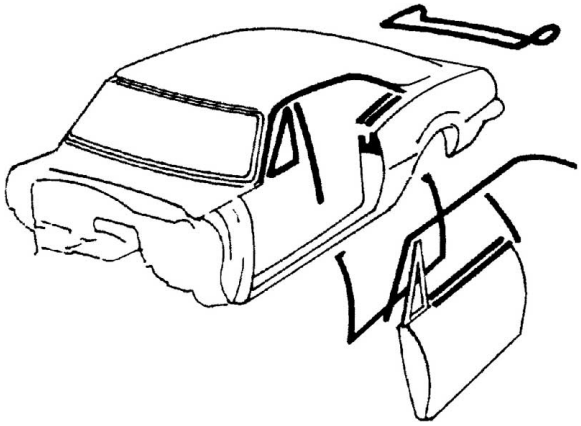




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Flocked materials since 1973

DIMOTIVE©
FLOCK TAPE

FLOCKED MATERIAL FOR AUTOMOTIVE APPLICATIONS



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Flock Tape

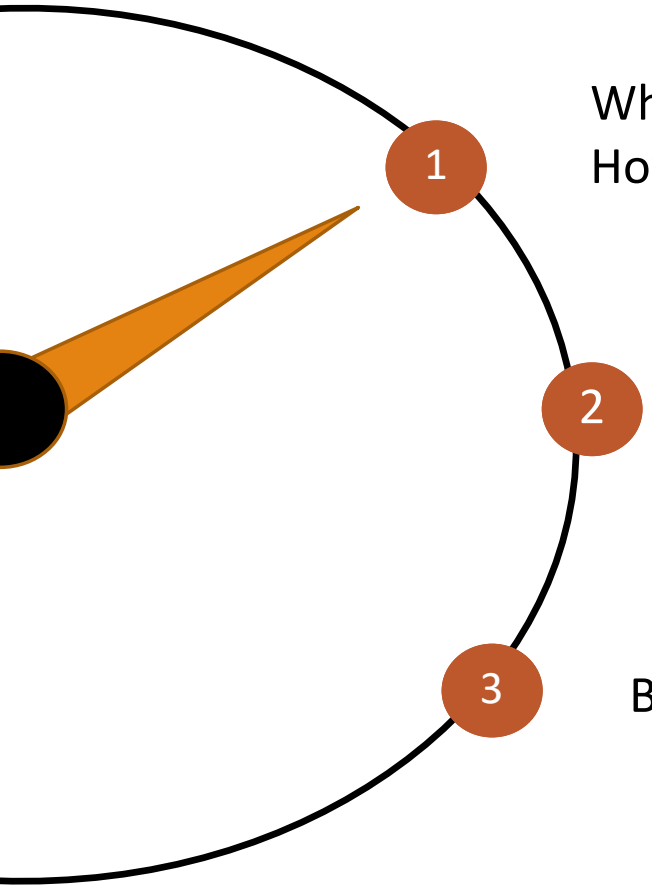
We are pleased to introduce our company, Dimontonate Floccati SpA and the **DIMOTIVE© PRODUCT LINE**, which is our flocked material production dedicated to the automotive market.

Dimotive Flock Tape: Flocked tapes for application in vehicle static sealing system.

Adherence to the following substrates: TPV, TPO, TPS, EPDM, PVC.

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Flock Tape



What is flock and flock Tape?
How is it made?

Dimontonate Products

Benefits to our Partner’s

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What is flock?

What is flocking?

It is a process of adhering short fibers to a substrate to create a pile-like design or overall pile effect.

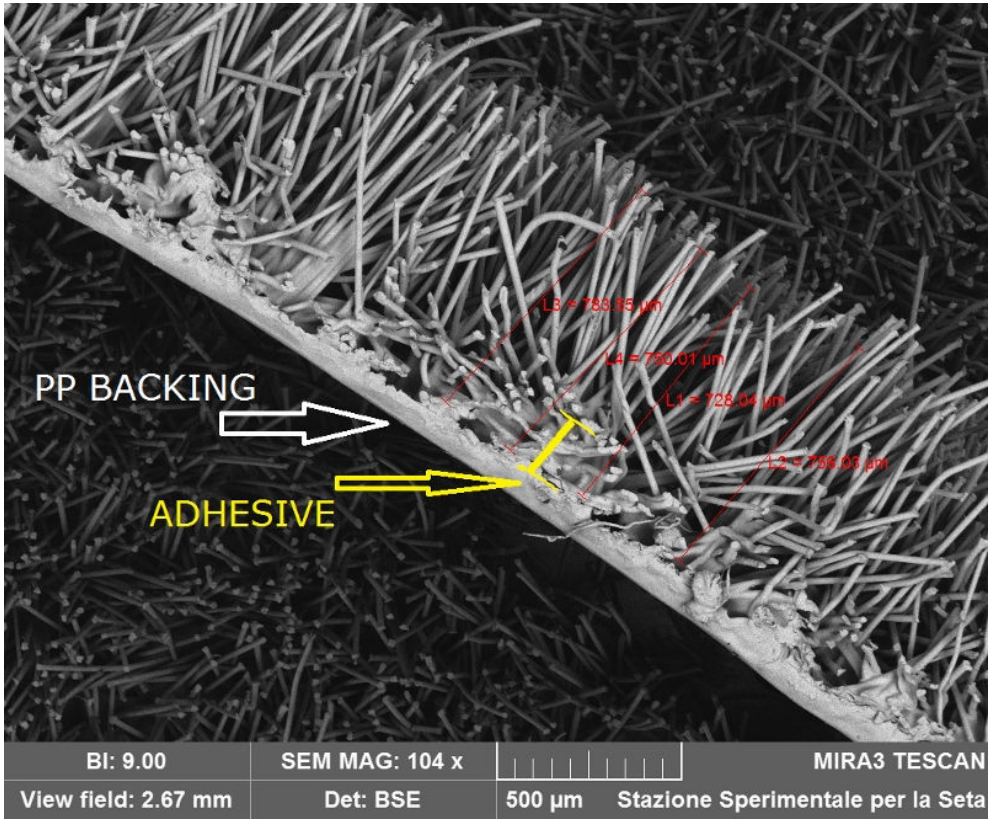
How is it done?

Flock passes through an electrostatic field and that orients the fibers in the direction of the current towards the substrate, which forces the fibers to stick to the glue in an upright position.

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What is flock tape?

