

S-TECH 100Cci™

Dry-Treat

Chemwatch Hazard Alert Code: 2

Issue Date: **17/01/2017**Print Date: **19/01/2017**S.GHS.USA.EN

Chemwatch: **5215-99**Version No: **5.1.1.1**

Safety Data Sheet according to OSHA HazCom Standard (2012) requirements

SECTION 1 IDENTIFICATION

Product Identifier

Product name	S-TECH 100Cci™	
Synonyms	protection from chloride ions, water repellent with corrosion inhibitor	
Other means of identification	Not Available	

Recommended use of the chemical and restrictions on use

Relevant identified uses

Water repellent for structural/engineered concrete.

Name, address, and telephone number of the chemical manufacturer, importer, or other responsible party

Registered company name	Dry-Treat	Dry-Treat	Dry-Treat Ltd
Address 150 Dascomb Road MA Andover 01810 United 4/149-155 Pascoe Vale Rd. VIC Moonee Ponds States 3039 Australia United Kingdom		United Kingdom	
Telephone	+1 866 667 5119 (USA)	1800 675 119 (AUS)	0800 0964 760 (UK)
Fax	+61 2 9954 3162	+61 2 9954 3162	+61 2 9954 3162
Website	Not Available	Not Available	Not Available
Email	Not Available	Not Available	sds@drytreat.com

Emergency phone number

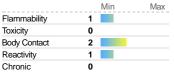
Association / Organisation Not Available		Not Available	Not Available
Emergency telephone numbers	(800) 255 3924	+1 813 248 0585 (Outside USA)	+1 813 248 0585 (Outside USA)
Other emergency telephone numbers	+1 813 248 0585 (Outside USA)	Not Available	Not Available

SECTION 2 HAZARD(S) IDENTIFICATION

Classification of the substance or mixture

Considered a Hazardous Substance by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200). Not classified as Dangerous Goods for transport purposes.

CHEMWATCH HAZARD RATINGS



0 = Minimum 1 = Low 2 = Moderate

3 = High 4 = Extreme NFPA 704 diamond

Note: The hazard category numbers found in GHS classification in section 2 of this SDSs are NOT to be used to fill in the NFPA 704 diamond. Blue = Health Red = Fire Yellow = Reactivity White = Special (Oxidizer or water reactive substances)

Classification

 $Flammable\ Liquid\ Category\ 4,\ Skin\ Corrosion/Irritation\ Category\ 2,\ Eye\ Irritation\ Category\ 2B,\ Acute\ Aquatic\ Hazard\ Category\ 3B,\ Acute\ Aquatic\ A$

Label elements

GHS label elements



SIGNAL WORD

WARNING

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Hazard statement(s)

H227	Combustible liquid
H315	Causes skin irritation.
H320	Causes eye irritation.
H402	Harmful to aquatic life

Hazard(s) not otherwise specified

Not Applicable

Precautionary statement(s) Prevention

P210	Keep away from heat/sparks/open flames/hot surfaces No smoking.	
P273	Avoid release to the environment.	
P280	Wear protective gloves/protective clothing/eye protection/face protection.	

Precautionary statement(s) Response

P362	Take off contaminated clothing and wash before reuse.	
P370+P378	In case of fire: Use alcohol resistant foam or normal protein foam for extinction.	
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P337+P313	If eye irritation persists: Get medical advice/attention.	

Precautionary statement(s) Storage

P403+P235 Store in a well-ventilated place. Keep cool.

Precautionary statement(s) Disposal

P501 Dispose of contents/container in accordance with local regulations.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
2943-75-1	>90	octyltriethoxysilane

SECTION 4 FIRST-AID MEASURES

Description of first aid measures

Eye Contact	If this product comes in contact with the eyes: Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If skin contact occurs: Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
Inhalation	 If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor, without delay.
Ingestion	 Immediately give a glass of water. First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Most important symptoms and effects, both acute and delayed

See Section 11

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIRE-FIGHTING MEASURES

Extinguishing media

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- Foam.
- ▶ Dry chemical powder.
- ▶ BCF (where regulations permit)
- Carbon dioxide.

Special hazards arising from the substrate or mixture

Fire Incompatibility

▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

Special protective equipment and precautions for fire-fighters

Fire Fighting

- ▶ Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses.
- ▶ Use water delivered as a fine spray to control fire and cool adjacent area
- ▶ Combustible.
- Slight fire hazard when exposed to heat or flame.
- Heating may cause expansion or decomposition leading to violent rupture of containers.
- ▶ On combustion, may emit toxic furnes of carbon monoxide (CO).

