



1. Identification of Substance & Company

Product

| | |
|----------------------|-------------------------------------|
| Product name | Dricon OxiTone™ Dark Brown |
| Other names | Synthetic Iron Oxide Brown Pigments |
| Product code | NA |
| HSNO approval | non hazardous |
| Approval description | NA |
| UN number | NA |
| DG Class | NA |
| Proper Shipping Name | NA |
| Packaging group | NA |
| Hazchem code | NA |
| Uses | Colourant for cement based products |

Company Details

| | | |
|-----------|--|--|
| Company | Dricon Firth Industries | |
| Address | 810 Great South Road Penrose Auckland, 1060 New Zealand | PO Box 14534 Panmure Auckland, 1741 New Zealand |
| Telephone | +64-9- 583 2121 | |
| Website | www.dricon.co.nz | |

Emergency Telephone Number: 0800-764 766

2. Hazard Identification

Approval

This product is not considered hazardous under the Hazardous Substances and New Organisms Act (HSNO), according to the criteria in the Hazardous substances (Hazard Classification) Notice 2020.

GHS 7 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/m³ for respirable particulates and 10mg/m³ 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

| | |
|--------------------|---|
| General | Personal Protective Equipment (PPE) should not be used as the primary means of exposure protection, except in the event of an accident or emergency situation or where all other means of protection have proven to inadequate. Clean PPE after use or dispose of as appropriate. Store PPE for re-use in a clean place. Regular training on the correct use of PPE should be provided. In particular the correct fitting and use of respirators and where applicable the cleaning of respirators should be undertaken. |
| Eyes | Protective eyewear is not normally necessary when using this product. However, it is 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 data |
| Odour Threshold | no data |
| pH | 3-6 (typically) |
| Freezing/melting point | >1000°C |
| Boiling Point | no data |
| Flashpoint | no data |
| Flammability | no data |
| Upper & lower flammable limits | no data |
| Vapour pressure | no data |
| Vapour density | no data |
| Specific gravity/density | 4.8g/ml @ 20°C |
| Solubility | insoluble in water |
| Partition coefficient | no data |
| Auto-ignition temperature | no data |
| Decomposition temperature | no data |
| Viscosity | no data |
| Particle Characteristics | no data |



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 ₂ O ₃ in an exothermic reaction. At >180°C Yellow iron oxide may lose water of hydration to form Fe ₂ O 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 Aggravation of existing conditions | No ingredient present at concentrations > 1% is considered a target organ toxicant. 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

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|------------------------|--|
| 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: | NA |

IMDG

| | | | |
|---------------------|----|------------------------------|---------------|
| UN number: | NA | Proper shipping name: | Not regulated |
| Class(es) | NA | Packing group: | NA |
| Precautions: | NA | EmS | NA |

IATA

| | | | |
|---------------------|----|------------------------------|---------------|
| UN number: | NA | Proper shipping name: | Not regulated |
| Class(es) | NA | Packing group: | NA |
| Precautions: | NA | ERG Guide | NA |

15. Regulatory Information

This substance is not considered to be hazardous under GHS 7. All ingredients appear on the NZIoC.

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 |
| EC₅₀ | 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) |



| | |
|------------------------|--|
| GHS | Globally Harmonised System of Classification and Labelling of Chemicals, 7 th revised edition, 2017, published by the United Nations. |
| 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 |
| LD₅₀ | Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats). |
| LC₅₀ | Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats) |
| NZIoC | New Zealand Inventory of Chemicals |
| 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 |
| STOT RE | System Target Organ Toxicity – Repeated Exposure |
| STOT SE | System Target Organ Toxicity – Single Exposure |
| 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 |
| July 2023 | update |

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 GHS 7 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: +64 21 1040951.

