ARDEX ENDURA

FLOORING SOLUTIONS for

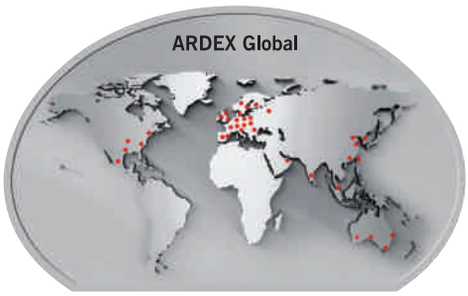
# PHARMACEUTICAL INDUSTRY

SYSTEMARDEX

PHARMACEUTICAL FLOORING SOLUTIONS

# ABOUT - ARDEX ENDURA INDIA PVT LIMITED

## ARDEX - A GLOBAL PERPECTIVE




ARDEX German heritage dates back more than 60 years and, as a global manufacturer of high performance specialty building products, ARDEX has remained at the forefront of the worldwide building & construction industry. The ARDEX name has been synonymous with innovative, premium quality products and services globally for many decades. Strong internal growth and intelligent acquisitions have resulted in annual sales exceeding Euro 500 million putting the ARDEX Group firmly on the world map with 36 subsidiaries and marketing in 50 countries across five continents.

The heart of the ARDEX product development process is at the central R&D in Witten, Germany; added to this are several local Centres of Excellence (CoE) around the world.

## ARDEX ENDURA - INDIA

BAL range of products was merged with ARDEX ENDURA (INDIA) PVT LTD after the joint venture between ARDEX Group, Germany and Prism Cement Limited, India. AEIPL has Technology Transfer agreements with ARDEX Group companies and the latest technology flows in from its Centers of Excellence.

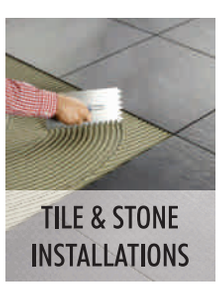
With the guidance and support from the ARDEX group, ARDEX ENDURA remains the quality leader for the industry, offering excellent building chemicals with supreme processing reliability. With 31 branches all over India and strategically positioned state-of-the-art manufacturing plants, ARDEX ENDURA develops products you can trust and rely on. The Company's products like 'Silver Star', 'Gold Star', 'Diamond Star', 'Platinum Star', 'White Star', etc., are market leaders and bench-marked in the Tiling Segment.


ARDEX ENDURA has intelligent solutions to service every possible requirement in the construction industry. Our Central Technical Services (CTS) department in Bangalore caters to the clients by offering professional assessment of the project requirements and providing tailor made solutions. They are available for on-going support at every stage of construction. A winning combination of best products and systems with a first-class training concept.

ARDEX ENDURA is committed to providing Continuing Professional Development (CPD) Seminars that allow our customers to improve and broaden their knowledge and skills base within construction industry. The ARDEXacademy has been created ensure that the knowledge gained through the seminars and hands-on trainings will have a positive impact on an attendee's ability to implement best practice, leading to an increase in the quality of work carried out on-site.

**Our vision is**

"To be one of The World's Leading Solution Providers of High performance Specialty Building Materials"







# HYGIENE & PHARMA GO HAND IN HAND

*"Hygiene refers to conditions and practices that help to maintain health and prevent the spread of diseases"*

***- World Health Organization (WHO)***

The pharmaceutical industry demands surroundings that are as state-of-the-art as its innovations. From research and development laboratories through to production and packaging facilities, the full pharmaceutical environment requires ground-level solutions that meet the demands of such facilities.

The sterile nature of the pharmaceutical production environments require a flooring solution that is hygienic and resists the build-up of bacteria. In order to meet the high performance demands of hygiene; production area, laboratory and clean rooms flooring must have a seamless finish that eliminates the cracks and crevices that harbour bacteria.

Chemical Storage Areas are likely to be subject to regular chemical attacks, meaning that a floor finish with superior resistance to a variety of chemicals is vital. In heavy duty areas such as packaging facilities, which are potentially operating on a 24 hour basis, a hard-wearing, durable solution that withstands heavy foot and vehicular traffic whilst maintaining health and safety requirements is required.

# 3 ESSENTIALS - FLOORING - COVING - WALL COATING

## FLOORING

Flooring system is a vital requirement by most clients in the pharmaceutical sector. They look to satisfy a number of performance requirements and service conditions in different areas of the pharmaceutical plant. Pharmaceutical plant floors require high performance flooring systems that will stand up to daily operations and conditions. A sound flooring system should be durable, chemical resistant, prevent microbial growth, should not slip, and should be cost-effective. An underperforming floor in a pharmaceutical plant can stop the entire production and hamper the hygiene requirements of these floors.

