

# DegafloorNZ > Quartz Series Specification

## DEGADUR® 332 | 430 | 530 Heavy Duty Anti-Slip Floor Topping for Freezers,

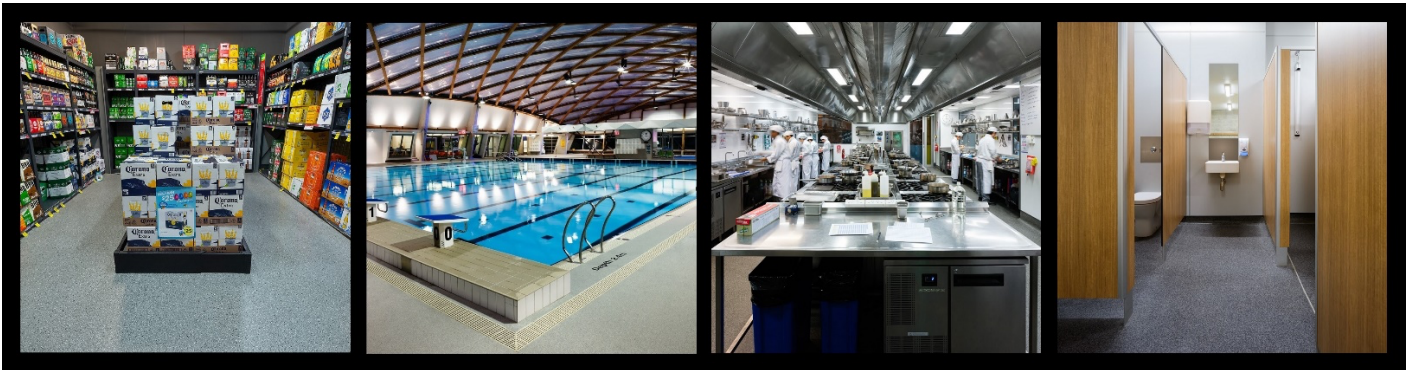
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<b>Date:</b>	
<b>Project Notes:</b>	

### OVERVIEW.

This specification is for the application of the DEGADUR® Quartz Series flooring screed utilizing a blend of 332+430 resins and 530 sealer. It is an industrial floor topping designed for demanding environments subject to **negative (-) temperatures**, water, and heavy mechanical loading.

This system is designed specifically for use in **Commercial Freezers** or for environments that are subject to extreme cold.

It is naturally anti-microbial, AsureQuality Certified and offers industry leading slip ratings.



### PROPERTIES.

DEGADUR® ~ based on Liquid Plexiglas® resin technology is the perfect choice for projects requiring a rapid return to service.

- DEGADUR® Resin floors can be returned to full service in just 2 hours after the final coat of sealer is applied.
- DEGADUR® Resins are **Solvent free**, and free from chemicals listed in the **Living Building Challenge Red List**.
- The unique chemistry of DEGADUR® allows installation and cure in temperatures as low as minus (-) 30°C.
- The unique resin rich formula at 4.0~6.0mm finished thickness offers excellent impact and wear characteristics.
- Available in a range of 9 off the shelf, multi-coloured quartz finishes with slip resistance ratings up to 0.8 or R13.

### SURFACE PREPARATION.

#### Responsibility.

All work in this section shall be the responsibility of the DegafloorNZ Registered Applicator.

To facilitate cleaning and meet health and safety requirements all surfaces leading to drains and gutters must be laid with appropriate falls to ensure they are free draining to mitigate ponding. All control joints are to be as specified and detailed by the engineer. All surfaces must be clean and free from grease, grime, oils, release agent or any other contaminants.

**Note:** Any areas requiring levelling or re falling are to be treated as a variation unless specified at the time of pricing. Before proceeding the Architect or Project Manager must approve any additional work required.

#### Onsite Equipment.

Ensure all necessary equipment is on site, such as calibrated scales, air flow equipment, mixers etc. Calibrated weighing scales are required for **precise measured quantities** of resin and catalyst.

The installation process requires air movement to facilitate curing. If air movement is limited, fans are required to create air flow. Air flow equipment is also used to assist in extraction of odour to an appropriate outlet.

During the brief curing process, Methyl Methacrylate resins emit an odor and ventilation is suggested when working in confined spaces or populated areas to disperse the vapour.

