PERMOHONAN PERSETUJUAN MATERIAL

Flooring

Nama Proyek	:	Epoxy Flooring +/- 3200 Micron Lanud Makassar
Nomor SPK	:	007/PO/MLJ/I/2026
Lokasi Pekerjaan	:	Lanud Sultan Hasanuddin Makassar
Item Pekerjaan	:	Flooring
Tanggal Pengajuan	:	21 Juli 2026
Diajukan Oleh	:	Ramdhani Amrullah

1. MATERIAL YANG DIAJUKAN

1.1.

Nama Produk	:	CONSOL 71 FC	
Packaging	:	6 Kg/Set	
Keterangan	:	CONSOL 71 FC merupakan perekat struktural dan mortar perbaikan dua komponen berbasis resin epoksi yang memiliki sifat toleran terhadap kelembapan dan tiksotropik, sehingga tidak mudah mengalir saat diaplikasikan pada permukaan vertikal maupun overhead.	

1.2.

Nama Produk	:	CONSOL 82 LP	
Packaging	:	5 Kg/Set	
Keterangan	:	Produk ini sangat ideal digunakan sebagai perekat antara permukaan beton baru dengan beton lama, sehingga menghasilkan ikatan yang kuat dan tahan lama.	

1.3.

Nama Produk	: CONSOLCRETE FLOOR LEVEL	
Packaging	: 25 kg	
Keterangan	: Consol Crete Level berfungsi sebagai material repair untuk memperbaiki beton rusak, mengisi cekungan atau kerusakan ringan pada permukaan beton.	

1.4.

Nama Produk	: CONSOL FLOOR 161	
Packaging	: 10 kg/set	
Keterangan	: resin epoksi dua komponen bebas pelarut yang dapat digunakan untuk membuat berbagai jenis mortar epoksi sesuai dengan kebutuhan aplikasi, seperti primer, mortar screed, perbaikan retak	

1.5.

Nama Produk	: CONSOL FLOOR 163	
Packaging	: 10 kg/set	
Keterangan	: Resin epoksi dua komponen bebas pelarut yang digunakan sebagai bahan dasar untuk primer, mortar screed, perbaikan retak, dan berbagai aplikasi mortar epoksi.	

1.6.

Nama Produk	: CONSOL PRIMER HYBRID EPOXY	
Packaging	: 5.4 kg/set	
Keterangan	: primer epoksi dua komponen berbasis air (water-based) dan bebas pelarut yang digunakan untuk meningkatkan daya rekat antara permukaan beton dengan lapisan epoxy atau polyurethane.	

1.7.

Nama Produk	: CONSOL HYBRID EPOXY NATURAL	
Packaging	: 25.4 kg/set	
Keterangan	: Mortar self-smoothing berbasis epoxy-semen tiga komponen yang digunakan untuk meminimalisir gelombang (tidak menghilangkan gelombang)	

1.8.

Nama Produk	: CONSOL FLOOR 255 AU	
Packaging	: 12,5 kg/set	
Keterangan	: Pelapis epoksi berbasis air untuk melindungi dan mempercantik lantai serta dinding beton dengan ketahanan terhadap goresan, bahan kimia, dan beban kerja ringan hingga sedang.	

1.9.

Nama Produk	: NIPPON PAINT ROADLINE PAINT	
Packaging	: 5 Kg	
Keterangan	: Merupakan Cat berbahan karet terklorinasi mempunyai daya tahan abrasi, minyak dan pelumas	

2. LEMBAR PERSETUJUAN

Diajukan Oleh	Diperiksa Oleh	Disetujui Oleh
(Ramdhani Amrullah)	(_____)	(_____)
Tanggal: _____	Tanggal: _____	Tanggal: _____

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TECHNICAL DATA SHEET
Version: 005
Update: July, 2022

CONSOL 71 FC

2-Part Thixotropic Multipurpose Epoxy Adhesive (Fast Curing)

DESCRIPTION

CONSOL 71 FC is a moisture tolerant, thixotropic, structural two parts adhesive and repair mortar. Based on a combination of epoxy resins and special fillers.

RECOMMENDED FOR

CONSOL 71 FC may only be used by experienced professionals. As a structural adhesive and mortar for:

- Concrete element
- Polyester, Epoxy
- Mortar, bricks, masonry
- Ceramics, fiber cement
- Hard natural stone
- Steel, iron
- Wood

As a repair mortar and adhesive:

- Corners and edges
- Holes and void filling
- Vertical and overhead use
- Joint filling and crack sealing
- Joint and crack arris/edge repair

BENEFITS

CONSOL 71 FC provides the following properties of benefit such as:

- Easy to mix and apply
- Suitable for dry and damp concrete surface
- Thixotropic: non-sag in vertical and overhead applications
- Good adhesion to most construction materials
- Abrasion resistant
- No primer needed
- Chemical resistant
- Impermeable to liquids and water vapour
- Hardens without shrinkage
- Different colored component
- Sea water resist

PRODUCT DATA

Form

Epoxy Resin

Appearance

Part A: White
Part B: Dark grey
Mixed of A+B: Concrete Grey

Density

1.7 ± 0.1 kg/L (part A+B mixed) (at +25 ^{0}C) (evacuated)

Packaging

Part A : 4 kg
Part B : 2 kg
6 Kg (A+B) Pre-Batched unit

Storage

Dry, shaded place. Protect from direct sunlight and frost. Store in dry condition at temperatures between +5 ^{0}C and +30 ^{0}C.