Combustion products include:

Fire/Explosion Hazard

carbon dioxide (CO2)

silicon dioxide (SiO2)

other pyrolysis products typical of burning organic material.

May emit poisonous fumes

May emit corrosive fumes.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

Min on Cuille
Minor Spills

- Remove all ignition sources.
- Clean up all spills immediately.
 Avoid breathing vapours and contact with skin and eyes.
- ► Control personal contact with the substance, by using protective equipment.

Major Spills

Moderate hazard.

- ▶ Clear area of personnel and move upwind.
- ▶ Alert Fire Brigade and tell them location and nature of hazard.
- ▶ Wear breathing apparatus plus protective gloves

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling

- ▶ DO NOT allow clothing wet with material to stay in contact with skin
- Avoid all personal contact, including inhalation.
- ▶ Wear protective clothing when risk of exposure occurs.
- ▶ Use in a well-ventilated area
- ▶ Prevent concentration in hollows and sumps.

Other information

- Store in original containers.Keep containers securely sealed
- ► No smoking, naked lights or ignition sources.
- ► Store in a cool, dry, well-ventilated area.

Conditions for safe storage, including any incompatibilities

Suitable container

- ► Metal can or drum
- ▶ Packaging as recommended by manufacturer.
- ► Check all containers are clearly labelled and free from leaks

Storage incompatibility

Avoid strong acids, bases.Avoid reaction with oxidising agents

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Not Available

EMERGENCY LIMITS

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Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
S-TECH 100Cci™	Not Available	Not Available	Not Available	Not Available
Ingradient	Original IDL H		Revised IDLH	
Ingredient	Original IDLH		Revised IDLH	
octyltriethoxysilane	Not Available		Not Available	

Exposure controls

Appropriate engineering controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.

Personal protection









Eye and face protection

- Safety glasses with side shields.
- ▶ Chemical goggles
- ► Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task.

Skin protection

See Hand protection below

▶ Wear chemical protective gloves, e.g. PVC.

Wear safety footwear or safety gumboots, e.g. Rubber NOTE:

- ► The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
- Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed.

Hands/feet protection

The selection of suitable gloves does not only depend on the material, but also on further marks of quality which vary from manufacturer to manufacturer. Where the chemical is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

The exact break through time for substances has to be obtained from the manufacturer of the protective gloves and has to be observed when making a final choice.

Personal hygiene is a key element of effective hand care.

Neoprene gloves

Body protection

See Other protection below

Other protection

- Overalls.P.V.C. apron.
- ▶ Barrier cream.

Thermal hazards

Not Available

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the $\ computer-generated$ selection:

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Material	СРІ
BUTYL	С
NATURAL RUBBER	С
NATURAL+NEOPRENE	С
NEOPRENE	С
NITRILE	С
NITRILE+PVC	С
PE/EVAL/PE	С
PVC	С

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

Respiratory protection

Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	A-AUS P2	-	A-PAPR-AUS / Class 1 P2
up to 50 x ES	-	A-AUS / Class 1 P2	-
up to 100 x ES	-	A-2 P2	A-PAPR-2 P2 ^

^ - Full-face

A(All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide(HCN), B3 = Acid gas or hydrogen cyanide(HCN), E = Sulfur dioxide(SO2), G = Agricultural chemicals, K = Ammonia(NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content. The wearer must be warned to leave the contaminated area immediately on detecting any odours through the respirator. The odour may indicate that the mask is not functioning properly, that the vapour concentration is too high, or that the mask is not properly fitted. Because of these limitations, only restricted use of cartridge respirators is considered appropriate.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

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Appearance	Colourless to pale yellow liquid with an alcoholic - like odour.		
Physical state	Liquid	Relative density (Water = 1)	0.88
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	Decomposition temperature	Not Available
Melting point / freezing point (°C)	Not Available	Viscosity (cSt)	2.04
Initial boiling point and boiling range (°C)	>65	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	65	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Combustible.	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water (g/L)	Not Available	pH as a solution (1%)	Not Available
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	 Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	Not normally a hazard due to non-volatile nature of product Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo. Inhalation hazard is increased at higher temperatures. Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and inco-ordination.		
Ingestion	The material has NOT been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.		
Skin Contact	This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing dermatitis condition Open cuts, abraded or irritated skin should not be exposed to this material Entry into the blood-stream, through, for example, cuts, abrasions or lesions, m of the material and ensure that any external damage is suitably protected.	ay produce systemic injury with harmful effects. Examine the skin prior to the use	
Eye	There is some evidence to suggest that this material can cause eye irritation and damage in some persons.		
Chronic	Substance accumulation, in the human body, may occur and may cause some concern following repeated or long-term occupational exposure. There is limited evidence that, skin contact with this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Prolonged exposure to ethanol may cause damage to the liver and cause scarring. It may also worsen damage caused by other agents.		
	TOXICITY	IRRITATION	
S-TECH 100Cci™	Not Available	Not Available	
	TOXICITY	IRRITATION	
octyltriethoxysilane	Dermal (rabbit) LD50: 5177.16 mg/kg ^[2]	Not Available	
	Oral (rat) LD50: 8812.56 mg/kg ^[2]		
Legend:	Value obtained from Europe ECHA Registered Substances - Acute toxicity 2 extracted from RTECS - Register of Toxic Effect of chemical Substances	.* Value obtained from manufacturer's SDS. Unless otherwise specified data	

