

NORTON

SAINT-GOBAIN

in partnership with

Farécla

Transforming
surfaces
...and beyond

SURFACE SOLUTIONS

SANDING
& FINISHING
COMPOSITES




SAINT-GOBAIN

INTRODUCTION

This guide is designed to provide an overview of the products and processes involved in finishing composite materials.

Whether it's production of Patterns and Moulds, or making GRP mouldings, this guide, compiled by our industry experts, offers an insight into what composites are, how they're made, and how to achieve the required finish fast and efficiently, every time during their manufacture.

Norton Abrasives' 'best in class' sanding systems combine with world leading Farécla finishing systems, to offer product recommendations and process guidance, to match application needs to real solutions for all your composite sanding & finishing needs.

Norton and Farécla. A powerful partnership.



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COMPOSITE MATERIALS

WHAT IS A COMPOSITE MATERIAL?

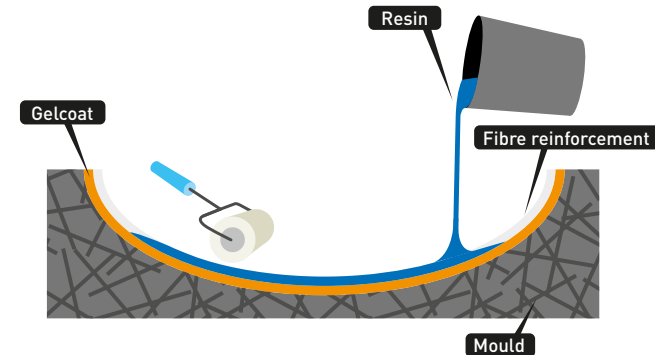
Composite material is made up of two or more different types of material that combine to provide greater advantages than they do alone.

HOW ARE COMPOSITES MADE?

Composite parts are usually made using a mould. The gelcoat is applied to an already prepared mould surface and then backed with layers of reinforcement (usually glass fibre matting) and additional resin. When the part is removed from the mould, the gelcoat surface forms the exterior surface of the part. The gelcoat is also pre-coloured; for instance, a red boat is usually red because the fabricator used red gelcoat. There are three main types of composite moulding processes (known as 'laying'). These are: hand lamination, vacuum infusion and prepreg.

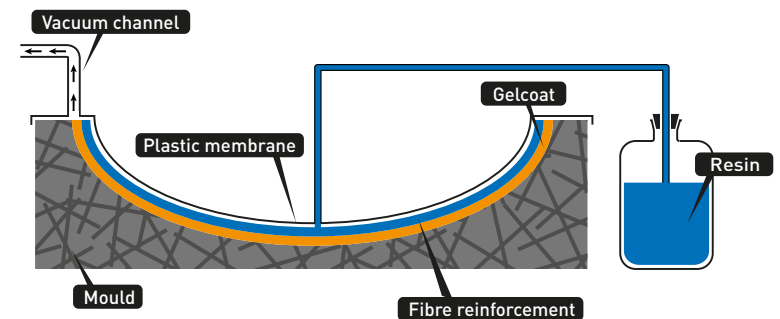
HAND LAMINATION

Hand lamination is the most straightforward composite moulding process from which a wide range of part sizes can be created. The tooling is low cost and the processing is simple.



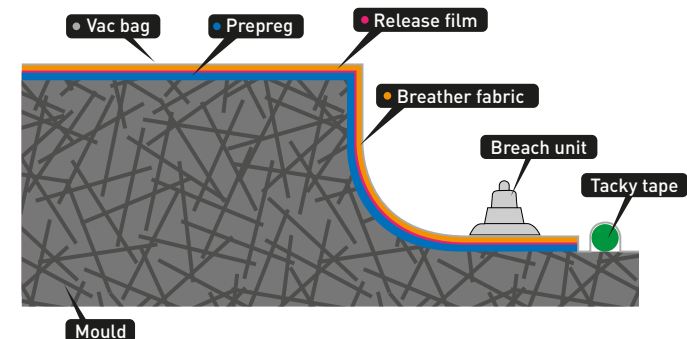
VACUUM INFUSION

Vacuum infusion is suitable for moulding very large structures and produces parts with uniform strength, whilst remaining lightweight.



PREPREG

Prepreg is a ready-made material where the fibre reinforcement has been impregnated with a thermoset matrix at manufacture.



3 PARTS TO COMPOSITE MANUFACTURE



THE PATTERN

Also known as the 'plug' or the 'master'

A well manufactured, high quality Pattern is essential to making quality moulds. An accurate Pattern with a high quality finish will save hours of rework further in the process. Some Patterns are milled from foam by CNC milling machines, others can be hand made from many different materials.

Pattern making is creating a version of the finished product in order to manufacture tooling a mould.

The Pattern needs to be cut, shaped, sanded and finished using a variety of abrasive products.



THE TOOL

Also known as the 'mould'

All glass fibre products have to be produced in a tool. Tools can be made from a variety of materials including hardboard, timber, aluminium, or a combination of these.

They are good enough for 'one off' or bespoke work; but when a production run of the same component is required, the mould is usually made of glass fibre with a hard gelcoat itself.

Once the tool has been removed from the pattern, it must be sanded and polished to a high gloss finish before applying release agent or wax.



THE FINISHED PIECE

Also known as the 'component'

Once the component has been formed and cured it can be released from the mould tool.

All gelcoats must be sanded and polished to ensure they're smooth and finished to the required standard.

The level of sanding and polishing depends on the method of laying used, gelcoat type, and the requirement of the component. Prepreg generally requires less work, whereas hand laying will require more steps.

Harder gelcoats such as epoxy will require further processing steps. Some components also require a higher quality finish and therefore need more finishing steps.

The better the pattern,
the better the tool

The better the tool,
the better the component

The better the pattern and tool, the less
work required to finish the component.

TYPES OF GELCOAT

Gelcoat is used to provide a durable and high quality finish on the visible surface of composite components. This is usually coloured to improve aesthetic appearance.

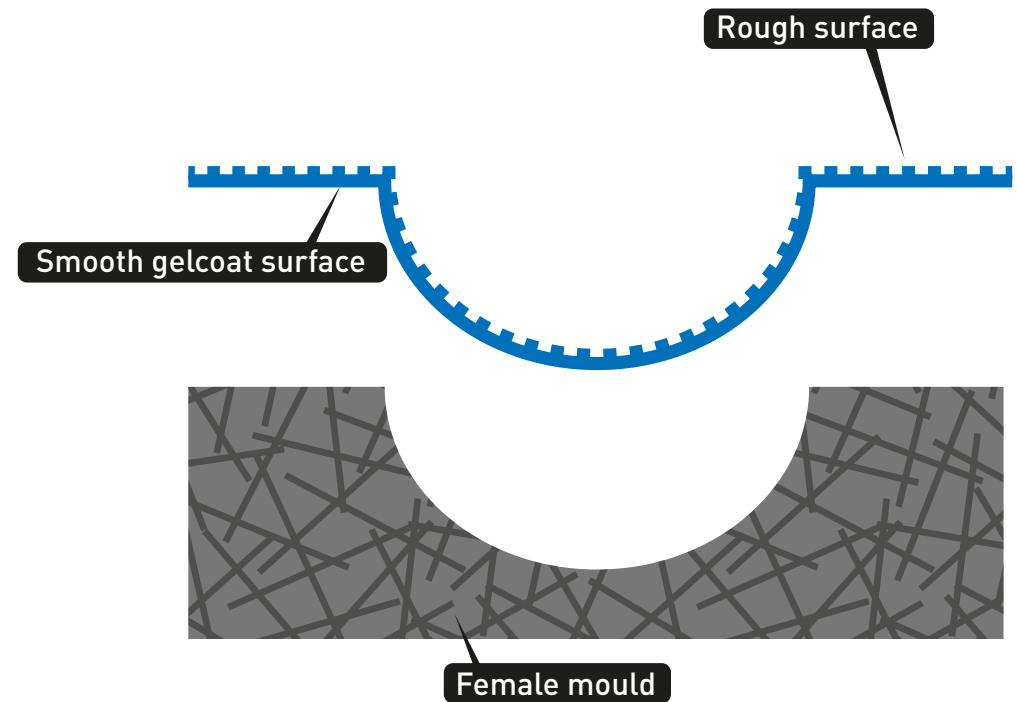
Gelcoats are durable and designed to be naturally UV resistant, and properly cured parts can be submerged in water.

THERE ARE 3 MAIN MATERIALS OF WHICH GELCOAT IS MADE AND EACH HAVE DIFFERENT PROPERTIES AS SHOWN IN THE DIAGRAM OPPOSITE.

POLYESTER: general purpose and a widely used resin, easy to work with and low cost

VINYL ESTER: similar to polyester, it's tough and resistant to corrosion and high temperatures.

EPOXY: greater part strength and stability. More suited for use with carbon fibre and Kevlar. Epoxy is the most expensive resin.



TIPS & TRICKS FOR THE FINISHED PIECE

SANDING

Always start the sander up while it's on the work piece.

10 second rule. Sand for a maximum of 10 seconds between cleaning the disc with a cloth to avoid creating pigtails.

Use the Norton Defect Guide Coat for highlighting pigtails in the gelcoat.



Use dust extraction where possible for your own safety and to avoid clogging the sanding discs prematurely.

For best performance always match the hole pattern of the disc to that of the back-up pad.

Choose the right tool orbit - Select a 5mm oscillation for aggression, 2.5mm for finer finishing.

COARSER ACTION

5mm oscillation
High RPM
Harder pad

SANDING

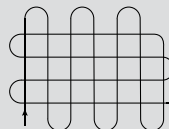
FINISHING

2.5mm oscillation
Low RPM
Softer pad

Use a high RPM for faster stock removal and coarser finish.
Use a lower RPM for finer finishing.

