

DUROCOAT 90A



DESCRIPTION

Durocoat 90A is a two component fast curing aliphatic coating that is 100% solids. The chemistry is such that it is a coating designed as an abrasion resistant topcoat for polyurea and polyurethane systems or a separate coating system in itself for specific substrates. This product is available in six colours for decking and flooring applications. The colours available are clear, black, white, beige, grey and chocolate brown.

FEATURES

- Fast cure
- Aliphatic coating
- Excellent ageing in outdoor exposures
- Zero VOC – no solvent and no flammability
- Mix ratio convenience 1/1 by volume

Use Area

- Industrial equipment
- Deck coatings
- Garage floors
- Industrial and commercial flooring
- Food processing plant walls
- Ponds and water features
- Floors and ceilings and UV resistant overcoat (polyurea and polyurethane)

COLOURS

Durocoat 90A is available in 6 colours:

- Clear
- Black
- White
- Grey
- Beige
- Chocolate Brown



TECHNICAL INFORMATION

Properties presented below are to be used as a guide and not intended for specification purposes.

Composition	Two-Pack, 100% Solids, Polyurethane Hybrid
Volume solids (%)	100
Service Temperature (°C)	Up to 100°C
Incidental contact (°C)	Up to 180°C
Mix ratio (by volume)	1:1
Curing time (hours)	1 hour tack free* Foot traffic: 2 hours*
Pot life (minutes)	40
Shelf life (months)	12
Odour	Very Low smell
Tensile Strength (MPa)	17
Elongation (%)	73
Hardness (Shore A/Shore D)	90/50
Tear Strength (Kg/cm)	56
UV resistance	No chalking, no cracking, no yellowing
Re-coating interval (days)	1 to 18 hours
Recommended relative humidity (%)	Between 20 and 90

Drying time is temperature, humidity and Film thickness dependent. Thicker films will take longer to through-cure. High humidity will shorten cure time.

PACKAGING

20 Litre & 4 Litre (Part A)

20 Litre & 4 Litre (Part B)



APPLICATION INSTRUCTIONS

The application details provide general procedures to be followed for all applications of the Durocoat 90A. When applying the Durocoat 90A, proper equipment is essential. The main application tool for each step is a 270 mm Epoxy Roller Cover with an adjustable roller cage. During the project the roller should be rolled dry every 10-18 m. This will prevent the roller from becoming tacky and it will increase the life of the roller. After the initial roll it is important to back roll the floor. Back rolling is done to ensure even application and will help with breaking any balloons that may have formed from filling pinholes. On average a roller cover will do 45-90m before replacement.

Prior to application, proper surface preparation is required. Surface must be clean, dry, and in sound condition. Remove all oil, dust, grease, loose particles and rust.

Consumption: Apply between 0.08 and 0.25 mm wet film thickness per coat. Optimum wet film thickness will vary with project specifics.

Mixing: This is a two-component system. When mixing the material, use graduated plastic mixing containers. Each batch that is being mixed on a project, will require a new plastic mixing container, however, after the project is complete, the cured material can be pulled out of the containers and they can be reused.

First, mix Durocoat 90A Part B thoroughly before use. Combine equal parts Durocoat 90A Part A and Durocoat 90A Part B by volume. If necessary, Durocoat 90A may be thinned using Xylene or MEK. For a semi-gloss finish contact for a Matte Reducer. Use care when mixing to avoid incorporation of air. This process in total should take no more than 1-1/2 minutes. Mix only the volume used within the pot-life. For a concrete floor, best results are found by mixing enough material for 10 minutes of rolling after which another 10-minute-sized batch is mixed. On average this is 1-3 Litres of mixed material and is project dependent.

After material is mixed, it should be poured out in a ribbon across the area that will be rolled. The above amount will be enough material to pour out 2-4 ribbons. Do not use a roller tray.

It should be noted that if these ribbons are a non-skid coat, the aggregate has a propensity to settle. If the material is not rolled out sufficiently to pick up and spread this settled aggregate, it can result in a ghost where the ribbon was poured, caused from an abundance of non-skid remaining where the material was poured out.

Allow at least 2 hours before light foot traffic and 24 hours before return to service. Cure time is very dependent on temperature and humidity. In cold dry conditions the cure time will be significantly prolonged.

Technical Tip: The reason we don't use a roller tray and always use a fresh mixing container is because each mixed batch can catalyse fresh material which can drastically reduce the pot life of newly mixed material.