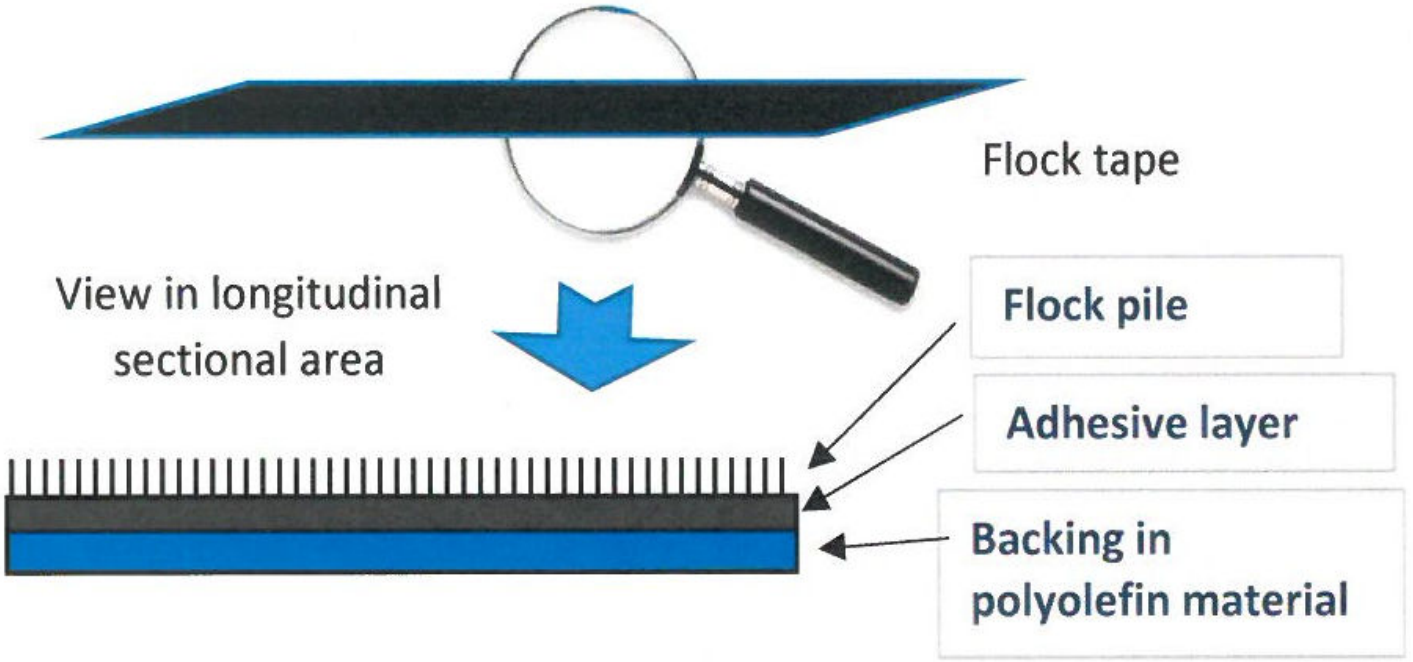
Our production of flock tape is vertically integrated from raw material to the finish product.



SEM-Image of a cross section of a typical flock tape

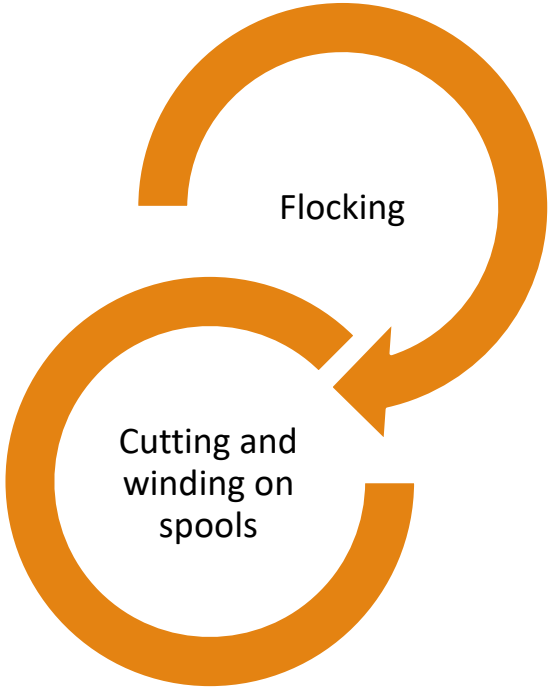
What is flock tape?

Construction



Flock Tape Manufacturing

Two Phases of Production for Flock Tape:



Flocking: Applying flock fibers on a PP cast extruded substrate coated with adhesive, through an electrostatic field.

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Flock Tape Manufacturing

Step 1 of Flocking: We flock a mother roll.