When selecting the back-up pad, use a harder pad for coarse grits, softer pad for fine grits or film.

Following a sanding path is recommended for homogeneous results, see the example in the diagram opposite.



FINISHING

Spur the pad periodically with a spurring brush. Do this with old pads to remove old, dry compound and with new pads to remove excess lint (before adding compound).



Never mix compounds on pads. Store pads in a dust free place.

Always apply the polish to the work-piece and start the machine on a slow setting (speed 1-2) in order to spread the compound around.

Increase speed (2-4) and work the polishing head side to side, consuming the polish in the pad.

Polish in manageable areas and work small, don't overextend, work in approx. 1m² boxes.

Use the weight of the machine to polish the surface instead of pushing it across. This will help reduce heating up the surface.

Before finishing, reduce the machine RPM to help clean the part and remove any holograms or process marks. If sanding marks remain, apply more compound and repeat the polishing process.

Always clean down between steps with a microfibre cloth.

Rub some compound into a new wool pad to condition before first use

MAKING THE PATTERN (MASTER)

SMOOTHING & FINISHING PROCESS

Once the pattern is built, it needs to be smoothed and finished.

01

REMOVING EXCESS
MATERIAL

02

SANDING
FILLER

03

SANDING
PRIMER

OPTIONAL STEP

04

POLISHING PRIMER
OPTIONAL FOR HARD SURFACES

05

POLISHING
PRIMER

06

POLISHING
PRIMER



**NORTON
A293**

P80 / P120 for heavy
removal & 180 / P240
for light removal

Back-up pad: hard

Machine speed: high

Orbit: 5mm

Apply filler

**NORTON
A293**

OR

A975 PRO PLUS

For larger areas

P80 > P120 > P240
progressively to get
a smooth finish

Back-up pad: medium

Apply primer

**NORTON
A293**

P120 > P180 > P240 >
P320 > P400 > P500 >
P600 > P800

Use progressively and
stop when desired
finished is achieved

Back-up pad: medium

For sprayed primer,
start with P180

**FARÉCLA
PROFILE 100 EXTRA
HEAVY CUT**

Use with single/double
sided twisted Wool
Compounding Pad

Machine speed:
low-medium

Pressure: low

**FARÉCLA
PROFILE 200 SELECT
COARSE CUT**

Use with single/double
sided twisted Wool
Compounding Pad

Machine speed:
medium-high

Pressure: low

**FARÉCLA
PROFILE 700 FINISH
LIGHT CUT POLISH
AND SWIRL
REMOVER**

Use with
Lambswool Pad

Machine speed:
low-medium

Pressure: low

TOOL FINISHING - TOOLING GELCOAT

To ensure a perfect finish, the surface must be sanded and polished. The finish of the tool is critical to ensure the part is produced to the highest quality.

FINISHING POLYESTER

A general purpose and a widely used resin, polyester is easy to work with and low cost.

01

SANDING



**NORTON
A293**
—
P400

It is possible to jump to the P600 step, but for the best results start from P400

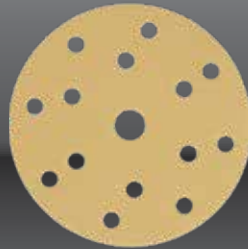
Back-up pad: medium

Machine speed: high

Orbit: 2.5mm

02

SANDING



**NORTON
A293**
—
P600

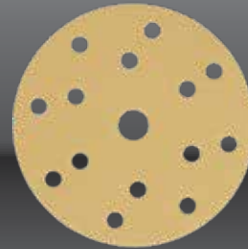
It is possible to skip the P600 step, but it should be included for best results

Back-up pad: medium

Machine speed: medium

03

SANDING



**NORTON
A293**
—
P800

Final surface blending before polishing

Back-up pad: medium

Machine speed: medium

04

POLISHING



**FARÉCLA
PROFILE 200 SELECT
COARSE CUT**
—

Use with single/double sided twisted Wool Compounding Pad

Machine speed:
medium-fast

Pressure: low

05

POLISHING



**FARÉCLA
PROFILE 700 FINISH
LIGHT CUT POLISH
AND SWIRL REMOVER**
—

Use with
Lambswool Pad

Machine speed:
low-medium

Pressure: low

TIP

The better the tool finish, the better the part finish

TOOL FINISHING - TOOLING GELCOAT

FINISHING VINYL ESTER

Vinyl Ester is similar to polyester but is tougher and more resistant to corrosion and high temperatures. It is possible to sand with Standard Aluminium Oxide abrasives however it would be beneficial to consider using an abrasive made from ceramic grain, like Norton Pro Plus for faster more efficient sanding. Vinyl Ester can be sanded using the following process:

01

SANDING

02

SANDING

03

SANDING

04

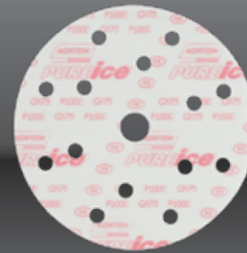
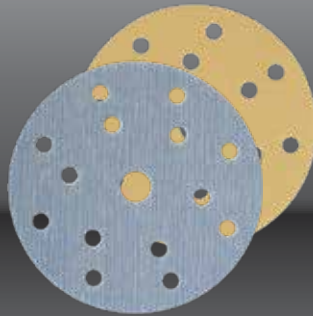
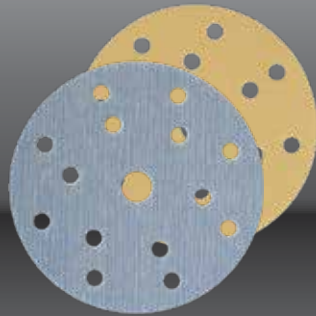
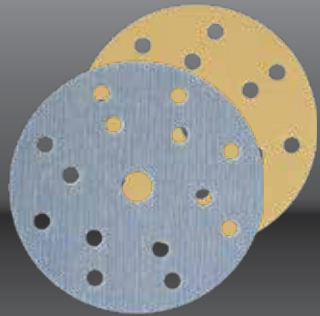
BLENDING

05

POLISHING

06

POLISHING
OPTIONAL FOR THE
ULTIMATE FINISH



NORTON A293
OR
A975 PRO PLUS
—
P400

Back-up pad: medium

Machine speed: high

Orbit: 2.5mm

NORTON A293
OR
A975 PRO PLUS
—
P600

Back-up pad: medium

Machine speed: medium

NORTON A293
OR
A975 PRO PLUS
—
P800

Back-up pad: medium

Machine speed: medium

NORTON PURE ICE
Q175
—
P1000

Fine grade film discs give
a perfect finish

Back-up pad: soft
(an interface pad can be used)

Machine speed: low

FARÉCLA
PROFILE 200 SELECT
COARSE CUT
—

Use with single/double
sided twisted Wool
Compounding Pad

Machine speed: fast

Pressure: low

FARÉCLA
PROFILE 700 FINISH
LIGHT CUT POLISH
AND SWIRL
REMOVER
—

For the ultimate finish
use with Lambswool Pad
or Black Finishing Foam

Machine speed:
medium-fast

Pressure: low

TOOL FINISHING - TOOLING GELCOAT

FINISHING EPOXY

Epoxy gives greater part strength and stability and is suited for use with carbon fibre and Kevlar. Epoxy is the most expensive but most durable resin and is therefore the most difficult to sand. An abrasive made from ceramic grain, like Norton Pro Plus, will work faster and for longer than an aluminium oxide equivalent.

01

SANDING

02

SANDING

03

SANDING

04

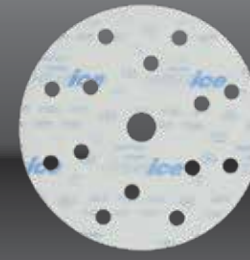
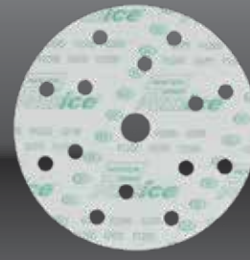
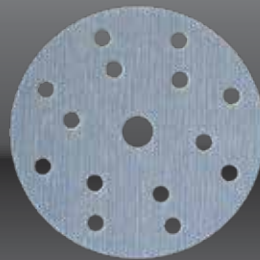
BLENDING

05

BLENDING

06

POLISHING



PRO PLUS
A975

—
P400

Back-up pad: medium

Machine speed: high

Orbit: 2.5mm

PRO PLUS
A975

—
P600

Back-up pad: medium

Machine speed: medium

PRO PLUS
A975

—
P800

Back-up pad: medium

Machine speed: medium

NORTON PURE ICE
Q175

—
P1200

Fine grade film discs
give a perfect finish

Back-up pad: soft
(an interface pad can be used)

Machine speed: low

NORTON PURE ICE
Q175

—
P1500

Fine grade film discs
give a perfect finish

Back-up pad: soft
(an interface pad can be used)

Machine speed: low

FARÉCLA PROFILE
400 ADVANCED PLUS
FAST MEDIUM
CUT COMPOUND

Use with Single/ Double
sided twisted Wool
Compounding Pad

Machine speed:
medium-fast

Pressure: low

TIP: Optional additional finishing step 7, for the ultimate finish, use Farécla Profile 400 Advanced Plus with the Lambswool Pad or black Finishing Foam at low to medium speed and with low pressure.

