## SDS Cover Note Dark Brown 686G granules



This attachment must be read in conjunction with the accompanying Safety Data Sheet.

Product

Product name(s): Bayferrox® Dark Brown (686G) granules,

Bayferrox® Dark Brown

(686G TM-R)

Cover note date October 2022

SDS date: 12.03.2021

**HSNO Status:** Not Hazardous

**DG Status:** Not Dangerous Goods

Supplier

Company: Peter Fell Ltd

Address: 81 Patiki Rd, Avondale, Auckland 1026,

New Zealand

Telephone: +64 9 828 6460

Email: info@peterfell.co.nz

Emergency Telephone Number: 0800 764 766

(National Poison Centre)

according to Regulation (EC) No. 1907/2006



### **BAYFERROX 686 G**

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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Trade name : BAYFERROX 686 G

Product code : 04212452

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the Sub: Colorants (pigments and dyestuffs), inorganic

stance/Mixture

1.3 Details of the supplier of the safety data sheet

Supplier : LANXESS Limited

Tenax Road, Trafford Park

M17 1WT Manchester, United Kingdom

Telephone : +4422188852288

E-mail address of person

responsible for the SDS

: infosds@lanxess.com

### 1.4 Emergency telephone number

0870 190 6777. National Chemical Emergency Centre

### **SECTION 2: Hazards identification**

### 2.1 Classification of the substance or mixture

### Classification (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

### 2.2 Label elements

### Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

### 2.3 Other hazards

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.

### **SECTION 3: Composition/information on ingredients**

### 3.2 Mixtures

Chemical nature : Fe2O3, Fe3O4

### Components

according to Regulation (EC) No. 1907/2006



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Chemical name	CAS-No.	Classification	Concentration
	EC-No.		(% w/w)
	Index-No.		
	Registration number		
Substances with a workpla	ace exposure limit :		
triiron tetraoxide	1317-61-9		>= 70 - < 90
	215-277-5		
diiron trioxide	1309-37-1		>= 20 - < 30
	215-168-2		

For explanation of abbreviations see section 16.

### **SECTION 4: First aid measures**

### 4.1 Description of first aid measures

General advice : Do not leave the victim unattended.

If inhaled : Move the victim to fresh air.

Get medical attention if symptoms occur.

If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained per-

sonnel.

If unconscious, place in recovery position and get medical

attention immediately.

Loosen tight clothing such as a collar, tie, belt or waistband.

In case of skin contact : No special measures required.

In case of eye contact : Immediately flush eyes with plenty of water, occasionally lifting

the upper and lower eyelids.

If easy to do, remove contact lens, if worn. Continue to rinse for at least 10 minutes. Get medical attention if symptoms appear.

If swallowed : No special measures required.

### 4.2 Most important symptoms and effects, both acute and delayed

Symptoms : See Section 11 for more detailed information on health effects

and symptoms.

Risks : See Section 11 for more detailed information on health effects

and symptoms.

### 4.3 Indication of any immediate medical attention and special treatment needed

### **SECTION 5: Firefighting measures**

### 5.1 Extinguishing media

Suitable extinguishing media : In case of fire, use water spray (fog), foam, dry chemical or

 $CO_2$ .

according to Regulation (EC) No. 1907/2006



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Unsuitable extinguishing

media

None known.

5.2 Special hazards arising from the substance or mixture

Specific hazards during fire-

fighting

No information available.

Hazardous combustion prod- :

ucts

The product itself does not burn.

5.3 Advice for firefighters

Special protective equipment :

for firefighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full

face-piece operated in positive pressure mode.

Further information : Standard procedure for chemical fires.

Promptly isolate the scene by removing all persons from the

vicinity of the incident if there is a fire.

Use extinguishing measures that are appropriate to local cir-

cumstances and the surrounding environment.

Fire residues and contaminated fire extinguishing water must

be disposed of in accordance with local regulations.

### **SECTION 6: Accidental release measures**

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : No action shall be taken involving any personal risk or without

suitable training.

Keep unnecessary and unprotected personnel from entering.

Avoid breathing dust.

Use personal protective equipment.

Avoid dust formation.

### 6.2 Environmental precautions

Environmental precautions : Avoid dispersal of spilt material and runoff and contact with

soil, waterways, drains and sewers.

If the product contaminates rivers and lakes or drains inform

respective authorities.

### 6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Pick up and arrange disposal without creating dust.

Sweep up and shovel.

Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For personal protection see section 8.

according to Regulation (EC) No. 1907/2006



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For disposal considerations see section 13.

### **SECTION 7: Handling and storage**

### 7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.

Smoking, eating and drinking should be prohibited in the ap-

plication area.