### **Concrete Surface Preparation.**

Concrete substrates shall have a surface which has been manually or mechanically trowelled or floated to an NZS 3114:1987 U3 finish. Concrete shall be cured for a minimum of 28 days before the installation of the selected DegafloorNZ Flooring System.

The slab moisture content shall be no greater than 4% or 75% RH ~ If this moisture content cannot be achieved, contact DegafloorNZ for an alternative solution. Applying DegafloorNZ flooring systems over green concrete is not advised.

### **Grinding | Bush Hammering | Shot Blasting.**

Prepare the concrete floor by mechanical abrasion with vacuum attachment to achieve a surface profile of CSP6-8. Thoroughly vacuum with an industrial grade machine to remove any leftover dust from the grinding process.

### **Ceramic Tiles.**

Prior to grinding, ensure all tiles are well adhered. Loose or damaged tiles are to be removed. Voids shall be filled with DEGADUR® 510 fast cure mortar. Allow minimum 1 hour cure.

Diamond grind the tiled surface with vacuum attachment to remove any contamination and to ensure the surface profile is sufficient for adhesion.

Once the surface preparation is complete, prime with a light coat of DEGADUR® 112 with the addition of 0.25~0.5% Degadur Bond Promotor. It is important to ensure the standard quantity of hardener (BPO) for the specific temperature is doubled due to the Bond Promoter retarding the resin cure. Avoid leaving puddles in the application of the primer.

### **Steel Surfaces.**

Prepare the steel substrate by either, diamond grinding, captive shot blasting or sand blasting to ensure a clean rust free surface is achieved, free from paint and oil contamination.

Galvanized and stainless steel surfaces should be mechanically abraded then thoroughly degreased.

Once the surface preparation is complete, apply a thin coat of DEGADUR® 530 with the addition of 0.25~0.5% Degadur Bond Promotor. It is important to ensure the standard quantity of hardener (BPO) for the specific temperature is doubled due to the Bond Promoter retarding the resin cure. Avoid leaving puddles in the application of the primer.

### **Ply Sheet Preparation.**

Ensure sheets are well fixed with appropriate fasteners to minimize deflection. For timber floor joists, 400mm centers are recommended. Prepare the ply floor by mechanical or manual sanding and rasping.

**Use 16 grit sandpaper across the grain of the ply sheet to intentionally lift the wood fibers.** Thoroughly vacuum with an industrial machine to remove all dust or loose fibers from this process.

**Ply Sheet Joints:** Any non-movement fixed sheet joints shall be bandaged with 225gm CSM fiberglass and embedded with DEGADUR® 112 resin formula.

### **Asphalt Surfaces.**

For new asphalt surfaces, diamond grind the surface to remove the oily residue that is present in new asphalt. 25 grit diamond pads will generally be suitable for this process.

Weathered asphalt will generally not require grinding. Pressure wash to remove any surface debris and contamination before priming with DEGADUR® 530.

### **Cracks & Voids.**

Fill any holes and voids that are not subject to continuing movement with DEGADUR® 510 Repair Mortar. Fill cracks that are less than 1.5mm wide with DEGADUR® Crack Sealer. Allow to cure for a minimum of (1) hour before grinding flush. For cracks greater than 1.5mm use unfilled DEGADUR® 430. For additional reinforcement prime the surface with 112 and lay a slurry of unfilled DEGADUR® 332 over pretreated cracks for additional reinforcement.

In the case of very porous slabs or slabs with extensive micro cracking, DEGADUR® Crack Sealer can be used to condition the surface. Lightly grind the floor to remove any contaminants, vacuum the dust then **flood the surface** with Crack Sealer allowing **approx. ½ litre per sqm** and leave to penetrate for 2~3 minutes before hard squeegeeing the sealer around the entire floor surface. It is important that no puddles are left which could affect the cure. Allow a minimum cure of 1 hour before a final light grind.

**Any cracks that may be subject to cyclic movement refer to DegafloorNZ for a specific solution.**

### **Falls | Leveling\***

For areas that require shape correction or to provide falls, **DEGADUR® 510** resin prefill can be used in thicknesses up to 150mm in one application. **See last page for DEGADUR® 510 mix formulation.**

Epoxy bonded concrete is an alternative on stable concrete substrates if a **minimum 28 day cure** can be accommodated.