## COVING

The junction between the floor and wall is a very prone to bacterial contamination. A 90 degree join not only spoils an otherwise seamless and impermeable finish, but it is also extremely difficult to properly clean. Coving is ideal for smoothing over this gap and creating a seamless, easily cleanable transition between the floor and the wall that leaves dirt, dust and germs without a place to hide.

## WALL COATINGS

The coatings for walls and ceilings in Pharmaceutical industry have to fulfil the highest hygiene standards and increasingly very specific requirements for the prevention of contamination. These hygienic wall coating products and systems have to provide smooth, dense, easily cleaned surfaces to prevent microbiological growth, and must be resistant to stringent cleaning regimes with the use of disinfectants and detergents.

# DETERMINANT FACTORS FOR PHARMA FLOORING

## Seamless floor (Production Area)

The word “seamless”, as it relates to flooring, is usually associated with the term bacteria free. The reason for this is that seamless epoxy floors have no “seams” or joints where water could stand, dirt could collect or bacteria could grow. The seamless nature of resinous flooring also makes it much easier to clean and sanitize, thus further ensuring a bacteria-free surface.

## Chemical Resistance (Labs)

Without the proper protective coating, solvents, acids, alkalis, and other compounds can be absorbed by the concrete slab and deteriorate it from within–they may even flow straight through and contaminate the soil underneath. Chemical resistant floor toppings & coatings protects both the concrete floor and the environment around it, helping prevent damage from exposure to corrosive compounds.

## Slip resistant (Wet areas)

Wet processing zones need slip-resistant or anti-slip systems, which protect staff from potential injuries due to slips, trips and falls. Slip related incidents create a massive cost burden to employers in terms of lost working days, medical care and compensation. However, following simple steps to ensure that floors are correctly specified and maintained can massively reduce or even eradicate the issue.

## Temperature resistance (Cold rooms)

The floor area can be very sensitive to changes in temperature, whether it is excessively high, below freezing, very sudden or over a long period of time. Thermal shock for example can quickly cause a floor finish to crack. For chilling and freezing lines, cold rooms and storage units, you need products that are tolerant to low temperatures, plus hygienic, easy to clean surfaces to conform to food safety standards.

## Impact resistant (Warehouse)

Warehouse flooring requires floor finishes which are of the highest standards to meet the day to day demands of racking solutions storing heavy items and the movement of heavy machinery including forklifts and conveyor systems. In addition warehouse flooring is subject to strict health, safety requirements and dependent on the nature of the products being warehoused hygiene and cleaning regimes should also be considered.

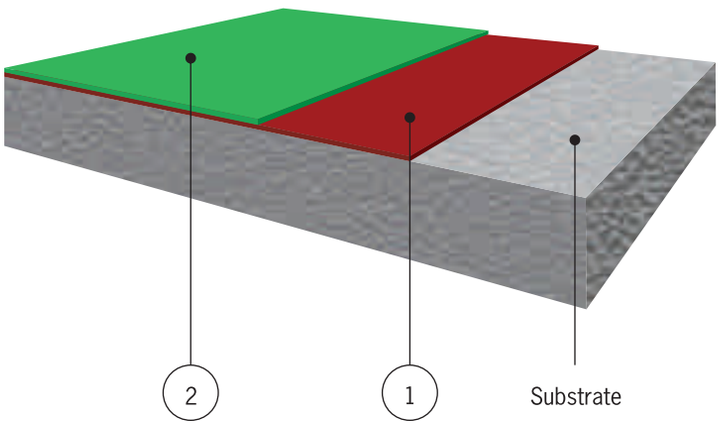

## Anti static flooring (capsule manufacturing units)

Wherever required for safety (to prevent sparks), or to ensure consistent and accurate function of electronic machinery and equipment, an anti-static, conductive grade of the same type of resin flooring should be used. Anti-static resin flooring has the ability to prevent an electrostatic discharge and / or spark, in these situations where static electricity generation is possible, such as through the movement, contact or separation of equipment, machinery, materials and personnel. Anti-static resin flooring can achieve this if it is Static Conductive or Static Dissipative.


## Fast Installation

Fast-track construction is critical and flooring system is often one of the highest priorities in order that other trades can progress. Floor spaces in areas cannot be taken out of service for long periods of time, so it important that downtime is kept to an absolute minimum, whilst durable floor protection is reinstated.