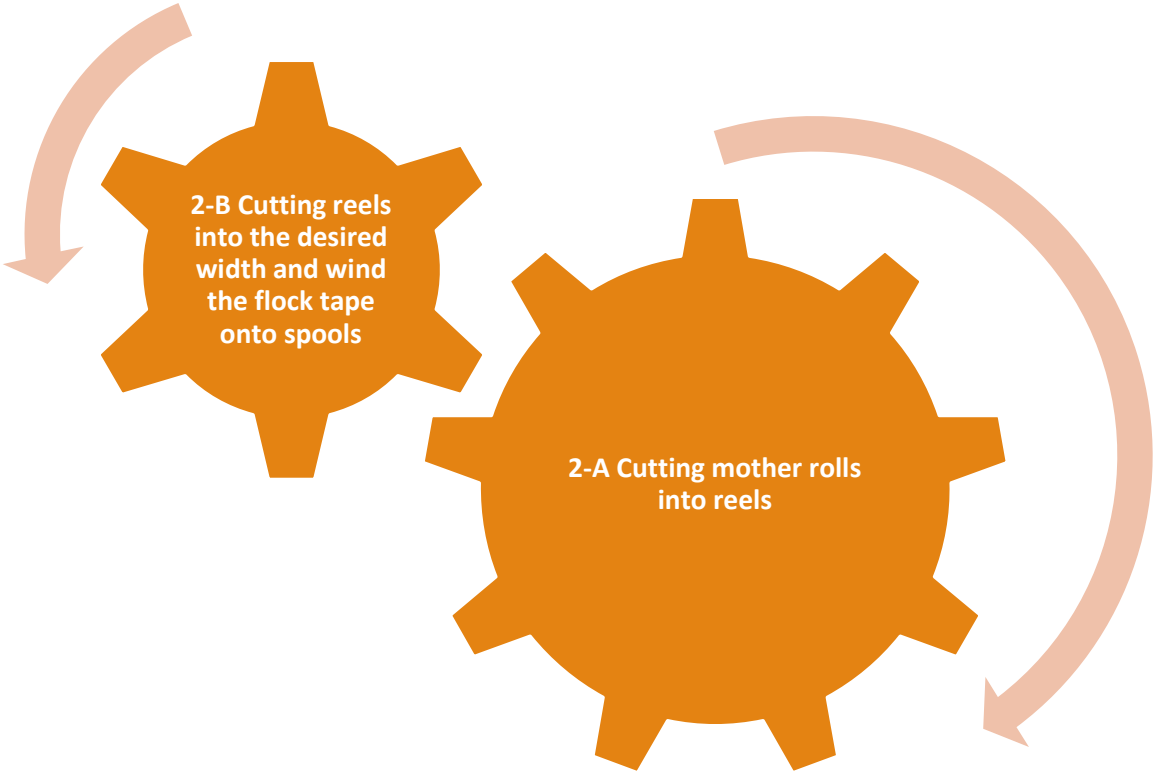




Flock Tape Manufacturing

Step 2 of Flock Tape Manufacturing: Cutting

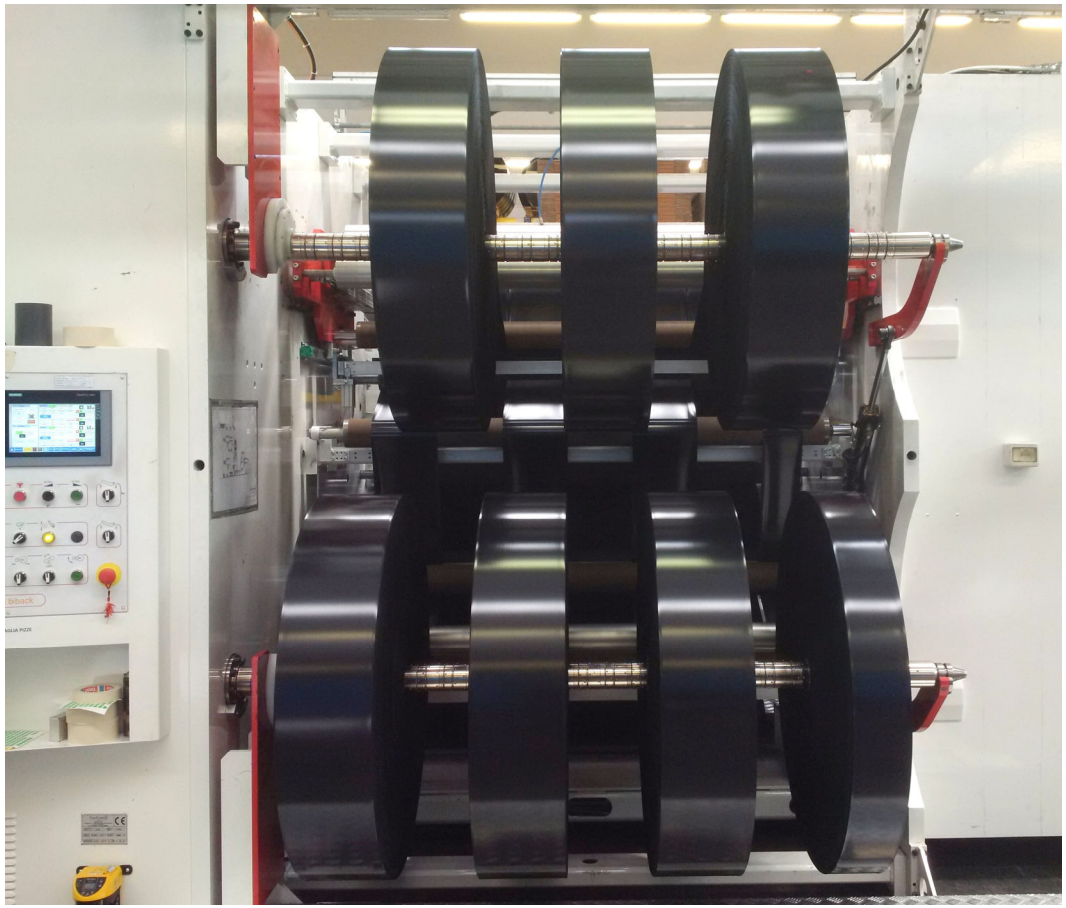
Two Phases of Cutting:



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Flock Tape Manufacturing

Step 2-A: Slice cutting into Reels



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Flock Tape Manufacturing

Step 2-B: Cutting into desired width and winding of flock tape in spools





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Dimotive© Flock Tape

Standard Supply Form of Flock Tape:

Spools: For easier tape unwinding on the extrusion line

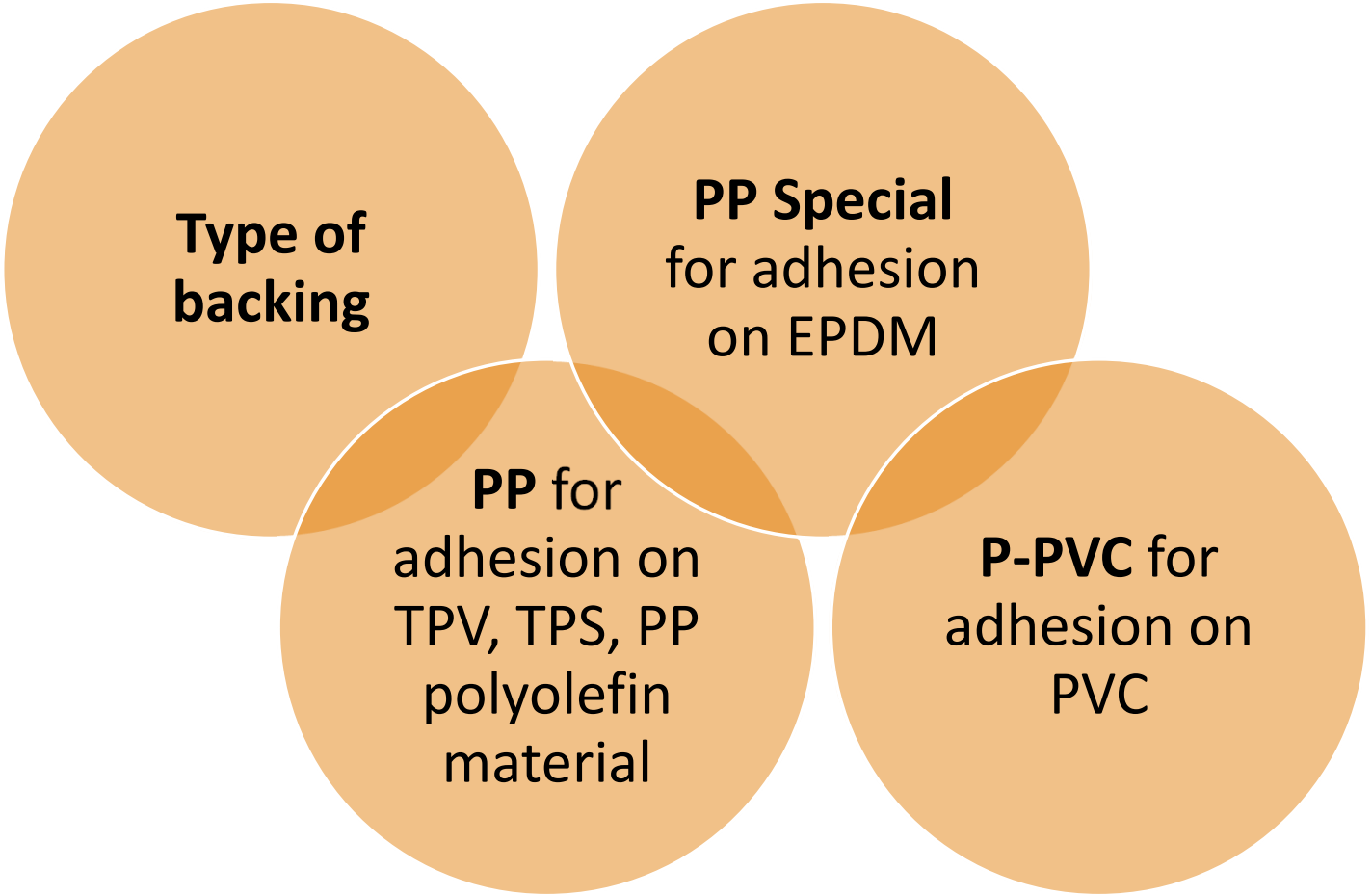
Available Widths: From 5mm to 40mm

Spool Capacity: 1000-5000 linear meters



Dimotive© Flock Tape - Product Range

Flock tape differs according to the type of backing:



