Dricon OxiTone™ Dark Brown/Light Brown

Safety Data Sheet

1. Identification of Substance & Company

Product	
Product name	Dricon OxiTone™ Dark Brown/Light Brown
Other names	Synthetic Iron Oxide Brown Pigments
Product code	NA
HSNO approval	non hazardous
Approval description	NA
UN number	NA
Proper Shipping Name	NA
Packaging group	NA
Hazchem code	NA
Uses	Colourant for cement based products
Company Details	
Company	**Dricon Firth Industries**
Address	585 Great South Rd, Penrose PO Box 99904, Newmarket, 1149 Auckland, New Zealand
Telephone	+64-9- 583 2100
Website	www.dricon.co.nz

Emergency Telephone Number: 0800-764 766

2. Hazard Identification

Approval

This product has been assessed as not hazardous under the Hazardous Substances and New Organisms Act (HSNO).

Classes	**Hazard Statement**
none	

SYMBOLS

None

Other Classifications

There are no other classifications that are known to apply.
NOTE: Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat.

Precautionary Statements

none

3. Composition / Information on Ingredients

Component	CAS/ Identification	Conc (%)
Black Iron Oxide	12227-89-3 or 1317-61-9	5-60%
Yellow Iron Oxide	51274-00-1	5-75%
Red Iron Oxide	1332-37-2	5-75%

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

4. First Aid

General Information

If medical advice is needed, have product container or label at hand. You should call the National Poisons Centre if you feel that you may have been harmed by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

Recommended first aid facilities Ready access to running water is recommended.

Exposure	
Swallowed	Do NOT induce vomiting. Give a glass of water to drink. Contact a doctor if concerned.
Eye contact	If product gets in eyes, wash material from them with running water for several minutes. If symptoms persist, seek medical advice.
Skin contact	Flush immediately with large amounts of water. Remove all contaminated clothing. Contact a doctor if experiencing symptoms
Inhaled	Generally, inhalation of dust is unlikely to result in adverse health effects. If coughing, dizziness or shortness of breath is experienced, remove the patient to fresh air immediately. If patient is unconscious, place in the recovery position (on the side) for transport and contact a doctor.

Advice to Doctor

Treat symptomatically. See Section 11 for information on potential long term health effects from exposure to very fine crystalline silica dust.

5. Firefighting Measures

Fire and explosion hazards:	There are no specific risks for fire/explosion for this chemical. It is non-combustible.
Suitable extinguishing substances:	Not applicable.
Unsuitable extinguishing substances:	Unknown.
Products of combustion:	Product does not burn. Dust may form irritating atmosphere. Product will react exothermically with water. Product may decompose in a fire and produce toxic or corrosive fumes.
Protective equipment:	Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.
Hazchem code:	NA

6. Accidental Release Measures

Containment	There is no current legal requirement for containment of this product.
Emergency procedures	Generally, the containers size will limit a large spill from occurring. If a significant spill occurs: Stop leak if safe or necessary. Isolate area. Collect spill, see below. Transfer to container for disposal. Dispose of according to guidelines below (Section 13).
Clean-up method	This product is not considered flammable or ecotoxic. Small spills do not require any special clean up method. Larger spills (e.g., greater than 10kg) should be mopped up and collected.
Disposal	Avoid the generation of dust. Sweep up carefully or vacuum. Collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.
Precautions	No special protective clothing is normally necessary.

7. Storage & Handling

Storage	Avoid storage of harmful substances with food. Containers should be kept closed in order to minimise contamination. Avoid contact with incompatible substances as listed in Section 10.
Handling	Keep exposure to a minimum, and minimise the quantities kept in work areas. Avoid creation of dusts. See section 8 with regard to personal protective equipment requirements.

8. Exposure Controls / Personal Protective Equipment

Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 3mg/m^3 for respirable particulates and 10mg/m^3 for inhalable particulates when limits have not otherwise been established.

NZ Workplace Exposure Stds	Ingredient	WES-TWA	WES-STEL
	iron oxides	5mg/m^3 (as Fe)	data unavailable

Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

Personal Protective Equipment

Eyes	Protective eyewear is not normally necessary when using this product. However, it always prudent to use protective eyewear if dust is likely.
Skin	Protective gloves and clothing are not normally necessary. However, it is prudent to wear gloves when handling chemicals in bulk or for an extended period of time.
Respiratory	Respirator is not required under normal use. Ensure adequate natural ventilation. If product is being used in confined conditions and dust formation is likely, the use of a particulate mask or respirator is recommended.

WES Additional Information

Not applicable

9. Physical & Chemical Properties

Appearance	Brown coloured fine powder/dust
Odour	no odour
pH	3-6 (typically)
Vapour pressure	no data
Viscosity	no data
Boiling point	no data
Volatile materials	no data
Freezing / melting point	>1000°C
Solubility	insoluble in water
Specific gravity / density	4.8g/ml @ 20°C
Flash point	no data
Danger of explosion	no data
Auto-ignition temperature	no data
Upper & lower flammable limits	no data
Corrosiveness	non corrosive

10. Stability & Reactivity

Stability	Stable
Conditions to be avoided	Containers should be kept closed in order to avoid contamination. Keep from extreme heat, open flames and direct sunlight.
Incompatible groups	Strong acids.
Substance Specific Incompatibility	None known
Hazardous decomposition products	Some toxic or irritating fumes may be released during thermal decomposition (e.g. fire)
Hazardous reactions	At >60°C black iron oxide may decompose to Fe_2O_3 in an exothermic reaction. At >180°C Yellow iron oxide my lose water of hydration to form Fe_2O_3.