Advice on protection against

fire and explosion

Provide appropriate exhaust ventilation at places where dust

is formed.

Hygiene measures : General industrial hygiene practice.

When using do not eat, drink or smoke. Wash face, hands and any exposed skin thoroughly after handling. Wash contami-

nated clothing before reusing.

### 7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep containers tightly closed in a dry, cool and well-ventilated place. Electrical installations / working materials must comply with the technological safety

standards.

Advice on common storage : No materials to be especially mentioned.

Further information on stor-

age stability

Keep in a dry place. No decomposition if stored and applied

as directed.

7.3 Specific end use(s)

Specific use(s) : No data available

### **SECTION 8: Exposure controls/personal protection**

### 8.1 Control parameters

### **Occupational Exposure Limits**

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
triiron tetraoxide	1317-61-9	TWA (Fumes)	5 mg/m3 (Iron)	GB EH40
		STEL (Fumes)	10 mg/m3 (Iron)	GB EH40
diiron trioxide	1309-37-1	TWA (inhalable dust)	10 mg/m3	GB EH40

according to Regulation (EC) No. 1907/2006



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TWA (Respirable | 4 mg/m3 | GB EH40 dust)

### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health ef-	Value
			fects	
triiron tetraoxide	Workers	Inhalation	Systemic effects, Long-term exposure	10 mg/m3
	Workers	Inhalation	Local effects, Long- term exposure	10 mg/m3

### 8.2 Exposure controls

### **Engineering measures**

This information is not available.

### Personal protective equipment

Eye protection : Safety glasses

Hand protection

Wearing time : < 60 min

Material : Leather gloves

Skin and body protection : Choose body protection in relation to its type, to the concen-

tration and amount of dangerous substances, and to the spe-

cific work-place.

Additional body garments should be used (e.g. sleevelets, apron, disposable suit etc.), based on the task being per-

formed.

Respiratory protection : Dust-protection mask if there is a risk of dust formation.

Filter type : P1 filter

### **Environmental exposure controls**

Water : The product should not be allowed to enter drains, water

courses or the soil.

### **SECTION 9: Physical and chemical properties**

### 9.1 Information on basic physical and chemical properties

Appearance : solid

Colour : brown

Odour : odourless

Odour Threshold : No data available

pH : 3-7

Concentration: 5 %

according to Regulation (EC) No. 1907/2006



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Melting point/range : > 1,000 °C

Boiling point/boiling range : No data available

Flash point : No data available

Evaporation rate : No data available

Flammability (solid, gas) : No data available

Upper explosion limit : No data available

Lower explosion limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Relative density : No data available

Density : 4.5 g/cm³ (20 °C)

Bulk density : 300 - 1,000 kg/m<sup>3</sup>

Solubility(ies)

Water solubility : insoluble

insoluble

Partition coefficient: n-

octanol/water

No data available

Ignition temperature : No data available

Decomposition temperature : No data available

Viscosity : No data available

Explosive properties : No data available

Oxidizing properties : No data available

### 9.2 Other information

No data available

### **SECTION 10: Stability and reactivity**

### 10.1 Reactivity

No specific test data related to reactivity available for this product or its ingredients.

according to Regulation (EC) No. 1907/2006

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### 10.2 Chemical stability

The product is chemically stable.

### 10.3 Possibility of hazardous reactions

Hazardous reactions : No dangerous reaction known under conditions of normal use.

### 10.4 Conditions to avoid

Conditions to avoid : At temperatures above 80 °C the product may become unsta-

ble and oxidise.

This generates additional heat which, under unfavourable conditions, may result in the combustion of flammable materi-

als.

The product should therefore not be stored near heat sources.

### 10.5 Incompatible materials

Materials to avoid : No specific data.

### 10.6 Hazardous decomposition products

Hazardous decomposition

products

: No decomposition if stored and applied as directed.

### **SECTION 11: Toxicological information**

### 11.1 Information on toxicological effects

Information on likely routes of:

exposure

Inhalation
Eye contact
Skin contact

### **Acute toxicity**

Not classified based on available information.

**Product:** 

Acute oral toxicity : LD50 (Rat): > 5,000 mg/kg

Remarks: Test results on an analogous product

**Components:** 

triiron tetraoxide:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

diiron trioxide:

Acute oral toxicity : LD50 (Rat, male and female): > 5,000 mg/kg

Method: OECD Test Guideline 401 GLP: No information available.