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Dimotive© Flock Tape - Product Range

Backing Thickness

- G1 – (50 µm special PP), for EPDM
- G2 – (120 µm PP), for TPV
- G3 – (75 µm PP), for TPV
- G5 – (50 µm PP), for TPV
- G6 – (170 µm P-PVC), for PVC
- G8 – (38 µm PP), for TPV



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Dimotive© Flock Tape - Product Range

Flock tape differs for:

Type of fiber

- **PES** Polyester fiber
- **PA** Polyamide 66 fiber



Titer and pile height:

- From 1,7 to 3,3 dTex
- From 0,5 to 0,8 mm

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Dimotive© Flock Tape - Product Range

Possible Combinations of Titer and Pile Height:



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Dimotive© Flock Tape - Product Range

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Dimotive® Flock Tape Material description

TAPE	PRODUCT CODE	FLOCK TYPE	FLOCK TITER/HEIGHT	BACKING / THICKNESS	TOTAL THICKNESS	FLOCK DENSITY(1)	WEIGHT	APPLICATION
			[dTex / mm]	[Type / mm]	[mm]	[fiber/mm^2]	[g/m^2]	
G1 PES 3.3 0.6	GPR066	PES	3,3 / 0,6	PP / 50	0,75 ± 0,1	> 400	190 ± 20	EPDM
G2 PES 3.3 0.7	GA1325	PES	3,3 / 0,7	PP / 120	1,0 ± 0,1	> 400	360 ± 20	TPV
G3 PES 3.3 0.7	GB9325	PES	3,3 / 0,7	PP / 75	0,95 ± 0,1	> 400	250 ± 20	TPV
G5 PES 3.3 0.7	GC8325	PES	3,3 / 0,7	PP / 50	0,85 ± 0,15	> 400	210 ± 20	TPV
G2 LIGHT 3.3 0.6	GA2335	PES	3,3 / 0,6	PP / 120	0,80 ± 0,2	> 400	270 ± 20	TPV
G3 PES 3.3 0.6	GB9335	PES	3,3 / 0,6	PP / 75	0,80 ± 0,1	> 400	220 ± 20	TPV
G5 PES 3.3 0.6	GC8335	PES	3,3 / 0,6	PP / 50	0,75 ± 0,15	> 400	190 ± 20	TPV
G8 PES 3.3 0.6	GL8335	PES	3,3 / 0,6	PP / 38	0,70 ± 0,15	> 400	190 ± 20	TPV
G5 SOFT 3.3 0.6	GCB335	PES	3,3 / 0,6	PP / 50	0,77 ± 0,15	> 400	205 ± 20	TPV
G5 PES 1.7 0.5	GC7835	PES	1,7 / 0,5	PP / 50	0,69 ± 0,1	> 750	195 ± 20	TPV
G6 PES 3.3 0.6	GF9335	PES	3,3 / 0,6	P-PVC / 170	1,0 ± 0,1	> 400	220 ± 15	PVC
G3 PA 1.7 0.5	GB4385	PA66	1,7 / 0,5	PP / 75	0,68 ± 0,1	> 750	210 ± 20	TPV
G5 PA 1.7 0.5	GC7385	PA66	1,7 / 0,5	PP / 50	0,65 ± 0,15	> 750	175 ± 15	TPV
G3 PA 3.3 0.5	GB4695	PA66	3,3 / 0,5	PP / 75	0,70 ± 0,1	> 400	200 ± 20	TPV
G5 PA 3.3 0.5	GC4695	PA66	3,3 / 0,5	PP / 50	0,70 ± 0,1	> 400	200 ± 20	TPV
G3 PA 3.3 0.8	GB9745	PA66	3,3 / 0,8	PP / 75	0,88 ± 0,1	> 250	205 ± 25	TPV
G5 PA 3.3 0.8	GC9745	PA66	3,3 / 0,8	PP / 50	0,85 ± 0,15	> 250	195 ± 25	TPV
G4 PA 1,7 0,5	GPR057	PA66	1,7 / 0,5	PP/PA / 105	0,70 ± 0,1	> 750	245 ± 20	TPV Injection
G4 PA 1,7 0,5	GPR058	PA66	1,7 / 0,5	PP/PA / 150	0,77 ± 0,1	> 750	310 ± 20	TPV Injection

Note (1). Minimum guaranteed value

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Wide Range of Choices

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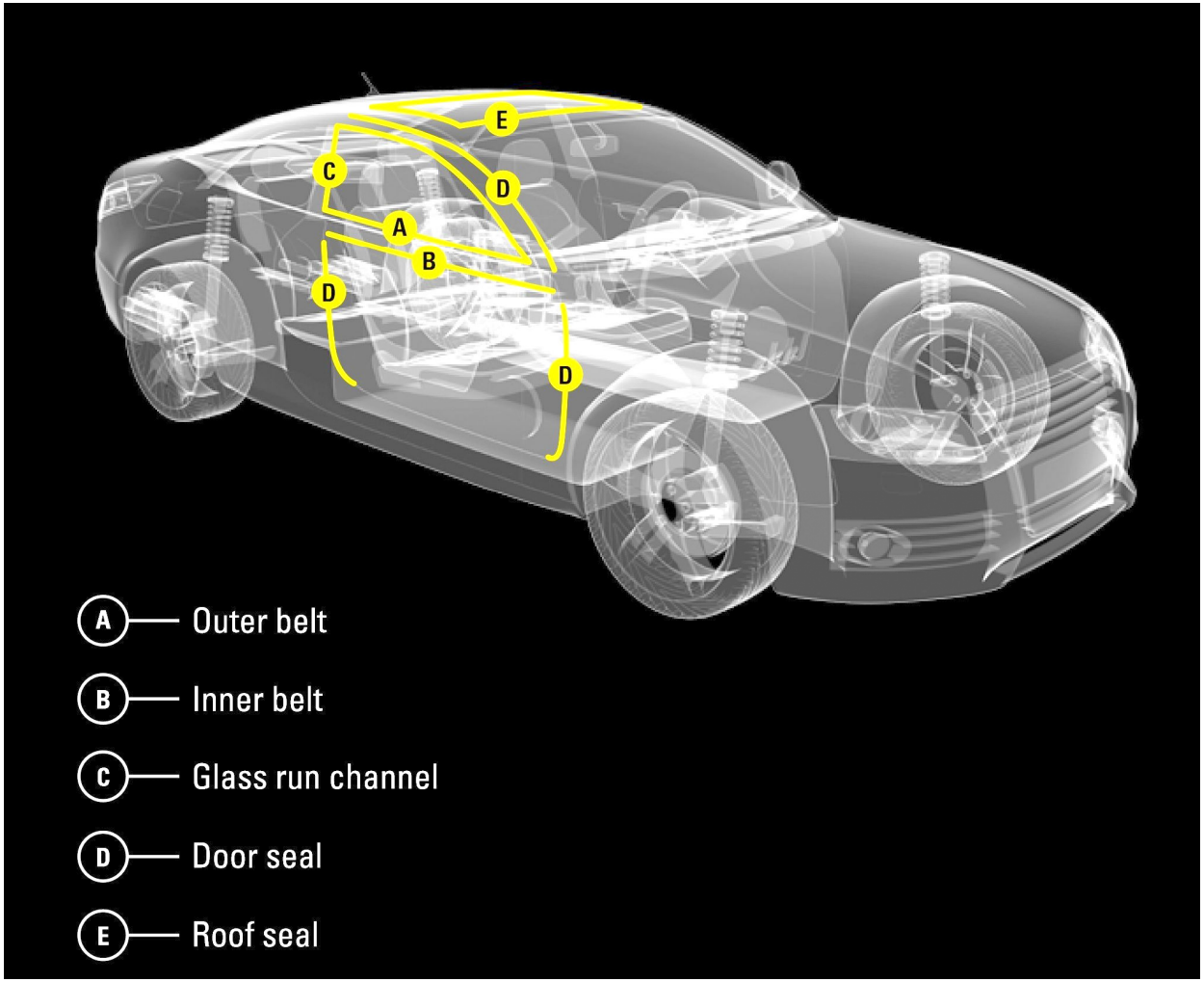
Dimotive© Flock Tape

