Designer Concrete Colour Sealer Tint

Safety Data Sheet according to WHS and ADG requirements: Revised Issue Date: 10 January 2022

SECTION 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier:

Product Name: Designer Concrete Colour Sealer Tint, HT Colour Sealer Tint, (Part A)
Product Code: Not available
Other means of identification: Not available

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

Colour Pigmented Tint of various shades for mixing with Designer Concrete Clear Sealer Base (Part B) used for colour sealer coating of plain and coloured concrete flatwork surfaces; and, spray-on resurfaced concrete flatwork. The product is not suitable for waterproofing concrete flatwork.

Details of the supplier of the safety data sheet:

Registered Company Name: Designer Concrete Coatings Pty Ltd
Address: 19 Liverpool Street, Ingleburn, NSW, 2565, Australia
Telephone: +61 2 9829 3311
Fax: +61 2 9829 3544
Website: www.designerconcrete.com.au
Email: sales@designerconcrete.com.au

Emergency telephone number:
Association / Organisation: Not Available
Emergency telephone number: Australian Poisons Information Centre: 13 11 26
Other emergency telephone numbers: Police / Fire: 000. Manufacturer: 0414 466 180

SECTION 2: HAZARDS IDENTIFICATION

This material is hazardous according to health criteria of Safe Work Australia

Signal Word: **Danger**

Hazard Classification:

Flammable Liquids – Category 3
Acute Toxicity: Inhalation – Category 4
Acute Toxicity: Dermal – Category 4
Specific Target Organ Toxicity: Repeated Exposure – Category 2
Specific Target Organ Toxicity: Single Exposure – Category 3
Skin Irritation – Category 2

Serious eye damage / irritation – Category 1
Aspiration Hazard – Category 1

Hazard Statement(s)

H226	Highly Flammable liquid and vapour
H302	Harmful if swallowed
H304	May be fatal if swallowed and enters airways
H312	Harmful in contact with skin
H315	Cause skin irritation
H318	Cause serious eye damage
H332	Harmful if inhaled
H336	May cause drowsiness or dizziness
H373	May cause damage to organs through prolonged or repeated exposure
AUH066	Repeated exposure may cause skin dryness or cracking

Precautionary Statement(s) Prevention

P102	Keep out of reach of children
P103	Read label before use
P202	Do not handle until all safety precautions have been read and understood
P210	Keep away from all source of ignition – No smoking
P233	Keep container tightly closed
P240	Ground/bond container and receiving equipment
P241	Use explosion-proof electrical; lighting and all other equipment
P242	Using only non-sparking tools
P243	Take precautionary measures against static discharge
P260	Do not breath mist, vapour or spray
P264	Wash hands, face and all exposed skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P271	Use only outdoors or in a well-ventilated area
P280	Wear protective clothing, gloves, eye / face protection and suitable respirator as required

Precautionary Statement(s) Response

P101	If medical advice is needed, have product container or label on hand
P301+310	If SWALLOWED: Immediately call Poison Centre or doctor/physician
P331	Do NOT induce vomiting
P302+352	If ON SKIN: Wash with soap and water
P303+361+353	If ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower
P304+340	If INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P312	Call POISON CENTRE or doctor / physician if you feel unwell
P305+351+338	If IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing
P363	Wash contaminated clothing before re-use
P337+313	If eye irritation persists seek medical advice / attention
P370+378	In CASE OF FIRE: Water fog, foam or dry agents for extinguishment

Precautionary Statement(s) Storage

P405	Store locked-up
P403+235	Store in well-ventilated place. Keep cool

Precautionary Statement(s) Disposal

Poisons Schedule:	S6
P501	Dispose of contents / container in accordance with local, regional, national and international regulations

DANGEROUS GOODS CLASSIFICATION: 3 Flammable Liquid

Classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail; and, the New Zealand NZS5433: Transport of Dangerous Goods on Land"
CLASS: 3 Flammable Liquid

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Entity:	CAS No.	EINECS No.	Index No.	Proportion (%w/w)
Acrylic Polymer (non Hazardous)	N/A	N/A	N/A	12.5 – 17.5%
Xylene (mixed Isomers*)	1330-20-7	215-535-7	601-022-00-9	12.5 – 17.5%
Ethyl Benzene (As a component of Xylene)	100-41-4	202-894-4	601-023-00-4	<5%
1-Methoxy Propyl Acetate-2 (2-Methoxy-1-Methylethyl Acetate)	108-65-6	203-603-9	607-195-00-7	2.5 – 7.5%
2-Methoxypropyl Acetate **	70657-70-4	274-724-2	607-251-00-0	<0.1%
Other Ingredients (non Hazardous)	N/A	N/A	N/A	<1.0%
OY-122 OXIDE YELLOW				
Pigment Yellow 42 – C.I. 77492 Hydrated Ferric Oxide, Synthetic	20344-49-4 /51274-00-1	243-746-4	Not Available	50 – 55%
TW-125 WHITE				
Pigment White 6 – C.I. 77891 Titanium Dioxide (Rutile, Chloride Process)	13463-67-7	236-675-5	N/A	60 – 70%
OR-131 OXIDE RED				
Pigment Red 101 – C.I. 77491 Synthetic Iron Oxide, *a*-Fe_2O_3	1309-37-1	215-570-8 /215-168-2	Not Available	60 – 70%
			TOTAL:	**100%**

*Xylene may be the common name for any combination of the following:

1,2-Dimethylbenzene (Ortho Xylene) – CAS# 95-47-6
1,3-Dimethylbenzene (Meta Xylene) – CAS# 108-38-3
1,4-Dimethylbenzene (Para Xylene) – CAS# 106-42-3

** Present below levels which affect the Classification of the material
All Components are listed and/or registered in accordance with the Australian Inventory of Chemical Substances (AICS).

