

# WATERPROOFING SYSTEM FOR ROOFS & BALCONIES (RESIDENTIAL)

**RESSICHEM**<sup>®</sup>  
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## Summary of application

**STEP 1:** Pouring of the roof / balcony slab with the inclusion of **Max Flo Integra 3**.

**STEP 2:** Application of **Water Guard 491** over the slab.

**STEP 3:** Flood Test of the roof slab.

**STEP 4:** Covering of conduit / Utility pipes with **Patch 365 Plus** & Coating the surface with **Water Guard 491**.

**STEP 5:** Screeding in slope with the inclusion of **Ressi SBR 5850** and **Silmix** in the roof screed mix.

**STEP 6:** Making of chamfers with **Patch 365 Plus**.

**STEP 7:** Finishing of the screed as required.

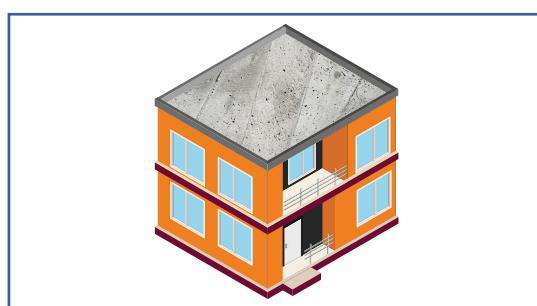
## Detailed Description

Private Residential projects are usually critical as once the structure is in use and habited, the possibility of renovation and maintenance of roofs and balconies on a regular basis is usually unlikely or exceedingly difficult to execute.

It is for this reason Ressichem proposes a variety of products as a solution for the waterproofing of roofs & balconies at the time of its construction. The intention behind this solution is that once the building is in use, there should be little to no maintenance.

## Step 1: Pouring of the slab.

It is important that good quality concrete is used when pouring an area as critical as roofs and balconies, a good quality integral waterproofing admixture is recommended for use in the concrete. **Max Flo Integra 3 (Powder)** is the recommended admixture to be used with the cement of the concrete. It is recommended to use 1 KG of **Max Flo Integra 3 (Powder)** admixture with every 50 KG Bag of cement. The Dosage can be optimized with a proper mix design of the concrete as well. Once the concreting works have been executed, it is recommended to have the parapet walls of the roof slab and balconies erected and plastered prior to the application of **Water Guard 491** and other subsequent materials.



## Step 2: Application of Water Guard 491 over the slab.

Once the roof slab has been casted, it is essential to apply the waterproofing coating of **Water Guard 491**. It is a 2 component highly flexible cementitious copolymer coating ideally designed as an excellent waterproofing coat over concrete & other cementitious surfaces to resist positive water ingress. It is essential to apply **Water Guard 491** Correctly, it is recommended to apply 2 coats of the material in right angled directions. If the first coat is applied top to bottom, the second coat should be applied in a left to right direction (Please refer product datasheet for further information).



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## Step 3: Flood Test of the roof slab.

Once the coating of **Water Guard 491** has been dried, it is recommended to conduct a flood test over the roof slab by filling it with 3 to 4 inches of water for at least 48 to 72 hours. The leakage points after the flood test should be rectified using appropriate means and the flood test should be repeated until all the leakage points have been rectified.



## Step 4: Conduit / Utility pipes over the roof slab.

Once the flood test over the slab has been successfully conducted, the utility pipes of electric, gas and plumbing are usually passed through the slab for various areas of the building. Once these lines are laid, it is recommended to cover them up with a repair mortar of **Patch 365 Plus**. It is recommended to fully cover these lines with the material with at least a thickness of 4mm to 8mm (Please refer to the product datasheet for further mixing and application details). Once the utility lines have been properly covered with **Patch 365 Plus**, it is recommended to coat over the material of **Patch 365 Plus** with at least 2 coats of **Water Guard 491** to ensure proper waterproofing of the utility lines.



## Step 5: Screeding of the roof slab.

After properly protecting & covering the utility lines, a screed is usually poured over the roof slab. It is recommended to use good strong mix design for the screed. It is also recommended to add **Ressi SBR 5850** along with the addition of **Silmix** within the mix of the screed. The recommended dosage of **Ressi SBR 5850** and **Silmix** is 1 Ltr each for every 50 KG Bag of cement used in the placement of floor screed over the roof & balcony slab. It is to be strictly ensured that the screed is placed in a slope moving towards the water drainpipes of the slab. If the slopes are not properly maintained, the functioning life of the slab will be reduced drastically and will cause many issues within the lifetime of the slab. Proper screeding in slope moving towards water drains is one of the most important elements of the waterproofing system for roofs and balconies. For larger areas proper panel grooves should be given in the screed at regular intervals to avoid cracks forming in the screed over time.



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## Step 6: Making of chamfers

Once screeding works have been completed it is recommended to make chamfers between the parapet walls & the floor screed. The material recommended for making the chamfers in this case is **Patch 365 Plus**. The chamfers should be at least 4 inches tall & 4 inches wide along the entire area intersecting the parapet wall & floor screed. This is to be ensured for skylight openings and parapet walls of those openings as well.



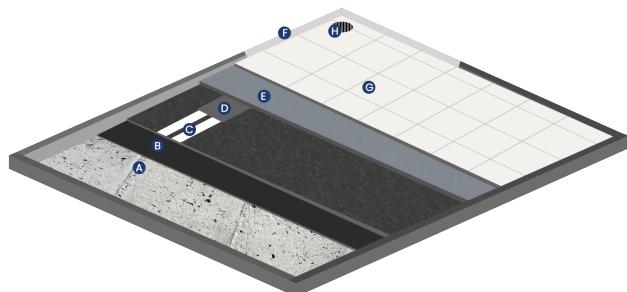
## Step 7: Finishing of the screed

Once the screed has been laid, cured, and dried out completely, it can be finished with a suitable material such as tiles, marble, or any other finish as per requirement. The screed itself can also be left without finishing if no further finish is required.

**Note:** This entire system is designed by sandwiching the coating of **Water Guard 491** between the slab and the screed. **Water Guard 491** can also be applied after the screeding of the slab as well. However, for prolonged life of the coatings, it is usually recommended to sandwich them for long term waterproofing durability of roofs and balconies.



## System Summary



## ROOFS & BALCONIES (RESIDENTIAL)

- A: Slab with the inclusion of Max Flo Integra 3
- B: Water Guard 491
- C: Conduit / utility pipes
- D: Patch 365 Plus and Coating with Water Guard 491
- E: Floor Screed with Ressi SBR 5850 and Silmix
- F: Chafer with patch 365
- G: Final Floor Finish
- H: Drain