Typical Applications

- INNER BELT
- OUTER BELT
- GLASS RUN CHANNEL
- SECONDARY DOOR SEAL
- ROOF SEAL

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Dimotive© Flock Tape



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Dimotive© Flock Tape

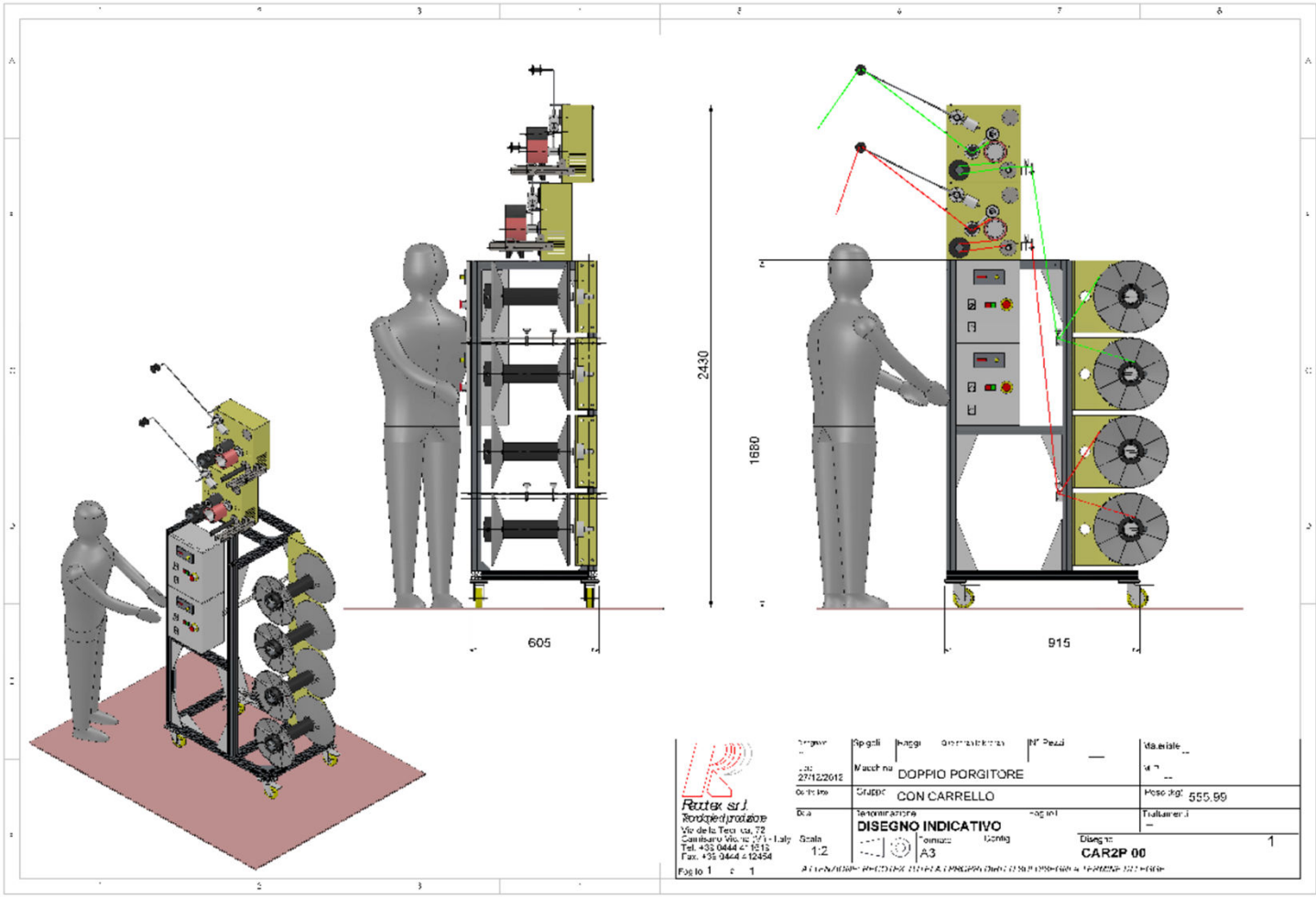


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Dimotive© Flock Tape - Tooling

Product Application

- We also supply unwinder units specifically designed to feed our flock tape on to an extrusion line.

