

DuO HT

4 WGG/F C180 FC LANDSCAPE



WATERPROOFING

APPLICATIONS

ROOFS

GREEN ROOFS

TECHNICAL DATA SHEET

ANZ-TDS-02-DuO HT 4 WGG/F C180 FC LANDSCAPE

DESCRIPTION

DuO HT 4 WGG/F C180 FC LANDSCAPE is a flexible waterproofing membrane with a composite reinforcement and a double bitumen coating with root-repellent and fire resistance additives.

The plastomer modified bitumen (TPO) upper side has a high mechanical resistance and is UV-resistant while the elastomer modified bitumen lower side and the overlap ensures good adhesion.

The upper side is finished with an optimally pressed-in mixture of colored slates and the underside is covered with a sacrificial film.

FIELD OF APPLICATION

DuO HT 4 WGG/F C180 FC LANDSCAPE has been especially designed for fire-resistant applications where root-repellent properties are required.

It can be used as a cap sheet in a torch applied single or multi layer waterproofing system.

APPLICATION METHOD

DuO HT 4 WGG/F C180 FC LANDSCAPE can be fully heat welded using a propane torch, or with MINI MACADEN machine.

INSTALLATION PROCEDURE

SUBSTRATE

- No work should be started until all surfaces are smooth, dry and free of ice, snow or any other substance that may prevent the membrane from adhering properly.
- Substrate must have a minimum 1% gradient to ensure that water drains to drain.
- Do not install heat welded membranes directly onto combustible substrate.
- Concrete substrate must be fully cured before application of the membrane.
- Concrete substrate must have a Concrete Surface Profile (CSP) between 3 and 5 as per International Concrete Repair Institute.
- Adhesion test is recommended prior to installation of membrane.
- Commencement of installation shall be taken as acceptance of the substrate by the Applicator.

PRIMING

- When installed over concrete or metal surface prime with SOPRADERE QUICK at the rate specified in the TDS.

HEAT WELDING

- Unroll membrane sheets onto the roof surface.
- Starting at the low point of the roof, lay out the membrane to ensure the plies are installed perpendicular to the roof slope, shingled to prevent back-water laps. Ensure specified minimum 80 mm side-laps overlap and minimum 150mm end-laps overlap are maintained. End-laps should be staggered 1 m apart.
- As the membrane ply is unrolled, apply heat to the underside of the ply until the thermofusible plastic film melts sufficiently for full adhesion to the substrate, and full adhesion between plies.
- For hand-held roof torches, continuously move the torch side-to-side across the underside of the roll to melt the bitumen while continuously unrolling sheet. While unrolling and heating the sheet, ensure approximately 6 to 12 mm of hot bitumen flows ahead of the roll, and there is 3 to 6 mm bleed out at all laps. Ensure all side-laps are fully adhered and sealed watertight.
- Adjust application methods to accommodate varying environmental conditions as necessary to achieve the desired results.
- At the 150 mm end-laps ensure a fully adhered watertight seal. Melt the thermofusible plastic film or embed granules and remove other membrane surfacing, where present, using a torch or hot-air welder.
- All penetrations and upturn details should be waterproofed as per SOPREMA Installation Guides and detail drawings.

FOR COMPLETE INFORMATION ON PRODUCT INSTALLATION, PLEASE CONSULT YOUR ENDUROFLEX REPRESENTATIVE.