Acute inhalation toxicity : LC50 (Rat, male and female): > 5.05 mg/l

Exposure time: 4 h

according to Regulation (EC) No. 1907/2006



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Test atmosphere: dust/mist

Method: OECD Test Guideline 403

GLP: yes

Assessment: The substance or mixture has no acute inhala-

tion toxicity

Remarks: Dosage caused no mortality

### Skin corrosion/irritation

Not classified based on available information.

### Components:

### triiron tetraoxide:

Species: Rabbit Exposure time: 4 h

Method: OECD Test Guideline 404

Result: No skin irritation

GLP: yes

#### diiron trioxide:

Species: Rabbit Exposure time: 4 h

Method: OECD Test Guideline 404

Result: No skin irritation

GLP: yes

### Serious eye damage/eye irritation

Not classified based on available information.

### **Components:**

### triiron tetraoxide:

Species: Rabbit

Method: OECD Test Guideline 405

Result: No eye irritation

GLP: yes

### diiron trioxide:

Species: Rabbit Exposure time: 24 h

Method: OECD Test Guideline 405

Result: No eye irritation

GLP: yes

### Respiratory or skin sensitisation

### Skin sensitisation

Not classified based on available information.

according to Regulation (EC) No. 1907/2006

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### Respiratory sensitisation

Not classified based on available information.

### **Components:**

### triiron tetraoxide:

Exposure routes: Skin contact

Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

GLP: no

### diiron trioxide:

Test Type: Maurer optimisation test

Exposure routes: Dermal Species: Guinea pig

Result: Did not cause sensitisation on laboratory animals.

GLP: No information available.

### Germ cell mutagenicity

Not classified based on available information.

### Components:

#### triiron tetraoxide:

Genotoxicity in vitro : Test system: Bacteria

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test system: Chinese hamster fibroblasts

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative GLP: yes

Test system: Chinese hamster fibroblasts

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative GLP: yes

diiron trioxide:

Genotoxicity in vitro : Test Type: Ames test

Test system: Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

GLP: No information available.

Remarks: Test results on an analogous product

Test Type: Chromosome aberration test in vitro

according to Regulation (EC) No. 1907/2006



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Test system: Chinese hamster fibroblasts

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative GLP: yes

Remarks: Test results on an analogous product

Test Type: In vitro mammalian cell gene mutation test

Test system: Chinese hamster fibroblasts

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative GLP: yes

Remarks: Test results on an analogous product

Genotoxicity in vivo : Test Type: comet assay

Species: Rat (male)

Application Route: intratracheal

Exposure time: 24 h Dose: 3,75 mg/kg bw Result: negative

Test Type: Chromosomal aberration assay

Species: Rat (female) Application Route: Oral Exposure time: 24 h Dose: 2000 mg/kg bw Result: negative

### Carcinogenicity

Not classified based on available information.

### Components:

### triiron tetraoxide:

Species: Rat, (male and female)

Exposure time: 914 days

Dose: 600 milligram per kilogram

Result: negative

### diiron trioxide:

Species: Rat, (male and female) Application Route: Intraperitoneal

Exposure time: 914 days Dose: 600 mg/kg body weight

Result: negative

### Reproductive toxicity

Not classified based on available information.

according to Regulation (EC) No. 1907/2006



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### STOT - single exposure

Not classified based on available information.

### STOT - repeated exposure

Not classified based on available information.

### Repeated dose toxicity

### **Product:**

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

### Components:

### triiron tetraoxide:

Species: Rat, male LOAEL: > 185,6 mg/m³ Application Route: Inhalation Test atmosphere: dust/mist

Exposure time: 14 d Dose: > 185,6 mg/m<sup>3</sup>

Method: OECD Test Guideline 412

GLP: yes

Remarks: Subacute toxicity

### diiron trioxide:

Species: Rat, male and female

NOAEL: 4,7 mg/m<sup>3</sup>

Application Route: Inhalation Test atmosphere: dust/mist

Exposure time: 90 d

Number of exposures: 5 days/week Dose: 4,7 - 16,6 - 52,1 mg/m<sup>3</sup> Method: OECD Test Guideline 413

GLP: yes

Remarks: Subchronic toxicity

Test results on an analogous product

Species: Rat, male NOAEL: 10,1 mg/m³

Application Route: Inhalation Test atmosphere: dust/mist

Exposure time: 28 d

Number of exposures: 5 days/week Dose: 10,1 - 19,7- 45,6 - 95,8 mg/m<sup>3</sup> Method: OECD Test Guideline 412

GLP: yes

Remarks: Subacute toxicity

Test results on an analogous product

### **Aspiration toxicity**

Not classified based on available information.

according to Regulation (EC) No. 1907/2006

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### **SECTION 12: Ecological information**

### 12.1 Toxicity

### **Components:**

triiron tetraoxide:

