

# Waterproof construction specifications of roof decks.

## Comprehensive F1 3.0m/m anti-seismic type.

### Materials instruction

1. G1 Merry Ground Water-Based Ground Coating Leveling.

Mix G1 Merry Ground Water-Based Ground Coating with cement (1:2).

Level the ground with trowel after adding appropriate amount of water.

Ratio Formula	G1 Merry Ground	Cement	Water
Mixing	1	2	0.3

Test Item	Test Result	Test Manner
Adhesive strength Rasc plate: Mortar plate	9.2 kgf/cm <sup>2</sup>	CNS 8083
Water resistance(23°C , 30 days)	No change in appearance	CNS 10757
Impact resistance	Passed	CNS 8083
Washability	Passed	CNS 10757
Compressive	248 kgf/cm <sup>2</sup>	CNS 10639

2. Waterproof primer S1 Superior Waterproofing Cement Resin

Mix S1-Superior Waterproofing Cement Resin with cement and then

add in appropriate amount of water (1:2:2) to paint or spray 3 coats on.

Ratio Formula	S 1	Cement	Water
Mixing	1	2	2

Test Item	Test Result	Test Manner
Adhesion-To mortar boards (standard condition)	12.5 kgf/cm <sup>2</sup>	CNS 8083
Adhesion-To steel plates (standard condition)	10.5 kgf/cm <sup>2</sup>	CNS 10757
Resistance of water (23°C, 30days)	No abnormal	CNS 10757
Resistance of alkali	No abnormal	CNS 8083
Permeability of water	2.0 ml	CNS 4684

3. Anti-seismic waterproof layer F1 Water-based sealant

Test Item	Test Result	Test Manner
Adhesion-To mortar boards(standard condition)	10.0 kgf/cm <sup>2</sup>	CNS 8083
Adhesion-To steel plates(standard condition)	9.8 kgf/cm <sup>2</sup>	CNS 10757
Permeability of water	0.1 ml	CNS 4684
Tensile strength	64 kgf/cm <sup>2</sup>	CNS 6483
Elongation rate	390 %	CNS 6483
Shear strength	28 kgf/cm <sup>2</sup>	CNS 6483
Elasticity rate	7 %	CNS 6483
Wear resistant(wear volume)	0.14 g	CNS 6483

4. Face coating F1-C Elastomeric Waterproofing Cool Resin

Test Item	Test Result	Test Manner
Adhesion-To mortar boards(standard condition)		
Adhesion-To steel plates(standard condition)		
Resistance of water(23°C, 30 days)		
Permeability of water		

**Construction procedures and material using amounts**

1. Waterproof construction procedures, material using specifications and amounts

Item No.	Construction Projects
<b>1</b>	Level the roof decks by trowling G1 Merry Ground Water-Based Ground Coating.
<b>2</b>	Trowel S1-Superior Waterproofing Cement Resin (1:2:2) for 3 coats as primer. 1kg/m <sup>2</sup>
<b>3</b>	Trowel F1 Water-Based Sealant for 2 coats. 3.0mm 2.4 kg/m <sup>2</sup>
<b>4</b>	Spray/brush F1-C Elastomeric Waterproofing Cool Resin for 3 coats. 0.6 kg/m <sup>2</sup>

2. Construction specifications and diagrammatic illustration

2-1. Use 3500psi high pressure washer to clean the floor on roof deck for 2 times until completely clean.

2-2. Use G1 Merry Ground Water-Based Ground Coating to level the ground.

- Moisten the floor or rough mud primer in advance, or moisten when high pressure washer washing.
- Stir after adding in 2 times of cement and 0.3 or 0.5 times of water in G1 Merry Ground Water-Based Ground Coating.
- Use trowel to level the ground and prepare half bucket of water and sponge to keep cleaning the trowel in order to keep the smooth procedures when trowling.

Ratio Formula	G1 Merry Ground	Cement	Water
Mixing	1	2	0.3

3. Construct comprehensive anti-seismic waterproof layer on roof deck.

- Use S1-Superior Waterproofing Cement Resin with roller brush to brush for 3 coats as primer. Reference to the following ratio formula:

Ratio Formula	S1	Cement	Water
Mixing	1	2	2

- Trowel F1-Water-Based Sealant on roof decks. 3.0mm/1 layer. Trowel with moist trowel in order to increase its density. It is necessary to keep moistening the trowel to keep the smooth procedures and will not stained with materials.
- Spray with pneumatic paint sprayer or brush to apply F1-C Elastomeric Waterproofing Cool Paint for 3 coats after F1 sealant is completely dry.