SECTION 4: FIRST AID MEASURES

If Poisoning occurs, contact a doctor or Poisons Information Centre (131 126 Australia); or, (0800 764 766 New Zealand)

Inhalation:

Remove victim from exposure – avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If breathing is laboured and patient cyanotic (blue), ensure airways are clear and have qualified person give oxygen through a facemask. If breathing has stopped apply artificial respiration at once. In the

event of cardiac arrest, apply external cardiac massage. Seek immediate medical advice: Call 000 ambulance emergency.

Skin Contact:

For gross contamination, immediately drench with water and remove clothing. Continue to flush skin and hair with plenty of water (and soap if material is insoluble). For skin burns, cover with clean dry dressing until medical help is available. If blistering occurs, do NOT break blisters. If swelling, redness, blistering or irritation occurs, seek medical assistance. A component of this material can be absorbed through the skin and / or skin abrasions with resultant toxic effects. Seek immediate medical advice.

Eye Contact:

If in eyes wash out immediately with large amount of water. Seek immediate medical attention.

Ingestion:

Rinse mouth with water. If swallowed, do NOT induce vomiting. Give glass of water to drink. Do NOT give anything by mouth to an unconscious patient. If vomiting occurs, give additional water to drink. Seek immediate medical advice.

PPE for First Aiders:

Wear overalls, safety glasses and impervious gloves. Use with aquatic ventilation. If inhalation risk exists wear organic vapour/particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make final assessment. Always wash hands before smoking, eating or drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Medical Attention:

Treat symptomatically.

SECTION 5: FIREFIGHTING MEASURES:

Extinguishing Media:

Suitable Extinguishing Equipment:
Alcohol-resistance foam is the preferred fire-fighting medium. If material is involved in a fire use alcohol-resistance foam, standard foam or Dry agent (Dry Chemical Powder, CO2).

Specific Hazards:
Flammable liquid. May form flammable vapour mixtures with air. Flameproof equipment necessary in areas where this chemical is being used. Nearby equipment must be earthed. Electrical requirements for work area should be assessed according to AS3000. Vapour may travel a considerable distance to source of ignition and flash back. Avoid all ignition sources. All potential sources of ignition (open flames, pilot lights, furnaces, spark producing switches and electrical equipment etc) must be eliminated both in and near the work area. Do NOT smoke.

Fire Fighting Further Advice:

Heating can cause expansion or decomposition leading to violent rupture of containers. If safe to do so, remove containers from path of fire. Keep containers cool with water spray. On burning, may emit toxic fumes,

including oxides of carbon and nitrogen. Fire fighters should wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

Special Protective Equipment and Precautions for Fire Fighters:

Wear breathing apparatus when fighting fire.

Hazchem Code: 3[Y]

SECTION 6: ACCIDENTAL RELEASE MEASURES:

Minor Spill:

Extinguish naked flames. And avoid sparks. Wear protective equipment to prevent skin and eye contamination. Wipe up with absorbent material (clean rags or paper towels) or absorb with sand, sawdust or earth. Collect in drums and arrange for disposal by a competent contractor in accordance with local regulations.

Major Spill:

Shut off all possible sources of ignition. Clear area of all unprotected personnel. Prevent further leakage or spillage if safe to do so. Slip hazard when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up-wind or increase ventilation. Contain spills – prevent run-off into drains and waterways. Use absorbent material (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal by competent contractor in accordance with local regulations. If contamination of drains, sewers or waterways occurs, immediately advise local emergency services and EPA.

Dangerous Goods – Initial Emergency Response Guide No. 14.

SECTION 7: HANDLING AND STORAGE:

Precaution(s) for Safe Handling:

This product is flammable... Avoid sources of heat, naked flames and sparks. Use in well ventilated areas. Use flame-proof equipment. No Smoking. Earth all containers to reduce the possibility of sparks from static electricity. Avoid skin and eye contact and inhalation of vapours, mist or aerosols.

Conditions for Safe Storage:

Store in a cool, dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in SECTION 10. Store away from heat sources or ignition sources. Keep containers closed when not in use – check regularly for leaks.

This material is classified as a **Dangerous Good Class 3 Flammable Liquid** under the criteria of Australian Dangerous Goods Code and must be stored in accordance with the relevant regulations.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION:

Control Parameters:

Chemical Entity	**TWA [1]**		**STEL [2]**	
The following TLV's apply to the solvents used in this material	ppm	mg/m3	ppm	mg/m3
Xylene	80	350	150	655
Ethyl benzene	100	434	125	543
1-Methoxy Propyl Acetate-2	50	274	100	548 (ACGIH)
Note: Oxide materials used in the manufacture of this product are controlled at the point of production. Control Parameters do not apply for the mixed end-use product.				