Toxicity to fish : LC0 (Danio rerio (zebra fish)): > 10,000 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Remarks: Fresh water

Toxicity to daphnia and other :

aquatic invertebrates

EC0 (Daphnia magna (Water flea)): > 10,000 mg/l

Exposure time: 48 h

Method: Regulation (EC) No. 440/2008, Annex, C.2

Remarks: Fresh water

Toxicity to microorganisms : EC50 (activated sludge): > 10,000 mg/l

Exposure time: 3 h

Method: OECD Test Guideline 209

Remarks: Fresh water

diiron trioxide:

Toxicity to fish : LC50 (Danio rerio (zebra fish)): > 50,000 mg/l

Exposure time: 96 h Analytical monitoring: no

GLP: no

Remarks: Fresh water

Toxicity to daphnia and other :

aquatic invertebrates

EC50 (Daphnia magna (Water flea)): > 100 mg/l

Exposure time: 48 h Analytical monitoring: no

Method: OECD Test Guideline 202

GLP: yes

Remarks: Fresh water

Toxicity to microorganisms : EC50 (activated sludge): > 10,000 mg/l

Exposure time: 3 h Analytical monitoring: no Method: ISO 8192

### 12.2 Persistence and degradability

### Components:

triiron tetraoxide:

Biodegradability : Result: The methods for determining the biological degradabil-

ity are not applicable to inorganic substances.

diiron trioxide:

according to Regulation (EC) No. 1907/2006



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Biodegradability : Remarks: The methods for determining biodegradability are

not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

### **Components:**

diiron trioxide:

Partition coefficient: n-

octanol/water

Remarks: Not applicable

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

### **Product:**

Assessment : 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...

### 12.6 Other adverse effects

### **Product:**

Additional ecological infor-

mation

Ecotoxicological data are not available.

No known significant effects or critical hazards.

### **SECTION 13: Disposal considerations**

### 13.1 Waste treatment methods

Product : Examine possibilities for re-utilisation.

Product residues and uncleaned empty containers should be packaged, sealed, labelled, and disposed of or recycled ac-

cording to relevant national and local regulations.

When uncleaned empty containers are passed on, the recipient must be warned of any possible hazard that may be

caused by residues.

For disposal within the EC, the appropriate code according to

the European Waste List (EWL) should be used.

It is among the tasks of the polluter to assign the waste to waste codes specific to industrial sectors and processes ac-

cording to the European Waste List (EWL).

Within the present knowledge of the supplier, this product is not regarded as hazardous waste, as defined by EU Directive

2008/98/EC

Contaminated packaging : Empty containers should be taken to an approved waste han-

dling site for recycling or disposal.

according to Regulation (EC) No. 1907/2006



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### **SECTION 14: Transport information**

### 14.1 UN number

Not regulated as a dangerous good

### 14.2 UN proper shipping name

Not regulated as a dangerous good

### 14.3 Transport hazard class(es)

Not regulated as a dangerous good

### 14.4 Packing group

Not regulated as a dangerous good

### 14.5 Environmental hazards

Not regulated as a dangerous good

### 14.6 Special precautions for user

Hazard statements : Not dangerous cargo.

Keep separated from foodstuffs.

### 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

### **SECTION 15: Regulatory information**

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mix-

International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors

: Not applicable

REACH - Candidate List of Substances of Very High

Concern for Authorisation (Article 59).

This product does not contain substances of very high concern (Regulation (EC) No 1907/2006 (REACH),

Article 57).

REACH - List of substances subject to authorisation

(Annex XIV)

: Not applicable

Regulation (EC) No 1005/2009 on substances that de-

plete the ozone layer

Not applicable

Regulation (EU) 2019/1021 on persistent organic pollu-

tants (recast)

: Not applicable

Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and

third countries in drug precursors

Neither banned nor restricted

Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import

Not applicable

according to Regulation (EC) No. 1907/2006



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of dangerous chemicals

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances,

preparations and articles (Annex XVII)

: Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Not applicable

### 15.2 Chemical safety assessment

not applicable

### **SECTION 16: Other information**

### Full text of other abbreviations

GB EH40 : UK. EH40 WEL - Workplace Exposure Limits

GB EH40 / TWA : Long-term exposure limit (8-hour TWA reference period)
GB EH40 / STEL : Short-term exposure limit (15-minute reference period)

ATE = Acute Toxicity Estimate BCF = Bioconcentration Factor

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

### **Further information**

The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet and its Annex [if required according to Regulation (EC) 1907/2006 (REACh)] is to describe the products in terms of their safety requirements. The given details do not imply any guarantee concerning the composition, properties or performance.