Optima COATINGS

DATA SHEET

FLOORING

Duratop 460C

Duratop 460C is a multi-component polyurethane render used to form coves and skirtings and to cover other vertical surfaces. It has the same properties as the urethane concrete product Duratop 460 but with a thicker consistency that will not slump.

Colours:

Charcoal, Green, Red and Cream

PRODUCT USES

For application by experienced contractors, **Duratop 460C** is used to form coves and skirtings:

•To protect drains, tank bases, sumps,
• containment pits, curbs, and other vertical surfaces
• Where severe conditions exist—high impact pressure, thermal shock, and chemical exposure
• Use with all Duratop flooring products
• Chemical processing facilities
• Meat, poultry, and dairy plants
• Bakeries
• Confectionery-packaging areas
• Food warehouses
• Textile-production sites
• Precious-metal refineries
• Pharmaceutical facilities
• Freezers and refrigerated storage areas

LOCATION

- Interior and exterior applications

SUBSTRATE

- New and aged concrete; when applying over other surfaces, contact Optima Coatings Technical Service
- It is used in combination with **Duratop 460CP**, a 2-part primer used prior to **Duratop 460C** to reduce the porosity of prepared concrete and provide a tacky surface to aid vertical application of **Duratop 460C**.
- **Duratop 460C** polyurethane concrete should be applied by trowel at a minimum of 3mm thick.

ADVANTAGES

Fast application/rapid access- Can be applied to 6-day-old concrete or 2 day old polymer screeds.
• Hygienic/Safe- Slip resistant, non-tainting, non-dusting, monolithic (minimum joints), easy to maintain, microbiologically inert.
• Durable/long life- Wide chemical resistance, wear and impact resistant, resists temperatures from -40°C to 110°C at 9 mm thickness.
• Pre-packed and Pre-weighed for immediate use; batch to-batch colour matched for consistency.
•Temperature service exceeds that of typical epoxy overlays
• New or old floors can be treated.

CONSUMPTION

18 kg kit provides a minimum of 9 liters of mixed product.

PRODUCT FEATURES AND BENEFITS

Features	Benefits
Thermal stability	limited bacterial growth in cracks
Solvent free	ease of application, no VOC
Low odour	environment-friendly, use in confined areas
No priming or sealing of substrate	single application,
Fast cure	limited downtime, trafficable after 12 hours, forklifts after 24 hours
Slip resistant	safety
Steam/Hot water washable	ease of maintenance, hygienic
Chemical resistance	resists organic and inorganic acids, bases and salts
Unaffected by freeze/thaw cycles	resists cracking due to thermal cycling
Wide in-service temperature range	stable from –40^{0}C to +110^{0}C
Impact resistance	remains undamaged in offloading areas
High bond strength	adheres to most substrates with limited preparation
Abrasion resistant	suitable for high traffic and forklift areas

SURFACE PREPARATION

- Concrete and walls shall be clean, structurally sound and free from foreign materials, contaminants, oily products and other debris.
- Concrete and wall surfaces shall be 'visibly dry' with no standing water. The minimum tensile (pull-off) strength shall be 1.5N/mm² and concrete shall have cured for at least 5 days.
- Concrete design shall allow provisions for movement joints, as required. In addition, provision shall be made for induced joints to allow any Shrinkage of the concrete to occur along defined planes.
- All imperfections such as holes and cracks shall be repaired and levelled with the mean level of the surface.
- For repairing surface unevenness, Optima® concrete repair systems shall be used.
- The whole surface shall be enclosed or impact shot blasted, surface planed, ground or high-pressure water jetted.
- All high spots shall be removed.
- Surfaces shall be rendered 'visibly dry' by heat or mechanical means.
- Remove all loose material and dust by vacuum or mechanical means.

APPLICATION DETAILS

- Stir Duratop 460 C wet ingredients thoroughly before use.
- Mix dry ingredients together well.
- Mix liquid Part A with liquid Part B until homogeneous.
- Mix the homogenous liquid with the mixed dry ingredients.
- Trowel out.