# SELF SMOOTHING EPOXY COATING




| Layer | Product | |
|---|---|---|
| 1 | Primer | R 2 CE / R 3 E |
| 2 | Topping | R 21 CE / R 25 CE / R 35 CE |

## PRIMER


### R 2 CE
### Solvent Free Epoxy Primer

R 2 CE is a solvent free two component epoxy based primer. It is designed to penetrate deeper into the pores in order to achieve a better mechanical bond of subsequent epoxy coating, epoxy screed and self level epoxy toppings.

- **Provides better adhesion because it penetrates into the concrete substrate for a better bond.**
- **Suitable for internal use.**
- **Longer pot life.**

## EPOXY FLOOR SYSTEM


### R 25 CE
### Self-Smoothing Epoxy Floor System (1mm - 4mm)

R 25 CE is self-smoothing, high performance epoxy resin floor finish. Suitable in areas where a seamless, joint free finish is required and maximum cleanliness is essential. Laboratories, clean rooms, and general light industry are some of the environments that can benefit from this system.

- **Hard wearing - durable with low maintenance costs**
- **Resistant to a wide range of chemicals and liquids**
- **Seamless - easily cleaned to maintain high standards of hygiene.**

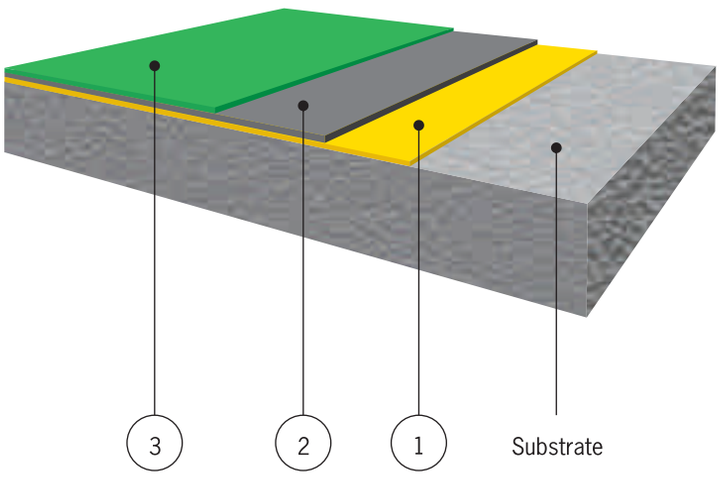
## EPOXY FLOOR COATING


### R 35 CE
### Solvent Free, High build Epoxy Coating

R 35 CE is a solvent free high performance high build epoxy resin floor coating. A fine textured finish with improved slip resistance may be achieved by the use of ARDEX Fine Aggregate.

- **Hard wearing, durable with low maintenance cost**
- **Provides tough, easily cleaned surface in environments where a degree of higher resistance to chemical attack is required.**
- **400$\mu$ in two coats**

# EPOXY SCREEDS




| Layer | Product | |
|---|---|---|
| 1 | Primer | R 2 CE / R 3 E / R 213 CE |
| 2 | Screed | R 24 CE / R 213 CE |
| 3 | Top Coat | R 21 CE / R 25 CE |

## PRIMER


### R 3 E
### Solvent Free Moisture Tolerant High Performance Epoxy Primer

R 3 E Moisture Tolerant Epoxy Primer is a two component solvent free epoxy resin for use on concrete and cementitious surfaces that have damp surfaces prior to installing ARDEX polyurethane screeds and self-smoothing epoxy floor coatings.

- Can be used on green concrete
- Seals substrates and acts as an adhesive bridge.
- Blind with ARDEX Fine Aggregate and use as a primer prior to thick applications of ARDEX cement-based floor systems

## EPOXY SCREED


### R 24 CE
### Self Smoothing Epoxy Screed (2mm - 4mm)

R 24 CE is a self levelling epoxy screed. Suitable in areas where a seamless, joint free finish is required and maximum cleanliness is essential. Clean rooms and general light industry are just some of the environments that can benefit from this system.

- Hard wearing - durable with low maintenance costs
- Resistant to a wide range of chemicals and liquids
- Easily cleaned to maintain high standards of hygiene

## EPOXY - CEMENTITIOUS SCREED


### R 213 CE
### Epoxy modified Cementitious Floor Screed (2mm - 4mm)

R 213 CE is epoxy modified cementitious floor screed which is non toxic, solvent free. Suitable on damp concrete surfaces. Recommended primer to be used is R 213 CE primer.

