Bayferrox® Marigold (965C) granules

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

Product

Product name: Bayferrox® Marigold (965C) granules
Product Code(s): PMRG965C, PMRG965CB, RETPMRG960B5KG, RETPMRG965C1KG, TPMRG965C
Cover note date: October 2022
SDS date: 16.03.2021
HSNO Status: Not Hazardous
DG Status: Not Dangerous Goods
Other Classifications: Handling and/or processing of this material may generate a dust

which can cause mechanical irritation of the eyes, skin, nose and throat.

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)

SAFETY DATA SHEET

BAYFERROX 965 C

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	16.03.2021	203000001905	Country / Language:NZ / 6N

Section 1: Identification

Product name : BAYFERROX 965 C

Product code : 000000000005120810

Manufacturer or supplier's details

Supplier : LANXESS Deutschland GmbH
Production, Technology,
Safety & Environment
51369 Leverkusen, Germany

Responsible Department : +49 221 8885 2288
infosds@lanxess.com

Emergency telephone number : YLXS-YADD00000000196
For 24/7 multilingual emergency please call toll free CHEMTREC New Zealand: 0800 425 459 and mention CCN 1001750.

Recommended use of the chemical and restrictions on use

Recommended use : Colorants (pigments and dyestuffs), inorganic

Section 2: Hazard identification

GHS Classification

Not a hazardous substance or mixture.

GHS label elements

Not a hazardous substance or mixture.

Other hazards which do not result in classification

None known.

Section 3: Composition/information on ingredients

Substance / Mixture : Mixture

Chemical nature : Fe2O3
FeO(OH)

Components

Chemical name	CAS-No.	Concentration (% w/w)
diiron trioxide	1309-37-1	>= 30 -< 50

Perlite, expanded	93763-70-3	>= 1 -< 10

Section 4: 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 personnel.
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.

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.

Notes to physician : Treat symptomatically.

Section 5: Fire-fighting measures

Suitable extinguishing media : In case of fire, use water spray (fog), foam, dry chemical or CO_2.

Unsuitable extinguishing media : None known.

Specific hazards during fire-fighting : No information available.

Hazardous combustion products	:	The product itself does not burn.
Specific extinguishing methods	:	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 circumstances and the surrounding environment. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
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.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures	:	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.
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.
Methods and materials for containment and cleaning up	:	Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Section 7: Handling and storage

Advice on protection against fire and explosion	:	Provide appropriate exhaust ventilation at places where dust is formed.
Advice on safe handling	:	For personal protection see section 8. Smoking, eating and drinking should be prohibited in the application area.
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 contaminated clothing before reusing.

Conditions for safe storage	:	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.
Materials to avoid	:	No materials to be especially mentioned.
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	WES-TWA (Dust and fume)	5 mg/m3 (Iron)	NZ OEL
		TWA (Respirable particulate matter)	5 mg/m3	ACGIH
Perlite, expanded	93763-70-3	WES-TWA	10 mg/m3	NZ OEL

Engineering measures : This information is not available.

Personal protective equipment

Respiratory protection	:	Dust-protection mask if there is a risk of dust formation.
Filter type	:	P1 filter
Hand protection Wearing time	:	< 60 min
Material	:	Leather gloves
Eye protection	:	Safety glasses
Skin and body protection	:	Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place. Additional body garments should be used (e.g. sleevelets, apron, disposable suit etc.), based on the task being performed.

Section 9: Physical and chemical properties

Appearance	:	powder
Physical state	:	solid
Colour	:	Yellow to red.
Odour	:	odourless
Odour Threshold	:	Not applicable
pH	:	5 Concentration: 5 %
Melting point/range	:	> 1,000 °C
Boiling point/boiling range	:	No data available
Flash point	:	No data available
Evaporation rate	:	No data available
Self-ignition	:	No data available
Burning number	:	No data available
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	No data available
Vapour pressure	:	Not applicable
Relative density	:	No data available
Density	:	4.3 g/cm3 (20 °C)
Solubility(ies)		
Water solubility	:	insoluble
Solubility in other solvents	:	No data available
Partition coefficient: n-	:	No data available

octanol/water

Decomposition temperature	:	No data available
Viscosity		
Viscosity, dynamic	:	No data available
Viscosity, kinematic	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available