PROJECT SPECIFIC APPLICATIONS

Non-Skid Finish

Durocoat 90A can be used to produce a durable non-skid finish with three optional textures. NS- 75 or NS-100 are recommended for most flooring and decking applications. They provide adequate traction and easy to clean surface. For increased traction NS-50 or NS-20 can be employed. NS-20 will provide the most aggressive traction but will make cleaning more difficult. The desired non-skid additive should be added to the Durocoat 90A part B and thoroughly blended prior to mixing with the Durocoat 90A part A. Apply at a maximum wet film thickness of 0.1 mm for best results. If wet film thickness is too high the non-skid effect will be lost and surface appearance will not be uniform. If higher film build is required apply multiple thin coats for best performance and uniform appearance. Optionally, the non-skid coat can be applied as the final coat only. See the table below for typical addition level of NS.

Non-skid Powder Application Chart (add to part B)

4 kg can	G	ml
NS-20 (coarse grade)	200	525
NS-50 (medium grade)	200	525
NS-75 (50+100)	200+400	525+1050
NS-100 (fine grade)	400	1050

COLOUR CHIP FLOORING

Color Chips can be used in conjunction with the Durocoat 90A to create an attractive and durable surface coating. It is recommended that the coatings contractor perform in-house testing and evaluation to determine the best technique for their specific application.

For general use, refer to the following procedure.

Step 1: Apply Durocoat 90A colour coat at approximately 7m per Litre to provide a uniform colour base. Colour choice will depend on the colour chip collection. Allow surface to cure to tack free (approximately 1-2 hours).

Step 2: Apply a second coat of Durocoat 90A colour coat at 2 approximately 15m per Litre. Broadcast colour chips uniformly to surface. The amount of colour chips used will depend on the desired effect. Allow surface to cure approximately 1-2 hours

Step 3: Remove excess colour chips and lightly scuff surface to produce a semi-smooth appearance. Broom or vacuum surface so it is free of any loose particles and dust.

Step 4: Apply Durocoat 90A clear coat at approximately 3.5 L per m² per Litre. Apply additional coats if a very smooth surface is desired.

These procedures are not intended as specific application instructions. The amount used and final appearance will depend on the specific project undertaken. Proper surface preparation, job-site conditions and adequate safety precautions are the responsibility of the coatings contractor.

ACCENT COLOUR FLOORING

Durocoat 90A accent colours can be used to create a durable, granite like, attractive floor finish. Accent colours can be used as an alternative to colour chips where a more durable and less textured finish is desired. For general use, refer to the following procedure.

Step 1: Apply Durocoat 90A colour coat at approximately 7m² per Litre to provide a uniform colour base. Colour choice will depend on the splash accent colour selection. Allow surface to cure to tack free (approximately 1-2 hours).

Step 2: Apply first Durocoat 90A splash accent colour using splatter-gun at desired setting. Size and concentration of splash accent colours will depend on splatter gun settings and speed of each pass. Allow the surface to cure for approximately 1-2 hours.

Step 3: Apply traditional splash accent colours as in Step 2, Two or three splash accent colours are used in typical applications. Allow 1-2 hours cure time after final splash accent colour.

Step 4: Apply Durocoat 90A NS-100 clear coat at approximately 7m² per Litre.

These procedures are not intended as specific application instructions. The amount used and final appearance will depend on the specific project undertaken. Proper surface preparation, job-site conditions and adequate safety precautions are the responsibility of the coatings contractor.

CLEAN-UP

Reusable tools should be cleaned carefully with MEK before curing.

SHELF LIFE

Shelf life of sealed Durocoat 90A in its original container is 12 months.

Store in a cool and dry place for product integrity. Store in tightly sealed containers to protect from moisture and foreign materials. Moisture contamination will result in significant reduction in pot-life.

SAFETY

Please refer to the Material Safety Data Sheet (MSDS) for personal protection, proper handling and storage.

IMPORTANT NOTICE

Durocoat 90A has been developed to protect and extend the longevity of the floor surface/substrate to which it has been applied, however as Durotech Industries has no control over substrate preparation and Durocoat 90A installation, Durotech Industries cannot guarantee the number of months/years Durocoat 90A will provide in extending the longevity of the floor/substrate.

When cured Durocoat 90A provides a gloss finish which may vary subject to drying conditions, application techniques and final finished film thickness.

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