COMPONENT FINISHING

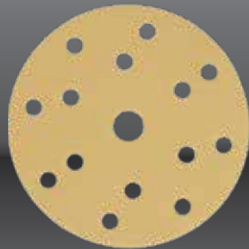
POLYESTER GELCOAT

ACHIEVING A 'FUNCTIONAL' FINISH QUICKLY

If a high gloss finish is not needed (which can be the case for some manufacturers), a good finish can quickly be achieved on the gelcoat using the following process:

01

SANDING



**NORTON
A293**

—
P400

Back-up pad: medium

Machine speed: high

Orbit: 2.5mm

02

POLISHING



**FARÉCLA
PROFILE 100 EXTRA HEAVY CUT**

—
Use with single/double sided twisted
Wool Compounding Pad.

Scratches from P400 will be removed
but heavier process lines will remain

Machine speed: low to medium

Pressure: low

03

POLISHING



**FARÉCLA PROFILE 350
PREMIUM LIQUID GRP
FAST MEDIUM CUT LIQUID
COMPOUND**

—
Removes process marks

This is a 2-in-1 compound to both cut
and polish out. Use with the single sided
Lambswool Pad

Machine speed: maximum

Pressure: low

COMPONENT FINISHING

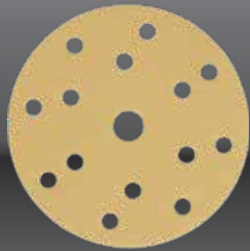
POLYESTER GELCOAT

ACHIEVING A 'STANDARD' FINISH

A standard finish is more commonly required, it's quick to obtain and gives great repeatable results. The sanding step is crucial here.

01

SANDING



**NORTON
A293**

—
P400

Back-up pad: medium

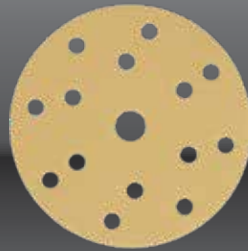
Machine speed: high

Orbit: 5mm

Additional step for dark colours:
use P600 before step 2

02

SANDING



**NORTON
A293**

—
P800

Sand out the surface scratches

Back-up pad: medium

Machine speed: medium

03

POLISHING



**FARÉCLA PROFILE 200
SELECT COARSE CUT**

Use with the single/double sided
twisted Wool Compounding Pad.

Machine speed: medium-fast

Pressure: low

04

POLISHING



**FARÉCLA PROFILE 700
FINISH LIGHT CUT POLISH
AND SWIRL REMOVER**

For an even better finish, use with
the single sided Lambswool Pad
and carry out two passes.

Machine speed: low

Pressure: low

COMPONENT FINISHING

VINYL ESTER RESIN GELCOAT

ACHIEVING A HIGH QUALITY FINISH

Vinyl Ester gelcoat is used on premium products; therefore the standard of finish is important. As this material is tougher there are two options for sanding; option one aluminium oxide abrasive and option two, a ceramic abrasive disc. Ceramic abrasive is high performance and achieves results faster.

01

SANDING

02

SANDING

03

BLENDING

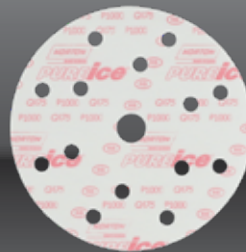
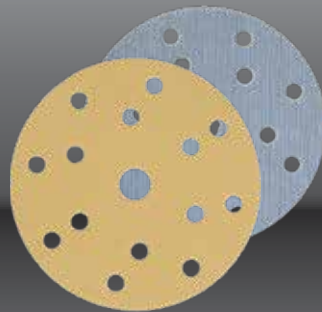
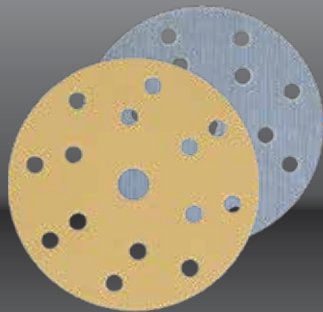
04

POLISHING

05

POLISHING

OPTIONAL FOR
DARK COLOURS



OPTION 1

NORTON A293 P400

OPTION 2

A975 PRO PLUS P400

Back-up pad: medium

Machine speed: high

Orbit: 2.5mm

OPTION 1

NORTON A293 P800

OPTION 2

A975 PRO PLUS P800

Back-up pad: medium

Machine speed: high

Orbit: 2.5mm

TIP: Optional: depending on the hardness or age of the gelcoat, you may need to follow P400 with P600

**NORTON PURE ICE
Q175**

P1000

Back-up pad: soft
(an interface pad can be used)

Machine speed: low

**FARÉCLA PROFILE 200
SELECT COARSE CUT**

Use with the single sided twisted
Wool Compounding Pad

Go over the surface until the
compound is gone. If pigtails
remain, complete one more pass.

Speed: low speed with high
speed finish to enhance gloss

Pressure: weight of machine

**FARÉCLA PROFILE
700 FINISH LIGHT CUT
POLISH AND SWIRL
REMOVER**

Optional step for dark colours

Finish with Farécla Profile
Finish using the black foam

Machine speed: medium

Pressure: low

COMPONENT FINISHING

EPOXY RESIN GELCOAT

ACHIEVING A HIGH QUALITY FINISH

Epoxy resin gelcoat is used mostly on premium products made from carbon fibre. As this is a harder material, there are two options for sanding; option one aluminium oxide abrasive and option two, a ceramic abrasive disc. Ceramic abrasive is high performance and achieves results faster.

TIP: Optional last step for ultimate finish use Farécla Profile 400 Advanced Plus Fast Medium Cut Compound with Lambswool Pad or black Finishing Foam with low to medium speed and low pressure.

01

SANDING

02

SANDING

03

SANDING

04

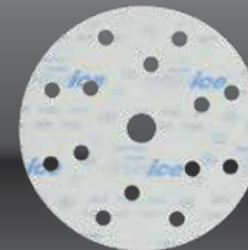
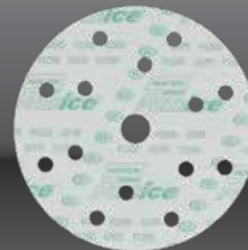
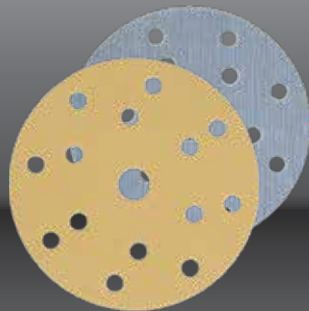
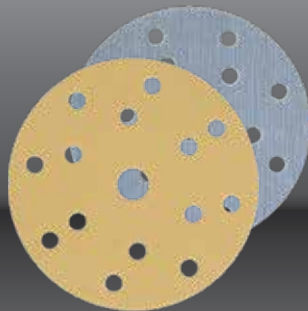
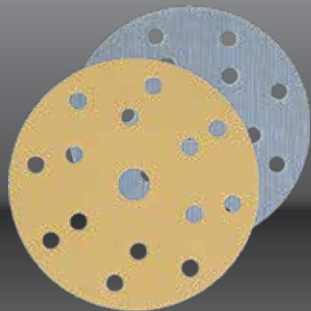
BLENDING

05

BLENDING

06

POLISHING



OPTION 1
NORTON A293
P400

OPTION 2
A975 PRO PLUS
P400

Back-up pad: medium

Machine speed: high

Orbit: 2.5mm

OPTION 1
NORTON A293
P600

OPTION 2
A975 PRO PLUS
P600

Back-up pad: medium

Machine speed: medium

Orbit: 2.5mm

OPTION 1
NORTON A293
P800

OPTION 2
A975 PRO PLUS
P800

Back-up pad: medium

Machine speed: medium

Orbit: 2.5mm

NORTON PURE ICE
Q175
—
P1200

Back-up pad: soft
(an interface pad can be used)

Machine speed: low

Orbit: 2.5mm

NORTON PURE ICE
Q175
—
P1500

Back-up pad: soft
(an interface pad can be used)

Machine speed: low

Orbit: 2.5mm

FARÉCLA PROFILE
400 ADVANCED PLUS
FAST MEDIUM
CUT COMPOUND
—

Use with single/double
sided twisted Wool
Compounding Pad

Machine speed:
medium-fast

Pressure: low

COMPONENT FINISHING

PAINTED SURFACES

It's common for some composite surfaces to be painted for UV protection and cosmetic reasons.

To prepare and finish painted surfaces, the following steps are recommended.

01

SANDING



**NORTON
A293**

P240 - 320

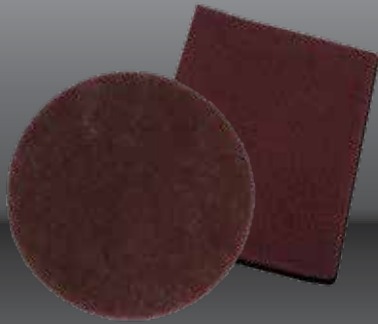
If the surface is even and blemish free, start with P320, but if the surface has many imperfections, select P240 as first step

Back-up pad: medium

Machine speed: medium

02

SANDING



BEARTEX DISC

MAROON

Very fine disc to blend

Back-up pad: medium

Machine speed: low

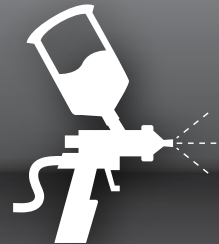
BEARTEX HAND PAD

MAROON

For more control on edges

03

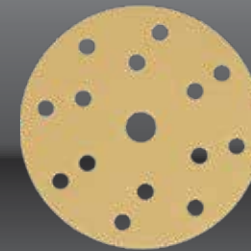
PAINTING



**PAINT WITH
PRIMER**

04

SANDING



**NORTON
A293**

P500

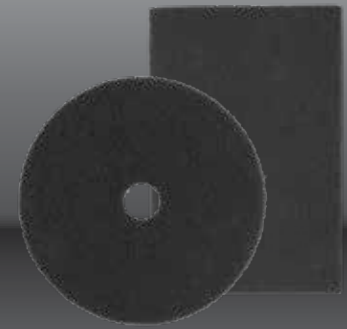
To sand primer

Back-up pad: medium

Machine speed: medium

05

SANDING



BEARTEX DISC

GREY

Ultra fine disc to blend

Back-up pad: medium

Machine speed: low

BEARTEX HAND PAD

GREY

For more control on edges

06

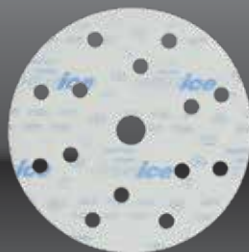
PAINTING



APPLY BASECOAT
IN THE REQUIRED
COLOUR & LACQUER

07

BLENDING



NORTON PURE ICE
Q175
—
P1500

Fine grade film discs give a
perfect finish.