- Excellent resistance to wear & abrasion
- Slip resistance to vehicular & foot traffic
- Exhibits combined strengths of both cement & epoxy

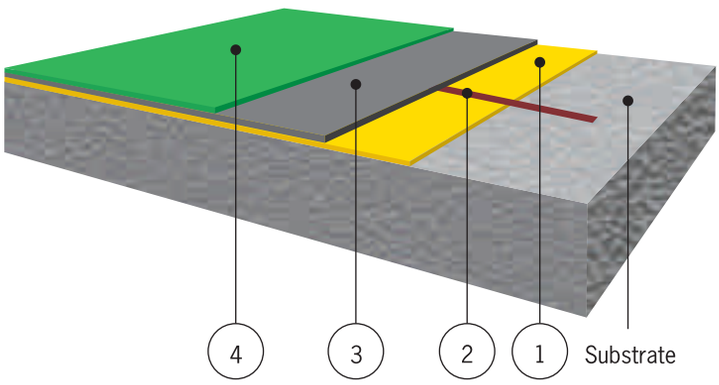
## EPOXY FLOOR TOPPING


### R 21 CE
### 1mm Self-Smoothing Epoxy Floor System

R 21 CE is a self smoothing epoxy floor system. The floor system is seamless and can be easily cleaned to maintain high standards of hygiene.

- Hard wearing - durable with low maintenance costs
- Resistant to a wide range of chemicals and liquids
- Self-smoothing properties provide a flat high gloss finish

## CONDUCTIVE SELF SMOOTHING EPOXY COATING




| Layer | Product | |
|---|---|---|
| 1 | Primer | R 3 E |
| 2 | Conductive tape | Copper Tape |
| 3 | Conductive primer | R 625 CE Primer |
| 4 | Conductive Top Coat | R 625 CE Top Coat |

### PRIMER


**R 3 E**
**Solvent Free Moisture Tolerant High Performance Epoxy Primer**

R 3 E Moisture Tolerant Epoxy Primer is a two component solvent free epoxy resin for use on concrete and cementitious surfaces that have damp surfaces prior to installing ARDEX polyurethane screeds and self-smoothing epoxy floor coatings.

- **Can be used on green concrete**
- **Seals substrates and acts as an adhesive bridge**
- **Blind with ARDEX Fine Aggregate and use as a primer prior to thick applications of ARDEX cement-based floor systems.**

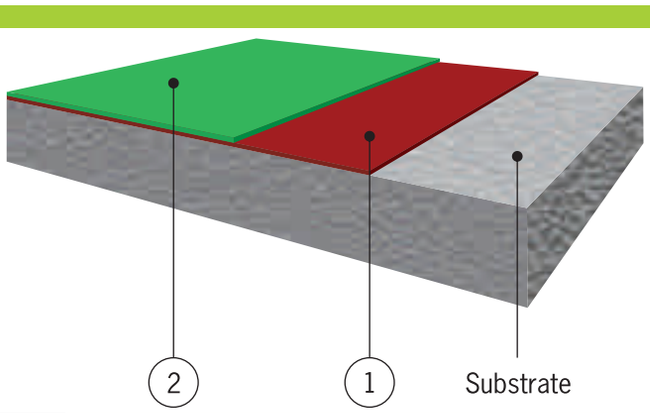
### EPOXY FLOOR SYSTEM


**R 625 CE**
**Solvent Free, Conductive Epoxy Coating**

R 625 CE is a solvent free high performance conductive epoxy resin floor coating. The coating is Electro statically Conductive and has a microelectronic industry grade conductivity of 104 - 106Ω

- **Antistatic**
- **Excellent Chemical, Mechanical and Abrasion Resistance**
- **Easily cleaned to maintain high standards of hygiene**
- **Hard wearing and durable with low maintenance costs**

## POLYURETHANE SCREED




| Layer | Product | |
|---|---|---|
| 1 | Scratch coat | R 70 CP |
| 2 | Screed | R 70 CP |

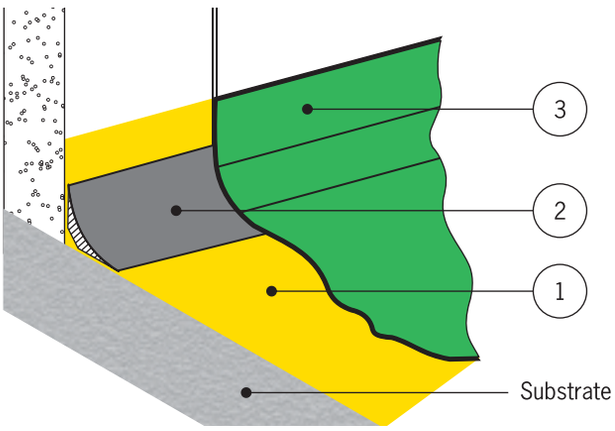
### POLYURETHANE SCREED


**R 70 CP**
**Medium Duty Polyurethane Screed (2mm - 5mm)**

R 70 CP is a high performance, polyurethane resin flooring system. Suitable in aggressive areas where seamless, hygiene and impact resistant floor is required.