CodeMark Certificate CM70138

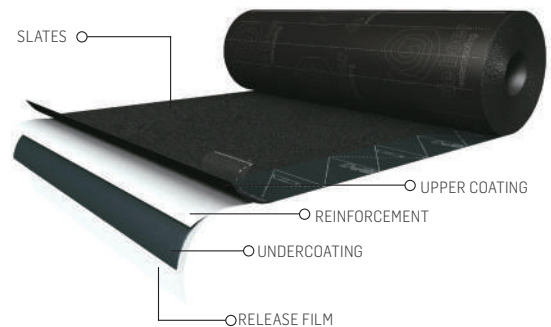
Compliance with AS 4654.1

Unique combination APP/SBS technology

Root resistant

High mechanical properties

Life expectancy of 35 years



Upper coating: TPO-plastomer modified bitumen
 Composite reinforcement (180 g/m²) of polyester and glass fibre
 Undercoating: SBS-elastomer modified bitumen

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PACKAGING

SPECIFICATIONS	DuO HT 4 WGG/F C180 FC LANDSCAPE
Thickness	4 mm
Roll dimensions	8 m × 1 m
Roll weight	37 kg
Rolls per pallet	23

(All values are nominal)

PROPERTIES

PROPERTY	TEST METHOD	DuO HT 4 WGG/F C180 FC LANDSCAPE
Visual defects	EN 1850-1	PASS
Straightness	EN 1848-1	PASS
External fire performance in accordance with EN 13501-5	CEN/TS 1187	NA
Reaction to fire in accordance with EN 13501-1	EN 13501-1	F
Tensile strength (L/T)	AS 4654.1	800 N/5 cm (±15) / 1200 N/5 cm (±100)
Elongation at break (L/T)	AS 4654.1	MD: 73 (±9) % CD: 55 (±5) %
Abrasion resistance	AS 1580.403.2	0.14
Bond strength	ASTM C794	40 ± 10 N/2.5cm Type of failure : 70% cohesive in the bitumen mass 30% cohesive in the primer
Dimensional stability	ASTM D6207	MD: 0,01% CD: 0,05%
Cyclic movement	CSIRO Moving Joint Test (see Appendix B)	Pass (22°C / 26% RH)
Field seam strength	ASTM D1876	7.4 (±0.8) N/m
Heat ageing	AS 4654.1 (AS 1145.3)	Pass / No change
Ultraviolet resistance	AS 4654.1 (AS 1145.3) (ASTM D4799)	Pass / No change
Durability	AS 4654.1	Pass
Water vapour transmission rate	ASTM E96	0*

* The results values are below the tolerance of the equipment.

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STORAGE AND HANDLING

Rolls must be stored upright. If stored outdoors, cover them with an opaque protection cover after removal of the delivery packaging.

STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this publication is based on the present state of our best knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, their representative or the contractor are responsible for checking the suitability of products for their intended use.

Note: Field service where provided, does not constitute supervisory responsibility. Suggestions made by Soprema Australia Pty Ltd either verbally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they are responsible for carrying out procedures appropriate to a specific application.

Enduroflex Soprema DuO Membrane

Chemwatch: 5484-45

Version No: 2.1.18.11

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

Chemwatch Hazard Alert Code: 0

Issue Date: 03/09/2021

Print Date: 17/09/2021

L.GHS.AUS.EN

SECTION 1 Identification of the substance / mixture and of the company / undertaking

Product Identifier

Product name	DuO membrane
Chemical Name	Not Applicable
Synonyms	Not Available
Chemical formula	Not Applicable
Other means of identification	Not Available

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

Relevant identified uses	Waterproofing membrane. Use according to manufacturer's directions.
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Details of the supplier of the safety data sheet

Registered company name	Soprema Australia Pty Ltd
Address	L 35/100 Barangaroo Avenue, Sydney NSW 2000
Telephone	+61 3 9221 6230
Fax	Not Available
Website	www.soprema.com.au
Email	info@soprema.com.au

Emergency telephone number

Association / Organisation	Soprema Australia Pty Ltd
Emergency telephone numbers	042 595 2526 (Cruz Utanga: Mon-Fri 7.30am to 4pm)
Other emergency telephone numbers	Not Available

SECTION 2 Hazards identification

Classification of the substance or mixture

Poisons Schedule	Not Applicable
Classification [1]	Not Applicable

Label elements

Hazard pictogram(s)	Not Applicable
Signal word	Not Applicable

Hazard statement(s)

