



Technical presentation

# Unison Movement and Movement control Joints

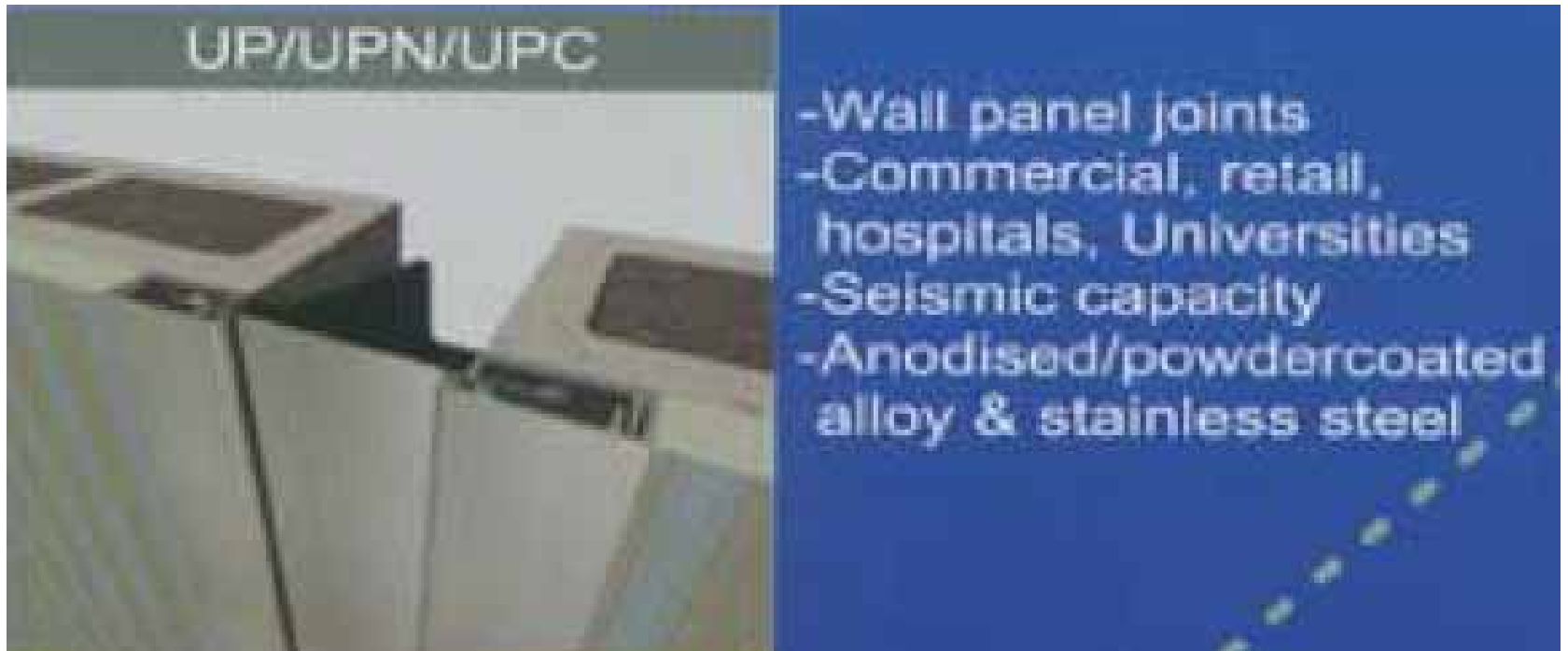


***nuplex***<sup>®</sup>  
Construction Products

# Nuplex are the NZ agents for this range of commercial movement control joints

 <p>UAD/UADS/UBD</p>	<ul style="list-style-type: none"><li>-Low profile</li><li>-Horizontal/ Vertical/ transverse movement</li><li>-Retrofit applications</li><li>-Anodised alloy, stainless steel cover, solid brass</li></ul>	 <p>UAFM/UBFM</p>	<ul style="list-style-type: none"><li>-Anodised alloy/ Solid brass</li><li>-Supermarket &amp; retail areas</li><li>-'Slab on ground' application</li></ul>
 <p>UAC/UACS</p>	<ul style="list-style-type: none"><li>-Commercial/public structures</li><li>-Concealed fixings</li><li>-Compatible with most floor finishes</li></ul>	 <p>UAC130HD</p>	<ul style="list-style-type: none"><li>-Heavy duty floor joint</li><li>-Airports, loading docks</li><li>-Commercial/ Industrial</li><li>-Anodised alloy or Stainless steel coverplates</li></ul>

# Vertical wall joints



# Unison movement joints for:

- Floor
- Wall
- Roof
- Hygiene
- Corbel slip joints
- Carpet
- General floor movement

# An example – requiring Unison joints

- New mid-size Australian supermarket: No vinyl tiles (polished concrete)
- No sheet vinyl anywhere
- No resin floor toppings, (tiles)(no instore process)
- No waterproofing on carpark decks (see later)

# Site uses:

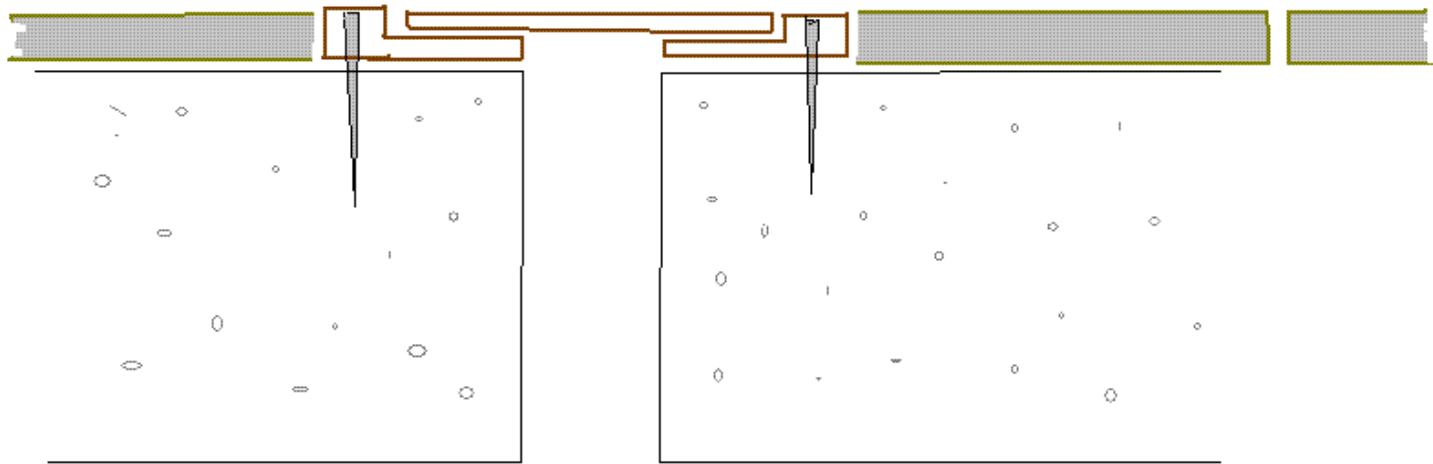
- Floor joints, UAD
- Exterior building joint UAC
- Carpark waterproofing UPBEN (joints only , epoxy nosed).
- Joint fireproofing, UFI
- All these systems were being installed by Unison, for Woolworths , on this site.
- Nuplex contractors could do this.