Back-up pad: soft

Machine speed: slow

08

POLISHING



FARÉCLA PROFILE 400
ADVANCED PLUS
FAST MEDIUM
CUT COMPOUND

Use 150mm
white High Cut Foam

Machine speed: medium

Pressure: light

09

POLISHING



FARÉCLA
PROFILE 700 FINISH
LIGHT CUT POLISH
AND SWIRL REMOVER

Use with 150mm
black Foam Pad

Machine speed: medium

Pressure: light

COMPONENT FINISHING

PROCESS MARK & HOLOGRAM REMOVAL

Holograms can often occur when polishing gelcoat. They can be caused by the wrong choice of polishing pad or using the pad above the recommended RPM. They can be removed easily as follows:

01

POLISHING



FARÉCLA PROFILE 700 FINISH LIGHT CUT POLISH AND SWIRL REMOVER

Apply a small amount of compound directly to the surface / to the pad

02

POLISHING



FARÉCLA G MOP LAMBS WOOL PAD

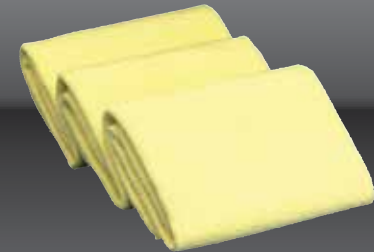
Using the weight of the tool, move the polisher quickly over the affected area

Machine speed:
low - medium
(1100-1800 RPM)

Pressure:
Machine weight only

03

WIPING



FARÉCLA G PLUS FINISHING CLOTH

Wipe the surface with a clean microfibre cloth.

The surface should be clean and bright.

COMPONENT FINISHING

TRIMMING & EDGE FINISHING

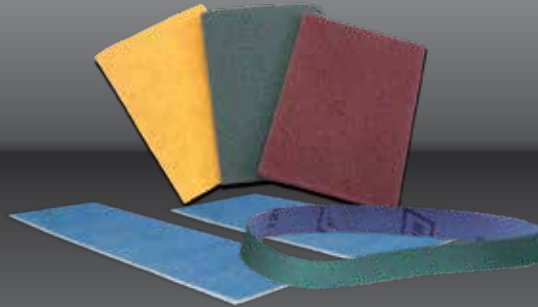
There are many ways to trim and finish the edges of a composite panel or component and Norton offers different abrasive products for this, including:

CUTTING



CUTTING DISCS
—
DIAMOND BLADE
—
JIGSAW BLADES

SMOOTHING SHARP EDGES



NORTON MESHPOWER SHEETS
—
FILE BELTS
—
BEARTEX HAND PADS

EDGE DRESSING



COATED ABRASIVE
SPEEDLOK™ DISCS
—
SPIRABANDS &
CARTRIDGE ROLLS
—
FLAP WHEELS
—
TUNGSTEN CARBIDE BURRS
—

All ideal for using in small,
hard to reach areas.

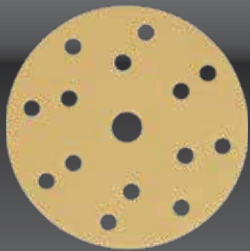
COMPOSITE REPAIR

Surface damage such as cracks, pinholes, delamination and general wear and tear is inevitable on composite material. It's recommended to repair small damages and imperfections before they worsen.

Gelcoat can be repaired by sanding back the surface until the defect is removed, and spraying or rolling new gelcoat over the entire feathered area. The excess material can then be removed and blended in with the existing surface.

01

SANDING



**NORTON
A293**

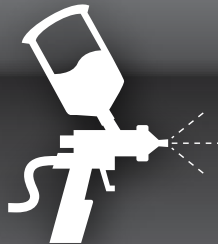
—
P400

Remove the defect
and surrounding
old gelcoat

Back-up pad: medium

02

REPAIR

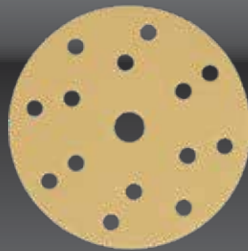


**REPAIR
GELCOAT**

—
Repair surface with
new gelcoat and leave
to harden

03

SANDING



**NORTON
A293**

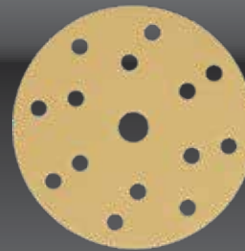
—
P400

Use to remove excess
new gelcoat

Back-up pad: medium

04

SANDING



**NORTON
A293**

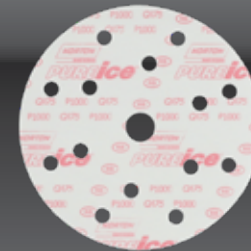
—
P600

Use to remove excess
new gelcoat

Back-up pad: medium

05

BLENDING



**NORTON PURE ICE
Q175**

—
P800

followed by P1000

Fine grade film discs give
a perfect finish

Back-up pad: soft
(an interface pad can be used)

Machine speed: low

06

POLISHING



**FARÉCLA PROFILE
400 ADVANCED
PLUS
FAST MEDIUM
CUT COMPOUND**

—
Use with a
Lambswool Pad

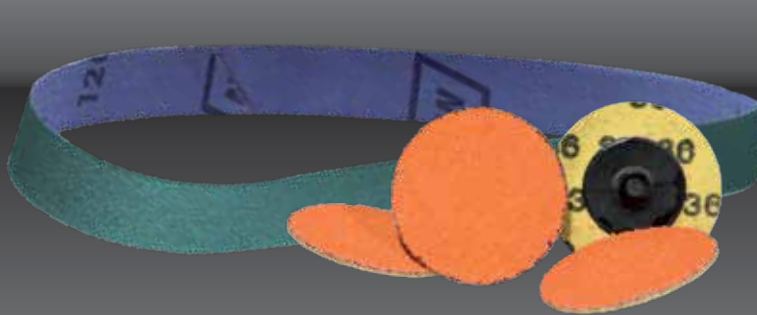
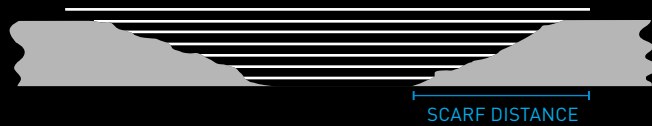
Machine speed:
1800 RPM

Pressure: light

COMPOSITE REPAIR

TAPER OR SCARF REPAIRS

TAPER OR SCARF REPAIRS



After completing initial damage removal, the area around the repair must be prepared. The area must be sanded at a pre-determined angle (usually around 5 degrees) in order to expose each ply of the laminate to provide the best load transfer when the repair patch is bonded in.

'Scarfig' or 'taper sanding' can be achieved with either an air powered high speed grinder with Norton Blaze SpeedLok discs, or a belt sander and ceramic abrasive belt. Start with grit P60 to P120 depending on the severity of repair.

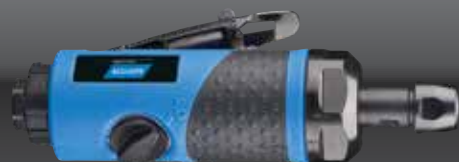
STEP SANDED REPAIRS



'Stepping' is an alternate method for removing material in preparation for applying a repair patch. This is a highly skilled operation for which specialist tooling is available, however it can be done manually. The laminate is sanded down so that a flat band of each layer is exposed, producing a stepped finish. Typical steps are 25-50mm per layer.

Step sanding is usually achieved using a compressed-air powered high-speed grinder and a finer grade abrasive. Norton Blaze ceramic SpeedLok™ discs in P120 are ideal for this.

NORTON MACHINES FOR USE ON COMPOSITE MATERIALS



PNEUMATIC DIE GRINDER

Can be used with many different abrasives including cartridge rolls, spirabands, flap wheels, mounted points and carbide burrs. Ergonomic grip for comfortable handling and greater control. The lightweight machine is small enough to access hard-to-reach areas and the double bearing spindle reduces vibration.

| | |
|--|-------------|
| COLLET DIAMETER (mm): | 6 |
| HORSEPOWER: | 0.9 |
| AIR CONSUMPTION (l/min): | 85 |
| RECOMMENDED OPERATION PRESSURE: | 6.2 bar |
| TOOL WEIGHT: | 0.65 kg |
| ARTICLE NUMBER: | 69957341008 |

MINI RIGHT ANGLE GRINDER

Ideal for use with Norton quick change back-up pads and SpeedLok™ and mini flap discs. Can be used with 38mm and 50mm discs and small spindle mounted abrasives.

| | |
|---------------------------------|-------------|
| EXHAUST DIRECTION: | REAR |
| THROTTLE TYPE: | LEVEL |
| HORSEPOWER: | 0.45 |
| AIR CONSUMPTION (l/min): | 85 |
| COLLET CHUCK: | 6mm |
| TOOL WEIGHT: | 0.74 kg |
| ARTICLE NUMBER: | 66261177765 |

FILE BELT SANDER

Perfect for small and awkward sanding jobs. Can be used with coated abrasive and non-woven belts. Small but powerful with an ergonomic grip for good control and manoeuvrability.

| | |
|--|-------------|
| BELT SIZE: | 10 x 330mm |
| HORSEPOWER: | 0.5 |
| FREE SPEED: | 18000rpm |
| RECOMMENDED OPERATION PRESSURE: | 6.2 bar |
| TOOL WEIGHT: | 0.82 kg |
| ARTICLE NUMBER: | 77696091766 |

TIP: Oiling pneumatic machines daily will improve performance and increase tool life

RANDOM ORBITAL SANDER & FARECLA POLISHER

WHETHER SANDERS OR POLISHERS, WE HAVE A NUMBER OF MACHINES TO MEET THE NEEDS OF COMPOSITE PRODUCTION AND REPAIR.