Pack size:	18kg
Recommended application thickness:	≥3mm
Applied density:	2kg/m^3
Recommended material temperatures:	minimum +10^{0}C, maximum +25^{0}C
Recommended substrate temperatures:	minimum +10^{0}C, maximum +35^{0}C (Cure time is temperature, humidity and film thickness dependent.)
Working time	the 18kg kit should be troweled into place within 40 minutes after mixing
Light traffic after:	12 hours
Full traffic after:	24hours
Full cure after:	2-3 days
Substrate preparation:	Remove all laitance, greases and foreign matter that may interfere with the bond. A fine shot blast or diamond grinding is recommended. Prime with Duratop 460CP.

TECHNICAL DATA

Correctly mixed and applied product can achieve the following specifications:

Compressive strength:	50MPa (7250psi)	ASTM C579
Tensile strength:	5.5MPa (800psi)	ASTM C307
Flexural strength:	12.5MPa(1820psi)	ASTM C580
Surface hardness:	80-90 Shore D	ASTM D2240
Impact resistance:	160 in.lb	ASTM D2794
Taber abrasion resistance:	5mg loss(1kg load, 1000 cycles)	ASTM D4060
Thermal conductivity:	1.2 W/mK	ASTM C177
Water absorption:	<0.1%	ASTM C413
Adhesive strength:	2.8MPa (400psi)	ASTM D4541

TEMPERATURE RESISTANCE

Service temperature:	Minimum: -40^{0}C
	Maximum: +110^{0}C

CHEMICAL RESISTANCE

No physical damage from temporary exposure to mustard, ketchup, lactic acid, vinegar and lemon juice. No physical damage from 24-hour immersion testing in:

- 10% acetic acid
- 30% nitric acid
- 50% sodium hydroxide
- 30% sulphuric acid
- xylene

STORAGE

Store indoors at temperatures of 5 – 35^{0}C and humidity below 80% R.H.

SHELF LIFE

Correctly stored product will last a minimum of:

Part A (polyol):	2 years
Part B (isocyanate):	1 year
Dry ingredients:	6 months unopened (must be protected from moisture)

IMPORTANT

- Colour stability or gloss may be affected by high humidity, low temperature or chemical exposure
- Proper mixing is essential for product performance
- Colours may vary from batch to batch. Use only one batch per area
- Always apply a suitable test area to check the product performance
- Substrate temperature must be 5^{0}C above dew point
- All new concrete must be fully cured before application
- Not recommend for use over flexible substrates
- Extremely porous or powdery substrates may require a consolidating primer e.g**. Duratop Universal Epoxy Primer.**

CLEANING

- All equipment should be cleaned with Duram Xylene immediately after use.

SAFETY PRECAUTIONS

• Wear gloves and eye protection during mixing and application.
• For the full health and safety hazard information and how to safely handle and use this product, please make sure that you obtain a copy of the Duram Product Material Safety Data Sheet (MSDS)) for each component of Duratop 460 PU from our office or the Technical Consultant.
• Skin contact: Wash thoroughly with soap and water.
• Eye contact: Flush immediately with water for 10 – 15 minutes and contact a physician.
• Respiratory problems: Remove affected person to fresh air immediately and contact a physician.
• Not for internal consumption.

PACKAGING DATA

18 kg pack: Pre-weighed Parts A and B: 1.307kg each
Aggregate/Portland cement/inorganic pigment: 11.735kg/3.52kg/0.13kg

Kit provides a minimum of 9 liters of mixed product.

Colours available: grey, charcoal, green, red and cream (uniformity between batches is not guaranteed.)

AUXILLARY PRODUCTS

Duratop 460 - a trowelable urethane concrete product for flooring applications.
Duratop 460CP, a 2K urethane primer that provides a tacky surface to aid vertical applications .
Duratop 460SL - A self-leveling version of Duratop 460 (see individual data sheets)**.**

Technical details above are provided in good faith. We are an ISO 9001: 2008 registered company and our products are manufactured to the highest standards using raw materials of superior quality. Consequently we believe in the quality of our products and will willingly replace any product in the unlikely event of a quality related performance failure. Whilst we are confident in guaranteeing the quality of our products, we cannot however accept any liability for performance failure due to the incorrect application of our products. Correct application is critical to the successful performance of our products and as this process falls outside of our control we are unable to cover the application under our product performance warranty. Where there are doubts, it is recommended that the user conduct their own suitability tests before use. To retain sheen and colour consistency of your paint, always make sure that the batch numbers are the same on all paint containers that you purchase.

Updated: April 2013 (this supersedes all previous publications)