Brunel Close, Park Farm
Wellingborough
Northants
NN8 6QX
01933 675299
01933 670800

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FLEXANE® URETHANES

PRODUCT DATA SHEET

FLEXANE 60, 80 & 94 LIQUIDS

A tough pourable rubber compound for part encapsulation, rugged flexible moulds and patterns, holding fixtures and forming die pads. It can also used to form equipment linings that are abrasion-resistant and noise reducing.

FEATURES

- Two-part compound mixes and pours easily
- Available in three standard hardness durometers
- Precision moulds faithfully reproduce detail as there is no shape change whilst curing
- Cures at room temperature
- Displace and return to their original shape without cold flow
- Shrinkage is negligible to non-existent
- Bonds to metal, concrete, rubber, wood and fibreglass

RECOMMENDED APPLICATIONS

- Pads for press brake forming
- Lines process equipment to dampen noise
- Protects equipment surfaces from wear and corrosion
- Pouring concrete expansion joints
- Casting flexible parts and moulds

PRODUCT DATA
Typical Properties

	Flexane 60	Flexane 80	Flexane 94
Mix ratio resin: curing agent ratio % by weight……..	1.67:1	3.33:1	2.19:1
Viscosity with hardener (cps).....	4,000	10,000	6,000
Specific Volume cm^3/kg.....	956	956	956
Hardness Shore A.....	65	87	97
Pot life of 500gm in mins.....	30	30	10
De-moulding time - hours.....	8	10	5
Maximum operating temperature ^oC .....Dry…..	82	82	82
Wet....	49	49	49
Cure shrinkage cm/cm ASTM D2566…….	0.0005	0.0007	0.0004
Elongation % ASTM 149.....	300	375	325
Tensile strength N/mm^2 ASTM D1002.....	5.1	14.5	27.6
Dielectric strength KV/mm2.ASTM 149.....	14	14	14
Tear resistance, N/mm^2 ASTM D624…….	19	44	73

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CHEMICAL RESISTANCE: 7 days room temperature cure (30 days immersion @ 24°C)

	Flexane 60	Flexane 80	Flexane 94
Kerosene	Fair	Fair	Fair
Hydrochloric Acid 10%	Very Good	Very Good	Very good
Chlorinated Solvent	Unsatisfactory	Unsatisfactory	Unsatisfactory
Sulphuric Acid 10%	Very good	Very good	Very Good
Methanol	Unsatisfactory	Unsatisfactory	Unsatisfactory
Toluene	Unsatisfactory	Unsatisfactory	Unsatisfactory
Ammonia	Very good	Very good	Very good
Sodium Hydroxide 10%	Very good	Very good	Very good

Generally, Flexanes are not recommended for exposure to solvents, oils or fuels.
Please consult ITW Devcon for other chemicals.

APPLICATION INFORMATION

General Surface Preparation

Metal Surfaces: Thoroughly clean the area that is to be repaired, rebuild or lined by using Devcon Fast Cleaner 2000 Spray/Cleaner Blend 300. All oil, grease and dirt must be removed before applying Flexane material. All surfaces must be roughened by grinding with a coarse wheel or an abrasive disc pad.

Rubber Surfaces: Thoroughly clean the rubber area with an abrasive pad and Devcon Fast Cleaner 2000 Spray/Cleaner Blend 300. You may take a grinding wheel and roughen the surface. The rubber surface must be coarse and free from oil and dirt clogged in the 'pores' of the rubber. Using Devcon Fast Cleaner 2000 Spray/Cleaner Blend 300, wipe or roughen surface until the colour of the rubber substrate no longer appears on cloth. The rubber should look new or a deeper black in colour.

Concrete Surfaces: Concrete being a very porous substrate requires multiple cleaning. Degrease the area with Devcon Fast Cleaner 2000 Spray/Cleaner Blend 300 and rinse the area. A power washer or steam cleaner is useful for quicker and efficient cleaning. Let the floor dry thoroughly before applying Primer and Flexane.

Priming Surfaces:
Metal Surfaces: On metal surfaces apply two coats of FL-10 Primer and allow to dry tack free for 15 minutes.
Rubber Surfaces: On rubber and urethane surfaces apply a coat of FL-20 Primer and allow to dry tack free for 15 - 20 minutes. On porous rubber surfaces, it may be necessary to do multiple coats.
Concrete Surfaces: Concrete being a “porous” substrate may need multiple coats for proper adhesion. Let Primer dry for 30 minutes between coats.
Wood & Fibreglass: Use FL-20 Primer for all wood and fibreglass products. The softwoods will need two coats because of their absorption characteristics.
Immersion Substrates: Use both Primers, FL-10 and FL-20 to coat any metal substrate that will be immersed in any aqueous solution. First apply the FL-10 Primer and let it dry for 60 minutes. Next coat with FL-20 Primer. Let it dry for 30 minutes before applying the Flexane material.

MIXING:
Add curing agent to the Flexane resin container and stir vigorously for 2 minutes. Ensure that the two parts are fully mixed by scraping along the bottom and side of the container. For quantities larger than 500g use an electric drill and mixer to mix the Flexane material. Make sure the mixer

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attachment is completely submerged during the mixing process. If not you will be mixing in large amounts of air and this will sometimes cause bubbles in the finished product.