- **Can withstand temperatures ranging from -30°C to +70°C**
- **Good abrasion resistant with low maintenance costs**
- **Easily cleaned to maintain high standards of hygiene**

# EPOXY COVING




| Layer | Product | |
|---|---|---|
| 1 | Primer | R 3 E |
| 2 | Coving Render | R 33 CE |
| 3 | Wall to Floor coating | R 34 CE |

## PRIMER


### R 3 E
### Solvent Free Moisture Tolerant High Performance Epoxy Primer

R 3 E Moisture Tolerant Epoxy Primer is a two component solvent free epoxy resin for use on concrete and cementitious surfaces that have damp surfaces prior to installing ARDEX polyurethane screeds and self-smoothing epoxy floor coatings.

- Can be used on green concrete
- Seals substrates and acts as an adhesive bridge
- Blind with ARDEX Fine Aggregate and use as a primer prior to thick applications of ARDEX cement-based floor systems

## EPOXY COVING RENDER


### R 33 CE
### Epoxy Coving Render

R 33 CE is a Epoxy coving system. Food processing and storage, dairies and general heavy duty plant and traffic areas are just some of the environments that can benefit from this system.

- Hard wearing - extremely durable
- Good abrasion resistant with low maintenance costs
- Seamless - easily cleaned to maintain high standards of hygiene

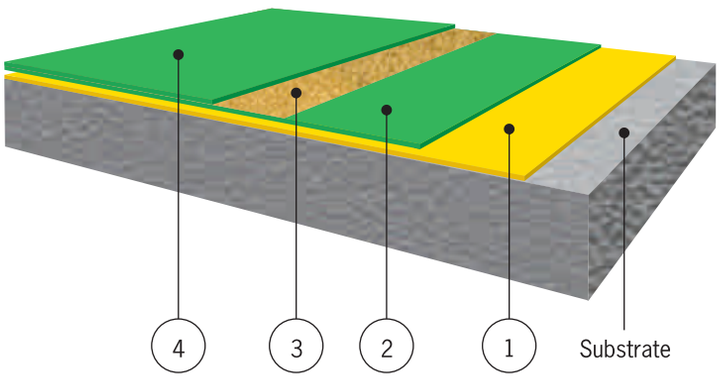
## EPOXY FLOOR COATING


### R 34 CE
### Solvent Free, Non Toxic Epoxy Coating

R 34 CE is a solvent free non toxic epoxy resin floor coating. Used for food storage and potable water application for floor and walls.

- High performance
- Glossy finish
- Resistance to a range of chemicals and liquids
- High abrasion resistance and corrosion resistant
- CFTRI approved
- 200$\mu$ in two coats

## EPOXY COATING WITH SLIP RESISTANCE




| Layer | Product | |
|---|---|---|
| 1 | Primer | R 2 CE / R 3 E |
| 2 | 1st coat | R 35 CE |
| 3 | Slip resistant | ARDEX Fine Aggregates |
| 4 | 2nd coat | R 35 CE |

### PRIMER


**R 3 E**
**Solvent Free Moisture Tolerant High Performance Epoxy Primer**

R 3 E Moisture Tolerant Epoxy Primer is a two component solvent free epoxy resin for use on concrete and cementitious surfaces that have damp surfaces prior to installing ARDEX polyurethane screeds and self-smoothing epoxy floor coatings.

- **Can be used on green concrete**
- **Seals substrates and acts as an adhesive bridge.**
- **Blind with ARDEX Fine Aggregate and use as a primer prior to thick applications of ARDEX cement-based floor systems**

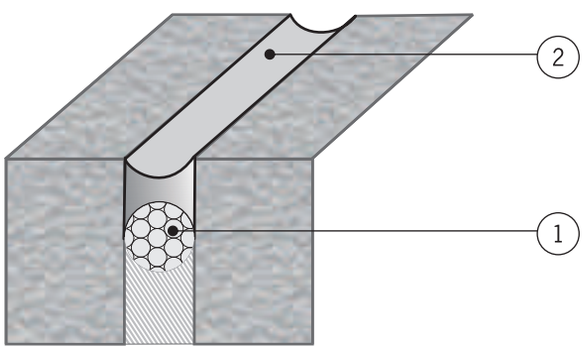
### EPOXY FLOOR COATING


**R 35 CE**
**Solvent Free, High build Epoxy Coating**

R 35 CE is a solvent free high performance high build epoxy resin floor coating. A fine textured finish with improved slip resistance may be achieved by the use of ARDEX Fine Aggregate.

