

# R-FLEX®

## Rubber Conveyor Belt Repair Kit

**Description:**

**DEVCON® R-Flex** is a self-levelling liquid that in minutes turns into a non-sag putty for repairing gouges, tears and holes and coats clips for heavy weight SBR conveyor belts. Offering excellent abrasion resistance as well as superior adhesion, the R-Flex® urethane compound is easy to mix and cures quickly – the repaired belt can be back in service in just 90 minutes after application.

**Intended Use:**

- Repairing holes, gouges, and tears in SBR conveyor belts.
- Rebuild worn rubber top ply of SBR belts protecting surfaces from abrasion and impact from aggregate.

**Product features:**

- **High adhesion to SBR belts creating “surface pull” to polymer.**
- **Rapid curing.**
- **Excellent flexibility and abrasion resistance.**
- **Self-levelling liquid that develops into a non-sagging putty.**
- **Belt back in service in 1 ½ hours.**

**Typical Physical Properties:**

*Technical data should be considered representative or typical only and should not be used for specification purposes.*  
**Cured 7 days @ 24°C.**

Colour	Black
% Solids by volume	94
Pot Life at 23°C	1-4 mins (semi-liquid) 4-10 mins (self-levelling non-sag gel)
Pot Life at 43°C	1-3 mins (semi-liquid) 3-5 mins (self-levelling non-sag gel)
Mix Ratio	88 resin: 12 curing agent
Abrasion Resistance	270mg loss per / 1,000 rev
Adhesion@ 24 hours	11.3 N.mm. surface rubber pull
Adhesion @ 7 days	18.9 N.mm. surface rubber pull
Cured Hardness	87 Shore A
Dielectric Strength	350 volts/mil (13.8kV/mm)
Function Cure	90 minutes
Maximum Elongation	420%
Maximum Operating Temperature	Dry: 82°C Wet: 48.9°C
Specific Volume	673mL per 680g
Tear Resistance	66.0 N.mm
Tensile Strength	256 N.mm

*Chemical resistance is calculated with a 7 day, room temp. cure followed by (30 days immersion) @ 24°C*

**Chemical Resistance:**

1,1,1 - Trichloroethane	Poor	Isopropanol	Poor
Ammonia	Very Good	Phosphoric 10%	Fair
Hydrochloric 10%	Very Good	Sodium Hydroxide 50%	Very Good
Hydrochloric 36%	Very Good	Sodium Hypochlorite	Very Good

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### Surface Preparation:

#### Surface Prep: Abrading / Cleaning

1. Clean the belt with Devcon® Surface Cleaner by applying ONLY onto a rag and then cleaning the area. DO NOT POUR directly onto the belt.
2. Attach abrasive wheel to a 100mm grinder (minimum 10,000 RPM). Roughen belt releasing contaminants and grit.
3. Using grinder, roughen belt until dull bluish-grey colour. Ensure top layer of belt is roughened, leaving a fine dusting of residue, brush off residue.  
NOTE: Be sure not to grind down to the belts woven fabric this will weaken the belt.
4. Take a dry rag and wipe off any ground particles. Making the repair dust free.
5. Repeat Step 4 until no black streaks appear on rag. DO NOT apply any solvent cleaners directly to the belt.
6. Ideal application temperature is above 12.8°C.

#### Surface Condition Mix Instructions (NOTE: Devcon® Surface Conditioner must be used prior to applying Devcon® R-Flex®)

- Open bag, remove Surface Conditioner bottles; Part A and Part B.
- Unscrew spout cap from Part B bottle and remove aluminium seal. Screw spout cap back on Part B bottle.
- Take Part A bottle and unscrew dauber top.
- Flip up the spout cap on Part B bottle to pour liquid into Part A bottle. Screw dauber top onto Part A bottle.
- Shake bottle for 30 seconds to mix Surface Conditioner.
- Remove clear cap from dauber top. Turn upside down and press dauber firmly on repair area.
- Thinly spread Surface Conditioner around entire repair area. It will evaporate quickly leaving slight change in colour on surface.
- Wait 3 minutes to ensure surface is dry before applying repair compound.

#### Metal Surfaces

- Thoroughly clean area to be repaired. Remove any oil, grease or dirt. Roughen metal surface by grinding with a coarse wheel. To prime the surface, apply a coat of Devcon® FL-10 Primer and allow to dry tack-free for 15 minutes.

### Mixing Instructions:

- Make sure surface is roughened and surface conditioner was applied over 3 minutes before applying repair compound.
- Remove plastic jar and open lid.
- Pour curing agent from pouch into resin jar.
- Using wooden paddle, stir contents thoroughly for 1.5 minutes – scraping sides and bottom of jar to activate curing mechanism. Take care to avoid air excessive air entrapment.
- Pour completely mixed R-Flex® onto the roughened belt.
- Spread with spatula over entire desired repair area.
- After 3 minutes R-Flex® will be able to be applied to a sloping surface without sagging (@6mm thick) as the product is polymerising quickly.
- R-Flex® will continue to “self-level” in seconds up to 8 minutes after you started your mixing. After that time, the material will not-self-level.

### Application Instructions:

#### Holes:

- For holes, use duct tape underneath belt to bridge hole. Be sure to

- prime repair area 15-20cm back from the hole.
- Follow surface abrading / cleaning section thoroughly.
- After mixing Devcon® R-Flex® and applying to repair area, make sure you fill the void 15-20cm around the hole to create additional strength.

### Gouges or Tears:

- For tears, if the tear is over 20 – 25cm take alligator clip and lock the tear on either end of the tear to mechanically stop the belt from continuing to rip.
- Take an abrasive wheel 100mm grinder and at the tear undercut the rubber at an angle in a “V” configuration opening up the tear to expose more surface area for the repair compound to attach to. Place a strip of duct tape underneath the tear sealing off the area so no repair compound leaks through during the repair.
- If using alligator metal clips, coat the clips with Devcon® FL-10 Primer and allow to dry for 3 minutes.
- Follow surface abrading / cleaning section thoroughly.
- After mixing Devcon® R-Flex® and applying to repair area, push the material into the “V” opening you created. The material will self-level in that area. Coat the clips with a thin layer of material.

### Coating Hinged or Solid Plate Fasteners:

- When coating plated clips, abrade a 20cm area from the clip to the belt on both sides of the clip. If clip was skived and below surface only go back 10cm.
- Follow surface abrading / cleaning section thoroughly.
- Coat the solid or pin clips with Devcon® FL-10 Metal Primer and allow to dry for 3 minutes.
- Spread R-Flex® on clips at a minimum thickness of 3mm (this helps to bridge the elongation that occurs when belt is subjected to pressure of wiper and travelling across the head pulley).

<b>Storage:</b>	Store at room temperature. Shelf life is 18 months in unopened / original containers.
<b>Warranty:</b>	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.
<b>Disclaimer:</b>	All information on this data sheet is based on laboratory testing and is not intended for design purposes. ITW Polymers & Fluids and Devcon makes no representations or warranties of any kind concerning this data.
<b>Order Information:</b>	680gm kit                      D15565
<b>Health &amp; Safety Information:</b>	For Health & Safety Information, refer to Safety Data sheet available from ITW Polymers & Fluids upon request on our website <a href="http://www.devcon.com.au">www.devcon.com.au</a> or <a href="http://www.devcon.co.nz">www.devcon.co.nz</a>