



ABN 15 165 125 895
ACN 065 125 895
19 Irvine Street
Bayswater W.A . 6053

Phone: +61 8 9272 1528
Fax: +61 8 9370 1113
Email: paul@assetsystems.com.au
Web: www.assetsystems.com.au

KING-GUARD FLEX® 6040

Spray Elastomeric Polyurea



Heavy Duty Elastomer Coating - Chemicals and Corrosion

KING-GUARD FLEX® 6040

A 100% solids, fast-set, two component high performance spray polyurea elastomer coating.

Product Description

KING-GUARD FLEX® 6040 is an ultra rapid curing spray applied polyurea elastomer coating and lining system, offering a high degree of mechanical and chemical protection for concrete and metal surfaces in aggressive environments. Typical application thickness is 2-5mm.

KING-GUARD FLEX® 6040 is a premium performance elastomeric coating for the preservation and repair of surfaces which may have been damaged or degraded by chemical attack, time or mechanical wear. It has excellent hydrolytic stability and is resistant to low concentrations of acids, alkalis, diesel fuel, seawater, moderate abrasion, sunlight and high temperatures.

KING-GUARD FLEX® 6040 is a 100% solids, two-component, 1:1 ratio material with elongation properties exceeding 200% and tensile strengths exceeding 15 MPa.

KING-GUARD FLEX® 6040 is applied using a plural component heated spray system with an effective pot life of 2 - 4 seconds. This product can be applied in temperatures ranging from -10°C to 50°C and can be utilized within 30 minutes (light duty / water immersion).

KING-GUARD FLEX® 6040 meets AS 4020:2005 Criteria - for use in potable water structures.



Advantages

Advantages of sprayed King-Guard Flex® 6040 coating include:

- Extremely fast cure
- Elastomeric - crack resistant
- High impact resistance
- Good chemical and thermal resistance
- No VOC's and minimal odour
- Reduced maintenance down-times

Recommended Uses

King-Guard Flex® 6040 is recommended as a durable, high performance protective coating and lining system in a wide range of industries. Some suitable applications may include:

- Thickeners & flotation - tank linings
- Diesel fuel storage bund linings
- Flexible industrial flooring
- Seamless secondary containment linings
- Potable water tank linings
- Earthen pond linings—seamless
- Manhole chambers and sewer linings
- Marine off-shore platforms
- Structural column/plinth encapsulation
- Marine pile protection
- Durable external pipe coatings
- Buried hazardous waste containment



KING-GUARD FLEX® 6040 will permanently bridge new cracks in concrete of up to 0.5mm wide (refer to independent materials testing approval - MPA "Official Material Research Laboratory Institute in Karlsruhe). Further sample testing achieved a nominal 10mm wide crack bridging capability, although not part of the official DIBt approvals.

Chemical Resistance (DIN 53521– 90 Days Immersion Exposure)

Hydrochloric Acid 10%:	Resistant	Heavy Duty Detergent:	Resistant
Sulphuric Acid 20%:	Resistant	Sodium Chloride (all conc.) 60°C:	Resistant
Nitric Acid 1%:	Resistant	Brine (saturated 130,000 ppm):	Resistant
Sodium Hydroxide 40%:	Resistant	Water (de-ionised @ 80°C):	Resistant
Sodium Hydroxide 50%:	Resistant, 72hrs @ 80°C (short term)	Liquid Nitrogen Fertilizer:	Resistant
Diesel Fuel:	Resistant	Roxby (mixture medium) + kerosene All+100g/L @ 40°C	Resistant

Physical Properties

Gel Time	2 - 4 seconds
Tack Free Time	10 -15 seconds
Light duty foot traffic	< 0.5 hours
90% Cure @ 25°C	12 hours
Tensile Strength, [N/mm ²] ASTM D-638	≥ 15
Tensile Elongation, %	≥ 200
Shore Hardness, D	45 ± 5
Density [g/cm ³]	1.12 ± 0.02
Thermal Resistance (dry)	minus 40 – 130°C
Abrasion Resistance [mm ³] , DIN 53516	≥ 200
Peel Strength (steel) [N/mm] DIN 53531	≥ 10
Water Vapour Permeability, ASTM E 96, 4mm	5 – 7g/m ² */day
Water Vapour Permeation, ASTM E96, [ng/cm ² *h *Torr]	0.03 – 0.05*

* The values are determined for material thickness of 4mm at a temperature of 38°C

Surface Preparation

Concrete

Concrete/ masonry surfaces to be high pressure water or sweep abrasive blasted to remove all traces of dirt, laitance and other contamination. Prime/fill imperfections in the substrate surface to limit out-gassing.

Remove all existing coatings by most efficient method available. Only well bonded, profiled, compatible coatings may remain.

Vacuum to remove loose dust etc, prior to application of primers.

Carbon Steel

Steel substrate surfaces to be abrasive blasted to AS 1627.4 Class 2.5 - 3 and adequately profiled (consult Asset Systems). Avoid flash rusting prior to priming.

Soluble salts must be removed to an acceptable level for the coating/lining application.

Primers

An adhesion promoting primer system is required for both metal and concrete substrates. Consult Asset Systems for advice.

Application

The King Guard Flex® 6040 is applied using specialist 1:1 plural component, heated, high pressure spray equipment.

Cure Time

Applications in cold temperatures will require longer cure times. For rapid return to service applications, consult Asset Systems for advice.

	10 - 21°C	21 - 32°C	32 - 43°C
Tack Free	<15 sec	<15 sec	<15 sec
Hard Film	<1 min	<1 min	<1 min
Recoat (max)	24 hr	24 hr	24 hr
Light Foot Traffic	5-10 min	5-10 min	5-10 min
Water Immersion	5-10 min	5-10 min	5-10 min
Full cure	4 days	4 days	2 days

Consult Asset Systems for specific over-coating instructions. Surfaces may require additional preparation/priming.

WARRANTY INFORMATION: ASSET SYSTEMS PTY LTD warrants that its products meet all current published specifications. No further warranty of any type, expressed or implied is made regarding the use of these products except as mandated by law. In all cases, the liability of ASSET SYSTEMS PTY LTD shall be limited to replacement of product that is proven to be at variance with the company's published specifications. The judgement of proper conditions and suitability of individual products for particular applications is the customer's sole responsibility and is not under the control of the manufacturer or supplier. It is recommended that all prospective customers of products supplied & installed by ASSET SYSTEMS PTY LTD conduct their own tests to ascertain suitability of these products for specific applications. All guidelines, recommendations, statements and technical data contained herein are based on information and tests we believe to be reliable and correct, the accuracy and completeness of the said tests are not guaranteed and are not to be construed as a warranty, either expressed or implied.