[1] Time Weighted Average concentration

[2] Short-Term Exposure Limit.

These exposure guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentration of chemicals. They are not a measure of relative toxicity. If the direction for use stated on the product label is followed, exposure of individuals using the product should not exceed the above standard. The standard was created for workers' routinely, potentially exposed during product manufacture.

Biological Limit Values:

As per the "National Model Regulations for the Control of Workplace Hazardous Substances (Safe Work Australia)" the ingredients in this material do not have a Biological Limit Allocated.

Engineering Controls:

Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use with local exhaust ventilation or while wearing appropriate respirator. Ventilation equipment should be explosion-proof. Vapour heavier that air; Avoid / prevent concentrations building in hollows or sumps. DO NOT enter confined spaces where vapour may have collected. Keep containers closed when not in use.

Exposure Controls:

Personal Protection Equipment (PPE).

G: OVERALL; SAFETY SHOES; SAFETY GLASSES; GLOVES; RESPIRATOR.

PPE: Wear overalls & protective footwear AS/NZS 2210; chemical safety glasses/goggles AS1336 & AS/NZS 1337; and, impervious gloves. Use with adequate ventilation. If inhalation risk exists wear organic vapour / particulate respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716. Available information suggests that gloves made from nitrile rubber should be suitable for intermittent contact. Refer to AS2161 / AS/NZS 4510 set 2008. However, due to variations in glove construction and local conditions the user should

make a final assessment. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Hygiene Measures:

Keep away from foodstuffs, drink and animal foodstuffs & feeding troughs. When using the material, do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid skin and eye contact and inhalation of vapour, mist or aerosols. Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES:

Property	Unit of Measurement	Typical Value
Appearance	Not Applicable	Viscous Liquid
Odour	Not Applicable	Solvent Odour
Solubility	g/l	0.0
Vapour Pressure @ 20°C (Xylene)	kPa	0.8 – 1.2
Boiling Point (Xylene)	°C	136 - 145
% Volatile	%	**OY-122 Oxide Yellow** 32.5 ± 0.5% **TW-125 Titanium White** 23.5 ± 0.5% **RO-131 Oxide Red** 24.5 ± 0.5%
Melting Point / Range	°C	Not Available
Auto Ignition Temperature (Xylene)	°C	499
Decomposition Point	°C	Not Available
Flash Point (Xylene)	°C	23 – 27 (Closed Cup)
Viscosity @ 25°C	Not Applicable	Viscous Paste
Flammability Limits	% (v/v)	1.3 LEL – 7.1 UEL
Volatile Content	% (w/w)	**OY-122 Oxide Yellow** 67.5 ± 0.5% **TW-125 Titanium White** 76.5 ± 0.5% **RO-131 Oxide Red** 75.5 ± 0.5%
Vapour Density (Xylene)	Air = 1	3.7
Specific Gravity @ 25°C	Water = 1	**OY-122 Oxide Yellow** 1.610 ± 0.005% **TW-125 Titanium White** 1.980 ± 0.005% **RO-131 Oxide Red** 2.000 ± 0.005%
Evaporation Rate (Xylene)	Butyl Acetate = 1	0.7
VOC Content	gm/L	**OY-122 Oxide Yellow** 520.0 ± 5 **TW-125 Titanium White** 385.0 ± 5 **RO-131 Oxide Red** 486.5 ± 5

n-Octanol / Water Partition Coefficient	Log Pow	3.12 – 3.20

SECTION 10: STABILITY AND REACTIVITY

Reactivity:

No reactivity hazards are known for the material. Refer to Section 7.

Chemical Stability:

This material is thermally stable when stored and used in accordance with this Safety Data Sheet and directions on the product label.

Conditions to Avoid:

Elevated temperature. Sources of heat and ignition. Open flames. Refer to Section 7.

Incompatible Materials:

Incompatible with oxidising agents. Refer to Section 7

Hazardous Decomposition Products:

Oxides of carbon and nitrogen; Smoke and other toxic fumes. Refer to Section 5.

Hazardous Reactions:

Further Information: Refer to Technical Bulletin "Ignition Hazards of Organic Chemical Vapours"

SECTION 11: TOXICOLOGICAL INFORMATION:

Aromatic hydrocarbons, such as those contained in this product irritate the skin and mucous membranes and are narcotic if inhaled in high concentrations. Symptoms or health effects that may or will arise if the product is mishandled and overexposure occurs are:

Acute Effects:

Ingestion:

Swallowing can result in nausea, vomiting and central nervous system depression. Ingestion in large quantity can result in ataxia (loss of muscle co-ordination) and greater likelihood of vomit entering the lungs and causing subsequent complications.

Eye Contact:

The material may cause eye irritation.

Skin Contact:

Contact with skin will result in irritation. Open cuts, abraded or irritated skin should not be exposed to this material. A component of the material can be absorbed through the skin and can result in similar symptoms to those described for 'ingestion'.

Inhalation:

The material may be an irritant to mucous membranes and respiratory tract. Inhalation of vapours can result in headaches, dizziness and possible nausea. Inhalation hazard is increased at higher temperatures. High

concentrations can produce central nervous system depression which in turn can lead to loss of co-ordination, impaired judgement and if exposure is prolonged lead to unconsciousness.