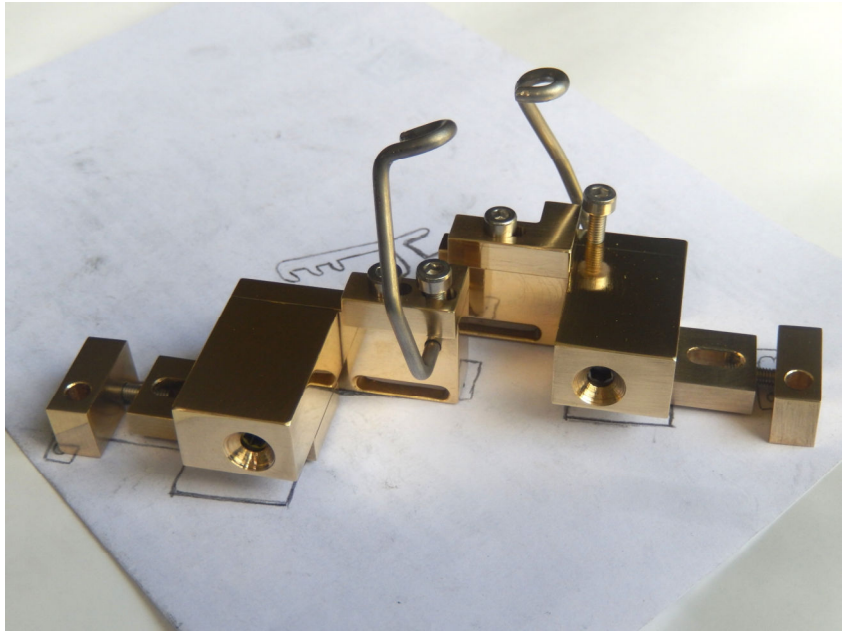


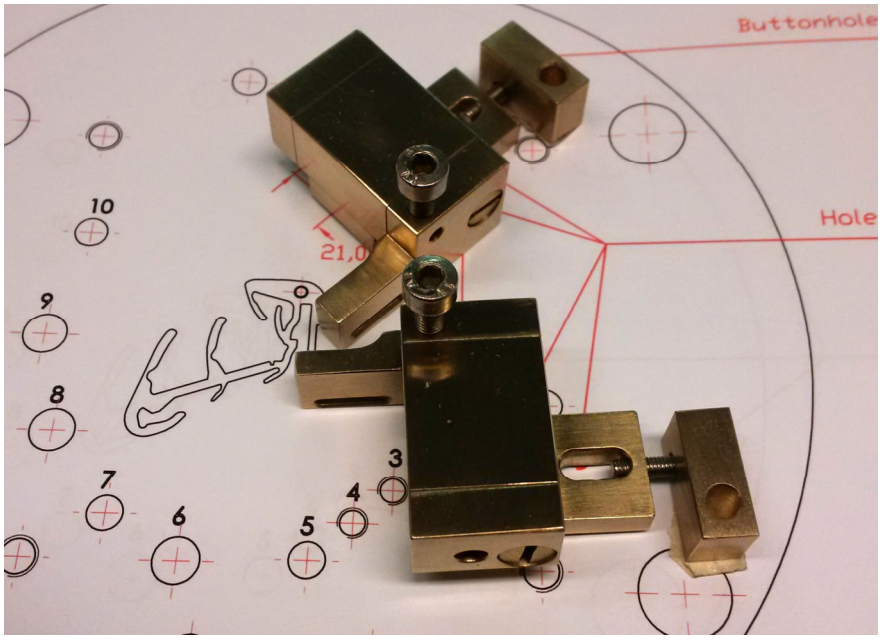
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Dimotive© Flock Tape - Tooling

Product Application

- **We offer support in designing and supplying guides according to your tooling set-up.**



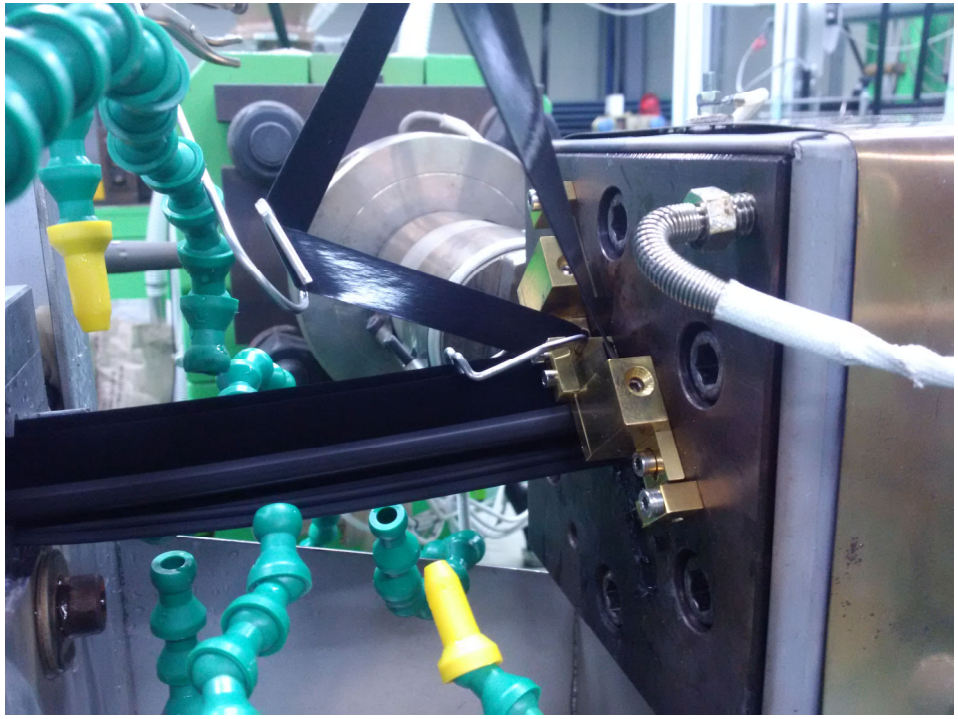


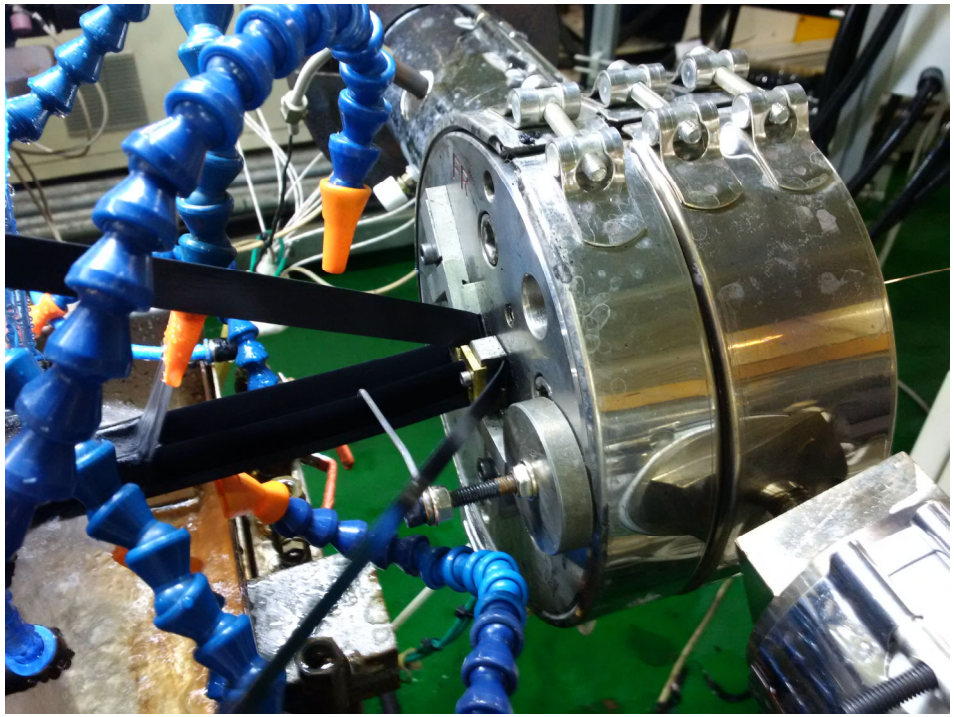
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Dimotive© Flock Tape - Tooling