NORTON

SAINT-GOBAIN



Farécla

NORTON D.A.S.P – DUAL ACTION SANDER (PNEUMATIC)

Available with two orbits (2.5mm and 5mm), the D.A.S.P provides excellent sanding results. The machine is compact and light weight, reducing fatigue when sanding for long periods. The rubber grip absorbs vibration and provides control. Speed can be adjusted manually and the 360° muffler cap is adjustable to reduce noise. The powerful motor and free speed gives swirl free finishes.

| MODEL NO. | PAD SIZE | DIA ORBIT | VACUUM | WEIGHT | POWER |
|-----------|----------|-----------------|----------------|---------|-----------|
| 150 / 5.0 | 152 | 5mm = 3/16 in | Central vacuum | 0.75 kg | 186 watts |
| 150 / 2.5 | 152 | 2.5mm = 3/32 in | Central vacuum | 0.71 kg | 186 watts |

| MODEL NO. | FREE SPEED | OPERATING PRESSURE | AVER. FREE AIR CONS. | ARTICLE NO. |
|-----------|------------|--------------------|----------------------|-------------|
| 150 / 5.0 | 12000 | 6.2 bar (90 psi) | 2.1 (@ 90psi) | 78072723478 |
| 150 / 2.5 | 12000 | 6.2 bar (90 psi) | 2.1 (@ 90psi) | 78072723484 |

FARÉCLA G PLUS ELECTRIC ROTARY POLISHING MACHINE

- Light weight yet powerful machine with low vibration
- Well balanced and provides cool running for large polishing jobs
- Thumb-operated speed control gives variable speed control from 700-2500 RPM
- 2 pin European plug, includes free G Mop Back Plate and spare carbon brushes



LIGHTWEIGHT
(2.2kg)



POWERFUL /
HIGH TORQUE



SPEED RANGE
700 - 2500rpm



ROTARY



220 - 240V~
(50/60Hz)



VERSATILE, 5M
POWER CORD

| WEIGHT | CABLE LEGTH | PK QTY | ITEM NO. |
|--------|-------------|--------|-------------|
| 2.2kg | 5m | 1 | 78072700159 |

FARÉCLA PRODUCTS

G MOP YELLOW COMPOUNDING FOAM

- Made from premium European grade foam with a closed cell structure which minimises mess and splatter
- Excellent cut and gloss and can be used with 'wet or dry use' compounds
- Superb handling and flexibility and glides easily over surface contours

| SIZE | PK QTY | ITEM No. |
|---------------------|--------|-------------|
| 8" (203mm) diameter | 12 | 78072708718 |



G MOP BLACK FINISHING FOAM

- Foam has a soft, open cell structure for improved air flow which lowers running temperature
- Provides a light cut and high gloss finish
- Superb handling and flexibility, glides easily over surface contours

| SIZE | PK QTY | ITEM No. |
|---------------------|--------|-------------|
| 8" (203mm) diameter | 12 | 78072700177 |



G MOP TWISTED WOOL PAD

- Twisted wool compound for a high cut
- Made from 4 ply 100% wool for the highest cut
- Double sided pads are ideal for polishing different coloured surfaces or using different products without contamination

| SIZE | SIDES | PK QTY | ITEM No. |
|---------------------|--------|--------|-------------|
| 8" (203mm) diameter | Single | 12 | 78072700175 |
| | Double | 12 | 78072700174 |



G MOP LAMBS WOOL PAD

- Made from 100% natural wool for a higher cut rate and great finish depending on the compound used
- Provides a medium cut and finer finish than the Wool Compounding Pads

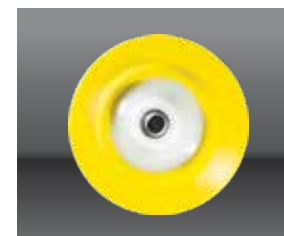
| SIZE | PK QTY | ITEM No. |
|---------------------|--------|-------------|
| 8" (203mm) diameter | 12 | 78072700176 |



G MOP BACK PLATE 14mm THREAD

- Flexibility allows improved handling performance of G-Mop pads
- Ideal for the G-Mop High Cut and Lambswool Pads

| SIZE | PK QTY | ITEM No. |
|---------------------|--------|-------------|
| 8" (203mm) diameter | 6 | 78072709129 |



G MOP 8" BOLT ADAPTOR

14mm THREAD

- For use with double sided pads

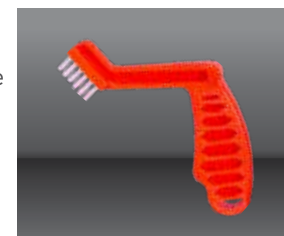
| DESCRIPTION | PK QTY | ITEM No. |
|--------------------|--------|-------------|
| for use on 8" mops | 1 | 78072700181 |



G PLUS SPURRING BRUSH

- For quick and easy cleaning of pads when spun on a machine
- Avoids residue, dried compound and other contaminants impairing the next job

| DESCRIPTION | PK QTY | ITEM No. |
|----------------|--------|-------------|
| Spurring Brush | 20 | 78072700135 |

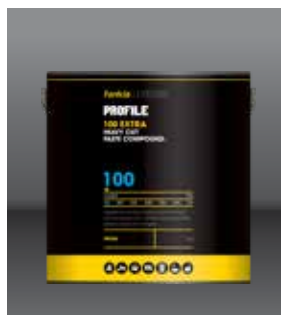


FARÉCLA PRODUCTS

FARÉCLA PROFILE 100 EXTRA HEAVY CUT PASTE COMPOUND

- 'Liquid' sandpaper for rapid, permanent removal of deep scratches from P600 or finer, leaving a low gloss finish
- Extra coarse water based cutting compound for aggressive compounding on rough resins, composites, moulds and gelcoats

| SIZE | PK QTY | ITEM No. |
|------|--------|-------------|
| 3 kg | 4 | 78072763866 |



FARÉCLA PROFILE 200 SELECT COARSE CUT LIQUID COMPOUND

- A versatile compound for removing P800 or finer sanding marks from tooling or gelcoats in one step
- On painted surfaces, when used with the G-Mop Lambswool Pad, P1500 sanding marks are quickly removed leaving a good finish

| SIZE | PK QTY | ITEM No. |
|--------------|--------|-------------|
| 1 litre | 6 | 78072700168 |
| 1 U.S gallon | 2 | 78072700169 |



FARÉCLA PROFILE 350 PREMIUM LIQUID GRP FAST MEDIUM CUT LIQUID COMPOUND

- High quality abrasive stays wet for a long time
- Engineered for production and weathered gelcoats
- No clogging, extended wool pad life and clean in use

| SIZE | PK QTY | ITEM No. |
|--------------|--------|-------------|
| 1 litre | 6 | 78072763911 |
| 1 U.S gallon | 2 | 78072764005 |



FARÉCLA PROFILE 400 ADVANCED PLUS

FAST MEDIUM CUT LIQUID COMPOUND

- Finer grades than P1500 not required, saving time
- Latest generation abrasive technology provides a fast cut and develops a transparent film that enables the user to see the final abrasive scratches fade out.
- Gives a high shine finish with good depth and clarity

| SIZE | PK QTY | ITEM No. |
|--------------|--------|-------------|
| 1 L | 6 | 78072715147 |
| 1 U.S gallon | 2 | 78072715148 |



FARÉCLA PROFILE 700 FINISH

LIGHT CUT POLISH AND SWIRL REMOVER

- A fine finishing compound to remove any light swirl marks and holograms from painted lacquers and gelcoat
- Restores dull surfaces and enhances colour
- Works well on soft coatings which are susceptible to swirl marks

| SIZE | PK QTY | ITEM No. |
|---------|--------|-------------|
| 1 litre | 6 | 78072763898 |



SANDING DISCS

NORTON PRO PLUS A975

- Using a combination of SG and premium heat-treated aluminium oxide grains, Norton Pro Plus provides excellent cutting with a uniform scratch pattern on primer, paint, composites, marine gel coat, non-ferrous metals and ceramic coatings
- In P80-P120 discs the backing is thicker for more aggressive use, P150-P800 has a thinner paper backing for better flexibility in finer applications
- The No-Fil® coating resists loading to extend disc life when sanding dry or wet.

NORTON A293

- Our premium aluminium oxide grains provide a fast cut in all sanding applications on composites, primer, paint and wood.
- The strong paper backing is tear resistant whilst still giving maximum flexibility.
- No-Fil® coating and hole configuration significantly improves load resistance for longer disc life.