Acute Toxicity:

Inhalation:

This material has been classified as a Category 4 Hazard.

Acute toxicity estimate (based on ingredients): 10-20 mg/L

Skin Contact:

This material has been classified as a Category 2 Hazard.

Acute toxicity estimate (based on ingredients): 1000-2000 mg/L

Ingestion:

Harmful if swallowed, may cause gastric irritation and narcosis.

Corrosion / Irritancy:

Eye: This material has been classified as a Category 1 Hazard. **Skin:** This material has been classified as a Category 2 Hazard (irritant to skin).

Sensitisation:

Inhalation: This material has been classified as not a respiratory sensitiser. **Skin:** This material has been classified as a skin sensitiser.

Aspiration Hazard:

This material has been classified as a Category 1 Hazard.

Specific Target Organ Toxicity (Single Exposure):

This material has been classified as a category 3 Hazard. Exposure via inhalation may result in depression of the central nervous system.

Specific Target Organ Toxicity (Repeated Exposure):

This material has been classified as a category 2 Hazard.

Chronic Toxicity:

Mutagenicity:

His material has been classified as non-hazardous.

Carcinogenicity:

This material has been classified as non-hazardous.

Reproductive Toxicity:

This material has been classified as non-hazardous.

Specific Target Organ Toxicity (Repeated Exposure):

This material has been classified as a category 2 Hazard.

TOXICITY:

No LD_{50} Data available for this specific product. Data below is for specific ingredients only.

XYLENE (Mixed Isomers) CAS No. 1330-20-7

Aspiration into lungs if swallowed or vomited may cause chemical pneumonitis which can be fatal.

Acute Oral Toxicity:	Low Toxicity:	LD_{50} >2000mg/kg. (Rat)
Acute Dermal Toxicity:	Low Toxicity:	LD_{50} >2000mg/kg. (Rabbit)
Acute Inhalation Toxicity:	Low Toxicity:	LC_{50} >20mg/L /4-hours. (Rat)

High inhalation concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea. Continued inhalation may result in unconsciousness and/or death.

Skin Irritation:	Irritating to skin. (Rabbit)
Eye Irritation:	Moderately irritating to eyes but insufficient to classify.
Respiratory Irritation:	Inhalation of vapours or mists may cause irritation to the respiratory system.
Sensitisation:	Not a skin sensitiser.
Mutagenicity:	Not mutagenic.
Reproductive Toxicity:	Does not impair fertility.
Carcinogenicity:	Mixed Xylene contains Ethylbenzene that show limited evidence of a carcinogenic effect.
Repeated Dose Toxicity:	Repeated high dose exposure affects the central nervous system.
Respiratory System:	Repeated high dose exposure affects the respiratory system.
Visual System:	May cause decreased colour perception but not found to lead to functional colour vision deficits.
Auditory System:	Prolonged and repeated exposures to high concentrations and noise interactions in the workplace have resulted in hearing loss. (Rats)
Additional Information:	Exposure to very high concentrations of similar materials has been associated with irregular heart rhythms and cardiac arrest.

This product is classified as an IARC Category 3 Carcinogen – unclassifiable as to carcinogenicity to humans.

ETHYL BENZENE CAS No. 100-41-4

Acute Oral Toxicity:	Low Toxicity:	LD_{50}: 3,500mg/kg. (Rat – Male & Female)
Acute Dermal Toxicity:	Low Toxicity:	LD_{50}: 15,433mg/kg (Rabbit)
Skin Irritation:	Moderate skin irritation – 24-hour (Rabbit)	
Eye Irritation:	Mild eye irritation (Rabbit)	
Respiratory or Skin Irritation:	No data available.	
Germ Cell Mutagenicity:	Hamster Ovary – Result Negative. Mouse (male & female): Result Negative.	
Reproductive Toxicity:	No data available.	
Specific Target Organ Toxicity:	Single Exposure: No data available.	
Specific Target Organ Toxicity:	Repeated Exposure: No data available	
Aspiration Hazard:	May be fatal if swallowed and enters airways.	
Additional Information:	Repeated dose toxicity (Rat – Male & Female) No observed adverse effect level – 75mg/kg. Central nervous system: depression, nausea, headache, vomiting, ataxia, tremors.	

1-METHOXY PROPYL ACETATE-2 (2-METHOXY-1-METHYLETHYL ACETATE) CAS No. 108-65-6

Acute Oral Toxicity:	Low Toxicity:	LD_{50}: 8,532mg/Kg (Rat)
Acute Dermal Toxicity:	Low Toxicity:	LD_{50} > 5000mg/kg (Rabbit)
Acute Inhalation Toxicity:		LC50: 4.345 ppm / 6-hours (CCOHS, RTECS) – (Rat)
Eye Irritation:	Moderately irritating to eyes (Rabbit)	
Skin Irritation:	No irritation (Rabbit)	
Respiratory or Skin Sensitisation:	Maximisation Test (Guinea Pig). Did not cause sensitisation on laboratory animals.	

Germ Cell Mutagenicity:	No data available
Carcinogenicity:	No component of this product present at levels ≥ 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive Toxicity:	No data available
Specific Organ Toxicity:	Single Exposure: No data available
Specific Organ Toxicity:	Repeated Exposure: No data available
Aspiration Hazard:	No data available
Other:	DO NOT induce vomiting if swallowed.