- **Hard wearing, durable with low maintenance cost**
- **Provides tough, easily cleaned surface in environments where a degree of higher resistance to chemical attack is required**
- **400$\mu$ in two coats**

## EXPANSION JOINT TREATMENT




| Layer | Product | |
|---|---|---|
| 1 | Bond Breaker | Backer Rod |
| 2 | Joint Treatment | SU 10 |

### SEALANT

**SU 10**
**Elastomeric Polyurethane Sealant for Expansion Joints**

SU 10 is single component Elastomeric Polyurethane Sealant. Suitable for Expansion Joints of width maximum of 40mm.

- **Non priming required**
- **Non staining**
- **For heavy and light prefabrication and traditional masonry**
- **UV resistant**

# OTHER PRODUCT OFFERINGS

## PRIMER


### P 51
### Emulsion based Primer

P 51 is a primer used for porous sub-floors to improve adhesion of ARDEX sub-floor smoothing compounds, helps minimise air bubbles/pin holes and prolong the flow life.

- Good adhesion to the porous surface
- Seals the substrates
- Used as a primer for cement based levelling compounds, screeds

## COATINGS & TOPPINGS


### R 30 CE
### Water based Epoxy Coating

R 30 CE is water based epoxy resin floor coating. Used for floor applications in warehouses, light industry and other areas subject to light vehicle and pedestrian traffic.

- Low odour
- Cost effective floor maintenance coating
- Improves durability of concrete surfaces
- Excellent adhesion to concrete and cement / sand screeds


### R 11 CP
### Water Based Polyurethane Floor and Wall Coating

R 11 CP is two component water based polyurethane floor and wall coating. R 11 CP can be extensively used for applications where a thin coating is required to reduce texture or improve appearance and cleaning.

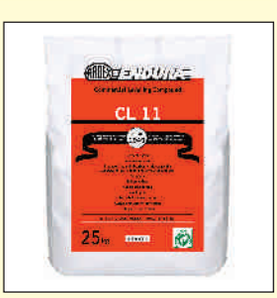
- For floors and walls
- Very high chemical resistance
- Hard wearing
- Hygiene
- Easy cleaning
- Anti-fungal,anti-bacterial


### R 71 CP
### 1mm Self-Smoothing Epoxy Polyurethane Floor Topping

R 71 CP is self-smoothing epoxy polyurethane resin floor finish. Ideally suited in areas where a seamless finish is required and maximum cleanliness is essential.

- Suitable for Laboratories, clean rooms
- Self-smoothing properties provide a flat high gloss finish

## CEMENTITIOUS FLOORING




### CL 11
### Commercial Levelling Compound (3mm - 5mm)

CL 11 has been especially designed to produce a smooth, flat surface when applied to hard, rigid sub-floors such as sand/cement screeds, concrete, etc.

- Produces flat and absorbent surfaces for the subsequent laying of flooring products
- Self-smoothing
- Contains high quality special cements and selected fillers


### K 80
### Rapid Drying Industrial Topping / Wearing Surface

K 80 is a specially formulated cement-based compound for resurfacing and levelling existing concrete floors to give a hard, smooth, flat, wearing surface or as a base for suitable paint and resin coatings.

- Cost effective
- Strong - has excellent abrasion resistance
- Can be installed from 5 - 10mm over existing surfaces
- Has unique ARDEX ENDURA Rapidry Formula'

## REFERENCES

Project: Shantha Biotechnics new flooring installation

Client: SHANTHA BIOTECHNICS. Shantha Biotechnics is an Indian biotechnology company based in Hyderabad. It is the first Indian company to develop, manufacture and market recombinant human healthcare products in India.

Location: Hyderabad, Bangalore

ARDEX Solution: K80 with R30CE, CL11, P 51, A 45, Feather Finish

Area: 10,000 sqm

Project: Zenufa Laboratories, Tanzania

Client: Zenufa Group, the group operates in the Pharmaceuticals and the Foods and Beverages industries within Africa.

Location: Dar-es-Salaam, Tanzania

Area of Application: Clean Rooms

Area: 3,000 sqm

## SWATCH CHART

### EPOXY

| | | | | | |
|---|---|---|---|---|---|
| Golden Yellow | Ivory | Flame Red | Light Blue | Emerald Green | Light Green |
| RAL 1004 | RAL 1014 | RAL 3000 | RAL 5012 | RAL 6001 | RAL 6027 |
| Mint Green | Silver Grey | Light Grey | Dusty Grey | Agate Grey | Traffic Grey |
| RAL 6029 | RAL 7001 | RAL 7035 | RAL 7037 | RAL 7038 | RAL 7042 |

### POLYURETHANE

| | | | | | |
|---|---|---|---|---|---|
| Golden Yellow | Ivory | Signal Orange | Signal Red | Grass Green | Silver Grey |
| RAL 1004 | RAL 1014 | RAL 2010 | RAL 3001 | RAL 6010 | RAL 7001 |
| Dusty Grey | | | | | |
| RAL 7037 | | | | | |

Due to printing processes, colours shown are only indicative, please consult ARDEX ENDURA Representative for more colours and applied sample.