# UAD

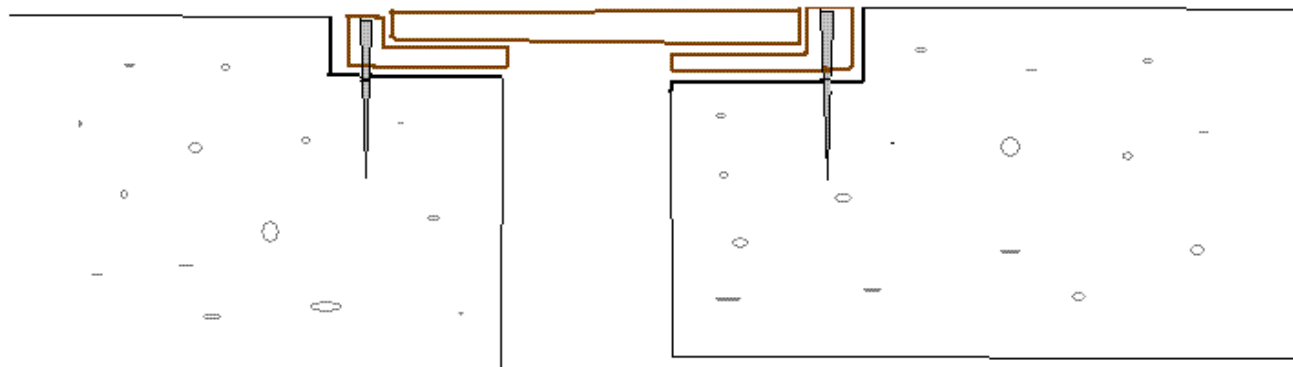
- Unique, low profile joint being used on many jobs.
- 6mm edge
- Shown in brochure as “on-top” of joint but used in supermarket as rebated to become flush with the finished polished concrete.
- Looks very sharp



Standard UAD on top of Concrete; Flush with flooring



Standard UAD, Inserted into cast or cut rebate to be level with finished floor.  
eg Polished concrete





## UAD

Can be post applied.  
Rebated or level with flooring.  
Fixing screws can be seen.  
Cover plates can vary 70 -120.  
Can be alum or SS

# Australian Supermarket under construction

- Inside: UAC joint with UFI (fire rating) underneath.
- Outside inter-structure: UAC + UFI
- Outside carpark: UPB EN

# Comparison of UAD low profile



UAD

The two (middle and right) are the same (UACEHD) only varying is the coverplate width.

(UACEHD: Unison-alum(joint not coverplate)-extra heavy duty.

(UACS110EHD – Unison- alum joint- (c is design) – S (stainless coverplate) – 110 (width of coverplate) - extra heavy duty, design

# Joints



Cover

UAC

UACEHD70

UACEHD100S

UACHD200



Rebate  
for UAD











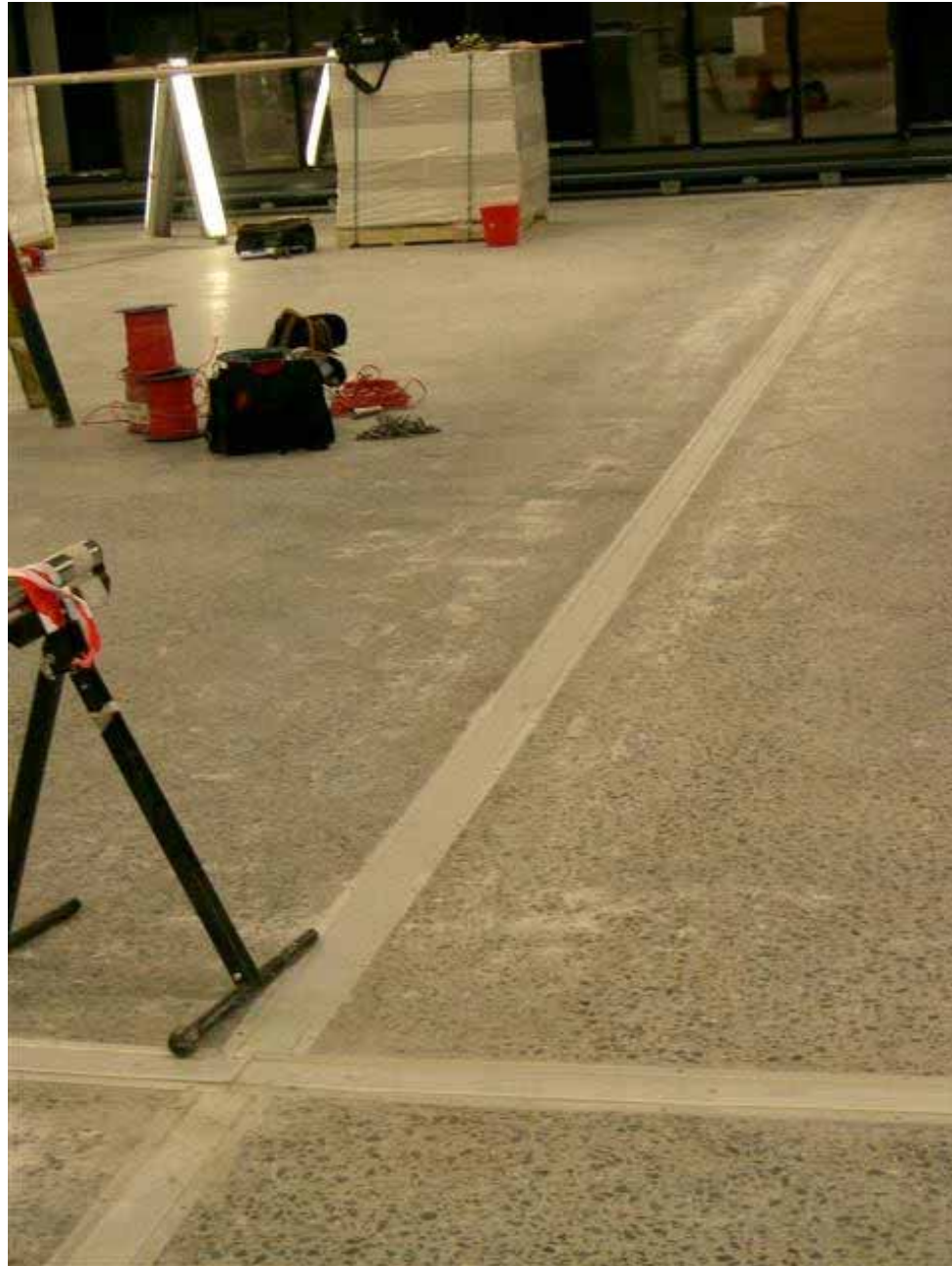
For cutting rebate; must be straight!

Two outers, then some inners, then chip out.











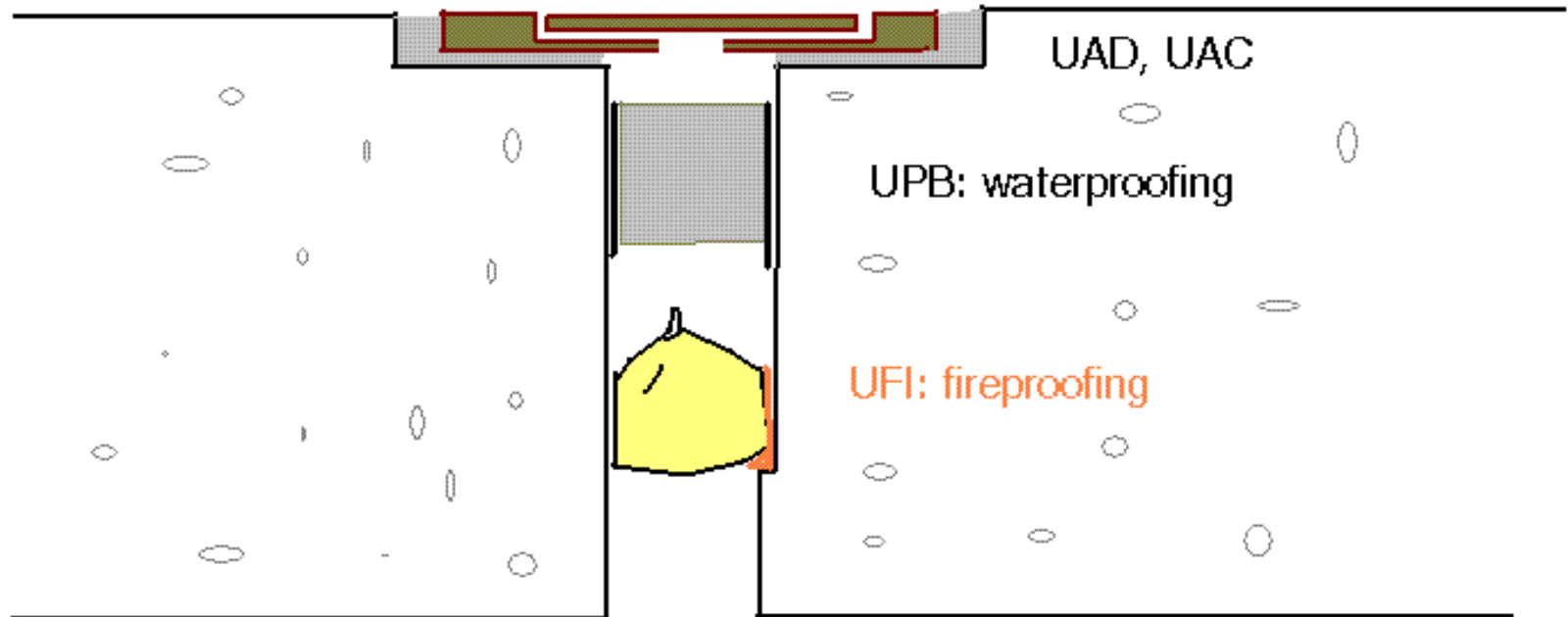
UAD as a lightweight retrofit (last thought) between tenacies.