11. Toxicological Information

Summary

IF SWALLOWED: Ingestion of this product may cause gastrointestinal irritation.
IF IN EYES: Eye contact may cause mechanical irritation. May result in mild abrasion.
IF ON SKIN: May cause abrasive irritation in contact with the skin, resulting in redness and itching. Prolonged or repeated skin contact may cause irritation.
IF INHALED: Exposure to Iron Oxide (Dust and Fume) can cause metal fume fever. This is a flu-like illness with symptoms of metallic taste, fever and chills, aches, chest tightness and cough. Inhalation may cause irritation to the respiratory tract. Symptoms may include coughing and shortness of breath.

Supporting Data

Acute	**Oral**	Using LD_{50}'s for ingredients, the calculated LD_{50} (oral, rat) for the mixture is >5,000 mg/kg. Data considered includes: Iron (III) Oxide >10000mg/kg (rat).
	Dermal	Using LD_{50}'s for ingredients, the calculated LD_{50} (dermal, rat) for the mixture is >5000 mg/kg. Data considered includes: Iron (III) Oxide LDLo 30mg/kg (dog)
	Inhaled	No evidence of acute inhalation toxicity.
	Eye	The mixture is not considered to be an eye irritant. Any irritation may be due to mechanical irritation of the particles.
	Skin	The mixture is not considered to be a skin irritant under HSNO.
Chronic	**Sensitisation**	No ingredient present at concentrations > 0.1% is considered a sensitizer.
	Mutagenicity	No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	Iron Oxides are not considered carcinogenic.
	Reproductive / Developmental	No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation.
	Systemic	No ingredient present at concentrations > 1% is considered a target organ toxicant.
	Aggravation of existing conditions	None known.

12. Ecological Data

Summary

This mixture is not considered ecotoxic.

Supporting Data

Aquatic	No evidence of aquatic ecotoxicity. Estimated EC_{50} of the mixture is >100mg/L,
Bioaccumulation	No data
Degradability	No data
Soil	No evidence of soil ecotoxicity.
Terrestrial vertebrate	No evidence of toxicity towards terrestrial vertebrates.
Terrestrial invertebrate	No evidence of toxicity towards terrestrial invertebrates.
Biocidal	no data

13. Disposal Considerations

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	Disposal of this product must comply with the Hazardous Substances (Disposal) Notice 2017 and the requirements of the Resource Management Act for which approval should be sought from the Regional Authority.
Contaminated packaging	Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Ensure that the package is rendered incapable of containing any hazardous substance and is disposed in a manner that is consistent with the requirements of the substance it contained and the material of the package. If possible reuse or recycle packaging.

14. Transport Information

Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007

There are no specific restrictions for this product (not a dangerous good).

UN number:	NA	**Proper shipping name:**	NA
Class(es)	NA	**Packing group:**	NA
Precautions:	NA	**Hazchem code:**	1T (recommended)

15. Regulatory Information

This product is not considered hazardous under the Hazardous Substances and New Organisms Act (HSNO).

Specific Controls

Key workplace requirements are:

SDS	Not required.
Inventory	An inventory of all hazardous substances must be prepared and maintained.
Labelling	No removal of labels and/or decanting of product into other containers can occur.
Emergency plan	Not required.
Certified handler	Not required.
Tracking	Not required.
Bunding and secondary containment	Not required.
Signage	Not required.
Location compliance certificate	Not required.
Flammable zone	Not required.
Fire extinguisher	Not required.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans.

16. Other Information

Abbreviations

Approval Code	NA
CAS Number	Unique Chemical Abstracts Service Registry Number
Ceiling	Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
Controls Matrix	List of default controls linking regulation numbers to Matrix code (e.g. T1, I16).
EC_{50}	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
EPA	Environmental Protection Authority (New Zealand)
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and Regulations)
IARC	International Agency for Research on Cancer
LEL	Lower Explosive Limit
LD_{50}	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC_{50}	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
MSDS (SDS)	Material Safety Data Sheet (or Safety Data Sheet)
PES	Prescribed Exposure Standard means a WES or a biological exposure standard that is prescribed in a regulation, a safe work instrument or an approval under HSNO (including group standards).
STEL	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
TWA	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
UEL	Upper Explosive Limit
UN Number	United Nations Number
WES	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone.

References

Data	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
Controls	EPA notices, www.epa.govt.nz, Health and Safety at Work (Hazardous Substances) Regulations 2017, www.legislation.govt.nz
WES	The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz.
Other References:	EU ECHA, Ingredients SDS's, ChemIDplus

Review

Date	**Reason for Review**
June 2018	NA – new SDS

Disclaimer

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely HSNO classifications, are based on our experience, EPA Guidelines and international classifications. A compliance record is available on request. This SDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the SDS author, email info@datachem.co.nz or phone: (09) 940 30 80.