

MATERIAL SAFETY DATA SHEET**SECTION 1 - MATERIAL IDENTIFICATION AND USE**Product : **BROWN DCE 40924**Manufacturer's name : **STARCO CONCENTRATES INC.** Telephone number: **514-645-9559**

12335 April Street

Montreal, Qc, Canada

H1B 5L8

Chemical name	Chemical Family	Chemical Formula
Dry compound	Pigment and/or additives	Proprietary mixture
Molecular weight	Trade Name and Synonyms	Material Use
Not applicable	Color/additives concentrates, masterbatch	Coloration of PVC compounds

SECTION 2 – COMPOSITION/INFORMATION ON INGREDIENTS

% Weight	CAS number	Ingredient	OSHA PEL (mg/m ³)	ACGIH TLV (mg/m ³)
3-7	1317-65-3	Calcium carbonate	5	10
0.1-1	14808-60-7	Crystalline silica	0.1	0.1
1-5	1309-37-1	Iron(III) oxide	10	5
10-30	68186-94-7	Manganese ferrite spinel	5	0.2
10-30	13463-67-7	Titanium dioxide	Not available	10
0.1-1	112926-00-8	Amorphous silica	0.8	Not available

SECTION 3 – HAZARDS IDENTIFICATION**Potential Health Effects****Acute toxicity**

Skin	Non-corrosive and non-sensitizing. Prolonged contact may result in rashes/irritations due to drying of the skin and/or mechanical abrasion related to skin-to-clothing contact or skin-to-skin contact.
Inhalation	Inert nuisance dust. Temporary drying effect and/or irritation of mucous membranes may result from excessive exposure. Exposure to dust may aggravate pre-existing respiratory conditions.

Ingestion	If ingested, do not induce vomiting unless directed to do by medical personnel. Get medical attention.
Chronic Effects	Prolonged dust inhalation may cause silicosis. Prolonged and excessive inhalation of dust may lead to chronic pulmonary disease.
Eyes	Inert foreign body hazard only.

SECTION 4-FIRST AID MEASURES

Eye contact:	In the case of contact with eyes, rinse immediately with plenty of water. If symptoms persist, call a physician.
Skin contact:	Wash skin with soap and water. Use of moisturizing may be helpful.
Ingestion:	No adverse health effects anticipated by this route during proper industrial handling. If accidentally swallowed, rinse mouth thoroughly with water and afterwards, drink plenty of water. In case of discomfort, obtain medical attention.
Inhalation:	In case product dust is released: Possible discomfort: cough, sneezing. Move victims into fresh air.

SECTION 5-FIRE FIGHTING MEASURES

Flash point:	Not flammable.
Suitable extinguishing media:	No fire hazard.
Hazardous combustion products:	No hazardous decomposition products.
<u>Explosion data</u>	
Sensitivity to mechanical impact:	Not applicable
Sensitivity to static discharge	Not applicable
Protective equipment and precautions for firefighters	As any fire, wear self-contained breathing apparatus and full protective gear.
<u>NFPA</u>	Health Hazard 1 Flammability 0 Stability 0

SECTION 6-ACCIDENTAL RELEASE MEASURES

Personal precautions:	Avoid inhalation of dust by arranging adequate ventilation, or use an appropriate dust mask. Avoid excessive contact with the skin.
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Methods for containment: Prevent further leakage or spillage if safe to do so. Use dyking or absorbant to prevent run-off from entering waterways.

Methods for cleaning up: Use any feasible mechanical mean (e.g. vacuuming, sweeping) but avoid dusting during clean up.

SECTION 7- HANDLING AND STORAGE

Handling	Handle in accordance with good industrial hygiene and safety practice. Avoid dust formation. Avoid contact with skin, eyes and clothing. Wash hands thoroughly before eating, drinking or smoking.
Storage	Keep container tightly closed in a dry and well-ventilated place. Store in original container.

SECTION 8-EXPOSURE CONTROLS/PERSONAL PROTECTION

Personal protective equipment

Engineering measures	Good natural ventilation will be sufficient in most circumstances. Local exhaust ventilation may be necessary if airborne dust concentration approaches the exposure limit(s).
Eye /face protection	Safety glasses with side-shields. Goggles.
Skin and body protection	Wear protective gloves/clothing.
Respiratory protection	Use NIOSH approved dust HEPA-type respirator if limit(s) is or may be exceeded.
Hygiene measures	Individuals having sensitive skin may find it beneficial to use a barrier cream or moisturizer when excessive or prolonged contact with the skin is likely.

