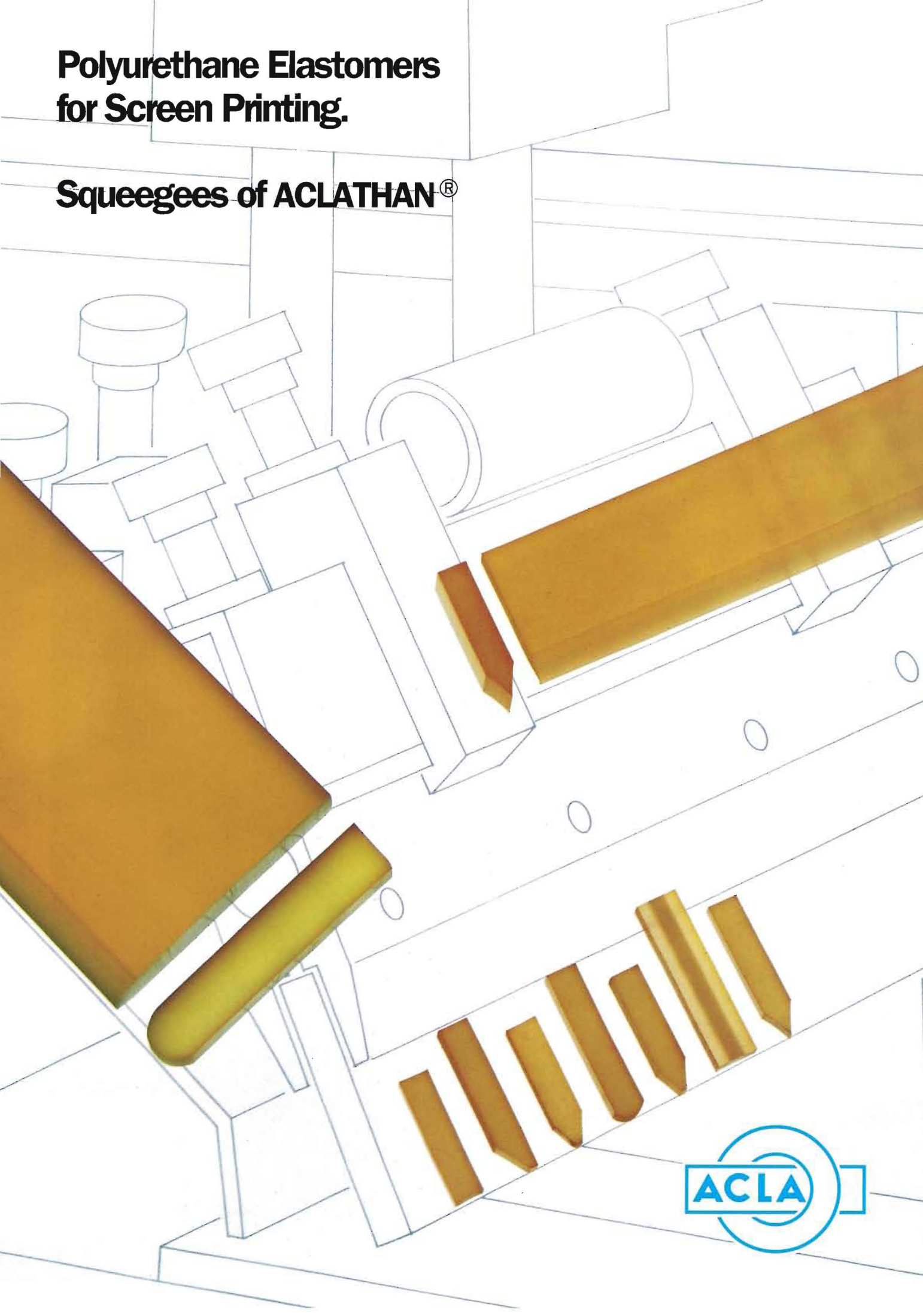
Polyurethane Elastomers for Screen Printing.