Shelf Life

CONSOL 71 FC can be stored for 12 months if stored as recommend in original unopened container.

TECHNICAL DATA

Compresive Strength

ASTM D 695

Curing Temperatures		
Curing Time	+10^{0}C	+25^{0}C
4 Hours	~ 20 N/mm^2	~ 25 N/mm^2
1 Days	~ 45 N/mm^2	~50 N/mm^2
3 days	~ 50 N/mm^2	~ 55 N/mm^2
7 days	~ 55 N/mm^2	~ 60 N/mm^2

Modulus of Elasticity in Compression

Compressive — **ASTM D 695**
>4600 N/mm^2 (14 days at 25 ^{0}C)

Flexural — **EN 53452**
>5000 N/mm^2 (14 days at 25 ^{0}C)

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Tensile Strength in Flexural

DIN EN 53452

Curing Temperatures		
Curing Time	+10 °C	+25 °C
4 Hours	~ 15 N/mm²	~ 20 N/mm²
1 days	~ 25 N/mm²	~ 30 N/mm²
3 days	~ 30 N/mm²	~ 35 N/mm²
7 days	~ 35 N/mm²	~ 40 N/mm²

Tensile Adhesion Strength

≥2 N/mm² (CONCRETE FAILURE)

APPLICATION INFORMATION

Mixing Ratio

Part A : Part B = 2 : 1 by weight or volume

Consumption

The consumption of **CONSOL 71 FC** is ~ 1.7 kg/m² per mm of thickness

Layer Thickness

15 mm max.
When using multiple units, one after the other. Do not mix the following unit until the previous one has been used in order to avoid a reduction handling time.

Sag Flow

On vertical surfaces it is non-sag up to 7 mm thickness.

Ambient Air temperature

+10 °C min / +40 °C max

Dew Point

Beware of condensation.
Substrate temperature during application must be at least 3°C above dew point.

Substrate Temperature

+10 °C min / +40 °C max

Substrate Moisture Content

When applied to mat moisture concrete, brush the adhesive well into substrate.

Pot Life

+10 °C : ~20 minutes
+ 25 °C : ~15 minutes
+ 35 °C : ~10 minutes

APPLICATION INSTRUCTION

Substrate Quality

Mortar and concrete must be older than 28 days (depends on minimal requirement of strengths).
Verify the substrate strength (concrete, masonry, natural stone).
The substrate surface (all types) must be clean, dry and free from contaminants such as dirt, oil, grease, existing surface treatments and coatings etc. Steel substrate must be de-rusted similar to 2.5.
The substrate must be sound and all loose particles must be removed.

Substrate Quality

Concrete, mortar, stone, and bricks:
Substrate must be sound, dry, clean, and free from laitance, ice, standing water, grease, oils, old surface treatments or coatings and all loose or friable particles must be removed to achieve laitance and contaminant free, open textured surface.

Steel:
Must be cleaned and prepared thoroughly to an acceptable quality i.e. by blast cleaning and vacuum. Avoid dew point conditions.

Mixing

Pre-Batched units:
Mix part A+B together for at least 3 minutes with a mixing spindle attached to a slow speed electric drill (max.300 rpm) until the material becomes smooth and a uniform grey color. Avoid aeration while mixing. Then, pour the whole mix into a clean container and stir again for approx. 1 more minute at low speed to keep air entrapment at a minimum. Mix only that quantity which can be used within this pot life.

Application

When using a thin layer adhesive, apply the mixed adhesive to the prepared surface with a spatula, trowel, notched trowel, (or with hands protected by gloves).
When using for bonding metal profiles onto vertical surface, support and press uniformly using props for at least 12 hours, depending on the thickness applied (not more than 5 mm) and the room temperature. Once hardened check the adhesion by tapping with a hammer.

Cleaning tools

Clean all tools and application equipment with general cleaner after use. Hardened/cured material can only be mechanically removed.

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TECHNICAL DATA SHEET
Version: 003
Update: July, 2022

CONSOL 82 LP

DESCRIPTION

CONSOL 82 LP is a solvent-free, thixotropic, 2 components structural epoxy resin adhesive. Perfect bond for new concrete surface to old concrete.

RECOMMENDED FOR

CONSOL 82 LP is used to bond fresh, plastic concrete, to hardened concrete and steel. Structural adhesive for concrete, mansory, metal, wood etc.

BENEFITS

CONSOL 82 LP is a deeply penetrative with high adhesive qualities. Other benefits are:

- Long pot life
- High strength bonding
- Excellent adhesion to most structural materials
- High early and final strength
- Insensitive to moisture before, during and after cure
- High effective, even on damps surfaces
- Can be applied with roller

PRODUCT DATA

Coverage
0.3 – 0.8 kg/m^2 depending on substrate condition

Colour
Light grey

Packaging

Part A	: 3.33 kg
Part B	: 1.67 kg
Part A+B	: 5 kg set

Shelf Life
12 months when unopened and stored correctly

TECHNICAL DATA

Mix Density
~1.5 kg/Litre

Pot Life
Approx. 120 minutes

Mixing Ratio
Comp A : B = 2 : 1 parts by weight and volume

Compressive Strength
>40 MPa (7 days)
>45 MPa (28 days)

Flexural Strength
>40 MPa (28 days)

Tensile Strength
>17.5 MPa (28 days)

Bond Strength
To Concrete > 2 MPa (28 days)

INSTRUCTION FOR USE

Surface Preparation
Surface must be clean and sound. It may be dry or damp, but free of standing water. Remove dust, laitance, grease, curing compound, impregnation, waxes, foreign particles, disintegrated materials.
Preparation work
Concrete : Sandblast or use other approved mechanical methods
Steel : White material finish

Mixing
Pre-Mix each component. Proportion 2 parts Component A to 1 part Component B into clean pail. Mix thoroughly 3 minutes witha paddle on low speed until uniform in color.