Product Application

- **We offer support during start up of your line with our tooling.**





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Dimotive© Flock Tape

Other applications of Dimotive flock tapes:

- **Over-Injection on Flock part (die cut part, example: corner injection molding)**
- **Interior application (door panels, glove boxes …)**
- **Pressure-sensitive flock tapes (with adhesive carrier, to prevent squeak-noise between interior parts)**

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Dimotive© Flock Tape

Flock Tape vs Other Solution



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THERMOPLASTIC EXTRUSION WITH FLOCK TAPE

Simple Process of Application

No Adhesive is Needed

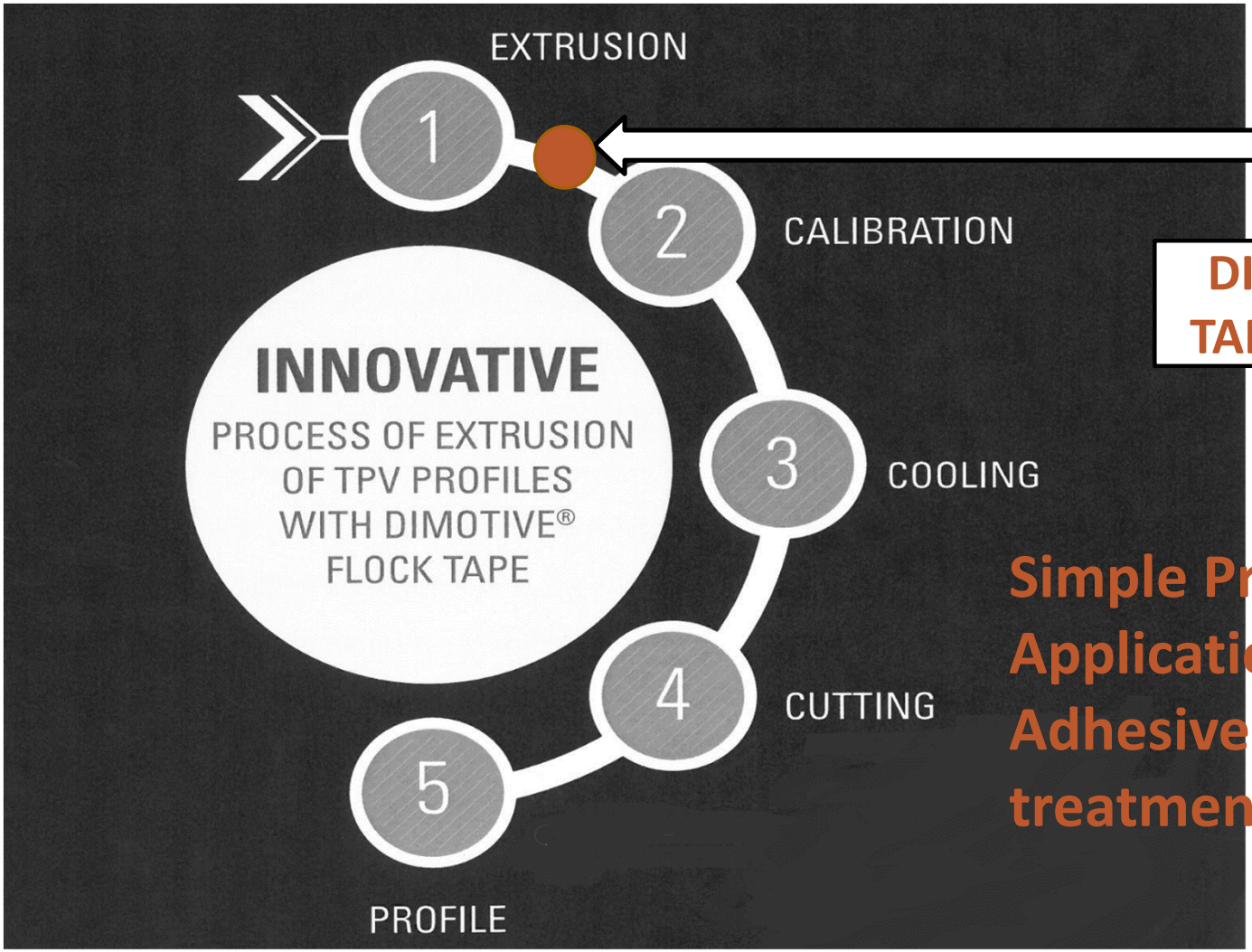
The application of tape is a chemical and physical process. No primer or adhesive is required.

The substrate of the tape is compatible with the extruded material and bonds to the profile.

The material is supplied in strips, winded in spools and ready to be used on an extrusion line.

