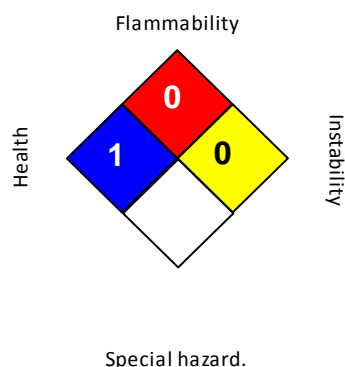
AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

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 704:****HMIS® IV:**

HEALTH	*	1
FLAMMABILITY		0
PHYSICAL HAZARD		0

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.

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.

LABEL CODE : N/A

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

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ACGIH : USA. ACGIH Threshold Limit Values (TLV)
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1
Limits for Air Contaminants
ACGIH / TWA : 8-hour, time-weighted average
OSHA Z-1 / TWA : 8-hour time weighted average

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