1. Draw away the protection layer from about a third of the area.
2. Place the cloth on the polishing disc from one side.
3. When pressing the polishing cloth against the disc remove the protection layer completely. It is very important to avoid trapped air between disc and cloth. The edge of the cloth must be carefully pressed down.
4. Squeeze approx. 0.5 g diamond paste onto the DP-cloth, in a circle, or apply some DIAMOND SPRAY for a couple of seconds while the disc is rotating.
5. Wet the DP-cloth with DP LUBRICANT and spread the diamond paste carefully.
6. When removing the cloth from the disc, do it slowly, pulling obliquely upwards. The cloth may be removed from the disc several times without the adhesion being reduced.

HOW TO USE THE DP-CLOTH WITH ADHESIVE BACK

Number of revolutions

For manual and automatic polishing the disc should run at about 250 rpm and 125 rpm respectively.

Lubrication

In the case of manual polishing a small amount of LUBRICANT, BLUE or RED, should be sprayed on to the DP-cloth whenever there is too much friction between the sample and the cloth.

In the case of automatic polishing the needle valve should be adjusted to give between 5 and 30 drops of LUBRICANT per minute depending on the type of cloth, the number of samples, and the material of the samples.

Regeneration

As it is used the DP-cloth will slowly lose its cutting effect, partly on account of the loss of diamond.

However, 0.2–0.4 g diamond paste is enough to restore full polishing effect. After 5-10 hours of polishing on a DP-cloth the cloth will be clogged with metal particles.

The DP-cloth can be regenerated in either of the following ways:

a. The cloth should not be removed from the polishing disc during regeneration. In order to avoid corrosion of the metal pins on the polishing disc they should be unscrewed. Put the disc with the cloth into a flat dish with a 5 % hydrochloric acid solution for about 12 hours. Rinse the cloth carefully in running water and let it dry horizontally.

b. Brush the cloth, while mounted on the disc, with a clean, soft nail-brush under a tepid stream of water and let dry.

Add diamond paste until full polishing effect is restored.

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METALLOGRAPHIC EQUIPMENT
STRUERS SCIENTIFIC INSTRUMENTS
COPENHAGEN · DENMARK

Cleaning of metallographic samples

Wash the samples carefully in water and alcohol and dry in hot air after each polishing stage so that diamond particles are not transferred from one cloth to another.

When very porous samples are polished we recommend ultrasonic cleaning (METASON) after each polishing stage.

DP Diamond Paste

Struers manufacture the following types of diamond paste and diamond spray:

Natural diamond	Synthetic diamond	
45 µ paste		
25 µ –		
15 µ –	15 µ DP-S paste	
	9 µ – –	
7 µ –	6 µ – –	6 µ spray
DP-paste grade A	3 µ – –	3 µ –
– – B	1 µ – –	1 µ –
– – C	¼ µ – –	¼ µ –

All Struers diamond compounds are subjected to rigorous inspection by the electron-microscope and to severe runs of test polishing.
The following table should be considered only as a brief guide to the use of DP-cloth and diamond compound.

Diamond compounds Diamant-Poliermaterialien Composés diamantaires	15 µ, 9 µ, 7 µ, 6 µ pastes, or 6 µ spray	DP/A, 3 µ DP-S pastes, or 3 µ spray		DP/B, 1 µ DP-S pastes, or 1 µ spray		DP/C, ¼ µ DP-S pastes, or ¼ µ spray	
Cloth / Tuch / Drap	DUR	DUR	MOL	MOL	NAP	MOL	NAP
Sintered carbides Hartmetalle Métaux durs	+	+		(+)			
Hardened steels Gehärtete Stähle Aciers durs	+		+	+	(+)		
Mild steels Kohlenstoffarme Stähle Aciers doux	+		+	(+)	+		(+)
Soft metals Weiche Metalle Métaux tendres	+		+	(+)	+		+
Different layers Verschiedene Schichten Couches differentes	+	+		(+)	+	(+)	