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Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS.

Low molecular weight alkoxysilane can cause irreversible lung damage when inhaled at low dose. It is not an obvious skin irritant. However, studies suggest with repeated occupational exposure, methoxysilane may cause damage to the eye and skin as well as cancer.

No significant acute toxicological data identified in literature search.

Acute Toxicity	0	Carcinogenicity	0
Skin Irritation/Corrosion	✓	Reproductivity	0
Serious Eye Damage/Irritation	~	STOT - Single Exposure	0
Respiratory or Skin sensitisation	0	STOT - Repeated Exposure	0
Mutagenicity	0	Aspiration Hazard	0

Legend:

X - Data available but does not fill the criteria for classification

Data required to make classification available

O - Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
octyltriethoxysilane	LC50	96	Fish	>0.055mg/L	2
octyltriethoxysilane	EC50	48	Crustacea	>0.049mg/L	2
octyltriethoxysilane	EC50	96	Algae or other aquatic plants	<1.000mg/L	3
octyltriethoxysilane	EC50	384	Crustacea	0.275mg/L	3
octyltriethoxysilane	NOEC	48	Crustacea	>=0.049mg/L	2
Legend:	Aquatic Toxicity Data (Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data			

Harmful to aquatic organisms.

Alkoxysilanes are highly toxic to algae and moderately toxic to aquatic invertebrates. e.g. the daphnid 48 hour LC50 for dimethyldiethoxysilane is 1.25 mg/l, and the 15-day algal EC50 for a number of alkoxysilanes is approximately 10 mg/l. Alkoxysilanes are used as coupling agents and are designed to hydrolyse in water. Hydrolysis generally produces biodegradable alcohols.

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
octyltriethoxysilane	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
octyltriethoxysilane	MEDIUM (LogKOW = 4.2394)

Mobility in soil

Ingredient	Mobility
octyltriethoxysilane	LOW (KOC = 187100)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.

A Hierarchy of Controls seems to be common - the user should investigate:

- ▶ Reduction
- ► Reuse
- Recycling
- ▶ Disposal (if all else fails)

Product / Packaging disposal

This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use.

- ▶ DO NOT allow wash water from cleaning or process equipment to enter drains
- $\blacktriangleright \ \ \text{It may be necessary to collect all wash water for treatment before disposal.}$
- ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- ▶ Where in doubt contact the responsible authority.
- ► Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Authority for disposal.
- Bury or incinerate residue at an approved site.
- ▶ Recycle containers if possible, or dispose of in an authorised landfill.

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SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant

NO

Land transport (DOT): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION

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

OCTYLTRIETHOXYSILANE(2943-75-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

US Toxic Substances Control Act (TSCA) - Chemical Substance Inventory

Federal Regulations

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SECTION 311/312 HAZARD CATEGORIES

Immediate (acute) health hazard	Yes
Delayed (chronic) health hazard	No
Fire hazard	Yes
Pressure hazard	No
Reactivity hazard	No

US. EPA CERCLA HAZARDOUS SUBSTANCES AND REPORTABLE QUANTITIES (40 CFR 302.4)

None Reported

State Regulations

US. CALIFORNIA PROPOSITION 65

None Reported

National Inventory	Status
Australia - AICS	Υ
Canada - DSL	Υ
Canada - NDSL	N (octy/triethoxysilane)
China - IECSC	Υ
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	Υ
Korea - KECI	Υ
New Zealand - NZIoC	Υ
Philippines - PICCS	Υ
USA - TSCA	Υ
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

PC-TWA: Permissible Concentration-Time Weighted Average

PC-STEL: Permissible Concentration-Short Term Exposure Limit

IARC: International Agency for Research on Cancer

ACGIH: American Conference of Governmental Industrial Hygienists

STEL: Short Term Exposure Limit

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TEEL: Temporary Emergency Exposure Limit。
IDLH: Immediately Dangerous to Life or Health Concentrations
OSF: Odour Safety Factor
NOAEL: No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value

LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index