Application
To bond fresh concrete to hardened concrete. Apply by brush, roller, or broom, place fresh concrete while **CONSOL 82 LP** is still tacky.

HANDLING PRECAUTIONS

- Avoids contact with skin and eyes
- Wear protective gloves and eye protection during work
- If skin contact occurs, wash skin thoroughly
- If in eyes, hold eyes open, flood with warm water and seekmedical attention without delay.

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TECHNICAL DATA SHEET
Version: 002
Update: September, 2024

CONSOLCRETE FLOOR LEVEL

High Performance Cementitious Mortar with Micro Silica, Micro and Macro Fibre

DESCRIPTION

CONSOLCRETE FLOOR LEVEL is a high performance cementitious mortar with an additional special blend of micro silica, micro and macro fibres.

RECOMMENDED FOR

CONSOLCRETE FLOOR LEVEL is used for surface levelling of new floor of floor renovation, at high rise building, mall, exhibition hall, auditorium, etc.

BENEFITS

CONSOLCRETE FLOOR LEVEL provides the following properties of benefit such as:

- Material added with micro silica fume
- Flowing micro-concrete
- Good flow characteristics
- Easy to use, ready to mix powder
- Easy to mix, only add water
- High compressive strength
- Resistant to impact and vibration
- Non toxic and non chloride
- Non corrosive

PRODUCT DATA

Form
Powder

Colour
Grey

Packaging
CONSOLCRETE FLOOR LEVEL : 25 kg
Can be added with Aggregate (5-10 mm) : 20% - 60% (5 kg - 15 kg) by powder weight (25 kg)

Mixing Density
~2.3 kg/L (3.25 L water per 25 kg bag)

Mixing Ratio
3.25 L per 25 kg bag
(water per powder = 13% by weight)

Pot Life 30°C
60 minutes

Shelf Life
9 months when unopened

Storage
Dry, cool, shaded place

Product temperature
< 30°C

Ambient air temperature
10°C - 35°C

Substrate temperature
10°C - 35°C

TECHNICAL DATA

Chemical Base
Cement, selected fillers and aggregates, micro silica, special micro and macro fibres, additives

Flexural Strength	(ASTM C-348)
28 Days	≥65 kg/cm²

Compressive Strength	(ASTM C-109)
1 Day	~270 kg/cm²
3 Days	~400 kg/cm²
7 Days	~520 kg/cm²
28 Days	~650 kg/cm²

Bond Strength
28 Days
> 1.5 N/mm²
Concrete failure, over roughened concrete surface

28 Days
> 1.5 N/mm²
Over mechanically roughened old surface

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INSTRUCTION FOR USE

Surface Treatment

Prepare surface area by cleaning. Remove oil, grease and other bond-inhibiting materials.
The surface of the concrete must be hard and targeted to get good adhesion. Before applying, surface must be wetted to saturated surface dry.

Mixing

Mix **CONSOLCRETE FLOOR LEVEL** with water, 25 kg for 3.25 liters of water. Mix continuously for 3 minutes (minimum). Use a mixing paddle or appropriately sized mortar mixer. Use a mechanically low speed drill (400 - 600 rpm).

Note : **CONSOLCRETE FLOOR LEVEL** can be mixed with Aggregate (5-10 mm): 20% - 60% (5 kg – 15 kg) by powder weight (25 kg).

Application

Apply **CONSOL 82 LP** (as a bonding agent) with notched trowel, approx. 0.5-1.0 kg/m^2 (depend on the surface condition). Place **CONSOLCRETE FLOOR LEVEL** while **CONSOL 82 LP** is still tacky.
Pour **CONSOLCRETE FLOOR LEVEL** after mixing to the repair area. Best to use trowel with desire result. For additional technical information of **CONSOLCRETE FLOOR LEVEL** contact the Technical Services.

CURING

Wet cure for a minimum 3 days with wet hessian, plastic sheet or apply a curing compound.

LIMITATION

Minimum applications thickness: 20 mm.
Recommended thickness in one pour is 20 mm to 100 mm.
If the application thickness exceeds 100 mm, special procedure must be taken to anticipate temperature rise. Iced water, add coarse aggregate to the mix, or both of them may used to eliminate temperature rise.
The product can be applied in sections generally up to 500 mm (mixed with Aggregate (5-10 mm)).
Keep the materials and substrate temperature lower than 30 ^{0}C.
Variations in cement could cause shade differences in colour of the mortar.
In the case of addition with coarse aggregate, it is advised to conduct trial mix to check influence of coarse aggregate addition on mortar workability and strength. 5 to 10 mm size aggregate is found to be the most suitable size for this addition.
Don't use for patch repair.
Please contact our Technical Service for suitable application.

CLEANING TOOLS

Clean all tools and application equipment with water immediately after use. Cured material/hardened can only be mechanically removed.

HANDLING PRECAUTIONS

- Avoid contact with skin and eyes
- Wear protective gloves and eye protection during work
- If skin contact occurs, wash skin thoroughly
- If in eyes, hold eyes open, flood with warm water and seek medical attention without delay.