Also has PB

And FI (next slide)



## Multi controlled joint



1. Movement control
2. Waterproofing under the movement joint
3. Fireproofing

# UAD used

- Brisbane Meyer centre
- 2006
- 600lm of UAD post applied to joints in a refit
- Probably \$220 /lm

Unison. Nov 2008

Part 2.2 UAC floor movement  
control joint

Installation – Supermarket

# UAC

- Unique, medium duty joint being used on many jobs.
- Deep recess
- Isolates structural movement between separate building elements.
- Looks very sharp

# Comparison of UAD low profile and UAC



UAD

The two (middle and right are the same (UACEHD) only varying is the coverplate width.

(UACEHD: Unison-alum(joint not coverplate)-extra heavy duty.

(UACS110EHD – Unison- alum joint- (c is design) – S (stainless coverplate) – 110 (width of coverplate) - extra heavy duty, design

# Joints



Cover

UAC

UACEHD70

UACEHD100S

UACHD200

# UAC

- UAC- ramped edges, feet as brackets
- UACHD- ramped edges, feet as continuous plate
- UACEHD - square , thick edges, feet as continuous plate, thicker alum.

# UAC

- UAC- normal expansion joint
- UACHD- commercial applications
- UACEHD - warehouses with plate jacks, forklifts, scissor lifts.



# UAC70 (70mm)



- Saw cut concrete
- Insert joint on a mortar (superset), levelling the joint with a level to match polished concrete.
- Cure, then screw down with plastic plugs



# UAC70 (70mm)

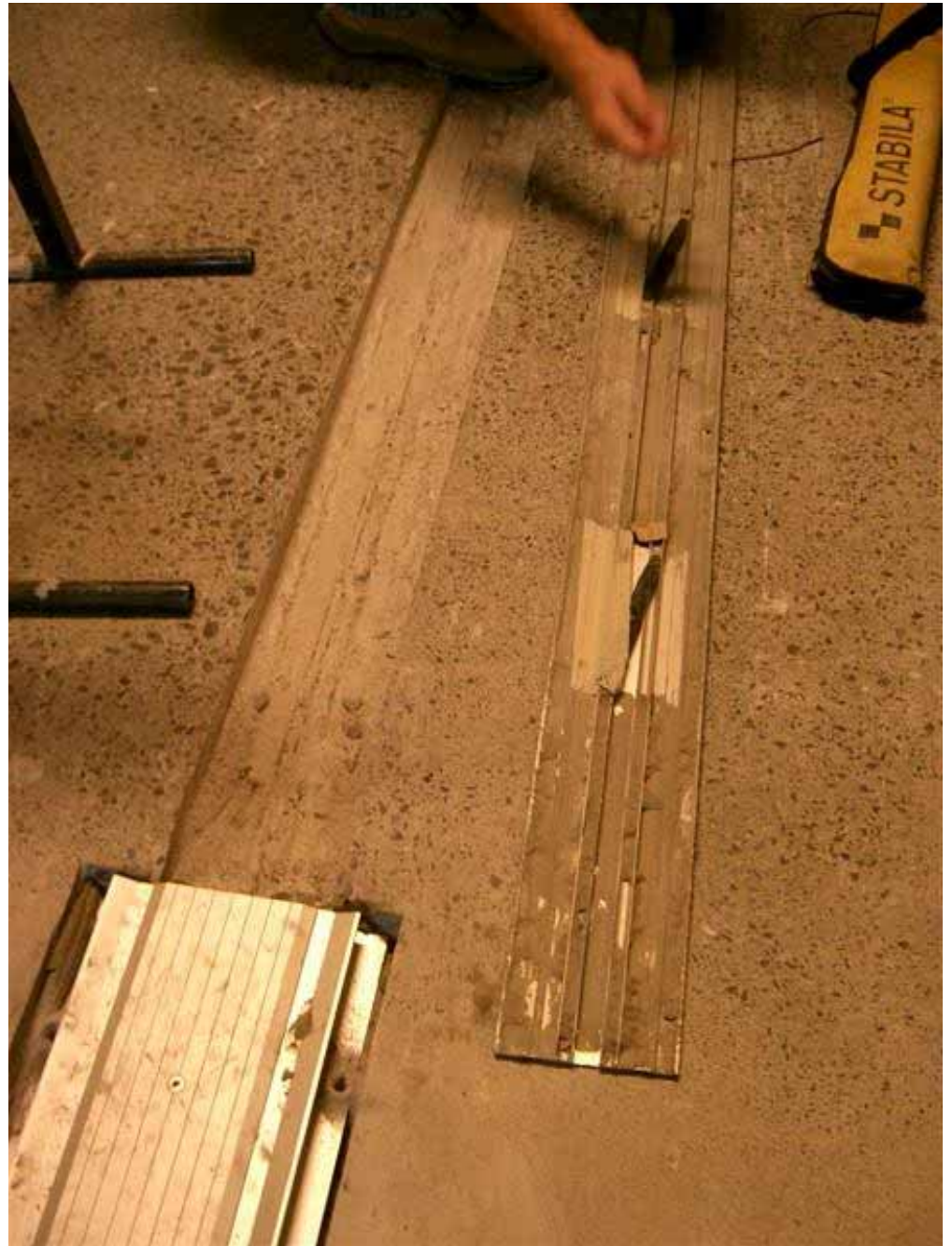


- UAC
- See angled out lip; allows cover plate to rise up, over and out in extremes.



Checking a problem.

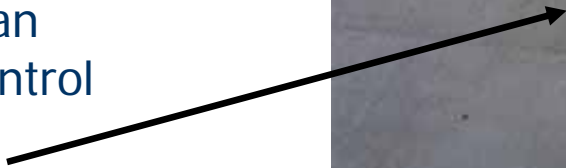
Note masking tape on  
mechanism to protect from  
mortar.  
It must move!!





That line is the control line between building and the carpark plaza deck.

Must have an effective control joint, UAC.





**UAC**  
**(missing its**  
**support**  
**feet)**

UACEHD

# Installation

- Saw out recess for UAC. See manual drawings for dimensions.
- Set UAC 's feet onto mortar while using level to set it flush with the deck or with whatever will be on the deck (tiles and mortar). Allow to set overnight.
- Come back and Dynabolt down.

# Installation mortar

- Cement mortar: normal installation.
- Epoxy mortar and nosing: heavy duty loadings
- The choice is part of the standard spec.