FERRIC OXIDE YELLOW, SYNTHETIC / PIGMENT YELLOW 42: CAS No. 20344-49-4 / 51274-00-1

Acute Oral Toxicity:	Low Toxicity:	LD_{50}: > 5,000mg/kg (Rat)
Acute Inhalation Toxicity:	Dusts & Mists:	LC_{50}: > 195gm/m^3 / 6-hours (Rat)
Irritation / Corrosion Skin:	Non-Irritating:	
Ingestion:	Non-Irritating:	
Eyes:	Non-Irritating:	
Sensitiser:	Not Sensitising (Guinea Pig):	
Chronic Effects:	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.	
Carcinogenicity Data:	The ingredient(s) of this product is (are) not classed as carcinogenic by ACGIH, IARC, OSHA or NTP.	
Reproductive Data:	No adverse reproductive effects are anticipated.	
Mutagenicity Data:	No adverse mutagenic effects are anticipated.	
Teratogenicity Data:	No adverse Teratogenicity effects are anticipated.	

TITANIUM DIOXIDE – CAS No. 13463-67-7

Acute Oral Toxicity:	LD_{50}: > 5,000mg/kg (Rat)
Acute Inhalation Toxicity:	LC_{50}: > 6.82mg/L / 4-hour (Rat)
Acute Dermal Toxicity:	Quantitative data not available
Respiratory or Skin Sensitisation:	Does not show respiratory sensitising properties in animal studies or in exposure related observations in humans.

ALUMINIUM HYDROXIDE – CAS No. 21645-51-2: As a component of Titanium Dioxide.

Acute Oral Toxicity:	LD_{50}: > 5,000mg/kg (Rat)

AMORPHOUS SILICA – CAS No. 7631-86-9: As a component of Titanium Dioxide.

Acute Oral Toxicity:	LD_{50}: > 5,000mg/kg (Rat)
Acute Dermal Toxicity:	LD_{50}: > 2,000mg/kg (Rabbit)
Acute Inhalation Toxicity:	LC_{50}: > 2.2mg/L (Rat) 4-hour

ACGIH CARCINOGENS – As a component of Titanium Dioxide.

Aluminium Hydroxide:	A4	Not classifiable as a human carcinogen.
Titanium Dioxide:	A4	Not classifiable as a human carcinogen.
Zirconium Dioxide: CAS No. 1314-23-4:	A4	Not classifiable as a human carcinogen

IARC Monographs:

Overall Evaluation of Carcinogenicity Titanium Dioxide (CAS No. 13463-67-7)

2B	possibly carcinogenic to humans.

FERRIC OXIDE RED, SYNTHETIC / PIGMENT RED 101 – CAS No. 1309-37-1

Acute Oral Toxicity:	Low Toxicity:	LD_{50}: > 5,000mg/kg (Rat)
Acute Dermal Toxicity:	Low Toxicity:	LD_{50}: > 5,000mg/kg (Rat)

TOXICITY CONTINUED: FERIC OXIDE RED, SYNTHETIC / PIGMENT RED 101 – CAS No. 1309-37-1

Irritation / Corrosion Skin:	Non-Irritating
Ingestion:	Non-Irritating
Eyes:	Non-Irritating
Sensitiser:	Not Sensitising (Guinea Pig)
Chronic Effects:	Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.
Carcinogenicity Data:	The ingredient(s) of this product is (are) not classed as a carcinogenic by ACGIH, IARC, OSHA or NTP.
Reproductive Data:	No adverse reproductive effects are anticipated.
Mutagenicity Data:	No adverse mutagenic effects are anticipated.
Teratogenicity Data:	No adverse Teratogenicity effects are anticipated.

SPECIAL PROPERTIES / EFFECTS:

Over-exposure, especially during spraying operations without the necessary PPE precautions entails the risk of concentration-dependent irritating effects on eyes, nose, throat and respiratory tract.
Delayed symptoms and development of hyper-sensitivity such as breathing difficulty, coughing, and asthma are possible.

SECTION 12: ECOLOGICAL INFORMATION:

Avoid contaminating waterways, waste water & soils.

Acute Aquatic Hazard:

Components of this material have been classified as harmful to aquatic life.
Refer to the component information set out below.

Long-Term Aquatic Hazard:
No information is available to complete an assessment.

Ecotoxicity:
No information is available to complete an assessment.

Persistence and Degradability:

Biodegradability Biotic / Aerobic – Exposure Time: 8-Days:	Result: 100% readily biodegradable.
Biochemical Oxygen Demand (BOD):	0.36mg/L
Chemical Oxygen Demand (COD):	1.74mg/g
Results of PBT & vPvB Assessment:	Not Available. Chemical Safety Assessment not required / not conducted.

Bioaccumulation Potential:
No information is available.

Mobility:
No information is available

XYLENE (Mixed Isomers) – CAS No. 1330-20-7

Acute Toxicity Fish:	Toxic:	$1 < LC / EC / IC_{50} \leq 10mg/L$
Aquatic Invertebrates:	Toxic:	$1 < LC / EC / IC_{50} \leq 10mg/L$
Algae:	Toxic:	$1 < LC / EC / IC_{50} \leq 10mg/L$
Mobility:	Floats on water. Highly mobile in soil – may contaminate ground water.	
Persistence / Degradability:	Readily biodegradable. Rapidly oxidises by photo-chemical reaction in air.	