Section 10: Stability and reactivity

Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	:	The product is chemically stable.
Possibility of hazardous reactions	:	No dangerous reaction known under conditions of normal use.
Conditions to avoid	:	From approx. 180 °C conversion into Fe2O3.
Incompatible materials	:	No specific data.
Hazardous decomposition products	:	No decomposition if stored and applied as directed.

Section 11: Toxicological information

Exposure routes : 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:

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 Test atmosphere: dust/mist Method: OECD Test Guideline 403 GLP: yes Assessment: The substance or mixture has no acute inhalation toxicity Remarks: Dosage caused no mortality

Perlite, expanded:

Acute oral toxicity	:	LD50 (Mouse): 12,960 mg/kg

Skin corrosion/irritation

Not classified based on available information.

Product:

Result	:	No skin irritation
Remarks	:	Test results on an analogous product

Components:

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.

Product:

Result	:	No eye irritation
Remarks	:	Test results on an analogous product

Components:

diiron trioxide:

Species	:	Rabbit
Result	:	No eye irritation
Exposure time	:	24 h
Method	:	OECD Test Guideline 405
GLP	:	yes

Respiratory or skin sensitisation

Skin sensitisation

Not classified based on available information.

Respiratory sensitisation

Not classified based on available information.

Components:

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.

Chronic toxicity

Germ cell mutagenicity

Not classified based on available information.

Components:

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 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:

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.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Repeated dose toxicity

Components:

diiron trioxide:

Species	:	Rat, male and female
NOAEL	:	4,7 mg/m³
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/m³
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/m³
Method	:	OECD Test Guideline 412
GLP	:	yes
Remarks	:	Subacute toxicity Test results on an analogous product

Aspiration toxicity

Not classified based on available information.

Section 12: Ecological information

Ecotoxicity

Components:

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 GLP: no

Persistence and degradability

Components:

diiron trioxide:

Biodegradability	:	Remarks: The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulative potential

Components:

diiron trioxide:

Partition coefficient: n-octanol/water : Remarks: Not applicable

Mobility in soil

No data available

Other adverse effects

Product:

Additional ecological information : Ecotoxicological data are not available.
No known significant effects or critical hazards.

Section 13: Disposal considerations

Disposal methods

Waste from residues : Examine possibilities for re-utilisation.
Product residues and uncleaned empty containers should be packaged, sealed, labelled, and disposed of or recycled according 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.

Contaminated packaging : Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14: Transport information

International Regulations

IATA-DGR
Not regulated as a dangerous good

IMDG-Code
Not regulated as a dangerous good

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

Not applicable for product as supplied.

National Regulations

NZS 5433
Not regulated as a dangerous good

Hazard and Handling Notes.
Not dangerous cargo., Keep dry., Keep away from cargo susceptible to odour., Keep away from foodstuffs, acids and alkalis.

Section 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

International Chemical Weapons Convention (CWC) Schedules of Toxic Chemicals and Precursors : Not applicable

HSNO Approval Number

Not applicable

HSW Controls

Certified handler certificate not required.
Tracking hazardous substance not required.
Refer to the Health and Safety at Work (Hazardous Substances) Regulations 2017, for further information.

Section 16: Other information

Date format : dd.mm.yyyy

Full text of other abbreviations

ACGIH	:	USA. ACGIH Threshold Limit Values (TLV)
NZ OEL	:	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
ACGIH / TWA	:	8-hour, time-weighted average
NZ OEL / WES-TWA	:	Workplace Exposure Standard - Time Weighted average

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Or-

ganisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

The data contained in this Safety Data Sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. 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 to be a guidance for processing and does not contain any 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. It is the responsibility of the recipient of the product to ensure that any proprietary rights and existing laws and legislation are observed.