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CONSOL FLOOR 161

Solvent Free Epoxy Resin Binder

DESCRIPTION

CONSOL FLOOR 161 is two components, solvent free epoxy resin that can be used to produce a range of epoxy resin mortars for different applications such as priming, mortar screed, crack repair, etc. The resin system is formulated to bind to dry surfaces.

RECOMMENDED FOR

CONSOL FLOOR 161 can be used as primer and adhesion promoter for epoxy and polyurethane floor on:

- Concrete floors
- Cementitious mortar screed
- Epoxy cement floor
- Epoxy mortar floor

BENEFITS

CONSOL FLOOR 161 provides the following beneficial properties such as:

- Low viscosity
- Solvent free
- Low odour
- Excellent bonding strength

COVERAGE

Material consumption approx. 0.1-0.6 kg/m^2 depends on substrate conditions

PRODUCT DATA

Form
Liquid

Colour
Yellowish

Density (27 ^{0}C)

Part A	~ 1.15 kg/L
Part B	~ 1.05 kg/L
Part A+B mixed	~ 1.12 kg/L

Packaging

Part A	: 7 kg
Part B	: 3 kg
Part A+B	: 10 kg set

Storage & Shelf Life
12 months in unopened, original containers when stored in cool dry condition below 30 ^{0}C

TECHNICAL DATA

Comp Strength
± 70 N/mm^2

Bond Strength
> 1.5 N/mm^2 (failure on concrete)

Shore D Hardness
80

Pot Life (30 ^{0}C)
Approx. 20 minutes

INSTRUCTION FOR USE

Substrate Condition
Surfaces must be structurally sound, clean, and free from loose particles, oil, grease, and all other contaminants. The compressive strength of the substrates shall not be less than 20 N/mm^2 and the bond strength of the substrate must be at least 1.5 N/mm^2.

Surface Preparation
Remove oil, grease and wax contaminants by scrubbing with industrial grade detergent or degreasing compounds followed by mechanical cleaning. Cement laitance, loose particles, mould release agents, curing membrane and other contaminants must be removed from the surface by sanding or grinding followed by vacuum cleaning.

Mixing
As Primer
Mixing use a low speed (300 rpm) electric mixer, mix part A&B for at least 3 minutes until the mix is uniform.

As Scratch Primer
Continue to mix and add 2-6 bags of silica flour 8370 as filler until uniform mix is obtained.

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Mixing Ratio:

As primer (by weight) A:B	= 7:3
As scratch primer (by weight) (A+B):C	= 1:1
As mortar screed (by weight) (A+B):C	= 1: (4-6)

APPLICATION

As Primer

Apply **CONSOL FLOOR 161** by squeegee or brush on to the prepared surface.

As Scratch Primer

Pour **CONSOL FLOOR 161** on to the prepared surface and spread using steel trowel.
If the surface has been treated with a moisture barrier, allow the moisture barrier to dry before apply **CONSOL FLOOR 161**.

Curing

At 30 ^{0}C, foot traffic access in 6 hours, fully cured in 48 hours. **CONSOL FLOOR 161** can be over coated after 6 hours and maximum 24 hours.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological, and other safety-related data.

PRECAUTIONS

CONSOL FLOOR 161 contain certain chemicals which can cause skin irritation if exposed and respiratory reaction if inhaled.

- Keep away from open light, including welding
- Avoid contact with skin and eyes
- If skin contact occurs, wash skin thoroughly
- Wear protective glove and eye protection during work
- If in eyes, hold eyes open, flood with warm water and seek medical attention without delay.

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TECHNICAL DATA SHEET
Version: 003
Update: July, 2022

CONSOL FLOOR 163

Solvent Free Epoxy Resin Binder

DESCRIPTION

CONSOL FLOOR 163 is two components, solvent free epoxy resin that can be used to produce a range of epoxy resin mortars for different applications such as priming, mortar screed, crack repair, etc. The resin system is formulated to bind to dry surfaces.

RECOMMENDED FOR

CONSOL FLOOR 163 can be used as primer and adhesion promoter for epoxy and polyurethane floor on:

- Concrete floors
- Cementitious Mortar Screed
- Epoxy Cement Floor
- Epoxy Mortar Floor

BENEFITS

CONSOL FLOOR 163 provides the following beneficial properties such as:

- Low viscosity
- Solvent free
- Low odour
- Excellent bonding strength

COVERAGE

Material consumption approx. 0.1-0.6 kg/m^2 depends on substrate conditions

PRODUCT DATA

Form
Liquid

Colour
Yellowish

Density (20^{0}C)
Part A ~ 1.16 kg/L
Part B ~ 1.00 kg/L

Packaging
Part A: 6.25 kg
Part B: 3.75 kg

Storage & Shelf Life
12 months in unopened, original containers when stored in cool dry condition below 30 ^{0}C

TECHNICAL DATA

Comp Strength
± 70 N/mm^2

Bond Strength
>1.5 N/mm^2 (failure on concrete)

Shore D Hardness
80

Pot Life (30 ^{0}C)
Approx. 20 minutes

INSTRUCTION FOR USE

Substrate Condition
Surfaces must be structurally sound, clean, and free from loose particles, oil, grease, and all other contaminants. The compressive strength of the substrates shall not be less than 20 N/mm^2 and the bond strength of the substrate must be at least 1.5 N/mm^2.

Surface Preparation
Remove oil, grease and wax contaminants by scrubbing with industrial grade detergent or degreasing compounds followed by mechanical cleaning. Cement laitance, loose particles, mould release agents, curing mem-brane and other contaminants must be removed from the surface by sanding or grinding followed by vacuum cleaning.