Squeegees of ACLATHAN®

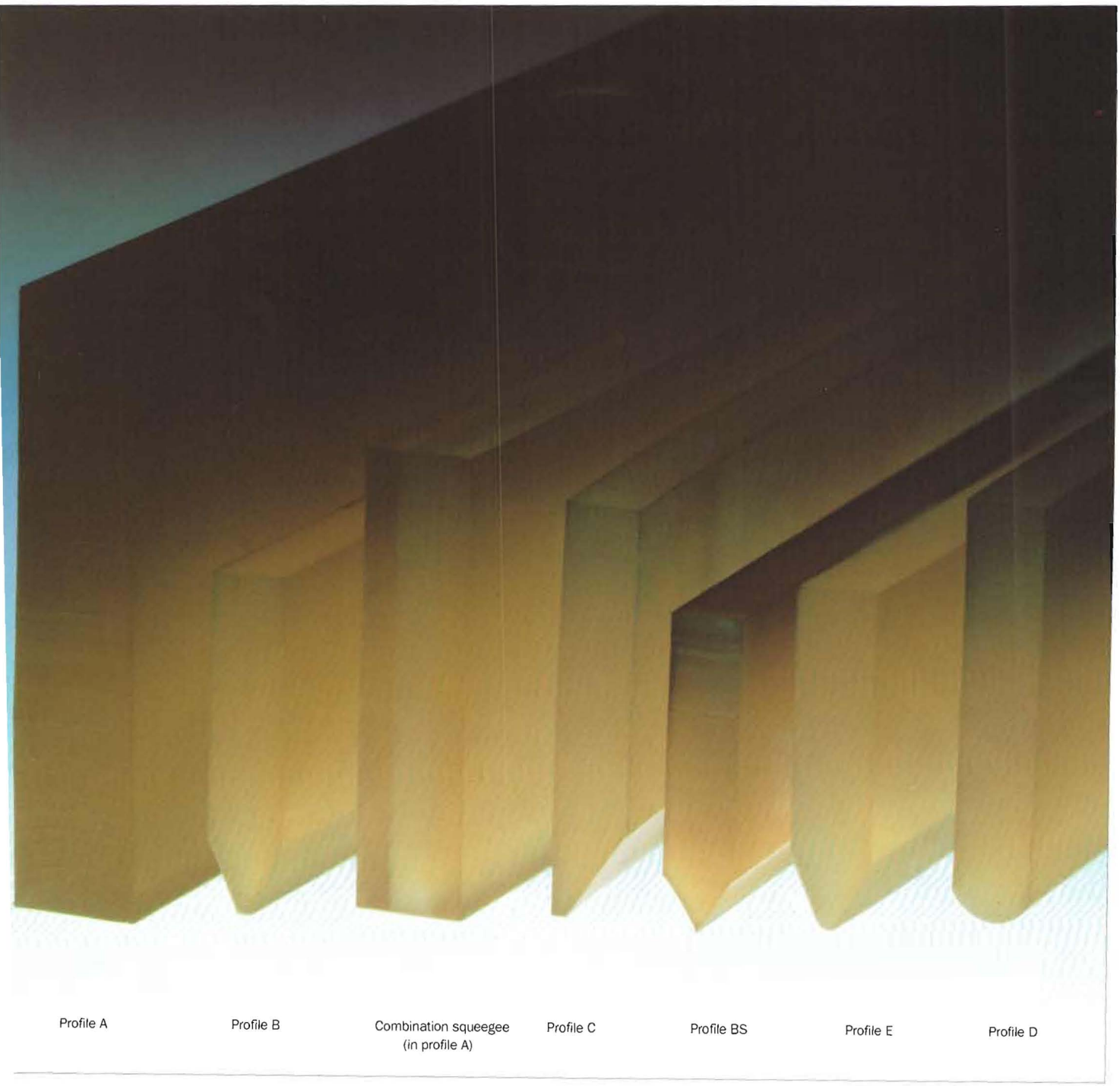


Pro bonum pressum -
Squeegees of ACLATHAN
for screen printing

Colour - coded squeegees/
combination squeegees
of ACLATHAN - N

The colour - coding makes the identification of the material hardness easier:

red = 65$^{\pm 5}$ Shore A,
green = 75$^{\pm 5}$ Shore A,
blue = 85$^{\pm 5}$ Shore A.