ECOLOGICAL INFORMATION CONTINUED:

XYLENE (Mixed Isomers) – CAS No. 1330-20-7

Bioaccumulation:	Does not bio-accumulate significantly.		

ETHYL BENZENE – CAS No. 100-41-4

Toxicity to Fish Flow-Through Test LC_{50}:	Menidia (Atlantic salmon):		5.1mg/L – 96-Hour.
Toxicity to Daphnia & Other Aquatic Invertebrates; Static Test EC_{50}:	Daphnia Magna (Water Flea):		1.8 – 2.4mg/L – 48-Hour.
Toxicity to Algae; Static Test EC_{50}:	Skeletonema Costatum:		4.9mg/L – 72-Hour.
Biodegradability Aerobic:	Exposure 28-Days:	Result:	70-80% Readily Biodegradable.

1-METHOXY PROPYL ACETATE-2 (2-METHOXY-1-METHYLETHYL ACETATE) – CAS No. 108-65-6

Toxicity to Fish Mortality LC_{50}:	Salmon Gairdner:	100-180mg/L – 96-Hour (OECD Test Guideline 203).
Ecotoxicity Fish LC_{50} / 24-Year:	Petromyzon Marinus:	5000µg/L
Toxicity to Daphnia & Other Aquatic Invertebrates Immobilisation EC_{50}:	Daphnia Magna (Water Flea): (Tested according to Annex V of Directive 67/548/EEC)	> 500mg/L – 48-Hour.

FERRIC OXIDE YELLOW, SYNTHETIC / PIGMENT YELLOW 42 – CAS No. 20344-49-4 / 51274-00-1

OEDC 202 Acute Mobilisation Test; EC_{50}:		Daphnia Magna (Water Flea):	> 100mg/L – 48-Hours.
Acute Toxicity to Fish Mortality:	LC_0:	Danio Rerio:	> 10,000mg/L
	LC_0:	Leuciscus Idus (Golden Orfe):	> 1,000mg/L
Acute Toxicity to Bacteria:		Harmless (Pseudomonas Putida)	> 1,000mg/L

No appreciable bio-concentration is expected in the environment.
The product is practically insoluble in water; it is separated in almost any filtration and sedimentation process.
No ecological problems have been identified with this product.
The product has an un-aesthetic appearance and a likely environmental nuisance.

TITANIUM DIOXIDE – CAS No. 13463-67-7

Acute Toxicity to Fish; LC_{50}:	Flathead/Minnow: > 1000mg/L – 96-Hour.
Acute Toxicity to Daphnia; EC_{50}:	Daphnia Magna: > 100mg/L – 48-Hour.
Acute Toxicity to Algae; EC_{50}:	Pseudokirchnerella Subcapitata: 61mg/L – 72-Hour.
Acute Toxicity to Bacteria; EC_{50}:	Escherichia Coli: > 1000mg/L – 1-Hour.
Persistence/Degradability:	Ti02 can be considered highly insoluble in water. Degradation / biodegradation testing is not relevant for metals and metal compounds like TI02 which are considered not bio-degradable.
Mobility:	Titanium Dioxide pigments have very limited mobility. They are insoluble in water and other solvents.
Ecotoxicity:	The product is not expected to be hazardous to the environment.
Environmental Fate:	DO NOT allow the product to enter waterways, drains and sewers.
Bioaccumulative Potential:	Bioaccumulations is unlikely to be significant due to low solubility of the product.

AMORPHOUS SILICA – CAS No. 7631-86-9 (As a component of Titanium Dioxide)

Acute Toxicity to Fish; LC_{50}:	Brachydanio Rerio:	5000mg/L – 96-Hour.

ECOLOGICAL INFORMATION CONTINUED.

AMORPHOUS SILICA – CAS No. 7631-86-9 (As a component of Titanium Dioxide)

Toxicity to Aquatic Invertebrates; EC_{50}:	Daphnia Magna (Water Flea) & Other Aquatic Invertebrates:	7,600mg/L – 48-Hour.
Toxicity to Algae; EC_{50}:		440mg/L – 72-Hour.

FERRIC OXIDE RED, SYNTHETIC / PIGMENT RED 101 – CAS No. 1309-37-1

Acute Toxicity to Fish; LC_0:	Leuciscus Idus (Golden Orfe):	> 1,000mg/L – 48-Hour.
Toxicity to Aquatic invertebrates; LC_{50}:	Daphnia Magna (Water Flea):	> 100mg/L – 48-Hour.
Toxicity to Bacteria:	Harmless: (Pseudomonas Putida)	> 1,000mg/L
Other Information:	No appreciable bio-concentration is expected in the environment. The product is practically insoluble in water; it is separated in almost any filtration and sedimentation process. No ecological problems have been identified with this product. The product has an un-aesthetic appearance and a likely environmental nuisance.	

SECTION 13: DISPOSAL CONSIDERATIONS:

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate Personal Protection Equipment is used. Refer to Section 8. Exposure Controls and Personal Protection PPE.

Refer to Waste Management Authority. Dispose of waste material through a licensed waste contractor. **Advise flammable nature...**

If possible, waste material and container should be recycled. If waste material and container cannot be recycled, disposal must be in accordance with local, national and international regulations.