Mixing
As Primer
Mixing use a low speed (300 rpm) electric mixer, mix part A&B for at least 3 minutes until the mix is uniform.

As Scratch Primer
Continue to mix and add 2-6 bags of silica flour 8730 as filler until uniform mix is obtained.

Mixing Ratio:

As primer (by weight) A:B	= 6.25:3.75
As Scratch primer (by weight) (A+B):C	= 1:1
As Mortar screed (by weight) (A+B):C	= 1: (4-6)

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APPLICATION

As Primer

Apply **CONSOL FLOOR 163** by squeegee or brush on to the prepared surface.

As Scratch Primer

Pour **CONSOL FLOOR 163** on to the prepared surface and spread using steel trowel.
If the surface has been treated with a moisture barrier, allow the moisture barrier to dry before apply **CONSOL FLOOR 163.**

Curing

At 30 ^{0}C, foot traffic access in 6 hours, fully cured in 48 hours. **CONSOL FLOOR 163** can be over coated after 6 hours and maximum 24 hours.

Health and Safety Information

For information and advice on the safe handling, storage and disposal of chemical products, users should refer to the most recent Material Safety Data Sheet containing physical, ecological, toxicological, and other safety-related data.

PRECAUTIONS

CONSOL FLOOR 163 contain certain chemicals which can cause skin irritation if exposed and respiratory reaction if inhaled.

- Keep away from open light, including welding
- Avoid contact with skin and eyes
- If skin contact occurs, wash skin thoroughly
- Wear protective glove and eye protection during work

If in eyes, hold eyes open, flood with warm water and seek medical attention without delay.

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TECHNICAL DATA SHEET
Version: 003
Update: July, 2022

CONSOL PRIMER HYBRID EPOXY

Water Based Epoxy Primer

DESCRIPTION

CONSOL PRIMER HYBRID EPOXY is two components, water based epoxy and solvent free. The system is formulated to bind to damp, dry, and green concrete.

RECOMMENDED FOR

CONSOL PRIMER HYBRID EPOXY can be used as primer and adhesion promoter for epoxy and polyurethane floor on:

- Concrete floors
- Cementitious Mortar Screed
- Epoxy Cement Floor
- Epoxy Mortar Floor
- Epoxy Concrete Floor

BENEFITS

CONSOL PRIMER HYBRID EPOXY provides the following beneficial properties such as:

- Low viscosity
- Solvent free
- Low odour
- Excellent bonding strength
- Water based
- Excellent adhesion to dry, damp, green concrete

COVERAGE

Material consumption approx. 0.15 - 0.3 kg/m^2 depends on substrate conditions

PRODUCT DATA

Form

Liquid

Colour

Part A : Milky white, liquid
Part B : Green to brown, liquid

Density

Part A : 1.05 kg/L
Part B : 1.05 kg/L

Bond Strength

1.5 N/mm^2 (Failure on concrete)

Pot Life (30^{0}C)

Approx. 20 minutes

Storage

Dry, cool, shaded place

Shelf Life

1 years if stored in unopened original container

Packaging

Part A : 2.1 kg
Part B : 3.3 kg

INSTRUCTION FOR USE

Substrate Condition

Surfaces must be structurally sound, clean, and free from loose particles, oil, grease, and all other contaminants. The compressive strength of the substrates shall not be less than 20 N/mm^2 and the bond strength of the substrate must be at least 1.5 N/mm^2.

Surface Preparation

Remove oil, grease, and wax contaminants by scrubbing with industrial grade detergent or degreasing compounds followed by mechanical cleaning. Cement laitance, loose particles, mould release agents, curing membrane and other contaminants must be removed from the surface by shot blasting, scarifying or grit-blasting followed by vacuum cleaning.

Mixing

As Primer
Mixing use a low speed (300 rpm) electric mixer, mix part A&B for at least 3 minutes until the mix is uniform.

Mixing Ratio:
General primer : **A : B = 2.1 : 3.3**

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KIMIA KONSTRUKSI INDONESIA

APPLICATION

As Primer

Apply **CONSOL PRIMER HYBRID EPOXY** by squeegee or brush on to the prepared surface.
If the surface has moisture barrier, allow the moisture barrier to dry before apply **CONSOL PRIMER HYBRID EPOXY**.
Curing:
At 30 ^{0}C, foot traffic access in 6 hours, fully cured in 48 hours.

PRECAUTIONS

- **CONSOL PRIMER HYBRID EPOXY** contain certain chemicals which can cause skin irritation if exposed and respiratory reaction if inhaled.
- Keep away from open light, including welding.
- Avoid contact with skin and eyes.
- If skin contact occurs, wash skin thoroughly.
- Wear protective glove and eye protection during work.
- If in eyes, hold eyes open, flood with warm water and seek medical attention without delay.

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CONSOL HYBRID EPOXY NATURAL

Self-Smoothening and Temporary Moisture Barrier

DESCRIPTION

CONSOL HYBRID EPOXY NATURAL is three components epoxy-cement modified self-smoothing floor topping for:

- leveling or patching concrete surfaces, both unfinished and after grinding or planning
- levelling layer beneath epoxy floor coatings
- for synthetic floor coating, carpets, or wooden parquet.