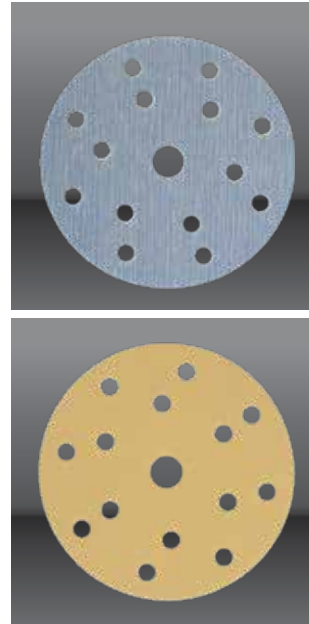


A975
150mm
15 HOLES



A293
150mm
15 HOLES

| GRIT | A975 150mm 15 HOLES | A293 150mm 15 HOLES | PK QTY | BOX QTY |
|------|---------------------------|---------------------------|--------|---------|
| P80 | 66254477881 | 78072710209 | 100 | 400 |
| P120 | 66254477879 | 78072710197 | 100 | 400 |
| P150 | 66254477882 | 78072710210 | 100 | 400 |
| P180 | 66254477883 | 78072710211 | 100 | 400 |
| P220 | 66254477884 | 78072710212 | 100 | 400 |
| P240 | 66254477885 | 78072710216 | 100 | 400 |
| P280 | 66254477886 | 78072710219 | 100 | 400 |
| P320 | 66254477887 | 78072710221 | 100 | 400 |
| P400 | 66254477888 | 78072710222 | 100 | 400 |
| P500 | 66254476601 | 78072710224 | 100 | 400 |
| P600 | 63642532659 | 78072710226 | 100 | 400 |
| P800 | 66254479091 | 78072710227 | 100 | 400 |



NORTON

SAINT-GOBAIN

MESH-POWER™

Reshaping
your
world.

POWERFUL
DUST EXTRACTION



With **Norton MeshPower™**, you get powerful dust extraction for virtually dust free sanding. This means a cleaner, healthier working environment, a better finish and a much more pleasant sanding experience. A multi-functional abrasive, MeshPower has thousands of holes created by a unique mesh matrix for dust extraction in any application.

BLENDING DISCS



PURE ICE FILM DISCS Q175



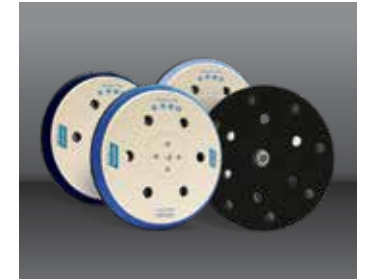
- The ultra-thin film backing provides multiple benefits including excellent flexibility, allowing conformity to contours and it helps the discs to remain flat and prevent curling
- Patented resin technology promotes excellent grain adhesion that keeps the disc effective for longer and imparts a consistent finish that's easier to buff out
- Water based No-Fil® stearate coating resists loading, eliminates pigtails and further extends the life of the product
- Colour coded grits provide an at-a-glance identification of the correct product across all hole configurations including the dust reducing Multi-Air disc

| COLOUR | GRIT | 150mm 15 HOLES | PK QTY | BOX QTY |
|--------|-------|-------------------|-----------|------------|
| Black | P800 | 66261110837 | 50 | 300 |
| Red | P1000 | 66261110838 | 50 | 300 |
| Green | P1200 | 66261110839 | 50 | 300 |
| Blue | P1500 | 66261110840 | 50 | 300 |

BACK-UP PADS & INTERFACES

NORTON PRO SELF-GRIP BACK-UP PADS 150mm

- Self-grip back-up pads are available in four hole configurations, three densities and with a versatile attachment system (M8 & 5/16" + key + 3 washers)
- To improve the versatility of Norton discs, a complete range of interface pads and conversion interfaces are also available



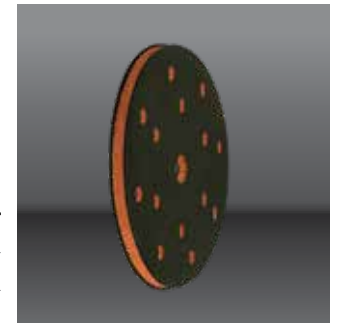
| PERFORATIONS | TYPE | DENSITY | | | PK QTY |
|--------------|------------|--------------|-------------|-------------|-----------|
| | | SOFT | MEDIUM | HARD | |
| No holes | 5/16" & M8 | - | 66623338436 | - | 1 |
| 6 + 1 holes | 5/16" & M8 | 66623338441* | 66623338445 | 66623338446 | 1 |
| 8 + 1 holes | 5/16" & M8 | 66623338447* | 66623338448 | - | 1 |
| 15 holes | 5/16" & M8 | 66623338452 | 66623338450 | 66623338451 | 1 |

| TYPE | ART NO. | PK QTY |
|-----------------------------|--------------|-----------|
| Adapter for Rupes | 63642526648* | 1 |
| Adapter for Rupes SK2 & SK3 | 66261131280 | 1 |

FOAM INTERFACES

Soft flat interfaces for finishing operations to reduce the risk of scratches thanks to the natural rubber and the gripping system which features the 'flat-top mushroom' shape

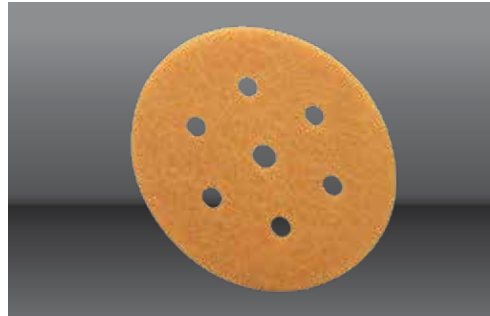
| DIAMETER | PERFORATIONS | ART NO. | PK QTY |
|----------|--------------|-------------|--------|
| 150mm | No holes | 63642567836 | 6 |
| | 6 holes | 63642567837 | 6 |
| | 15 holes | 63642567840 | 6 |



FINISHING DISCS

BEARTEX

- Three-dimensional disc that conforms to work surface and provides a uniform finish
- Non-loading and ideal for finishing solid surface materials
- Gentle action that easily removes burrs without affecting the dimension of the workpiece
- In Self Grip and Plain backing



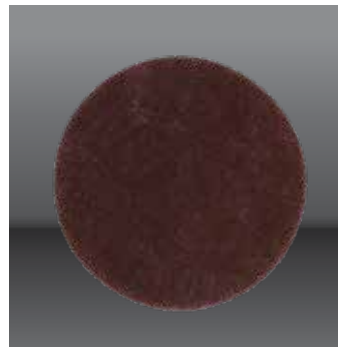
| COLOUR | GRADE | 150mm 15 HOLES | PK QTY |
|--------|--------------|-------------------|-----------|
| Red | Very fine A | 69957383151 | 10 |
| Grey | Ultra fine S | 69957383158 | 10 |
| Gold | Micro fine A | 69957383162 | 10 |

PLAIN DISCS BEARTEX

- Three dimensional discs that conform to panels and uneven surfaces thanks to the nylon fibre impregnated with abrasive



| COLOUR | GRADE | 150mm | PK QTY |
|--------|--------------|-------------|-----------|
| Red | Very fine A | 63642557497 | 10 |
| Grey | Ultra fine S | 63642557498 | 10 |
| Gold | Micro fine A | 69957383952 | 10 |



SHEETS

MULTI-AIR PLUS A975

- The advanced No-Fil® coating both prevents build-up of dust and avoids premature clogging. In very fine grits, it can be used for final dry sanding before spraying, without the risk of developing runs.
- Patented Norton ceramic grain is blended with premium heat-treated aluminium oxide to deliver a very high cut rate that lasts up to twice as long as conventional abrasives and imparts a consistent, uniform scratch pattern
- A unique fibre-reinforced latex paper backing adds to the flexibility and makes the cut sheets tear resistant in all the applications
- Specifically designed for paint sanding from levelling filler to finishing primer








| GRIT | 70 x 125mm | 70 x 198mm | 70 x 420mm | 115 x 230mm | PK QTY | BOX QTY |
|------|-------------|-------------|-------------|-------------|-----------|------------|
| P80 | 69957394456 | 69957394470 | 69957394463 | 69957394479 | 50 | 200 |
| P120 | 69957394457 | 69957394472 | 69957394464 | 69957394481 | 50 | 200 |
| P150 | 69957394458 | 69957394473 | 69957394465 | 69957394482 | 50 | 200 |
| P180 | 69957394459 | 69957394474 | 69957394466 | 69957394483 | 50 | 200 |
| P220 | 69957396408 | 69957396410 | 69957396406 | 69957396414 | 50 | 200 |
| P240 | 69957394460 | 69957394475 | 69957394467 | 69957394484 | 50 | 200 |
| P280 | 69957396409 | 69957396411 | 69957396407 | 69957396415 | 50 | 200 |
| P320 | 69957394461 | 69957394477 | 69957394468 | 69957394485 | 50 | 200 |
| P400 | 69957394462 | 69957394478 | 69957394469 | 69957394486 | 50 | 200 |

SANDING BLOCKS



MULTI-AIR SANDING BLOCKS

- The perfect partner for Norton abrasives for high dust extraction, including Norton Cyclonic, Multi-Air or MeshPower, for cut sheets or rolls, available in a range of sizes for any product dimension
- An in-built air chamber keeps sanding dust-free and the workplace clean
- Robust, impact resistant plastic body that has been built to last and stand up to the rigours of day-to-day use
- Comfortable rubber grip helps the user maintain control over the process

| | | | | |
|---|---|---|---|--|
|  |  |  |  |  |
| 70 x 125mm | 70 x 198mm | 70 x 400mm | 115 x 230mm | PK QTY |
| 69957396645 | 69957396646 | 69957396648 | 69957396644 | 1 |

