Insulation Adhesive
The fast and reliable solution for bonding insulation materials
Icopal Insulation Adhesive

Icopal Insulation Adhesive offers optimum application properties and ensures perfect results.

- Quick & easy to apply
- Reliable holding power
- Economical and efficient
- Short curing time
- Levels off uneven surfaces
- Bonds all types of insulation

Icopal Insulation Adhesive is a single component, moisture curing polyurethane foam adhesive supplied in a self contained airless spray, for fast bonding of thermal insulation boards on flat roofs.

The 13.6 litre canister delivers sufficient Adhesive to bond 120 sq.m of roof area, making it a versatile and flexible solution for the roofer.

(calculated with 30mm beads at 300mm centres)

Icopal Insulation Adhesive

Conventional PU Adhesive
Icopal Insulation Adhesive is suitable for bonding the following insulation boards on flat roofs:

- Extruded Polystyrene
- Rigid Polyurethane
- Rigid Polyisocyanurate Glass & Bitumen Faced
- Mineral Fibre
- Expanded Polystyrene
- Rigid Phenolic

Easy to apply

The application guns are high quality, manufactured from stainless steel. The 600mm lance allows the operative to stand up whilst applying the Adhesive onto the substrate.

Easy to Clean

Once connected the canister remains open and on/off is controlled only with the application gun. The special 100% moisture block hose prevents the Adhesive from premature curing. Cleaning Kits are available for in-use and end of use cleaning.
Icopal Insulation Adhesive Application

Substrates
Icopal Insulation Adhesive is ideal for use on absorbent and non-absorbent surfaces such as:

- Concrete
- Plywood & OSB
- Brickwork
- Galvanised Metal Decks
- Existing Aged Bitumen Roofs
- Mastic Asphalt (sand rubbed)
- Mineral Surfaced Roofing Felts
- Bitumen Vapour Control Layers (sand finish)

Application Temperature
Icopal Insulation Adhesive should be applied in temperatures above 5 degrees C.

Surface Preparation
- Surfaces must be sound, clean and free from blisters, oil & grease.
- Concrete surfaces should be free of latents and sharp projections.
- Remove all loose or excess mineral from aged bitumen roofing, prior to application.
- Bonding is possible to damp surfaces but avoid over wet or ponding water.
- It is recommended to always carry out a trial application to establish bond strength before commencing with the full installation.
- For bonding and compatibility to other surfaces consult Icopal Technical Services.
Application Guidance
The following guidance is based upon independent wind uplift testing of Icopal Thermazone PIR Insulation bonded to a reinforced bituminous vapour control layer using Icopal Insulation Adhesive. The suitability of the assembly to resist wind loads has been assessed in accordance with BSEN 1991-1-4 2005.

Central zone and perimeter zone
The roof area must be subdivided into zones and additional Insulation Adhesive is required in the perimeter zone where the wind action is stronger.

Determine the Perimeter Zone Width from Table A
L = the longest side dimension (m)
H = the height of the roof from the ground (m)

Table A = Perimeter Zone Width (m)

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Determine the correct Adhesive spacing for the perimeter and central areas.

1. Read the wind speed for the location of the project from the wind speed map above.
2. Read from Table B the required bonding pattern for the height of the roof.
3. Refer to the bonding pattern diagrams on pages 8, 9 & 10 for the correct centres of Icopal Insulation Adhesive to be applied.
4. If the project is located on the Coast or in a severely exposed location or the building has large openings to any elevation or the height is above 20m contact Icopal Technical Services who will be happy to provide project specific calculations.
### Table B

<table>
<thead>
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<th>Roof Height From Ground</th>
<th>Wind Speed (m/sec) – From Map</th>
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<table>
<thead>
<tr>
<th>Perimeter Zone</th>
<th>Centre Zone</th>
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<td>200mm</td>
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<td>150mm</td>
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<td>150mm</td>
<td>250mm</td>
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Consult Icopal Technical Services

Individual calculation required. Call Icopal Technical Services.
Bonding Patterns

To ensure the correct bonding pattern to the substrate, apply Icopal Insulation Adhesive in beads of 30 - 40mm dia using the Insulation Adhesive Gun at the required centres across the 1200mm length of the Insulation board. Bonding patterns are based on Icopal Thermazone Roofboard Insulation. For alternative Insulation boards consult Icopal Technical Services.

Adhesive strips at 150mm centres
8 strips per 1200mm board

Adhesive strips at 200mm centres
6 strips per 1200mm board
Adhesive Strips at 250mm centres
5 strips per 1200mm board

Adhesive strips at 300mm centres
4 strips per 1200mm board
User Instructions

Storage

- Ideal storage temperature 15 to 25 deg C.
- Always store the canisters upright and in dry conditions.
- Do not store in hot areas or direct sunlight.
- Do not force product out of the canister.
- Do not puncture canisters as they are pressurised.

Always store on a pallet and not directly on a concrete floor.