Sites, such as IKEA are very heavy duty. Fork lifts, pallet jacks, scissor lifts cross the floor joints. Failure is not an option.



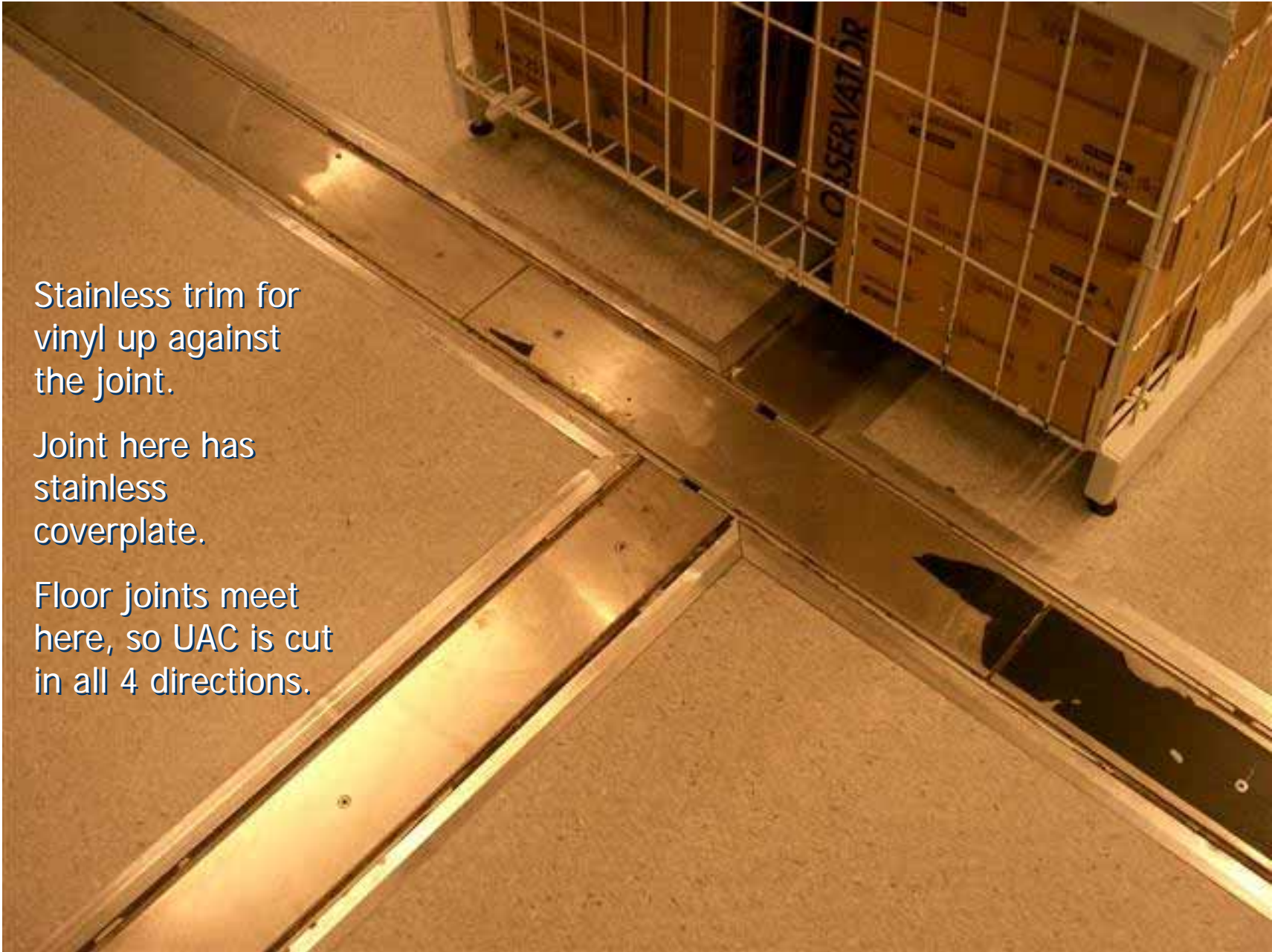


UAC110EHD (EN) (A)

( C-type joint, 110mm coverplate, extra heavy duty design, epoxy nosing and epoxy setting mortar, alum coverplate







Stainless trim for vinyl up against the joint.

Joint here has stainless coverplate.

Floor joints meet here, so UAC is cut in all 4 directions.



The amount of epoxy mortar used is very significant.

# UAC used..

- Brisbane Queens plaza (david jones)
- 400lm
- UACS100, 100mm wide stainless coverplate
- Plus PB (waterproofing inside! In case of a flood from sprinklers)
- Plus FI, interfloor fire proofing.

# Very decorative

- Logan megacentre
- UACS70  
c type, S-stainless 70mm coverplate,
- UFI fire underneath
- Not EN, epoxy nosing, just mortar as not heavy duty loading like IKEA



Note  
polished  
concrete  
yet again



Supplied in 4.m lengths.

Joining point;

cover plate must not lap  
joint for obvious reasons



Runs along, independent of tenancies





UAC joint at airport with  
non-slip tape on top.

Installed on both sides of  
connecting walkways.



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Part 2.4 UAST floor joint  
Installation – supermarket  
hygiene area

# UAST:

- Floor joints, UAD  
*UAST Hygienic floor joint in wet areas*
- Exterior building joint UAC
- Carpark waterproofing UPBEN (joints only , epoxy nosed).
- Joint fireproofing, UFR
- All these systems were being installed by Unison on this site.
- Nuplex contractors could do this.

# UAST

- No photos, not yet installed
- Combo of metal joint and waterseal ribbed rubber floor joint
- Used in tiled wet areas
- Unison will form a curved piece too for coves.





# UAST



# UAST

- Microbe resistant & waterproof
- Install rubber under compression with clasps.

Grout to height.

Dynabolt in.

Release clasps so that the joint is tight and under compression within the aluminium joint.



Ready for delivery.

Already  
compressed.

See clasps

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Part 2.3 UPB Waterproofing &  
slab movement control