APPLICATIONS:

Mouldmaking

- First ensure good surface preparation and coat the entire "box" with Devcon's Release Agent. Let it dry for 10 minutes. Apply a second coat, and let this dry for 10 minutes.
- Now take a small brush and apply a thin coat of mixed product over the surface. This helps to alleviate any "air bubbles" in the curing process.
- Then pour the liquid into the "box". It is recommended to tilt the "box" slightly onto one side when pouring to let the air escape easily and produce no "blow holes" in the finished product.
- After the Flexane has been poured, it helps to "wave" a hot air gun back and forth over the top of the mould to help release air bubbles that want to get to the surface.
- De-mould time is 8 hours for Flexane 60 Liquid, 10 hours for the Flexane 80 Liquid and 5 hours for the Flexane 94 Liquid, when cured at room temperature.
- To de-mould the part easier use the Flexane 60 or 80 Liquid.
- For a more rigid part, use Flexane 94 Liquid.
- Note: To adjust the Durometer (hardness) of the part to a softer and more pliable rubber, use Devcon's Flex-Add (see Flexane Accessories Technical Data Sheet). Add this to the curing agent before mixing.
- Note: To shorten the cure time of all Flexanes, add Devcon's Flexane Accelerator (see Flexane Accessories Technical Data Sheet).

Expansion Joints

These are areas between concrete slabs that are "stress" points. These areas move with pressure from underneath the concrete surface or from stress being applied from the top of the slab. To fill these cracks a special material like Flexane 80 Liquid is required to take the expansion and contraction that occurs in these areas.

- The crack must be cleaned to remove any loose particles and chips of concrete. Also make sure there is no grease or oil in the joint area, if so follow the degreasing procedure.
- Next check the depth of the expansion joint. If the concrete slab is 4" thick, the joint should only be half that amount
- Prime the joint using Devcon's FL-20 Primer. Apply two coats to the concrete edges.
- Take a piece of round foam backer rod and insert into the joint. If this is not available, use a fine sand grain to fill the bottom of the joint exactly half way.
- Pour mixed Flexane 80 Liquid into the joint. Pour from one side of the joint and let the material fill the entire area. This helps all the air to escape, thus no "air bubbles". Do not overfill the joint area, as the Flexane material will run into the concrete. Leave a slight depression below your desired height.

Lining Applications/Noise Reduction

Flexane has an outstanding quality of having "elasticity". This is beneficial for applications requiring impact resistance such as feeder bowls in production plants, chutes in cement, coal or mining plants and cyclones. Lining applications require a good depth of coating along with the proper Primer for good adhesion.

- For good adhesion follow the cleaning method for the appropriate surface. A good surface profile is required for excellent adhesion.
- Abrade the surface of the wear area with an abrasive disc pad and clean thoroughly.
- Next apply a coating of FL-10 Primer. Let it dry thoroughly and follow with a coating of FL-20 Primer. Let dry for 30 minutes before continuing.
- Before applying the Flexane material be sure the substrate has a defined "butt joint". Leaving an edge will create the possibility of the aggregate "undercutting" the material. Apply the Flexane to

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the substrate. Apply at least 1/16" of the material if possible for better wear resistance to the substrate.

- Note: Applying multiple coats to the substrate will "build up" the wearing ability of the coating.

CURE

Allow the Flexanes to cure for 6 hours before returning equipment to light service. Once cured, the repair may be ground flush using a 24 or 36 grit open coat-sanding disc. Be careful to keep the grinder moving and do not overheat the work surface. De-mould Flexane Liquids approximately 5-10 hours. Allow Flexane 94 Liquid or Flexane 80 Liquid to cure 24 hours before running moulds in operation.
Note: To shorten the cure time of all Flexanes, add Devcon's Flexane Accelerator (see Flexane Accessories Technical Data Sheet).

SHELF LIFE

A shelf life of two years from date of manufacture can be expected when stored at room temperature (22ºC) in their original containers.

PRECAUTION

For complete safety and handling information, please refer to the appropriate Material Safety Data Sheet prior to using this product.

ORDERING INFORMATION:

Stock No	Unit size
15200	Flexane 60 Liquid 500g
15210	Flexane 60 Liquid 5Kg
15212	Flexane 60 Liquid 25Kg
15800	Flexane 80 Liquid 500g
15810	Flexane 80 Liquid 5Kg
15812	Flexane 80 Liquid 25Kg
15250	Flexane 94 Liquid 500g
15260	Flexane 94 Liquid 5Kg
15262	Flexane 94 Liquid 25Kg
15980	Flexane Primer FL-10
15985	Flexane Primer FL-20
15940	Flex-Add Flexibilizer 237ml
15990	Flexane Accelerator 336g
19600	Release Agent 470ml
19510	Cleaner Blend 300 250ml
19512	Cleaner Blend 300 1 Litre
19550	Fast Cleaner 2000 Spray 500ml

Warranty: Devcon will replace any material found to be defective. Because the storage, handling and application of this material is beyond our control we can accept no liability for the results obtained.

Disclaimer: All information on this data sheet is based on laboratory testing and is not intended for design purposes. ITW Devcon makes no representations or warranties of any kind concerning this data.

For technical assistance please call 01933 675299

LINDBERG & LUND AS

Tel: 64 95 6363