SANDING ROLLS



NORTON PRO PAPER ROLLS A275

- Aluminium oxide abrasive with No-Fil® layer cuts fast and lasts longer
- Ideal for sanding filler, primer, gel-coat, aluminium, wood and composite materials

| GRIT | 100mm x 50m | 115mm x 50m | PK QTY |
|------|-------------|-------------|--------|
| P80 | 63642591122 | 69957380739 | 2 |
| P120 | 63642591123 | 69957380761 | 2 |
| P150 | 69957391073 | 69957380765 | 2 |
| P180 | 63642591124 | 69957380767 | 2 |
| P220 | 63642590924 | 69957380769 | 2 |
| P240 | 63642590927 | 69957380777 | 2 |
| P280 | - | 69957380778 | 2 |
| P320 | 63642591649 | 69957380779 | 2 |
| P400 | 69957391077 | 69957380781 | 2 |
| P500 | - | 69957396696 | 2 |



NORTON PRO ROLLS A275

- Ideal for sanding filler, primer, gel-coat, aluminium, wood and composite materials

| GRIT | 115mm x 25m | PK QTY |
|------|-------------|--------|
| 120 | 69957391218 | 2 |
| 150 | 69957391219 | 2 |
| 180 | 69957391220 | 2 |
| 220 | 69957391221 | 2 |
| 240 | 69957391222 | 2 |
| 320 | 69957391224 | 2 |
| 400 | 69957391225 | 2 |

HAND PADS

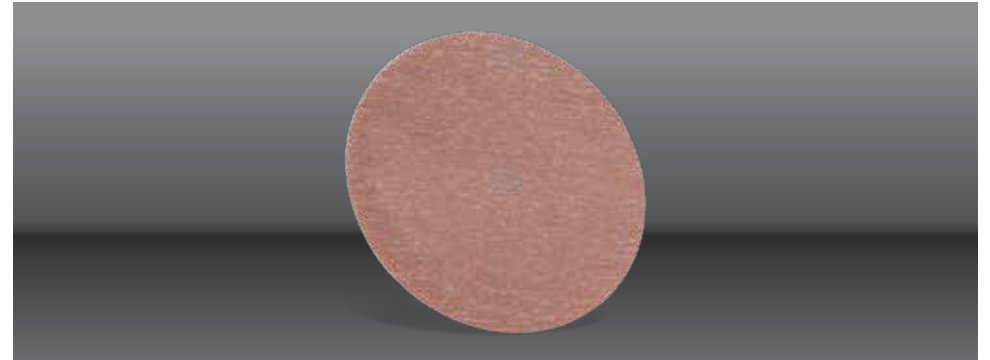


BEARTEX HAND PADS

- Open mesh construction resists clogging
- Flexible, conforms to curves, contours and tight spaces easily, will not break
- Waterproof, washable and reusable
- Lasts longer than standard sandpaper and will not gouge the workpiece when used

| DIM W x L (mm) | GRADE | CAP CODE | PK QTY | ART NO. |
|----------------|-------------------------------|----------|--------|-------------|
| 150x230 | Extra Cut A | F2302 | 20 | 63642557491 |
| | Heavy Duty | F2316 | 20 | 63642577268 |
| | Medium A | F2300 | 20 | 63642557493 |
| | Fine A | F2401 | 20 | 66261018286 |
| | Very Fine A Long Life | F2504 | 20 | 66261018287 |
| | Gen. Purpose Clean & Scour A | F2568 | 20 | 63642574103 |
| | Medium S | F4300 | 20 | 66261039806 |
| | Ultra Fine S | F4807 | 20 | 77696046252 |
| | Micro Fine A | F2801 | 20 | 63642557277 |
| | White Cleaning (Non Abrasive) | F0001 | 20 | 66261018283 |
| 230x280 | Very Fine A Long Life | F2504 | 20 | 66261018291 |
| | Ultra Fine S | F4807 | 20 | 66261018292 |

SMART REPAIR DISCS



NORTON PRO SMART REPAIR A275

- When an operation calls for more precision or is in a small area, the Norton Smart repair system offers a good sanding solution in small disc size
- Heat-treated high performance aluminium oxide grain provides a fast cut rate
- Flexible & tear resistant due to their fibre-reinforced latex paper backing which is thicker in coarser grits to support more aggressive applications
- The No-Fil® layer is added to resist loading

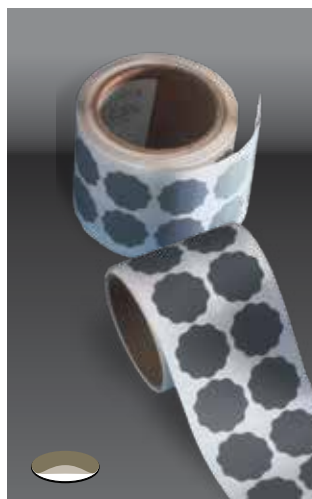
| GRIT | 76mm | PK QTY | BOX QTY |
|-------|-------------|--------|---------|
| P80 | 63642585133 | 50 | 100 |
| P150 | 63642585148 | 50 | 100 |
| P180 | 63642585150 | 50 | 100 |
| P220 | 63642585153 | 50 | 100 |
| P240 | 63642585156 | 50 | 100 |
| P320 | 63642569699 | 50 | 100 |
| P400 | 63642585169 | 50 | 100 |
| P500 | 69957391303 | 50 | 100 |
| P800 | 63642585172 | 50 | 100 |
| P1000 | 63642585180 | 50 | 100 |

SMALL DISCS FOR COMPOSITE REPAIR

BLACK ICE ROSETTE DISCS

SELF ADHESIVE

- Self-adhesive waterproof rosette discs combine a light weight paper backing with ultra fine grain for fine sanding applications in a small area
- Use with a sanding block, or by hand, to eliminate small flaws in lacquer (stone chips, paint runs etc.) before polishing or buffing
- Use a sanding block for best results and an even finish
- Use wet for sanding polyurethane primer and cutting back an old surface before spraying, can also be used for cutting back flush joints



| GRIT | 38mm | PK QTY |
|------|-------------|--------|
| 1500 | 63642534470 | 400 |
| 2000 | 69957360371 | 400 |
| 2500 | 63642561155 | 400 |

| SANDING BLOCK 38mm | PK QTY |
|--------------------|--------|
| 63642567819 | 12 |

DEFECT GUIDE COAT



- Quickly identifies pinholes and deep scratches in primer to ensure the total primed area is sanded prior to top coating
- Does not require masking and takes no time to dry
- Does not contain solvents and can be used for both wet and dry sanding

| VOLUME | ART NO. | PK QTY |
|--------|-------------|--------|
| 100g | 77696072696 | 6 |



BLAZE X-TREME LIFE DISCS R980

- Premium ceramic grain delivers powerful cutting performance on stainless steel, inconels, chromium cobalt and titanium, even at medium pressure
- Premium ceramic alumina abrasive grain provides a cool, fast cut and a long product life
- Supersize layer contains active filler which promotes cool cutting and longer product life

| DIA (mm) | GRADE | TR  | TS  | PK QTY |
|----------|-------|--|--|--------|
| 50 | 36 | 63642597039 | 69957390698 | 50 |
| | 50 | 63642597045 | 69957390699 | 50 |
| | 60 | 63642597050 | 69957390700 | 50 |
| | 80 | 63642597052 | 69957390701 | 50 |
| | 120 | 66261136868 | 66261136986 | 50 |
| 75 | 36 | 63642597053 | 69957390702 | 50 |
| | 50 | 63642597057 | 69957390703 | 50 |
| | 60 | 63642597060 | 69957390704 | 50 |
| | 80 | 63642597062 | 69957390705 | 50 |
| | 120 | 66261136980 | 66261136987* | 50 |

* Made-to-order

SPECIALTIES

BLAZE RAPID STRIP



TR

- Heavily coated with super-sharp ceramic alumina grains, which ensures this disc will last twice as long as competitor products
- Use for multiple operations including stripping, cleaning and finishing, provides a comparable finish to a medium surface conditioning disc
- The open structure will not shed on rusted surfaces or load on soft metals







| GRIT | GRADE | ART NO. | PK QTY |
|------|--------------|--------------|--------|
| 75 | Extra coarse | 66261096557 | 25 |
| 50 | Extra coarse | 66623303912 | 25 |
| 100 | Extra coarse | 66623303921* | 5 |

* Use with TR holder, order separately

QUICK CHANGE DISC HOLDER

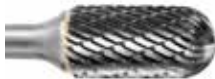
- TS: Turn-on/turn-off system using a metal to metal fixing on pad (TS) with spindle.
- TR: Roll-on/roll-off system using a nylon threaded male button on a pad (TR) with spindle.



| DIMS (mm) |  TS MEDIUM DENSITY |  TS HARD DENSITY |  TR MEDIUM DENSITY |  TR HARD DENSITY | PK QTY |
|-----------|---|---|---|---|--------|
| 50 | 63642501157 | 63642586926 | 7660717817 | 63642586931 | 1 |
| 75 | 7660707384 | 63642586932 | 63642556631 | 66254401460 | 1 |

DOUBLE CUT EXTRA CARBIDE BURRS

- 'DTECH' Double cut EXTRA cut style
- Good stock removal and strong tooth formation thanks to decreased tooth wedge angle
- Longer tool life and reduced chipping
- A number of sizes available for a variety of applications

| PRODUCT SHAPE | D ₁ xL ₁ xD ₂ xL ₂ (mm) | PK QTY | ARTICLE NO. |
|---|---|--------|-------------|
| C BALL NOSED CYLINDER | | | |
|  | 10x19x6x65 | 1 | 07660739841 |
| | 12x25x6x70 | 1 | 60157638175 |

| | | | |
|---|------------|---|-------------|
| F BALL NOSED TREE | | | |
|  | 12x30x6x75 | 1 | 63642587067 |

| | | | |
|---|-----------|---|-------------|
| L BALL NOSED CONE | | | |
|  | 10x9x6x53 | 1 | 07660707832 |

SPECIALTIES

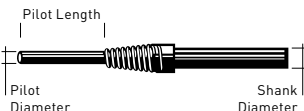
BLAZE CARTRIDGE ROLLS R920

- Ceramic alumina grain for the highest productivity of all rolls, with faster cut rate and long life
- Grinding aid provides a cooler cut and reduced loading and glazing on hard to grind materials, stainless steel, cobalt, inconel and titanium
- Improved bond system retains the grain for longer, helping you get more use from just one product
- Strong backing provides excellent durability even under tough pressure and wears evenly