This product IS NOT suitable for disposal by landfill. The product MUST NOT be disposed of into municipal sewers, drains or any natural waterways.

It may be necessary to contain and dispose of this product as a HAZARDOUS WASTE. Controlled incineration may be an option consideration.

DO NOT reuse empty containers without commercial cleaning or reconditioning.

DO NOT pressurise, cut, heat or weld empty containers. Flammable / combustible residues may be present in empty containers.

SECTION 14: TRANSPORT INFORMATION:

Road & Rail Transport:

Classified as Dangerous Goods by criteria of the Australian Code for the Transport of Dangerous Goods by Road and Rail and the New Zealand NZS5433: Transport of Dangerous Goods on Land. Refer to Australian Code for the Transport of Dangerous Goods by Road & Rail (7th Edition) for transport regulations and State Dangerous goods Regulations for Storage Requirements.

UN No:	**1263**

Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S.
DG Class: AS1940 Class	3: Flammable Liquid ICAO / IATA-DGR: 3: 1263 III
Subsidiary Risk:	Not Assigned
Packaging Group:	III SPECIAL PROVISIONS: 223
Hazchem Code:	3 [Y]
Initial Emergency Response Guide:	14
Limited Quantities:	ADG 7 Specifies Limited Quantity Value of 5-Litres for this Class of product.
IMO Hazard Class:	Flammable Liquid / 3.1 EPG
Declaration for Land Shipment:	1263
Declaration for Sea Shipment:	Flammable Liquid, N.O.S.
Declaration for Air Shipment	Flammable Liquid, N.O.S.
Storage Temperature:	^{o}C Ambient
Transport Temperature:	^{o}C Ambient
Loading / Unloading Temperature:	^{o}C Ambient
Storage / Transport Pressure	kPa Atmospheric
Electrostatic Accumulation Hazard:	YES: All Sources Must be Grounded.
Usual Shipping Containers:	Metal Drums / Pails
Materials & Coatings Suitable:	Carbon Steel / Stainless Steel
Materials & Coatings Unsuitable:	Natural Rubber / Butyl Rubber / EPDM / Polystyrene / Polyethylene / Polypropylene / Polyvinyl Chloride / Polyvinyl Alcohol / Polyacrylonitrile
Poisons Schedule:	S6

Segregation Dangerous Goods: Not to be loaded with explosives (Class 1); Flammable gasses (Class 2.1), if both are in bulk: Toxic gasses (Class 2.3); Spontaneous combustible substances (Class 4.2); Oxidising agents (Class 5.1); Organic peroxides (Class 5.2); or, Radioactive substances (Class 7); Halogens (chlorinated compounds etc); Food and Foodstuff Empties.

Marine Transport:
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code.

UN No:	1263
Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S.
DG Class:	3 Flammable Liquid
Packaging Group:	III

Air Transport:
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for Transport by Air.

UN No:	1263
Proper Shipping Name:	FLAMMABLE LIQUID, N.O.S.
DG Class:	3 Flammable Liquid
Packaging Group:	III

SECTION 15: REGULATORY INFORMATION:

This material is NOT subject to the following International Agreements:
Montreal Protocol (Ozone Depleting Substances)
The Stockholm Convention (Persist Organic Pollutants)
The Rotterdam Convention (Prior Informed Consent)

This material is subject to the following International Agreements:

Basel Convention (Hazardous Waste)

- Waste from production, formulation and use of inks, dyes, pigments, paints, lacquers, varnish.
- International convention for the prevention of pollution from ships (MARPOL).
- Annex III – Harmful substances carried in packaged form.

This material / constituent(s) are covered by the following requirements:

- All the constituents of this material are listed on the *Australian Inventory of Chemical Substances* (AICS). This product is compliant with NICNAS Regulations. The following ingredient: Xylene; is mentioned in SUSMP.

Statement of Hazardous Nature:

Classified as Hazardous according to the Criteria of SAW.
Classified as Dangerous Goods according to Criteria of the ADG Code

Classification & Labelling According to NOHSC Codes:

Classification / Symbol: FLAMMABLE / F.
Classification / Symbol: HARMFUL / Xn; IRRITANT / Xi; DANGEROUS FOR THE ENVIRONMENT / N.
Governing Directive: National Code of Practice for the Labelling of Hazardous Substances.
Leaks of gas or spills of liquid can readily form flammable mixtures at temperatures at or above flash point.

SYMBOLS: **Xi** Irritant; **Xn** Harmful; **N** Dangerous for the Environment; **F** Flammable.

GHS Signal Word: **DANGER**

SECTION 16: OTHER INFORMATION:

Revision Requirement: Re-issue 10 Jan. 22
Information updates of all sections to comply with Code of Practice Safe Work Australia December 2011. Date of last revision 22 June 2017, provides additional toxicology & ecological information recommended by the supplier for GHS format / compliance inclusions.