RECOMMENDED FOR

CONSOL HYBRID EPOXY NATURAL is suitable when used in:

- Concrete floors
- Cementitious Mortar Screed
- Epoxy Cement Floor
- Epoxy Mortar Floor

BENEFITS

CONSOL HYBRID EPOXY NATURAL provides the following beneficial properties such as:

- Low viscosity
- Good levelling properties and easy application
- Permeable to water vapour
- Excellent adhesion to damp and green concrete
- Excellent early and final mechanical strengths
- Excellent resistance to water and oil

COVERAGE

Material consumption approx. 4 kg/m^2 for 2 mm layer depends on substrate conditions.

PRODUCT DATA

Form : Liquid and Powder

Color

Resin- Part A : Milky white, liquid
Hardener- Part B : Green to brown, liquid
Part C : Cementitious Grey

Density (25 ^{0}C)

Part A ~ 1.05 kg/l
Part B ~ 1.05 kg/l
Part C ~ 1.45 kg/l
Mixed A+B+C ~ 1.85 kg/l

Layer Thickness

Part A : 2.1 kg
Part B : 3.3 kg
Part C : 20 kg
Total pack size : 25.4 kg per set

Storage and Shelf Life

12 months in unopened, original containers when stored in cool dry condition below 30 ^{0}C

TECHNICAL DATA

Chemical Base

Epoxy-Cement modified

Comp. Strength

± 35 N/mm^2 at 28 days

Flexural. Strength

± 10 N/mm^2 at 28 days

Bond Strength

1.5 N/mm^2 (failure on concrete)

Shore D Hardness

80 (7 days)

Pot Life (30 ^{0}C)

Approx. 20 minutes at 30 ^{0}C

INSTRUCTION FOR USE

Substrate Condition

Surfaces must be structurally sound, clean, and free from loose particles, oil, grease, and all other contaminants. The compressive strength of the substrates shall not be less than 20 N/mm^2 and the bond strength of the substrate must be at least 1.5 N/mm^2. The substrate temperature shall not be less than 10 ^{0}C min./30 ^{0}C max. Substrates must be dry or saturated surface-dry (no standing water).

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Surface Preparation

Remove oil, grease and wax contaminants by scrubbing with industrial grade detergent or degreasing compounds followed by mechanical cleaning. Cement laitance, loose particles, mould release agents, curing mem-brane and other contaminants must be removed from the surface by shot blasting, scarifying or grit-blasting followed by vacuum cleaning.

Application System

Application on Green Concrete/Fresh and Damp Concrete

Apply primer	: Consol Primer Hybrid Epoxy approx. 0.1 – 0.15 kg/m^2.
Self-levelling floor	: **CONSOL HYBRID EPOXY NATURAL** (A+B+C) approx. 4 kg/m^2 for ±2 mm layer thickness.

Mixing

Shake part A and B vigorously for at least 30 seconds.
Pour the binder mixture (A+B) into a suitable pail (approx. 25 litre capacity) and add part C, whilst mixing with a slow electric mixer (approx. 300-400 rpm). Mix thoroughly for about 3 minutes.

Waiting Time/Overcoating

CONSOL HYBRID EPOXY NATURAL can be overcoated with epoxy based materials as soon as surface moisture content of **CONSOL HYBRID EPOXY NATURAL** is less than 4%, however not earlier than 24 hours

PRECAUTIONS

- **CONSOL HYBRID EPOXY NATURAL** contain certain chemicals which can cause skin irritation if exposed and respiratory reaction if inhaled.
- Keep away from open light, including welding.
- Avoid contact with skin and eyes.
- If skin contact occurs, wash skin thoroughly.
- Wear protective glove and eye protection during work.
- If in eyes, hold eyes open, flood with warm water and seek medical attention without delay.
- Not classified as finishing material, and slightly color difference on result may occurred.

CONSOL®
CONCRETE SOLUTION

TECHNICAL DATA SHEET
Version: 001
Update: September, 2025

CONSOL FLOOR 255 AU

2-Part Water Based Epoxy Sealer Coat

DESCRIPTION

CONSOL FLOOR 255 AU is a water dispersed, solvent free, coloured, semi glossy-finish, two parts epoxy resin based coating high performance. It provides a protective surface treatment for concrete floors and walls.

RECOMMENDED FOR

- Coloured sealer coat for concrete and cementitious substrate.
- Coloured sealer coat for the wall and ceiling.
- Can be subjected to normal up to medium duty mechanical and chemical.
- For production areas, warehouses, car park decks, show rooms, automotive production area, garages, abattoirs, food processing area, laboratories, storage areas, breweries, tunnel walls, ground water tanks, waste water treatment, decontaminable areas, pharmaceutical, etc.

BENEFITS

- Good chemical and mechanical resistance
- Good bond, also on mat moist substrate
- Water vapour permeable
- Solvent Free
- Water dilutable
- Odourless
- Easy application
- Prevent dusting
- Easy to Clean
- Non Toxic
- Sea water resist

PRODUCT DATA

Appearance/Colours

- Resin – part A : white, liquid
- Hardener – part B : coloured, liquid
- Available only in the following standard colours: RAL 7032, 1001, 6010 & 6011 (refer to standard colour chart)
- Under direct sun radiation there may be some discolouration and colour deviation, this has not an influence on the function and performance of the coating.

Packaging

Part A : 3.4 kg
Part B : 9.1 kg
Part A+B : 12.5 kg set

Shelf-Life

12 months from date of production if stored properly in original, unopened and undamaged sealed packing, in dry conditions at temperatures between ±18 ^{0}C and under 30 ^{0}C.

TECHNICAL DATA

Chemical Base

Epoxy, Waterborne

Density, Values at 25 ^{o}C

Mixed Resin : 1,38 kg/L

Solid Content

~55% (by weight)

Chemical Resistance

Resistant to many chemicals. Please contact our technical service for specific information.