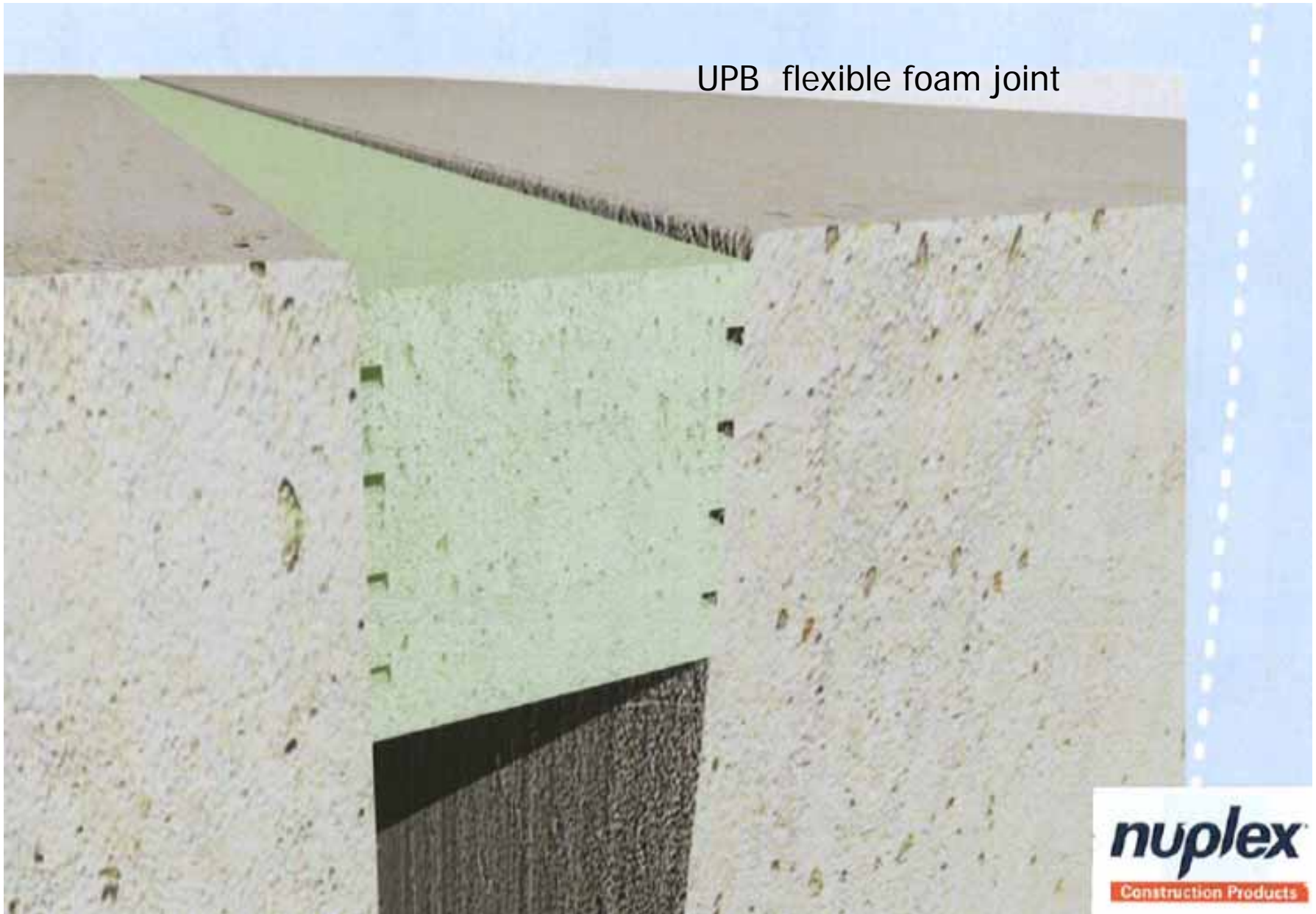
# UPB

- UPBEN actually. (Unison PB Epoxy nosing)
- Unique, foam joint being used on many carpark decks.
- Budget waterproofing: assume the slabs wont leak; waterproofing the joints.
- Usually over car parks, not internals
- Isolates structural movement between separate building elements.
- Looks very functional

# EN

- The logic of the epoxy nosing is that concrete joints will crack and spall.
- Cut out the edge, create a tough epoxy nosing. This will support the foam waterproofing.

UPB flexible foam joint



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# UPB EN (epoxy nosed for strength)





Epoxy nosing  
(Supascreed type)  
formed up to a  
polystyrene insert.  
30mm+








The polystyrene is then cut out or dissolved out. (messy).  
Two straight re-cuts are best.

Once the polystyrene is gone and two straight cuts made, the PB is inserted to below the level. The walls of the cut and the PB are smeared with PB epoxy adhesive. It is compressed and forced down, using a template to keep it even below the edge of the screed.

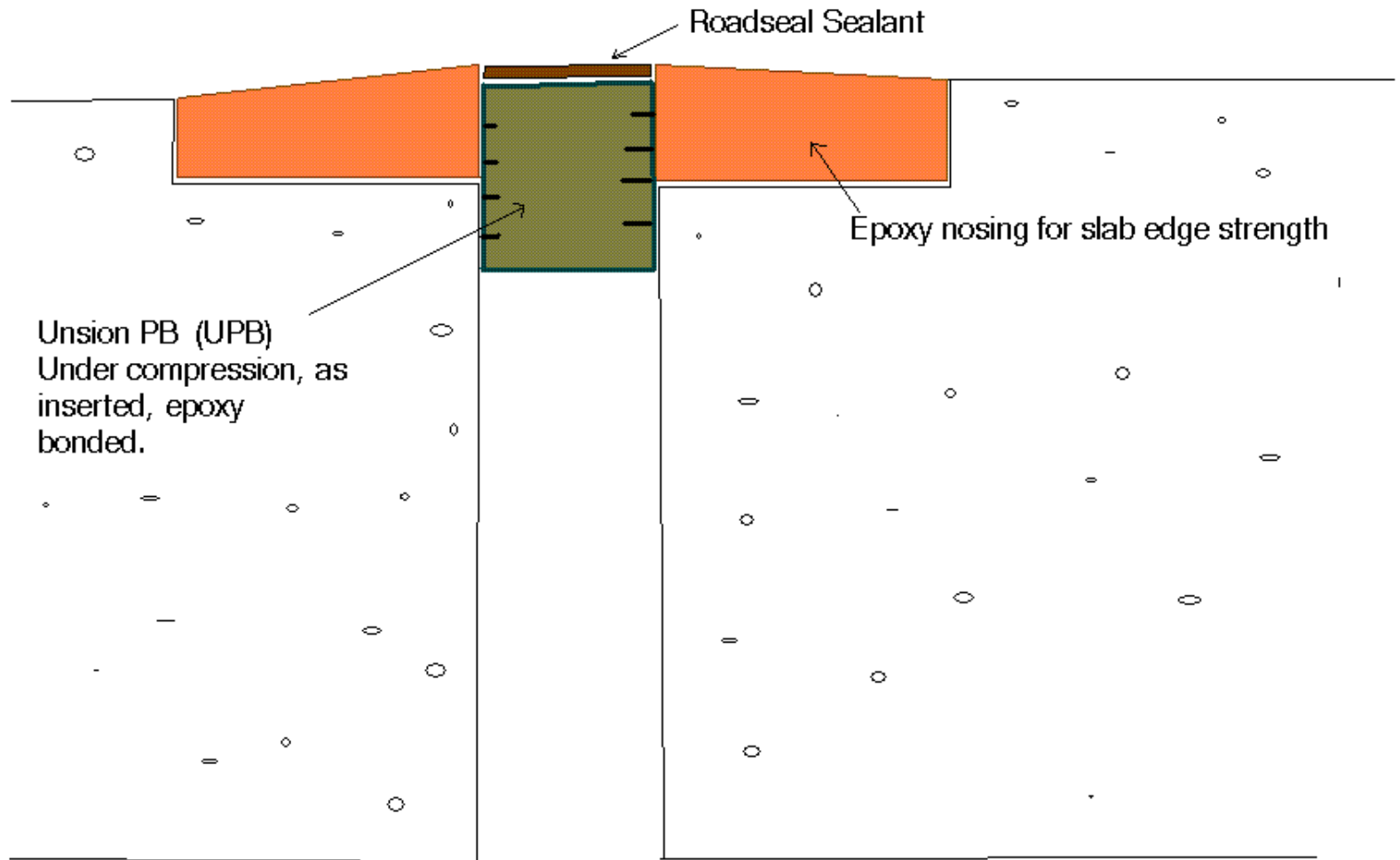




Put sealant over the top.  
(Parchem Emerseal  
Roadseal is good;  
Sikaflex is too rigid)

The PB is kept secure  
below the sealant and is  
not exposed to traffic  
forces.