SECTION 9-PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Brown	Odor	None
Physical state	Solid	ph	Not applicable
Flash point	None	Auto-ignition temperature	Not applicable
Boiling point/boiling range	Not applicable	Melting point/range	130 - 156°C
Explosion limits	Not applicable	Flammability Limits in air	Not applicable

Density (calculated)	3.50 g/cm ³	Molecular weight	Not applicable
Water solubility	< 0.5 mg/100 mg	Evaporation rate	Not applicable
Vapor pressure	Not applicable	Vapor density	Not applicable
VOC content(%)	None		

SECTION 10-STABILITY AND REACTIVITY

Stability	Stable under normal conditions.
Incompatible products	Aluminum and aluminum salts. Reacts with strong acids to liberate carbon dioxide.
Conditions to avoid	Contact with incompatible substances.
Hazardous decomposition products	Carbon dioxide and calcium oxide.
Hazardous polymerization	Hazardous polymerization does not occur.

SECTION 11-TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Iron(III) oxide	>5000 mg/kg (Rat)	Not available	>210 mg/m ³
Zinc ferrite	>2000 mg/kg (Rat)	Not available	Not available
Manganese ferrite spinel	>5000 mg/kg (Rat)	Not available	Not available
Titanium dioxide	>25000 mg/kg (Rat) >10000 mg/kg (Mouse male)	>10000 mg/kg (rabbit)	>6820 mg/m ³
Limestone	6450 mg/kg (Rat)	Not available	Not available
Quartz (crystalline silica)	Not available	Not available	Not available

Carcinogenicity effects	IARC has concluded that there is sufficient evidence in humans for the carcinogenicity of inhaled crystalline silica in the form of quartz from occupational sources. IARC also classifies TiO ₂ "2B – possibly carcinogenic".
Reproductive effects	Contains material which can impair male fertility
Teratogenicity	Not available
Mutagenicity	Not available

Synergistic Materials

Not available

Section 12-ECOLOGICAL INFORMATION**Ecotoxicity**

Available evidence indicates that mixture does not cause any significant adverse environmental effects

Chemical name	Toxicity to algae	Toxicity to fish	Microtox	Daphnia magna(water flea)
Zinc ferrite		LC50= 1000 mg/L (Golden orfe)	EC50:>1000 mg/l (pseudomonas putida)	EC50>1000 mg/L
Iron(III) oxide		LC50> 50000 mg/L (Danio rerio) 96 hours	EC50:>10000 mg/l Micro-organism Activated sludge	EC50>100 mg/L 48 hours
Titanium dioxide		LC50: no mortality at up to 1000 mg/L	>10000 mg/L - no effect (Pseudomonas fluorescens) >5000 mg/L-no effect (Escherichia coli)	EC50>100 mg/L 48 hours

Persistence and degradability

Product is not biodegradable

Bioaccumulation /accumulation

Does not bioaccumulate

Mobility

There is no evidence of mobility of these products.

SECTION 13-DISPOSAL CONSIDERATIONS**Waste disposal methods**

This material, as supplied, is not a hazardous waste according to state and federal regulations (40 CFR 261).

Contaminated packaging

Contaminated packages are not considered hazardous for disposal into sanitary landfill or industrial waste disposal landfill. Please review appropriate national and local waste regulations.

SECTION 14-TRANSPORT INFORMATION

DOT Not regulated

TDG Not regulated

IMO Not regulated

SECTION 15-REGULATORY INFORMATION

CEPA status All components of this product are on the Canadian List

WHMIS HAZARD CLASS

D2A Very toxic materials

NFPA

Health	1
Flammability	0
Physical Hazard	0

HMIS

Health	1
Flammability	0
Physical Hazard	0

SECTION 16-OTHER INFORMATION

Prepared by	Phone number	Date (last revision)
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Sources used

COOHS literature and supplier's MSDS

To the best of Starco Concentrates' knowledge, the aforementioned information is accurate as of the date of preparation. However, since the conditions of use of this product are not within the control of Starco Concentrates. It is the user's responsibility to determine the suitability of his particular purpose. Starco Concentrates assumes no obligation or liability regarding the accuracy of this data, or the results to be obtained from their use.