## VALUED CLIENTELE

Alkem Pharma, Ahmedabad

Apotex Research Laboratories, Bangalore

Astra Zeneca R&D, Bangalore

Avik Pharma, Vapi

BAL PHARMA, Bangalore

Banner Pharma Caps, Bangalore

Biocon, Bangalore

Biokem, Bangalore

Biological (E) Limited, Hyderabad

Brown & Burk, Bangalore

Cadila, Ahmedabad

Canton Lab Pvt. Ltd., Vadodara

Chiron Behring Vaccines, Ankleshwar

Cipla, Bangalore, Goa, Mumbai

Dishman Pharma, Ahmedabad

Dr Reddy's laboratories, Hyderabad

Fortis Hospital, Chennai

Gen. Hospital, Chickmagalur

Gertrude Hospital, Nairobi

Glaxo SmithKline, Mysore

Group Pharma, Malur

Hikal, Bangalore

Himalaya Drugs, Bangalore

Hinduja Hospita, Mumbai

Jaslok Hospital, Mumbai

Kemwell, Bangalore

Kim Hospital, Trivandrum

Mahatma Gandhi Hospital, Hyderabad

Mediplus (India) Limited, Haryana

Matrix laboratories, Hyderabad

Medreich Sterilab, Bangalore

Megan Hospital, K.H.S.D.P, Shimoga

Micro Labs, Hosur

National Tuberculosis Institute, Bangalore

Onco Care Pvt. Ltd, GOA

Orchid Chemicals, Chennai

Regent Drug, Delhi

RPG, Ankleshwar

Sarvodaya Hospital, Bangalore

Sarvotham Care, Baddi

Shantha Biotech, Hyderabad

Shreya Biotech Ltd, Pune

Shrusthi Pharmaceuticals, Bangalore

Sir Hurkisondas Naruttamdas Hospital, Mumbai

Stericon Pharma, Bangalore

Sterling lab, Hosur

Strides Arcolab, Bangalore

Sun Pharma, Ankleshwer

Syngenta Biosciences, Goa

Wockhardt Hospital, Bangalore

Wockhardt. Aurangabad

Zenufa Pharmaceuticals, Tanzania

Zydus Cadilla, Ahmedabad

## NOTES

# 10 STEPS TO A BRILLIANT RESIN FLOOR

## 1. Evaluate the Existing Floor

There are three main factors to consider when first looking at an existing floor:

- Physical Condition

Not all floors can be saved! Even a heavy duty resin floor is only a thin layer when compared to the concrete slab underneath it, and it cannot be expected to compensate for inadequacies in the concrete slab. Certainly if some contamination has degraded the integrity of the concrete itself, the client should be directed towards replacing the slab before proceeding with any applied finish.

- Moisture

All impervious coatings require a functioning suitable damp proof membrane to be installed. If one is not present below the slab, then provisions must be made for installation of a surface applied temporary moisture barrier.

- Previous Uses/Contamination

Try to find out what the site has been used for in the past. Industries that use a lot of oil (engineering, food production, health and beauty products) may have led to contamination of the slab which could affect the bond and performance of subsequently applied finishes.

## 2. Select the Right System

Taking into consideration the results of the evaluation, the needs and expectations of the client and the advice of ARDEX ENDURA, select a suitable resin finish. Whilst cost is always a factor, selecting a lower performance system in order to meet cost restrictions very rarely results in satisfaction for the client!

## 3. Plan the Job – Schedule and Labour

The work schedule must consider achievable laying rates and curing times of both the final finish and intermediate layers. Ensure sufficient experienced labour is allocated in terms of both mixing and application. Use of trained applicators is highly recommended.

If time is genuinely limited, contact us for information on various fast-track systems which can save some time on schedule compared to traditional systems.

## 4. Plan the Job – Access and Layout

When planning the layout of the job, take into consideration;

- Access routes (width of doors and corridors for machinery etc)
- Access to power
- Access to water (if required)
- Setting of mixing stations
- Disposal of waste and packaging
- Bay sizes (which may be influenced by available labour, movement joints in the floor and allowed possessiontimes of the site).