Not Applicable

Precautionary statement(s) Prevention

Not Applicable

Precautionary statement(s) Response

Not Applicable

Precautionary statement(s) Storage

Not Applicable

Precautionary statement(s) Disposal

Not Applicable

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

DuO membrane

Mixtures

CAS No	%[weight]	Name
Not Available	100	article contains
Not Available		reinforcing base material coated with bitumen and surface finish.
Not Available		base material contains
Not Available		polyester, glass/polyester, foil and glass fiber.
Not Available		bitumen coating contains
Not Available		mineral filler and/or synthetic polymers.
Not Available		surface finish contains
Not Available		sand, talcum, mineral states/granules and polymer film.
Legend:		1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; * EU IOELVs available

SECTION 4 First aid measures

Description of first aid measures

Eye Contact	When product is subjected to high temperature, hot bitumen splashed into eye should be cooled immediately by irrigating with cold running water, the eyes as wide open as possible, for at least 15 minutes. Obtain medical advice. ▶ Generally not applicable.
Skin Contact	When product is subjected to high temperature, in the event of contact with hot bitumen immediately irrigate affected part under cold running water. (for 15 minutes) and transport urgently to specialized hospital. Do not attempt to remove the adhering bitumen as it can act as a sterile barrier until healing occurs. If not detached by itself, it may be removed using warm medicinal liquid paraffin. ▶ Generally not applicable.
Inhalation	When product is subjected to high temperature, Remove from sources of fume into fresh air if any ill effects are experienced. Rest and keep warm. If unwell seek medical advice. ▶ Generally not applicable.
Ingestion	▶ Not considered a normal route of entry. ▶ Immediately give a glass of water. ▶ First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

Extinguishing media

- ▶ There is no restriction on the type of extinguisher which may be used.

Special hazards arising from the substrate or mixture

Fire Incompatibility	None known.
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Advice for firefighters

Fire Fighting	<ul style="list-style-type: none"> ▶ Use water delivered as a fine spray to control fire and cool adjacent area. ▶ Do not approach containers suspected to be hot. ▶ Cool fire exposed containers with water spray from a protected location. ▶ If safe to do so, remove containers from path of fire. ▶ Equipment should be thoroughly decontaminated after use.
Fire/Explosion Hazard	<ul style="list-style-type: none"> ▶ Non combustible. ▶ Not considered a significant fire risk, however containers may burn.
HAZCHEM	Not Applicable

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

Minor Spills	<ul style="list-style-type: none"> ▶ Clean up all spills immediately. ▶ Secure load if safe to do so. ▶ Bundle/collect recoverable product. ▶ Collect remaining material in containers with covers for disposal.
Major Spills	<ul style="list-style-type: none"> ▶ Minor hazard. ▶ Clear area of personnel. ▶ Alert Fire Brigade and tell them location and nature of hazard. ▶ Wear physical protective gloves e.g. Leather. ▶ Contain spill/secure load if safe to do so. ▶ Bundle/collect recoverable product and label for recycling.

Continued...

DuO membrane

- ▶ Collect remaining product and place in appropriate containers for disposal.
- ▶ Clean up/sweep up area.
- ▶ Water may be required.

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

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	No special handling procedures required.
Other information	Stored in places protected from the sun and the weather. Avoid temperatures below 5°C, as well as over 35°C. ▶ Keep dry

Conditions for safe storage, including any incompatibilities

Suitable container	Do not store rolls without the protection packaging film. ▶ Check that containers are clearly labelled
Storage incompatibility	None known

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Not Available


Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
DuO membrane	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
DuO membrane	Not Available	Not Available

MATERIAL DATA

Exposure controls

Appropriate engineering controls	None under normal operating conditions.
Personal protection	
Eye and face protection	None under normal operating conditions.
Skin protection	See Hand protection below
Hands/feet protection	Wear general protective gloves, eg. light weight rubber gloves. No special equipment required due to the physical form of the product.
Body protection	See Other protection below
Other protection	No special equipment required due to the physical form of the product.