NUPLEX: Carpark deck waterproofing with Unison PB compression joint















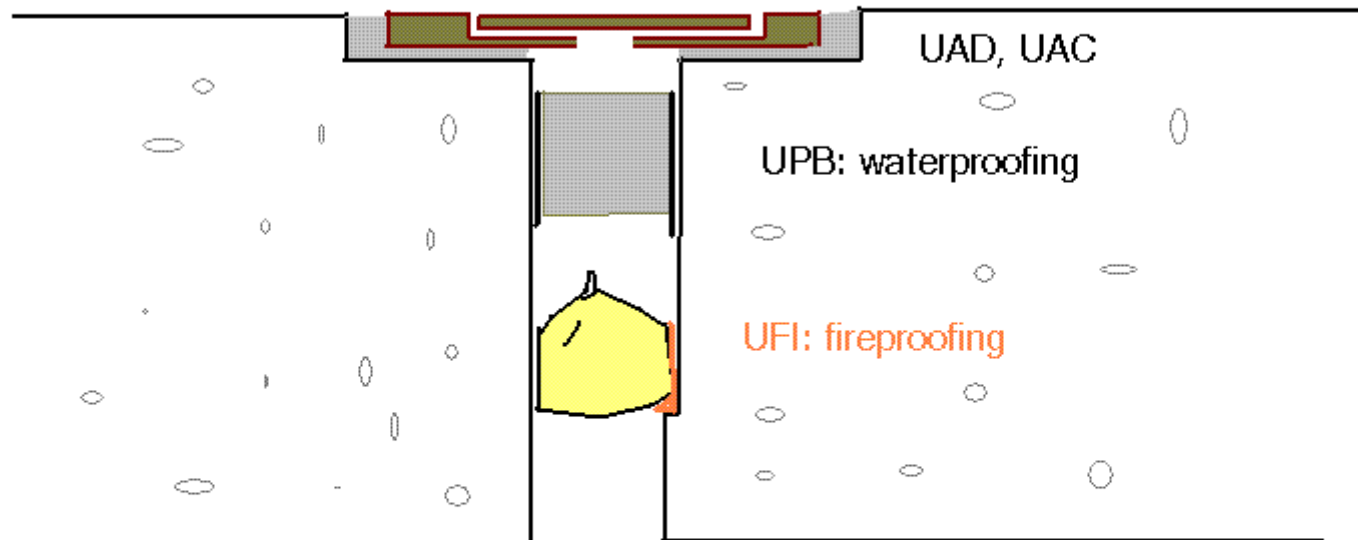
# Installation

- Saw out recess for UPB or wider recess for EN. See manual drawings for dimensions.  
Practically the UPB should be min 30mm.
- Put polystyrene in joint. Install epoxy (Supascreed). Ramp away from joint. Allow to set overnight.
- Come back and cut out polystyrene.
- Smear PB epoxy on sides of joint and PB.

It is inserted 30 % compressed to ensure the installed state can go from compression to normal to elongated. (simply: if the gap is 30mm, order 40mm foam and insert.)

- Ensure it is 3mm below the surface of the EN edge. Cure
- Put sealant over the top. (Parchem emerseal Roadseal is good; Sikaflex is too rigid.  
The dark colour in the picture is the roadseal.

## Multi controlled joint



1. Movement control
2. Waterproofing under the movement joint
3. Fireproofing



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Part 2.5 UFI Fire protection  
Installation

# We could sell:

- Floor joints, UAD
- Exterior building joint UAC
- Carpark waterproofing UPBEN (joints only , epoxy nosed).
- Joint fireproofing, UFI
- All these systems were being installed by Unison on this site.
- Nuplex contractors could do this.

# Supermarket under construction

- Inside: UAC joint with UFI (fire rating) underneath.  
**(Uniseal FI)**
- Outside inter-structure: UAC + UFI
- Outside carpark: UPB EN

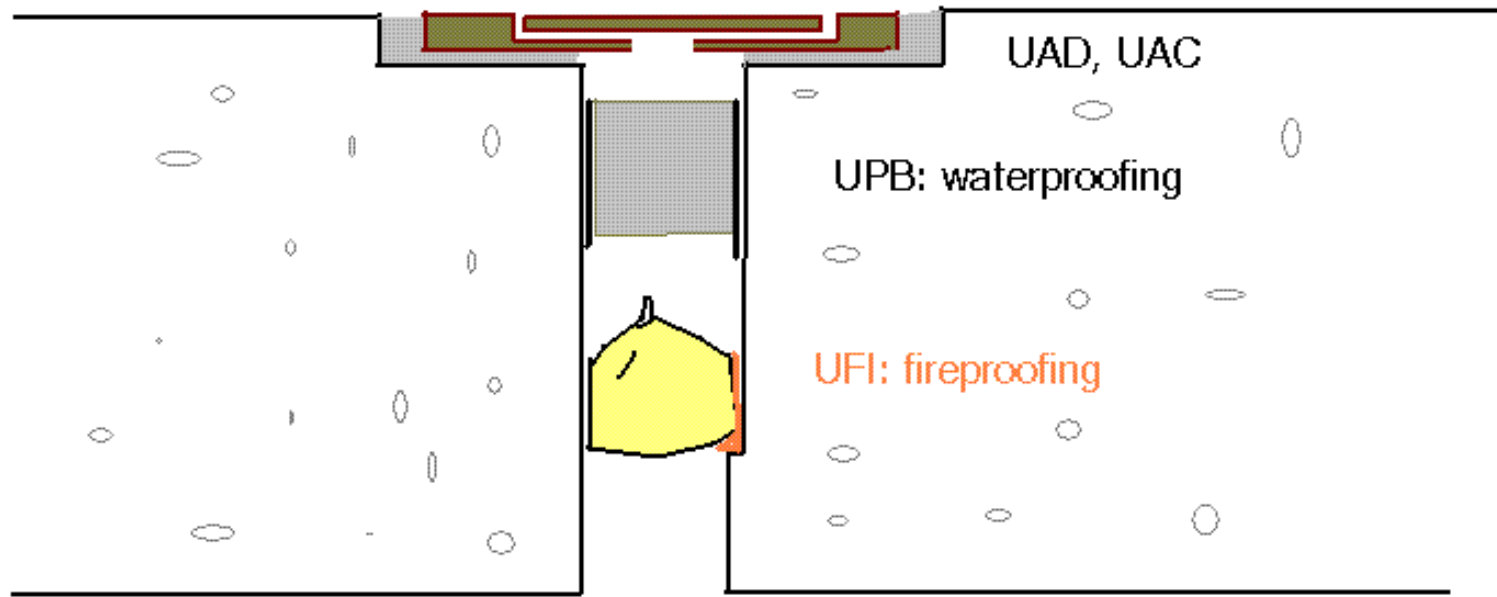
UAD as a lightweight retrofit , between tenacies.

Also has PB

And FI (next slide)



## Multi controlled joint



1. Movement control
2. Waterproofing under the movement joint
3. Fireproofing



UFI intumescent prior to compression

UFI ready to go: The strip is installed with the plastic bag (dryness). A little sealant is applied to hold it in place. It does nothing until a fire hits it. It is intumescent, (expands in fire) to seal the joint. Prevents fire running up .



UFI can be pushed from top , or bottom as in this case. The joint had to be cut to widen.