**\*A fall of 1:20 for showers is mandatory.**

In other wet areas, a fall of 1:50 is required to achieve a free draining floor and 1:100 is suggested in kitchens or laundries to aid cleaning and water removal.

**Inspection Hatch & Drain Edge detailing.**

It is recommended in these areas where the covers are removed on a regular basis for cleaning and inspection to utilize a stainless-steel L angle, rebated into the concrete for the cover to sit in. A standard profile would be 30x30x3mm aluminum or 316 stainless steel. Refer to DegafloorNZ online CAD details 15 & 16.

**Control Joints.**

Any existing or new control joints within the concrete slab shall be reflected through the DEGADUR® System. Control joints are normally addressed by recording the location of existing concrete joints and re cutting them once the floor has been laid with a crack chaser to form a neat chase filled with floor sealant. Joints should be filled with PEF rod and a flooring grade sealant such as **Gorilla 940FC** PU Adhesive Sealant by Soudal.

**Quartz Coving.**

Where required install coving to floor & wall junctions. A typical cove height is 150mm with a nominal 50mm radius. Cove height can be reduced to 50mm with a 10-20mm radius or increased in height if required. It is recommended that coves are installed before the floor is laid using StoPox CH700 or CS100 epoxy resin.

Coving can be finished against the wall lining with an aluminum coving bead or behind the wall linings. Please note, on block or precast concrete walls, a cove bead is not used, the cove is finished by manually "rolling" the resin back into the vertical wall surface.

Mix Sto CH700 | CS100 resin at a ratio of 1.43Kg of Part A with 0.66Kg of Part B, adding 8.5Kg of C200 Quartz & 5.5Kg of J61 sand.

**This formula will yield approx. 2.75 lineal metres of cove at 150mm high with a nominal 50mm radius.**

If installation time does not allow for overnight drying, DEGADUR® CP200 coving formula can be used for rapid cure coves..

**DEGADUR® Application & Materials:**

DEGADUR® Primer 112 or 111 or 530	DEGADUR® 510 Mortar
DEGADUR® 332   530	DEGADUR® Crack Sealer
AEROSIL® 200   BPO Hardener	DegaFiller332   Accelerator 101   Bond Promoter
Degafloor C100   C200 Quartz	StoPox Coving Resin A + B

**NOTE:** All DEGADUR® resins must be kept and mixed at the same ambient temperature as the location of installation to prevent a premature reaction.

**Dissimilar Surfaces.**

All dissimilar surfaces are to be checked for compatibility with the DEGADUR® System and are to be correctly detailed to ensure any transitions remain secure and watertight. As required, install metal termination edges to protect the finished surface.

**DEGADUR® Primer.**

Prime prepared concrete surfaces with DEGADUR® 112 primer using a 10mm pile roller and/or brush to distribute the product evenly. Consumption is approx. **0.4Kg per m<sup>2</sup>** depending on the absorbency of the substrate.

Broadcast the freshly laid primer immediately with fire-dried quartz sand 0.3 - 0.8 mm (Blackhead Quarries 18/36). Material consumption: approximately **0.2Kg per m<sup>2</sup>**. Do not cover the surface completely - aim for approx. 70% coverage. Vacuum excess aggregate once primer has dried which takes approximately 30 minutes. Hardener % is adjusted according to temperature - see TDS Sheet.

For wet concrete, prime with DEGADUR® 111. Add 1Kg of F111 Filler per 1.86Kg of resin. Consumption is approx. 0.6Kg per m<sup>2</sup>.

For Asphalt surfaces prime with DEGADUR® 530.

For Steel surfaces prime with DEGADUR® 530 ~ ensure bond promotor is added.

For Ceramic surfaces prime with DEGADUR® 112 ~ ensure bond promotor is added.

**Application in minus (-) temperatures requires the use of Accelerator 101.** Refer to DEGADUR® low temperature guide.

**IMPORTANT: Bond Promotor must be added at a ratio of 0.25% per kilo of primer for ceramic and metallic substrates.**

**DEGADUR® 332 Quartz Body coat.**

Mix the DEGADUR® body coat formula based on **2.0Kg resin per m<sup>2</sup>** with **DegaFiller 332** (2.7Kg filler per 1Kg resin), mix with appropriate percentage of hardener and apply the catalyzed resin screed. The material should be dispersed using a trowel, gauge rake or notched squeegee.