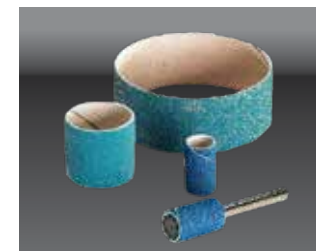
| DIM BSxLxB (mm) | GRIT | PK QTY | ART NO. | RECOMMENDED SPEED (RPM) | MANDREL CODE |
|--------------------|------|--------|-------------|----------------------------|-----------------|
| 10x38x3 | 60 | 50 | 66261129486 | 11500 - 17200 | 63642556791 |
| | 80 | 50 | 66261129493 | | |
| 13x38x3 | 60 | 50 | 66261129489 | 8800 - 13200 | 63642556791 |
| | 80 | 50 | 66261129496 | | |

STEEL MANDREL FOR CARTRIDGE ROLLS

| DESCRIPTION | DIM DIAxL (mm) | SHAFT DIAMETER (mm) | PK QTY | ART NO. |
|---|-------------------|------------------------|--------|-------------|
|  | 3x19 | 6mm | 1 | 63642556790 |
| | 3x25 | 6mm | 1 | 63642556791 |


NORZON SPIRABANDS R822

- A great choice for carbon steel and welds
- Prevents loading on aluminium
- Zirconia abrasive provides an aggressive cut and long life
- Ideal for use on irregular shaped components such as curves



| DIM DIAxW (mm) | GRIT | PK QTY | ART NO. | RECOMMENDED SPEED (RPM) | MANDREL CODE |
|-------------------|------|--------|-------------|----------------------------|-----------------|
| 22x20 | 36 | 100 | 63642539865 | 17500 - 21000 | 63642562578 |
| | 50 | 100 | 63642528497 | | |
| | 60 | 100 | 63642539866 | | |
| | 80 | 100 | 63642539867 | | |
| 25x25 | 36 | 100 | 63642528510 | 15300 - 19000 | 7660705183 |
| | 50 | 100 | 63642528511 | | |
| | 60 | 100 | 66623316384 | | |
| | 80 | 100 | 63642528512 | | |
| 30x30 | 36 | 100 | 63642566870 | 12700 - 15800 | 7660707918 |
| | 50 | 100 | 63642535053 | | |
| | 60 | 100 | 63642545925 | | |
| | 80 | 100 | 63642545926 | | |
| 38x25 | 36 | 100 | 66261180965 | 10000 - 12500 | 7660717568 |
| | 50 | 100 | 66261180966 | | |
| | 60 | 100 | 66261137836 | | |
| | 80 | 100 | 66261180967 | | |

MANDRELS FOR SPIRABANDS

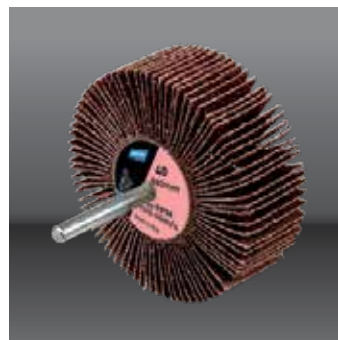
| | DIM DxWxS (mm) | PK QTY | ART NO. |
|---|-------------------|--------|-------------|
|  | 22x20x6 | 1 | 63642562578 |
| | 25x25x6 | 1 | 7660705183 |
| | 30x30x6 | 1 | 7660707918 |
| | 38x25x6 | 1 | 7660717568 |

FLAP WHEELS

METAL R207Plus



- Excellent cut rate even at low-pressure when used for finishing operations,
- A universal product which achieves a good finish on steel and stainless steel
- New generation of premium aluminium oxide grain provides an aggressive cut yet long product life
- Conforms to the workpiece thanks to the flexible cotton backing



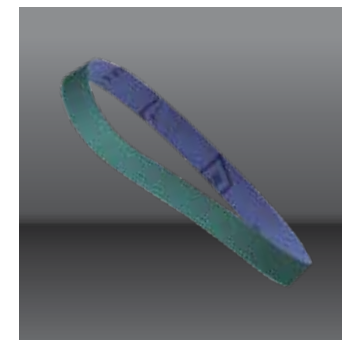
| DIM DIAxWxS (mm) | GRIT | PK QTY | ART NO. | RECOMMENDED SPEED (RPM) |
|---------------------|------|--------|-------------|----------------------------|
| 6mm SHAFT | | | | |
| 30x15x6 | 40 | 10 | 66261056890 | 9500 - 15900 |
| | 60 | 10 | 63642513148 | |
| | 80 | 10 | 63642561466 | |
| | 120 | 10 | 63642551593 | |
| | 180 | 10 | 66261138106 | |
| 60x15x6 | 40 | 10 | 63642546773 | 4800 - 7900 |
| | 60 | 10 | 69957360901 | |
| | 80 | 10 | 63642546767 | |
| | 120 | 10 | 63642546758 | |

FILE BELTS

SG R929

- Made with premium SG abrasive grain, perfect for heat sensitive metals
- High content of active filler for cool cut, no burn marks on the metal part
- Excellent performance at low and medium pressure
- X-weight polyester cloth, extremely durable even on aggressive applications

| WxL (mm) | GRIT | PK QTY | ART NO. |
|----------|------|--------|-------------|
| 10x330 | 40 | 10 | 66623303110 |
| | 60 | 10 | 66261144369 |
| | 80 | 10 | 66623303270 |
| | 120 | 10 | 66623303271 |



RAPIDPREP

SURFACE CONDITIONING FILE BELTS

- Strong synthetic mesh and aluminium oxide abrasive bonded together with a smear resistant adhesive
- Open construction of non-woven material for tough cutting action without clogging or loading
- Ideal for removing paint, rust, adhesives, coatings and sealant corrosion in hard to access areas

| WxL (mm) | GRADE | PK QTY | ART NO. |
|----------|-----------|--------|-------------|
| 10x330 | Coarse | 10 | 69957360172 |
| | Medium | 10 | 63642578004 |
| | Very Fine | 10 | 69957360176 |



CUTTING PRODUCTS

PRO MARMO

- Versatile diamond blade suitable for materials such as granite, marble, plastics and natural stone, and is ideal for use on angle grinders, cut-off saws and masonry saws
- The electroplated surface and drop-down diamond inserts on the steel centre clean the cutting profile while in use, these features ensure fast and smooth cutting



| MACHINES | DIA (mm) | BORE (mm) | SEGMENT H/W (mm) | PK QTY | ART NO. |
|----------|----------|-----------|------------------|--------|-------------|
| | 50 | 6 | 2,4 | 1 | 70184629965 |
| | 115 | 22,23 | 2,4 | 1 | 70184626663 |
| | 125 | 22,23 | 2,4 | 1 | 70184626666 |



MULTI MATERIAL CUTTING

- One wheel for all materials
- The easy choice in general trade
- No lost time due to wheel changing
- Quick, comfortable and versatile

CORDLESS COMPATIBLE

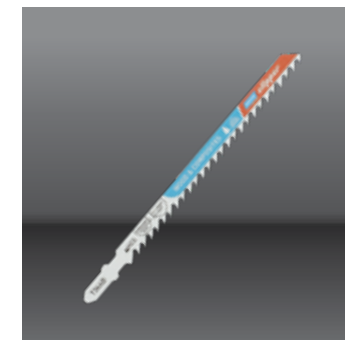


| TYPE | DIA (mm) | TxB (mm) | SPEC | PK QTY | ART NO. |
|------|----------|-----------|--------|--------|-------------|
| | 115 | 1,0x22,23 | C 60 T | 25 | 66252833258 |
| | | 1,6x22,23 | C 46 T | 25 | 66252828951 |
| | 125 | 1,0x22,23 | C 60 T | 25 | 66252918924 |
| | | 1,6x22,23 | C 46 T | 25 | 66252828952 |



JIGSAW BLADES

- Whatever the application, Norton Clipper have a jigsaw blade for it.
- This range always delivers fast, clean cutting performance for a variety of different natural and man-made wood materials.



| PRODUCT NAME | MAX MATERIAL HEIGHT (MM) | WORKING LENGTH (MM) | OVERALL LENGTH (MM) | CUT | TEETH MATERIAL | TPI | PCK QTY | ITEM NO. |
|--------------|---|---------------------|---------------------|----------------------------|----------------|-----|---------|-------------|
| T 101 BR | Softwood, chipboard, wood core plywood, fibre boards (3-30 mm), laminated panels, clean surface | 76 | 100 | Extra clean & straight cut | HCS | 10T | 3 | 70184608374 |
| T 244 D | Softwood (5-50 mm), chipboards, wood core plywood, fibre boards, especially for curve cuts | 76 | 100 | Fast & curved cut | HCS | 6T | 3 | 70184608375 |
| T 119 B0 | Softwood (2-15 mm), plywood, chipboard, wood core plywood, fibre boards, especially for curves | 50 | 76 | Fast & curved cut | HCS | 12T | 3 | 70184608376 |
| T 308 BFP | Laminated panels, plastic and fibre boards (5-50mm) | | 100 | Extra clean & straight cut | BIM | 12T | 3 | 70184608377 |

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