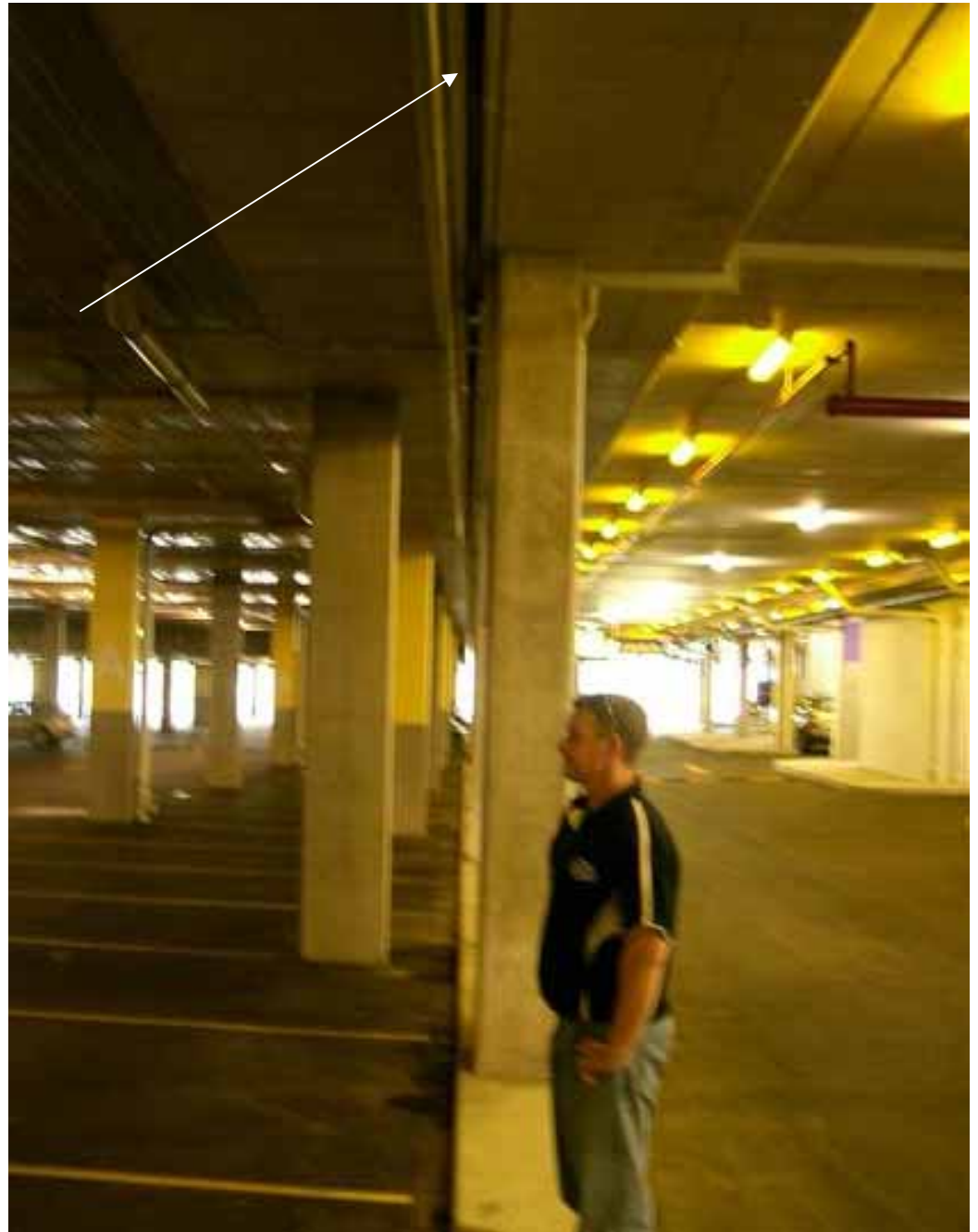


UFI



Meeting between two buildings; different owners and builders.

Fire proofing is fundamental; but really simple.



Every joint is fireproofed.

If a car caught fire under an unprotected joint. It would go into the building itself.....



# UFI

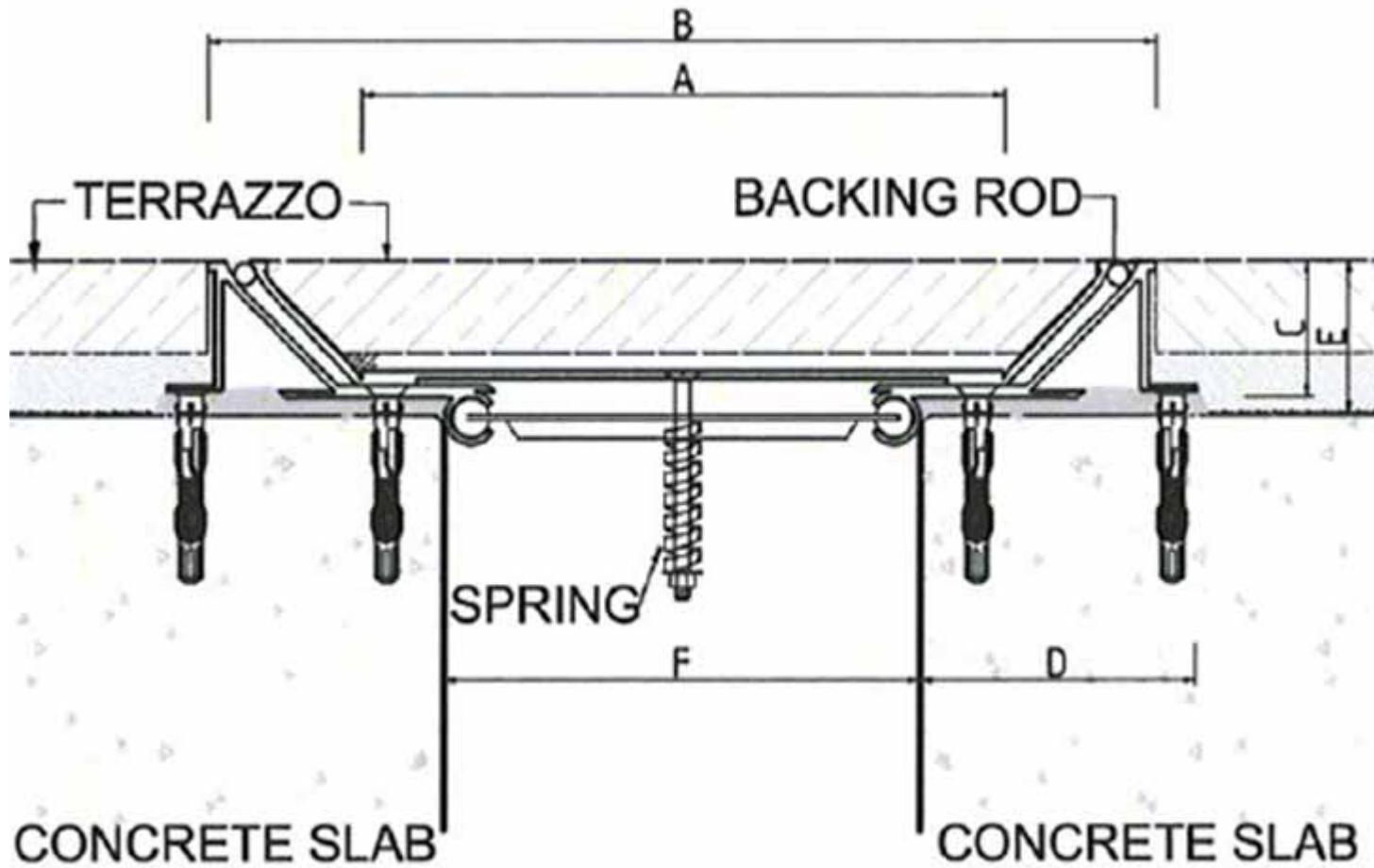
- All fire tested
- Conforms to AUS/NZ standards

# Seismic joints SUACT

- To provide trafficable bridging over large joints.