Broadcast the C100 quartz, **gradually building coverage** into the basecoat to avoid creating "waves" in the resin. Be mindful to achieve full coverage and ensure no resin bleed.

**A 25Kg bag of C100 quartz will cover approx. 7m<sup>2</sup> when broadcast into 332 resin.**

### DEGADUR® 530 Sealer.

Remove all loose C100 quartz by first sweeping the excess, then vacuuming the remainder. Once clean apply the **first coat** of sealer by rubber bladed squeegee, and back rolling with a high quality 10mm pile, lint free roller to distribute the product evenly at the spreading rate of **approx. 0.5Kg per m<sup>2</sup>**, ensure no more than 0.8Kg per m<sup>2</sup> is applied at any one time. Allow 1 hour cure before applying the **final coat of sealer** at a spread rate of approx. **0.3Kg per m<sup>2</sup>**.

### RETURN TO SERVICE TIME.

DEGADUR® Flooring Systems are ready for light foot traffic one (1) hour after the final application of sealer and ready for full use two (2) hours after the final application of sealer.

### MAINTENANCE.

This DEGADUR® 332 | 530 system should be cleaned using clean water not exceeding 65°C with a neutral detergent solution. Use of a stiff bristled broom or power washing yield the best results. **Mopping is not effective at removing grime** and is not recommended. Dirty water should be squeegeed to drains or removed by wet vacuum.

**\* Health & Safety regulations stipulate water temperature must not exceed 65°C to avoid severe burns.**

Annual inspections should be carried out so any mechanical or physical damage can be addressed. The system is easily repaired, new DEGADUR® layers chemically fuse to existing layers indefinitely. Areas that are identified as damaged should be immediately rectified to the original specification standard to maintain system integrity and stop any substrate corrosion.

Certain substances such as iodine and turmeric can cause staining. This is an aesthetic issue but does not affect the performance or functionality of the floor and is therefore not considered a defect or warranty issue.

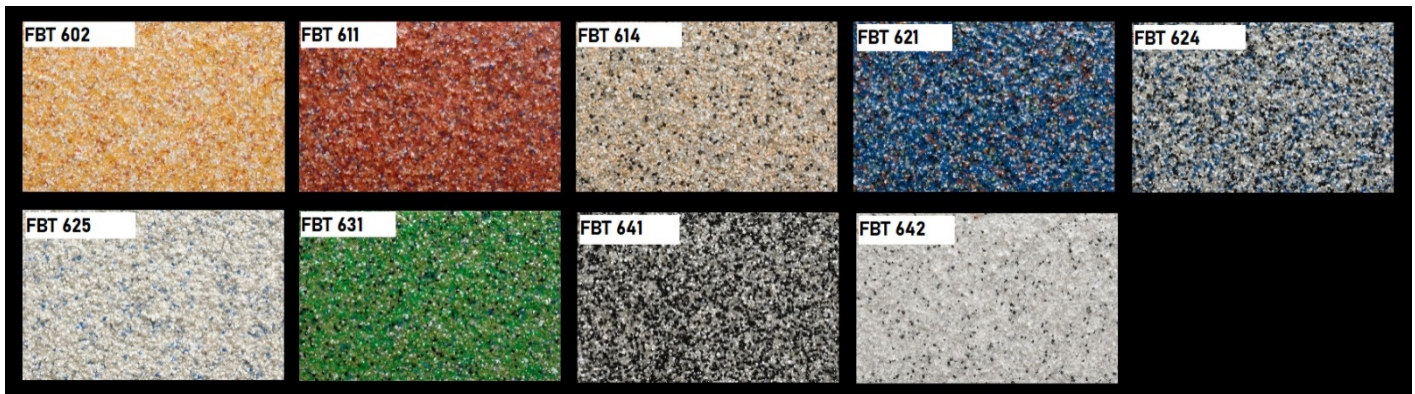
**The use of solvents or abrasives is not recommended. Any resulting damage will not be covered under the warranty. Contact DegafloorNZ for a Cleaning & Maintenance guide.**

### SLIP RESISTANCE.

DEGADUR® Quartz Series floors have been tested by WSP to comply with NZBC D1/AS1, 2.1 to meet a minimum coefficient of friction of 0.6 and up to 0.8. Alternatively, an R rating up to R13 can be achieved.