Dosage

Light exposure

Base coat 1 x **CONSOL FLOOR 255 AU** (±0.15 - 0.2 kg/m^2)
Top coat 1-2 x **CONSOL FLOOR 255 AU** (±0.15 - 0.2 kg/m^2)

Medium exposure

Base coat 1-2 x **Consol Floor 161** (0.3 - 0.7 kg/m^2)
Top coat 3 x **CONSOL FLOOR 255 AU** (0.15 - 0.2 kg/m^2)

Wall/ Ceiling

On gypsum plaster boards and plaster
Base Coat 1 x **CONSOL FLOOR 255 AU** ±10-15% water (±0.1 – 0.15 kg/m^2)
Top Coat 2 - 3 x **CONSOL FLOOR 255 AU** (±0.1 – 0.15 kg/m^2)
On strongly absorbent surface, pre damping of the surface is recommended.

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Mechanical Properties
Continuous exposure 60 ^{0}C

Heat Resistance
Short term exposure 100 ^{0}C

INSTRUCTION FOR USE

Substrate Preparation
- Concrete substrates must be prepared mechanically using abrasive blast cleaning or scarifying equipment to remove cement laitance and achieve a profiled open textured surface.
- Weak concrete must be removed and surface defects such as blowholes and voids must be fully exposed.
- High spots must be removed by e.g. grinding.
- All dust, loose and friable material must be completely removed from all surfaces before application of the product, preferably by brush and/or vacuum.
- The concrete or sreed substrate has to be primed or leveled up in order to achieve an even surface.
- The cementitious substrate should be sound and of sufficient compressive strength. Minimum pull off strength 1.5 N/mm^2.

Mixing
Part A : Part B = 3.4 : 9.1 (by weight)

Application Method/Tools
- Prior to application, confirm substrate moisture content, r.h and dew point.
- Prior to mixing stir part B mechanically. When all of part A has been added to part B, continuously mix for 2 minutes until a uniform mix has been achieved.
- Primer
  Make sure that a continuous, pore free coat covers the substrate. If necessary, apply two priming coats. When used as a primer always apply by brush.
- Coating
  CONSOL FLOOR 255 AU is spread evenly by means of a short pile roller.
  A seamless finish can be accieved if a wet edge is maintained during application.

Methods
To maintain the appearance of the floor after application, **CONSOL FLOOR 255 AU** must have all spillages removed immediately and must be regulary cleaned using rotary brush, mechanical scrubber dryer, high pressure washer, wash and vacuum techniques etc. Using suitable detergents and waxes.

Waiting Time Between Coats

	10 ^{0}C	20 ^{0}C	30 ^{0}C
Min	24 hours	12 hours	10 hours
Max	3 days	2 days	2 days

Final Drying Times

	10 ^{0}C	20 ^{0}C	30 ^{0}C
Foot traffic	48 hours	24 hours	24 hours
Lightly serviceable	5 days	3 days	2 days
Fully serviceable	10 days	7 days	5 days

Limitation
- The “gloss” of the finish, can vary with temperature and the absorbency of the substrate.
- For exact color matching, ensure the **CONSOL FLOOR 255 AU** in each area is applied from the same control batch number.
- **CONSOL FLOOR 255 AU** finish appearance very depends on humidity and ambient temperature. To get uniform colour application for final coat for one area shall be conducted continuously at one single (one go) coating application.
- At least two coats, depending on intended use.

Cleaning
Use soap and water. Hardened material may have to be mechanically removed.

Cautions
Apply barrier cream to hands. In case of contact with eyes or mucous membrane clean immediately with warm water.

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ROADLINE PAINT

TECHNICAL DATA SHEET

DESKRIPSI PRODUK

ROADLINE PAINT merupakan cat berbahan dasar karet terklorinasi. Produk ini menghasilkan lapisan film yang keras dan fleksibel, mempunyai daya tahan terhadap abrasi, tumbukan, minyak dan pelumas

REKOMENDASI PENGGUNAAN

ROADLINE PAINT sangat cocok digunakan untuk marka jalan dan zebra cross karena sifatnya yang cepat kering. Maka jalan sangat berguna pada jalan yang lalu-lintasnya padat untuk menghindari kemacetan.

SPESIFIKASI

Tipe Cat	: *Chlorinated rubber.*
Warna	: Putih, Hitam, Merah, dan Kuning.
Tampilan	: *Semi Gloss.*
Volume Solid	: 53 ± 2%.
Berat Jenis (SG)	: 1.60 ± 0.05 Kg/L.
Daya Sebar Teoritis	: 5 – 6 m^2/Kg/lapis.

PERSIAPAN PERMUKAAN

Substrat	Persiapan Permukaan	
	Minimum	**Rekomendasi**
Aspal & Permukaan sudah dicat	Bersihkan segala kontaminasi yang bisa mengganggu daya rekat intercoat. Pengecatan yang melebihi interval pengecatan maksimum akan membutuhkan pembersihan/pengikisan dan/atau aplikasi lapisan tambahan, tergantung kondisi.	Bersihkan segala kontaminasi yang bisa mengganggu daya rekat intercoat. Pengecatan yang melebihi interval pengecatan maksimum akan membutuhkan pembersihan/pengikisan dan/atau aplikasi lapisan tambahan, tergantung kondisi. Pada aspal baru (umur kurang dari 6 bulan) direkomendasikan menggunakan 1 lapis Roadliner 268-Putih untuk mencegah *bleeding.*

KONDISI SELAMA PENGECATAN

Hindari pengecatan pada suhu udara dibawah 10°C. Suhu permukaan substrat minimum harus 3°C diatas titik embun udara sekitar. Kadar air dalam substrat tidak boleh melebihi 4% (berdasarkan berat). Lapisan cat tidak boleh terkena minyak, bahan kimia atau tekanan mekanis sampai benar-benar kering sempurna.