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Dimotive© Flock Tape

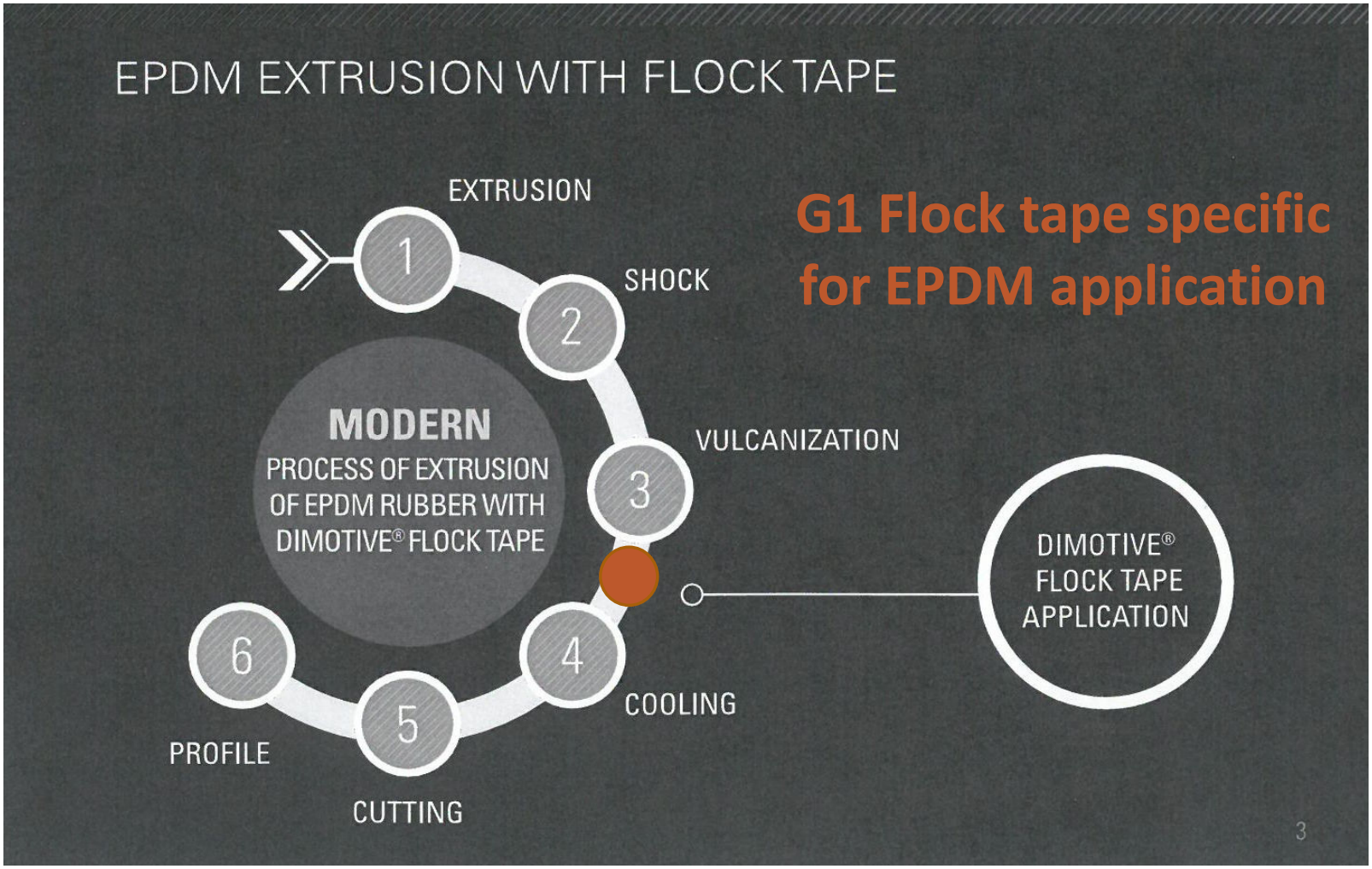


DIMOTIVE FLOCK TAPE APPLICATION

Simple Process of Application, no Adhesive or Pre-treatment is Needed

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Dimotive© Flock Tape

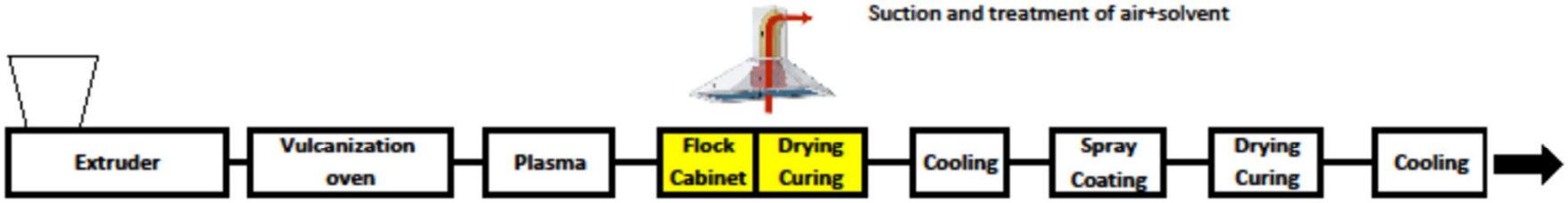


G1 Flock tape specific for EPDM application

EPDM Extrusion with direct flocking vs flock tape

COMPARISON

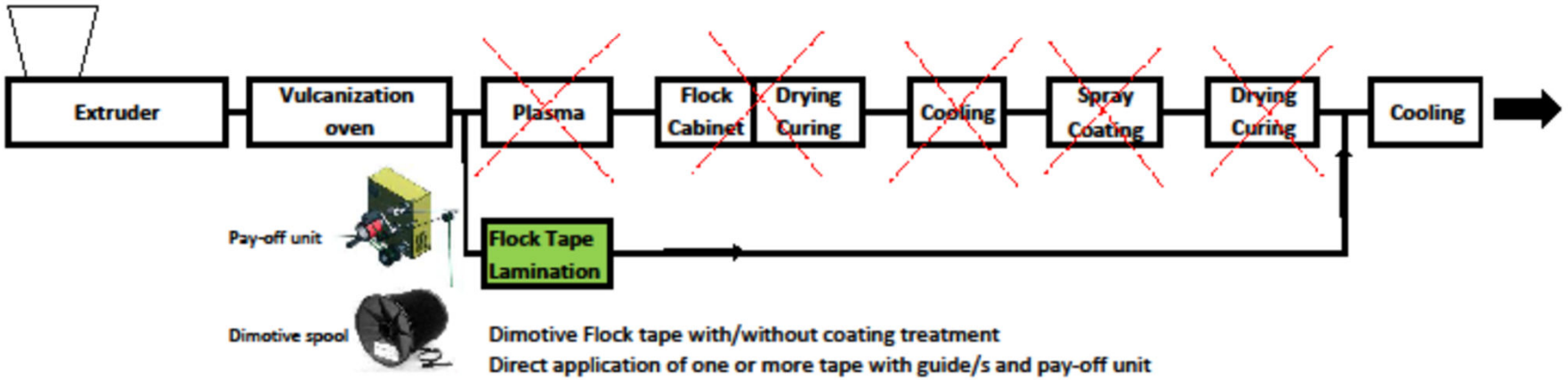
Case A In-Line flocking and in-line coating



Glue dispenser
Electrostatic Flocking
Curing

EPDM LINE

Case B Application In-Line of un-coated or coated Flock Tape



Dimotive Flock tape with/without coating treatment
Direct application of one or more tape with guide/s and pay-off unit

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Dimotive© Flock Tape

Dimontonate can perform Tests according to the following OEM Standards:

- BMW (PR/TS 231);
- Chrysler (CS 10560 and CS 10680);
- Daimler-Mercedes (DBL 5575);
- Fiat (9.03119/03);
- Ford (WSS-M9P10-A);
- General Motors (GMW 16774);
- Peugeot (PSA B15 5060);
- Toyota (TSM 1707G);
- Volkswagen (TL 52447 and TL 52641);
- Hyundai
- ….. and more….

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Dimotive© Flock Tape

We are approved by the following OEM's and we are proud to serve them.

BMW, Daimler Mercedes, Audi, Ford, GM, FIAT Chrysler Group, Mitsubishi, Toyota, Suzuki, Skoda, Volkswagen, Nissan, Renault, PSA, Hyundai, AvtoVAZ and more

Summary of Benefits

- **Investment**
  - **- Lower cost of tooling vs flocking line**
  - **- No investment for environmental regulations**
  - **- Less space required**
  - **- Flexibility of application on any extrusion line**
- **Engineering**
  - **- Compatible with all kind of extrusion and coextrusion TPV, TPO, SEBS, EPDM**
  - **- More than one tape in line application**
- **Process**
  - **- Less energy consumption**
  - **- Reduction of FTE needed because of reduction in processes**
  - **- No adhesive and flock fibers handling needed**

Summary of Benefits

- **Logistic**
  - **- Only flock tape spools to be handled**
- **Environmental**
  - **- No environmental impact and costs**
  - **- No solvent implemented in the process and recovery**
  - **- No flock fibers dispersion and recovery**
  - **- TPE is recyclable**

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THANK YOU FOR YOUR ATTENTION.

WE APPRECIATE THE OPPORTUNITY TO EARN YOUR BUSINESS.



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