Profile A | Profile B | Combination squeegee (in profile A) | Profile C | Profile BS | Profile E | Profile D

Squeegees of ACLATHAN -
the best posibility for printing

Squeegees sold by ACLA are exclusively manufactured of ACLATHAN which is an improved polyurethane elastomer on the basis of Vulkollan®.

By using this high-grade material many advantageous product properties are achieved which stand up to the high requirements of modern screen printing technique.

Excellent wear and tear resistance

The special quality of ACLATHAN minimizes wear at the squeegee edges even with high compression stress.

With proper maintenance a substantially superior wear and tear resistance versus conventional squeegee materials (rubber and other plastics) is noticeable. This is also valid for the tearing strength.

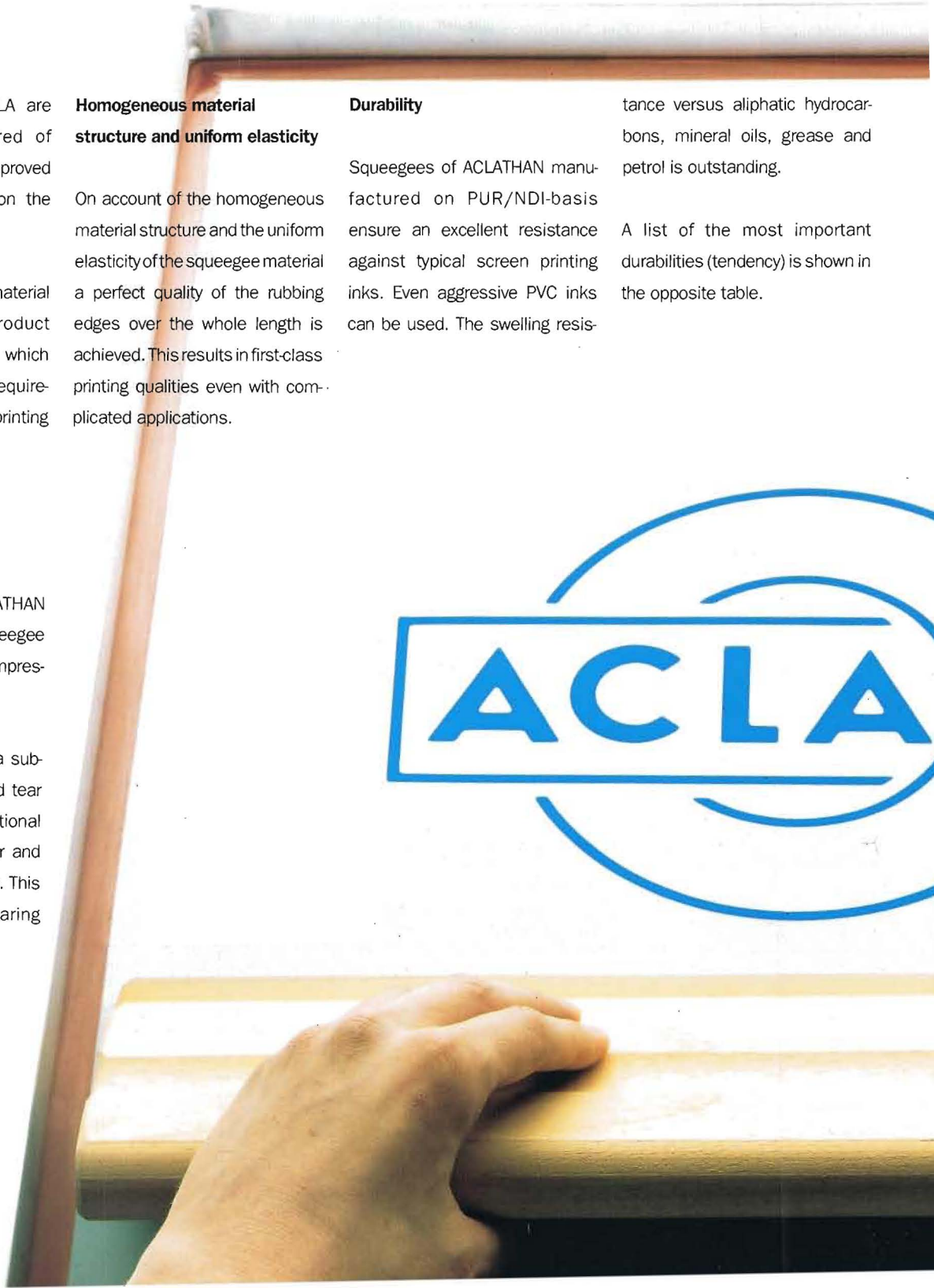
Homogeneous material structure and uniform elasticity

On account of the homogeneous material structure and the uniform elasticity of the squeegee material a perfect quality of the rubbing edges over the whole length is achieved. This results in first-class printing qualities even with complicated applications.