PANDUAN APLIKASI

Range Aplikasi : 30 – 40 µm (DFT)

Pelarut : THINNER B SPECIAL/ THINNER B

Pembersih : THINNER B SPECIAL/ THINNER B

Konvensional spray direkomendasikan untuk mendapatkan hasil yang lebih halus. Kuas direkomendasikan untuk stripe coating dan area yang sulit dijangkau. Cara aplikasi yang sesuai diperlukan untuk mencapai ketebalan lapisan yang ditentukan

DETAIL APLIKASI

Kuas/Roller : Tambahkan 0% – 5% thinner jika dibutuhkan.

Waktu Kering : Suhu Permukaan

	25 °C	30 °C	40 °C
Kering Sentuh	4 menit	3 menit	2.5 menit
Kering Keras	18 menit	15 min	12 menit
Kering Sempurna	7 hari	7 hari	7 hari
Interval Pengecatan Selanjutnya	50 menit	60 menit	50 menit

Catatan:

Jika waktu pelapisan "diperpanjang", konsultasikan dengan Nippon Paint untuk persiapan permukaan yang direkomendasikan untuk mencapai daya rekat antar lapisan yang optimal.

Data yang diberikan harus dianggap sebagai pedoman saja. Waktu pengeringan aktual sebelum pelapisan ulang mungkin lebih pendek atau lebih lama, tergantung pada ketebalan film, sirkulasi udara, kelembaban udara, sistem cat dasar, persyaratan untuk penanganan awal dan kekuatan mekanis, dll. Sistem lengkap dapat dijelaskan pada lembar sistem, di mana semua parameter dan kondisi khusus dapat dimasukkan.

REKOMENDASI SISTEM PENGECATAN

Sistem pengecatan berikut ini direkomendasikan untuk **ROADLINE PAINT:**

Primer :

- ROADLINE PAINT

Cat Akhir :

- ROADLINE PAINT

Untuk pilihan sistem pelapisan untuk aplikasi yang berbeda, lihat brosur produk atau hubungi Nippon Paint untuk rekomendasi profesional.

KEMASAN

Unit	Base	
	Volume	Ukuran Wadah
1 Kg	1 Kg	1 Kg
5 Kg	5 Kg	5 Kg
25 Kg	25 Kg	25 Kg

PENYIMPANAN

Umur Simpan : 24 bulan (25 °C)

Suhu yang lebih tinggi selama penyimpanan dapat mengurangi umur simpan dan dapat menyebabkan pembentukan gel dalam kaleng. Perubahan suhu juga dapat memperpendek umur simpan. Simpan dalam wadah tertutup rapat di tempat yang kering, sejuk, dan berventilasi baik, jauhkan dari sumber panas dan nyala api.

INFORMASI KESELAMATAN, KESEHATAN, DAN LINGKUNGAN KERJA

- Produk ini ditujukan untuk penggunaan aplikator profesional. Lihat tampilan informasi keselamatan pada wadah dan lembar data keselamatan (SDS) sebelum menggunakan produk. Gunakan produk ini di area dengan sirkulasi udara yang baik, hindari kontak dengan kulit, tumpahan pada kulit harus segera dihilangkan dengan pembersih, sabun, dan air.
- Mata harus dibilas dengan air dan segera cari pertolongan medis setelah kontak dengan produk ini.
- Selama aplikasi, tidak diperbolehkan menyalakan api, melakukan pengelasan, dan merokok. Harus ada sirkulasi udara yang baik.
- Jika Anda ragu tentang kesesuaian penggunaan, lihat Nippon Paint untuk saran lebih lanjut.

DISCLAIMER

Informasi dalam lembar data ini diberikan berdasarkan pengetahuan dan pengalaman praktis terbaik Nippon Paint. Pengguna dapat berkonsultasi dengan Nippon Paint tentang kesesuaian produk secara umum untuk kebutuhan mereka dan praktik aplikasi spesifik meskipun tetap menjadi tanggung jawab setiap pengguna untuk menentukan kesesuaian produk untuk penggunaan khusus pengguna. Kondisi substrat dan aplikasi tidak berada dalam kendali Nippon Paint. Oleh karena itu, tidak ada ketentuan, jaminan, atau persyaratan tersirat lainnya yang akan berlaku untuk Produk. Nippon Paint tidak dan tidak dapat menjamin hasil yang mungkin diperoleh pengguna dengan menggunakan produk. Dalam keadaan apa pun Nippon Paint tidak akan bertanggung jawab kepada pengguna atas segala jenis kerugian (baik langsung maupun tidak langsung) meskipun Nippon Paint telah diberitahu sebelumnya. Sejalan dengan kebijakan Nippon Paint untuk pengembangan berkelanjutan, Nippon Paint berhak mengubah produk dan informasi dalam lembar data ini tanpa pemberitahuan sebelumnya. Pengguna bertanggung jawab untuk memeriksa dengan Nippon Paint versi terbaru dari lembar data ini. Lembar data ini telah diterjemahkan ke dalam berbagai bahasa. Jika terjadi ketidakkonsistenan, versi Bahasa Inggris yang akan berlaku.

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