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Black sheet in roll form with various surface finishes.		
Physical state	Manufactured	Relative density (Water = 1)	Not Applicable
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Applicable
pH (as supplied)	Not Applicable	Decomposition temperature	Not Applicable
Melting point / freezing point (°C)	Not Applicable	Viscosity (cSt)	Not Applicable
Initial boiling point and boiling range (°C)	Not Applicable	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Applicable	Taste	Not Available
Evaporation rate	Not Applicable	Explosive properties	Not Available
Flammability	Not Applicable	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Applicable	Surface Tension (dyn/cm or mN/m)	Not Applicable

DuO membrane

Lower Explosive Limit (%)	Not Applicable	Volatile Component (%vol)	Not Applicable
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water	Partly miscible	pH as a solution (%)	Not Available
Vapour density (Air = 1)	Not Applicable	VOC g/L	Not Applicable

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	Product is considered stable and 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 physical form of product.
Ingestion	Not normally a hazard due to the physical form of product. The material is a physical irritant to the gastro-intestinal tract
Skin Contact	Not normally a hazard due to physical form of product.
Eye	Not normally a hazard due to physical form of product.
Chronic	▸ Generally not applicable.

DuO membrane	TOXICITY	IRRITATION
	Not Available	Not Available

Legend: 1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

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

Legend: ✗ – Data either not available or does not fill the criteria for classification
✔ – Data available to make classification

SECTION 12 Ecological information

Toxicity

DuO membrane	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available

Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - 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

DO NOT discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
	No Data available for all ingredients	No Data available for all ingredients

Bioaccumulative potential

Ingredient	Bioaccumulation
	No Data available for all ingredients

Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

DuO membrane

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	<ul style="list-style-type: none"> ▶ Recycle wherever possible or consult manufacturer for recycling options. ▶ Consult State Land Waste Management Authority for disposal. ▶ Bury residue in an authorised landfill. ▶ Recycle containers if possible, or dispose of in an authorised landfill.
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SECTION 14 Transport information

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (ADG): 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

Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
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Transport in bulk in accordance with the ICG Code

Product name	Ship Type
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SECTION 15 Regulatory information

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

National Inventory Status

National Inventory	Status
Australia - AIIIC / Australia Non-Industrial Use	Not Available
Canada - DSL	Not Available
Canada - NDSL	Not Available
China - IECSC	Not Available
Europe - EINEC / ELINCS / NLP	Not Available
Japan - ENCS	Not Available
Korea - KECI	Not Available
New Zealand - NZIoC	Not Available
Philippines - PICCS	Not Available
USA - TSCA	Not Available
Taiwan - TCSI	Not Available
Mexico - INSQ	Not Available
Vietnam - NCI	Not Available
Russia - FBEPH	Not Available
Legend:	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

SECTION 16 Other information

Revision Date	03/09/2021
Initial Date	03/09/2021

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.

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

TEEL: Temporary Emergency Exposure Limit.
IDLH: Immediately Dangerous to Life or Health Concentrations
ES: Exposure Standard
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
AIIIC: Australian Inventory of Industrial Chemicals
DSL: Domestic Substances List
NDSL: Non-Domestic Substances List
IECSC: Inventory of Existing Chemical Substance in China
EINECS: European INventory of Existing Commercial chemical Substances
ELINCS: European List of Notified Chemical Substances
NLP: No-Longer Polymers
ENCS: Existing and New Chemical Substances Inventory
KECI: Korea Existing Chemicals Inventory
NZIoC: New Zealand Inventory of Chemicals
PICCS: Philippine Inventory of Chemicals and Chemical Substances
TSCA: Toxic Substances Control Act
TCSI: Taiwan Chemical Substance Inventory
INSQ: Inventario Nacional de Sustancias Químicas
NCI: National Chemical Inventory
FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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TEL (+61 3) 9572 4700.