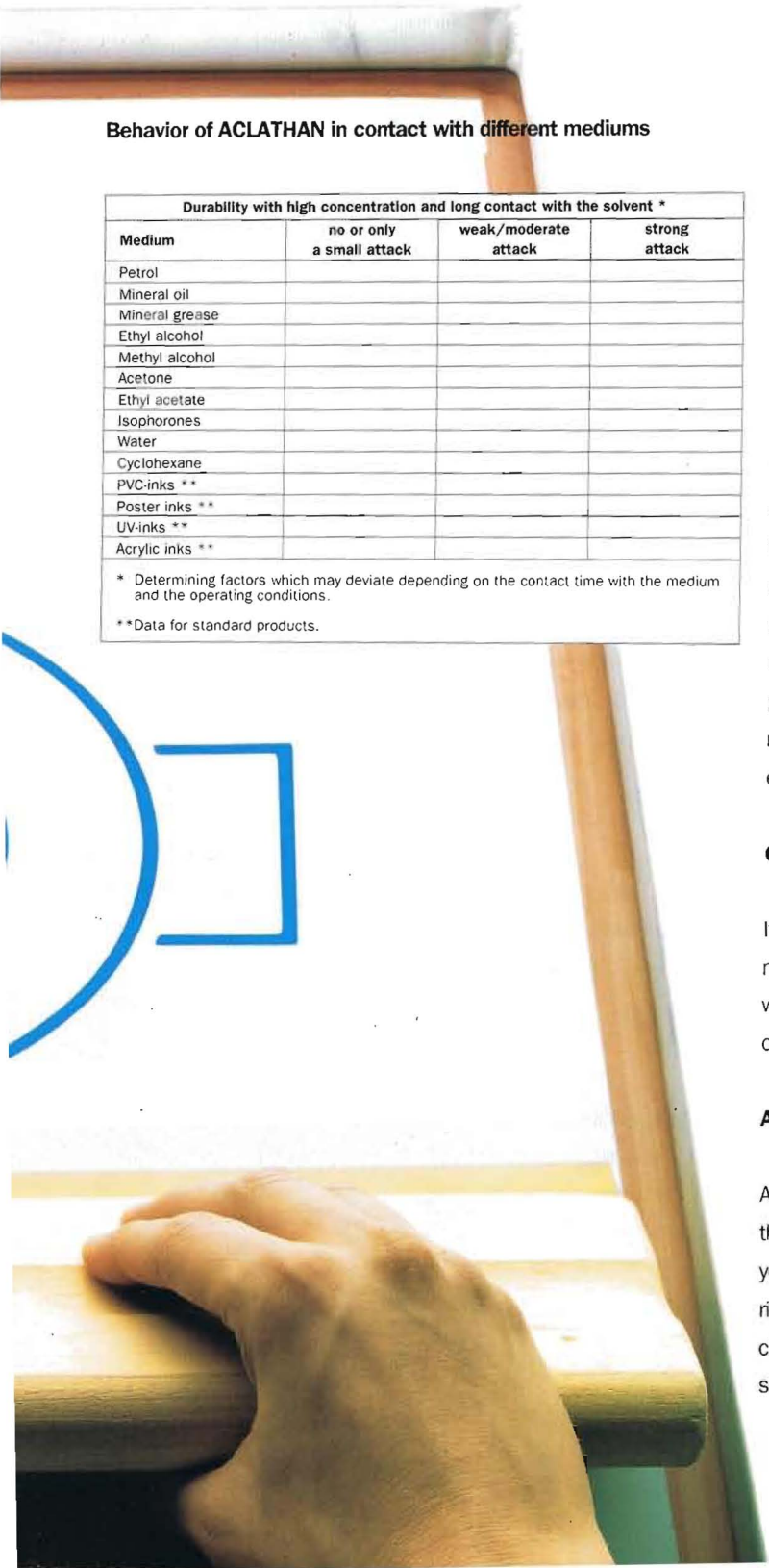
Durability

Squeegees of ACLATHAN manufactured on PUR/NDI-basis ensure an excellent resistance against typical screen printing inks. Even aggressive PVC inks can be used. The swelling resistance versus aliphatic hydrocarbons, mineral oils, grease and petrol is outstanding.