Unopened canisters have a shelf life of 12 months. Opened canisters can last for a period of 9 months provided the canister is left open and the gun is closed correctly after use.

General User Information

- Always wear suitable protective eyewear & gloves.
- Install Adhesive in temperatures above 5 deg C.
- Low ambient temperatures will extend the curing process.
- In cold weather the canister temperature can be raised by immersion in warm water.
- In high summer the curing time can be accelerated by applying a fine mist water spray to the Adhesive (care must be taken to avoid overwetting).
- Adhesive will not work in standing water or puddles.
- DO NOT expose canisters to direct flame or heat.
- Materials to be bonded should be dry and free from dust, oil & grease.
Connecting the Application Gun

1. On initial use or if the canister has been standing for more than 12 hours shake the canister from side to side for 30 seconds.

2. Connect the Moisture Block Hose to the Application Gun & fully tighten with the spanner provided.

3. Ensure the Gun is closed by checking the adjustment screw is turned fully clockwise.

4. Remove the safety cap from the canister and connect the Moisture Block Hose. Fully tighten with a spanner. Make sure the red tap on the hose is turned to the off position.

5. Fully open the valve on the canister (anti-clockwise) and turn the red tap on the hose to the on position. Check the connections for any leaks and tighten if required.

6. DO NOT TURN OFF THE CANISTER OR HOSE VALVES AGAIN UNTIL THE CANISTER IS EMPTY AND YOU ARE CHANGING TO A NEW CANISTER OR YOU ARE FINISHED AND WANT TO CLEAN THE GUN & HOSE.
7. Before use purge the gun and hose to ensure the correct discharge of adhesive. Point the lance into a bucket or container and gently squeeze the trigger on the gun to extrude an even and continuous bead of adhesive. Adjust the flow of adhesive by turning the screw on the back of the gun (anti-clockwise to open and clockwise to close). Take care not to open the screw too far as the control pin may come out. Always make a trial application to obtain a feel for the application.

8. During use keep the tip of the application gun clean to prevent blockages by using the Icopal Adhesive Cleaning Kit.

Application

9. Set the application gun to discharge a consistent 30-40mm bead of adhesive. Keep the tip of the lance approximately 250mm above the substrate. (do not drag the tip on the surface as this will damage the tip).
10. Apply the adhesive in line with the selected bonding pattern from page 8-9 (Note: Adhesive should always be applied across the 1200mm length of the Insulation board).

11. Lay the Insulation Board immediately into the Adhesive with the joints staggered (Do not allow the Adhesive to skin over as this will affect the bond strength).

12. Apply even pressure across the Insulation Boards by carefully walking on them just once. This will ensure they are level and the bond underneath is evenly spread. Do not stand on the boards again for at least 15 minutes.

13. Initial bond will be achieved after 15 minutes at which time the boards are safe to walk on. Full strength cure will occur within 24 hours.

14. After use turn off the application gun by turning the adjustment screw clockwise. (Note: it is advisable to turn off the gun each time there is a break in the work).

15. DO NOT TURN OFF THE CANISTER OR HOSE VALVES AGAIN UNTIL THE CANISTER IS EMPTY AND YOU ARE CHANGING TO A NEW CANISTER OR YOU ARE FINISHED AND WANT TO CLEAN THE GUN & HOSE.
Changing the Canister

16. When the canister is running empty it will start to splutter. At this point you should discharge the remaining adhesive and change to a new canister.

17. Turn off the valve to the top of the canister (clockwise).

18. Squeeze the trigger to the application gun to discharge the remaining pressure in the hose and gun.

19. Turn off the red tap on the hose (clockwise).

20. Disconnect the hose from the canister using a spanner.

21. For disposal of the canister proceed to steps 25 to 30.

22. Connect the hose to the new canister after agitating for 30 seconds and follow steps 3 to 7. This process should be carried out immediately to prevent any adhesive from curing within the hose which will create a blockage and become unusable.

Cleaning

23. If work is complete and the gun and hose require cleaning before storage. Connect the hose to the B Safe Cleaner Canister in the same way as a new canister of adhesive.

24. Flush through the gun and hose by discharging the cleaner into a bucket or container until all adhesive residue has been removed and the equipment is clean.
Canister Disposal

25. ALWAYS WEAR EYE PROTECTION AND GLOVES WHEN DISPOSING OF CANISTERS.

26. Never carry out this process near sources of flame or electrical equipment.

27. Lay the empty canister on its side with the discharge valve pointing AWAY from the body.

28. Open the canister valve (anti-clockwise) and slowly release any residual pressure.

29. Stand the de-pressurised canister upright and use a brass or spark free punch to remove the disc located next to the valve.

Dispose of empty canisters

Empty canisters which are safely de-pressurised should be disposed of in accordance with local waste and scrap metal recycling & disposal regulations.

Further information on Icopal’s full range of membrane adhesives and accessories is available from the website www.icopal.com or via Icopal Customer Service department.