### COLOUR.

To be confirmed in writing by Architect or Client. Refer to DegafloorNZ for available options.



### PRICING | APPLICATORS.

For a list of registered applicators, contact Matthew Collie on 027 238 2955 or email [matt@degafloor.nz](mailto:matt@degafloor.nz)

### WARRANTY.

The DEGADUR® Flooring System described in this specification is warranted as fit for the purpose for **five (5) years** from the date installation is completed. Regular maintenance and damage rectification are essential to maintain the warranty. Structural movement is not covered within the warranty.

We strongly encourage annual inspections to be undertaken by the original applicator to identify any maintenance that may be required to ensure optimal performance and service life.

Such a warranty is issued by the DegafloorNZ applicator carrying out the work, and is backed by the manufacturer as to the suitability for use of the material supplied, provided that:

- A.** All specified work is carried out by an approved DegafloorNZ applicator who must complete the DEGADUR® Flooring Compliance Form and DEGADUR® PS3 Workmanship Warranty.
- B.** All work is carried out in accordance with this specification, or any written amendment issued by the manufacturer.
- C.** DegafloorNZ must be informed of any usage conditions that may affect the warranty. Special conditions may be applied where service or usage conditions involve any one of the following: severe mechanical abrasion, excessive impact, extreme temperature, and/or chemical spillage.

**DEGADUR® LOW TEMPERATURE APPLICATION GUIDE.**

DEGADUR® BPO Hardener percentages: From 0° to (+) 35° Celsius

Temp °C	Crack Sealer	111	112	CP200	332	420	430	510	165	526	527	530
0°C to +5	5%	2%	6%	~	~	~	~	~	~	~	~	~
+5 to +10	5%	1.5%	5%	4%	5%	4%	5%	6%	1.8%	1.5%	1.5%	3.5%
+10 to +15	5%	1.2%	4%	3%	4%	3%	4.5%	4%	1.5%	1.5%	1.5%	2.5%
+15 to +20	3%	1%	3%	3%	3%	2.5%	3.5%	3.2%	1%	1.5%	1.5%	2%
+20 to +25	2%	0.7%	2%	2%	2%	1%	2.5%	2.4%	0.8%	1%	1%	1.5%
+25 to +30	2%	0.7%	2%	2%	2%	1%	1.5%	1.8%	0.8%	1%	1%	1%
+30 to +35	1%	0.7%	1%	1.5%	1%	1%	1%	1.2%	0.8%	1%	1%	1%

Accelerator 101 &amp; BPO Hardener percentages for temperatures from 0° to (-) 30° Celsius

For DEGADUR® 332, 430 &amp; 510 Resins

Temp °C	Accelerator 101 %	BPO Hardener %	Pot Life (mins)	Hardening Time (mins)
0° to -9°	0.5%	5%	15	30
-10° to -19°	1%	5%	25	50
-20° to -29°	2%	5%	35	100
-30°	3%	5%	35	100

For DEGADUR® Crack Sealer, 112, 420 &amp; 530 Resins

Temp °C	Accelerator 101 %	BPO Hardener %	Pot Life (mins)	Hardening Time (mins)
0° to -9°	0.5%	5%	17	20
-10° to -19°	1%	5%	35	45
-20° to -29°	2%	5%	65	90
-30°	3%	5%	160	300

**Warning! Accelerator 101 & Hardener Powder must never be brought into direct contact as there is a risk of explosion. Always store & add separately.****Note:** Add Accelerator 101 to DEGADUR® resin first, stirring thoroughly, **then** add the BPO Hardener.**DEGADUR® 510 formulation.**

THICKNESS	0 ~ 20mm	20 ~ 150mm
DEGADUR® 510	2.7 ~ 3.0Kg resin	2.5 ~ 2.7Kg resin
7/14	7.5Kg	7.5Kg
18/36	7.5Kg	7.5Kg
J61	5Kg	5Kg
BPO – refer to chart		

Note: resin must come to the top of your mix when it is being troweled otherwise it will not cure properly.