Abbreviations:
ADG: Australian Code for Transport of Dangerous Goods by Road and Rail.
CAS Number: Chemical Abstracts Number.
HMIS: Hazardous Materials Identification System.
TLV-TWA: Time - Weighted Average airborne concentration over an 8-hour working day, for 5-day working week over an entire working life.
STEL: Short-Terms Exposure Limit; the average airborne concentration over a 15-minute period which should NOT be exceeded at any time during a normal -8-hour working day.
AICS: Australian Inventory of Chemical Substances.
SWA: Safe Work Australia; formerly ASCC and NOHSC
HAZCHEM CODE: Emergency Action code of numbers and letters that provide information to Emergency Services.
IARC: International Agency for Research on Cancer.
N.O.S: Not otherwise specified.
NTP: National Toxicology Program (USA)
SUSMP: Standard for the Uniform Scheduling of Medicines & Poisons.
UN Number: United Nations Number.
NOEC: No Observed Effect Concentration.
Sk NOTICE: Absorption through the skin, mucous membranes and eye may be a significant source of exposure. The exposure standard is invalid if such contact should occur.

SECTION 16: OTHER INFORMATION CONTINUED:

PEAK LIMITATION: A ceiling concentration which should not be exceeded over a measurement period which should be as short as possible but not exceeding 15-minutes.

ODOUR THRESHOLD: Whilst reported values are widely divergent, two key factors which influence odour detection are: differences between individuals in their ability to perceive a particular odour; and, the methodology employed in conducting the odour threshold determination.

THEORETICAL OXYGEN DEMAND (ThOD): The calculated amount of oxygen required to oxidise a compound to its final oxidisation products; or, the amount of oxygen that theoretically can be consumed if the test substance is completely oxidised by micro-organisms. The ThOD is calculated from the test substance's chemical structure; units mg O_2 per mg of test substance.

CHEMICAL OXYGEN DEMAND (COD): Used to indirectly measure the amount of organic compounds in water. Common applications of COD determine the amount of organic pollutants found in surface water (e.g. lakes & rivers) and a measure of water quality. Expressed in mg/L (milligrams per litre) indicates mass of oxygen consumed per litre of solution. References may also express the units as ppm (parts per million).

BIOCHEMICAL OXYGEN DEMAND (BOD): Used as an indication (not a precise test) of the organic quality of water. The chemical procedure determines the amount of dissolved oxygen needed by aerobic biological organisms in a body of water to break down organic material present in a given water sample at certain temperature over a specific period of time. BOD is most commonly expressed by: milligrams of oxygen consumed per litre of sample during 5-days of incubation at 20^{o}C. It provides a robust surrogate of the degree of organic pollution of water.

LD_{50} (Lethal Dose 50%): Recognised method of measuring the short-term poisoning potential (acute toxicity) of a material. The measurement can be found for any 'route of entry' but dermal (applied to the skin) and oral (given by mouth) administration methods are most common.

LC_{50} (Lethal Concentration 50%):
LC values normally refer to the concentration of a chemical in air. Environmental studies can also mean the concentration of a chemical in water. In terms of Inhalation Study, the LC_{50} value is the concentration of the chemical in air that produces a 50% fatality rate (test animals) in a given time – usually 4-hours.

EC_{50} (Half Maximum Effective Concentration):
EC values refer to the concentration of a toxicant (drug or antibody) which induces a response mid-point between the baseline and maximum within a specified exposure time. It is a common measure of toxicant potency.

IC_{50} (Half Maximum Inhibitory Concentration):
IC values is a measure of the effectiveness of a compound to inhibit biological or biochemical function. It is a quantitative indicator of how much of a particular inhibitor (drug or other substance) is needed by half for a given biological process.

TL_M (Median Tolerance Limit):
The concentration of toxicant (or substance) at which 50% of the test organisms survive of the test period.

SECTION 16: OTHER INFORMATION CONTINUED:

Log Pow / Log P (o/w):

Chemistry & Pharmaceutical Science: A partition (P); or, distribution coefficient (D) is the ratio of concentrations of a compound in the two phases of a mixture of two immiscible solvents at equilibrium. These coefficients are a measure of differential solubility of the compound between these two solvents. Normally, one of the solvents chosen is water; the other is hydrophobic such as Octanol. The partition and distribution coefficient are measures of how hydrophilic (water loving) or how hydrophobic (water fearing) a chemical substance is. A partition coefficient can also be used when one or both solvents is a solid. The phrase 'Partition Coefficient' is obsolete by IUPAC. The appropriate phrase alternatives "Partition Constant" or "Partition Ratio" or "Distribution Ratio" are becoming more commonly used.

PRINCIPAL REFERENCES: Supplier Safety Data Sheet (SDS# 0200 Version 2.0)
In "Registry of Toxic Effects of Chemical Substances 1995" (Ed. D. Sweet),
(US Dept. Of Health & Human Services: Cincinnati 1995).

Disclaimer:

This Safety Data Sheet (SDS) has been prepared to the best belief of the manufacturer as to its accuracy and reliability as at the date of issue. No warranty expressed or implied is made as to its full reliability or completeness but is considered the appropriate information required by the user in the context of how the product must be handled and used in the workplace and including in conjunction with other products or materials present. Since the manufacturer cannot anticipate or control the conditions under which this information may or will be used, it is the user's responsibility to determine the safety, risk and fitness-for-purpose of the product under the conditions and environment where the product is intended to be used; and, responsibility to ensure that the SDS issue date is current. This information given is a non-controlled document and Designer Concrete Coatings Pty Ltd shall not be liable for personal injury or property damage associated with use or misuse of the product.