Pay particular attention to any feature of the site which protrudes into or through the applied material. Floor joints and drain details need to be properly addressed. Also consider any of the client's staff, materials or processes which may be present during application and need to be separated from the project.

Steps 1 - 4 are key to a successful result. There are very few problems that cannot be overcome, and no problem that is not better addressed a few weeks prior to installation rather than a few hours!

## 5. Storage of Materials on Site

Store all materials according to AEIPL guidelines. Cold materials flow less and set slower, which can result in an impaired finish. Conversely, very warm materials will give a reduced working time which can again lead to an impaired finish. For most products the optimum temperature range is 15 to 25 C. Bear in mind that large volumes of material can take over 24 hours to adjust to the surrounding temperatures, so simply bringing materials into a warm room for an hour or so is unlikely to provide much benefit.

Note: Slab temperature may not reflect ambient temperature.

## 6. Preparation and Repairs

All floors (including power floated concrete and levelling screeds) require some degree of mechanical preparation before receiving bonded material and this preparation should be carried out immediately prior to receiving the finish. The longer the time left between preparation and application, the more likely the floor will need to be prepared again. Selection of repair materials should reflect the expected duty of the floor, and repair materials in turn will require preparation if they are to receive any bonded materials. Terminations of the resin floor should be straight, neat and tidy and include anchor grooves where applicable.

## 7. Mixing Materials

Maintain a tidy mixing station with easy access to all required components and suitable facilities for disposal of packaging.

Always use the recommended mixing equipment. Ensure that mixing times and sequences are followed. Avoid leaving mixed material in the mixing vessel for longer than is necessary. Protect the area surrounding the mixing station from splashes. On-site batching of materials must be rigorously controlled to ensure both quality and correct proportions of materials are achieved.

## 8. Application

Apply materials in strict accordance with AEIPL instructions. For screeds, it is essential that good compaction is achieved throughout the depth of the material. Ensure consistency of application and finishing techniques to achieve the best finish. Again, use of trained applicators is highly recommended. Should unforeseen circumstance arise on site, which requires a break in application, steps must be taken to ensure a neat and tidy day join, including any anchor grooves on either side wherever applicable. For ALL Resin Systems, maintaining the "wet edge" is critical to achieving a good finish.

## 9. Protect your Work!

There may be some time both between intermediate stages of the project and between final finish and handover to the client. Ensure the floor is protected from traffic, contamination and damage during these periods.

## 10.Cleaning and Maintenance

All floors (not just resin) benefit from a suitable and consistent cleaning and maintenance regime, which will vary depending upon expected duty of the finished project. Make sure the client is aware of the recommended regime for the resin floor, and of the deterioration in appearance that will occur if the agreed regime is not implemented and maintained. Please refer to FeRFA cleaning and maintenance guidelines on how to maintain your new resin floor.


**ARDEX ENDURA (INDIA) PRIVATE LIMITED**

an **ISO 9001:2008** certified company

Corporate Office & Regd. Office: Unit No. 406 & 407, "Brigade Rubix" No. 20, HMT Campus, Yeshwantpur Hobli, Bengaluru - 560013.

CIN No: U24233KA1997PTC022383 Tel: +91 80 66746500 Email: customercare@ardexendura.com Website: www.ardexendura.com

Branches

AHMEDABAD: 079 - 26425310 • AURANGABAD: +918888480847 • BENGALURU: 080 - 40912934 • BHUBANESHWAR: 0674 - 2421901 • CALICUT: 0495 - 2740334 • CHENNAI: 044 - 42805544 • DELHI: 011 - 26802949
ERNAKULAM: 0484 - 2341044 • GHAZIABAD: 0120 - 6541564 • GOA: 0832 - 2750992 • GUWAHATI: +917896002188 • HUBBALLI: 0836 - 2970505 • HYDERABAD: 040 - 27650293 • INDORE: 0731 - 4021148 • JAIPUR: 0141 - 2392993
KOLKATA: 033 - 65090604 • LUCKNOW: 0522 - 4043251 • LUDHIANA: 0161 - 2532170 • MANGALURU: 0824 - 2442176 • MUMBAI: 022 - 65133299 • MYSURU: 0821 - 2570171 • NAGPUR: +919822223743 • PATNA: +919934687909
PUNE: 020 - 64781879 • RAIPUR: 0771 - 6539055 • SALEM: 0427 - 2211454 • SHIVAMOGGA: +919880605770 • TRICHY: 0431 - 6454649 • TRIVANDRUM: 0471 - 2598648 • VIJAYAWADA: +918688354587
VISAKAPATNAM: 0891 - 6469499

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