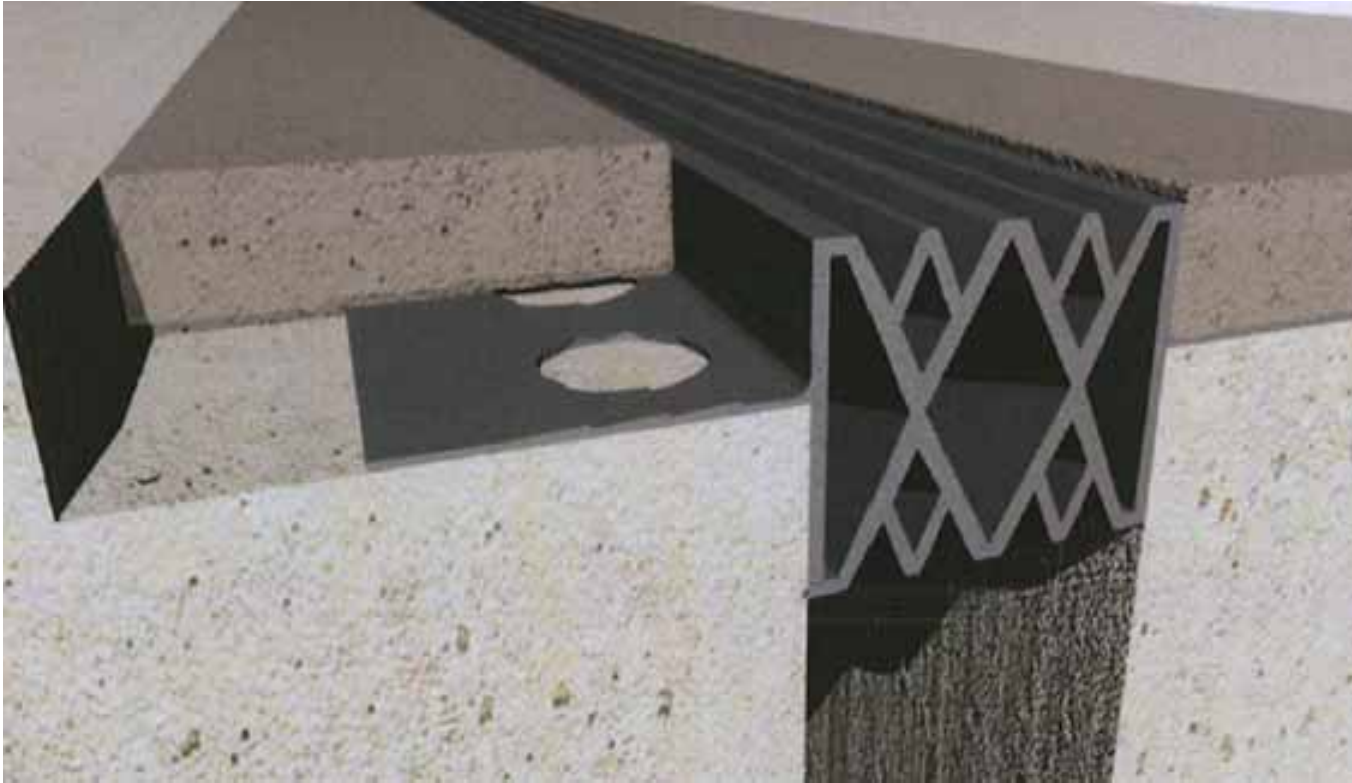
## Seismic SUACT of varying plate widths



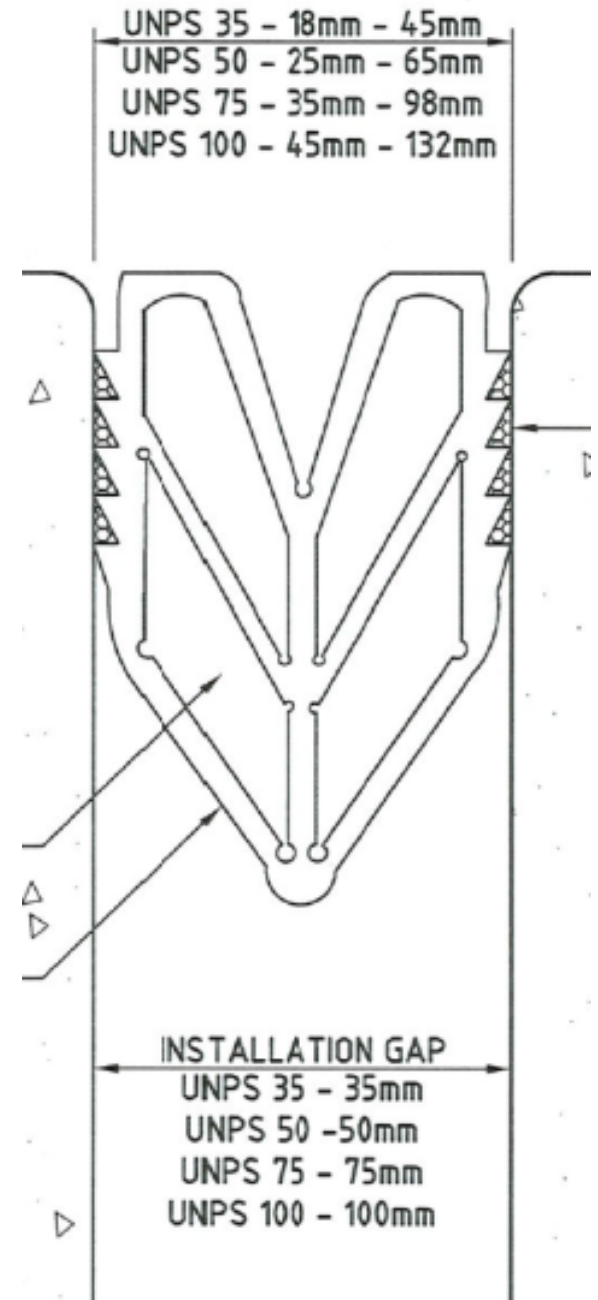


Packed and ready to go 4.8Lm lengths of seismic joints

# UNWC compression seal



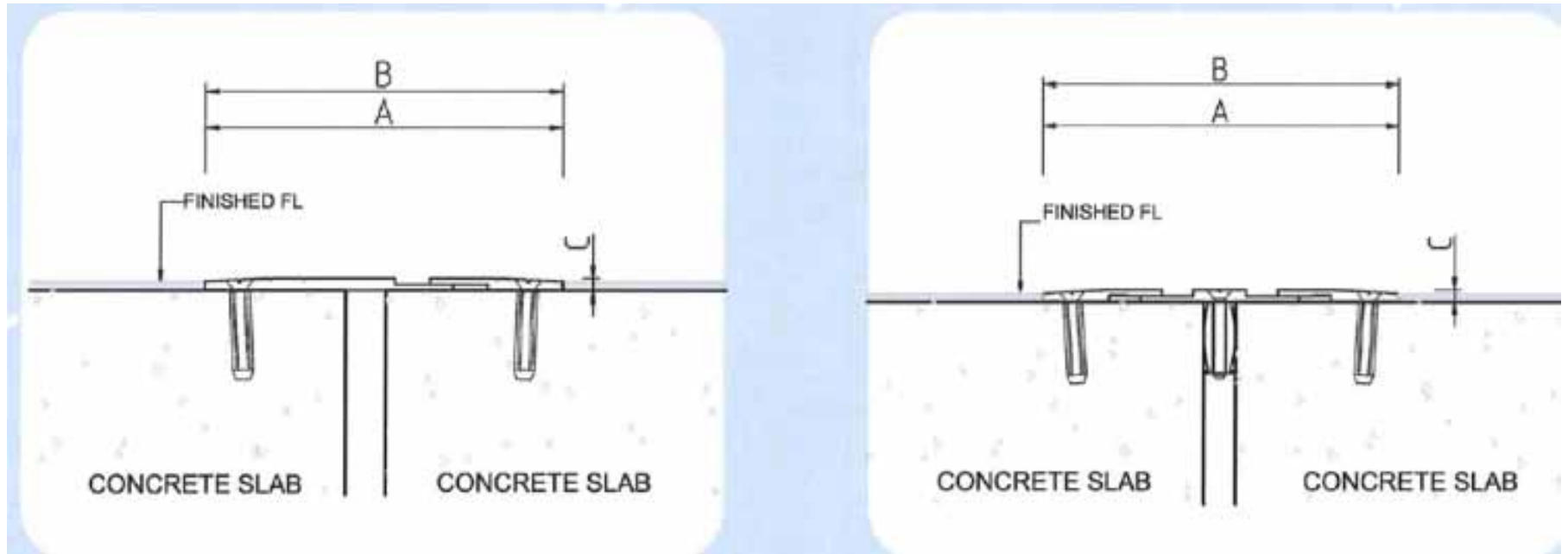
# UNPS compression seal



# UFM general top applied floor movement



# UAFM, two types

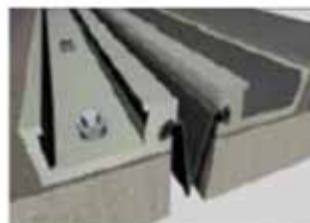


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BY JOINT  
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joints.



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