A list of the most important durabilities (tendency) is shown in the opposite table.



At home in efficient screen printing machines: Squeegees of ACLATHAN



Behavior of ACLATHAN in contact with different mediums

Durability with high concentration and long contact with the solvent *			
Medium	**no or only a small attack**	**weak/moderate attack**	**strong attack**
Petrol			
Mineral oil			
Mineral grease			
Ethyl alcohol			
Methyl alcohol			
Acetone			
Ethyl acetate			
Isophorones			
Water			
Cyclohexane			
PVC-inks **			
Poster inks **			
UV-inks **			
Acrylic inks **			

* Determining factors which may deviate depending on the contact time with the medium and the operating conditions.

**Data for standard products.

Storage stability

The ACLATHAN compounds especially developped for screen printing are explicitly resistant to ageing so that the storage of the squeegees does not pose any problems.

The natural elasticity remains stable with dry storage at room temperature. An embrittlement or hardening of the material must not be feared. Its darkening under light influence is a natural phenomenon of the polyurethane materials which has no negative effect on the quality.

Cleaning and maintenance

If the squeegees are regularly maintained and cleaned they will withstand frequent ink colour changes without problems.

A good hint:

An especially long service life of the squeegees can be achieved if you allow them a „recreation period" of at least 10 hours after cleaning before the next operation starts.

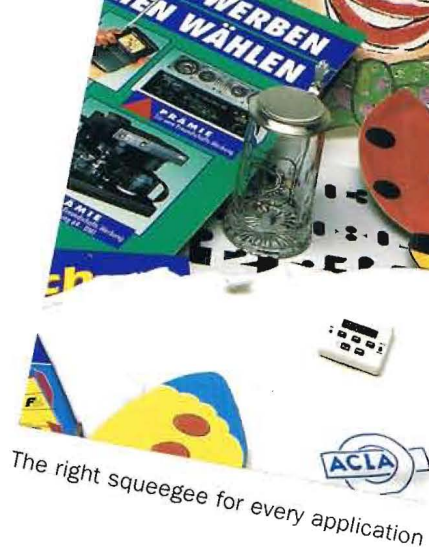
The many good properties of ACLATHAN-squeegees are ideal for all screen printing applications. The advantages are convincing:

- excellent wear and tear resistance
- high elasticity
- homogeneous material structure (sharp edges)
- good solvent resistance
- first-grade raw materials (Vulkollan®)
- all popular hardnesses in Shore A
- all profiles used in practice
- complete program
- good ageing resistance
- extremely long service life

= high economy

We reserve the right to change compounds if an improvement in quality goes along with it.

Fundamental remarks as to the choice of the right squeegee *



Quality has got many reasons. Especially in screen printing it is important to use production components which are well matched according to the application.

ACLA offers a comprehensive program of high-grade squeegees for all purposes. They are a dominating factor in the screen printing technique on account of a long experience in practice.

On the other hand, ACLA is always anxious to improve regularly the quality of its squeegee program by means of a constant dialogue with the technical world, printers, trade, machine producers etc. Pro bonum pressum - for good printing.

Hardness Range

For the various purposes there are squeegees of ACLATHAN in different hardnesses. Since the „softness" of a squeegee does not only depend on the Shore hardness, but also on how short the squeegee is fixed in its holder, the choice of the correct squeegee has to be made by the experienced printer.

Hardness [Shore A]	Type of ACLATHAN	Usual hardness designation
65 ± 5 70 ± 5	1800-S-40 I 1800-S-30	soft
75 ± 5 80 ± 5	1800-S-20 1800	medium
85 ± 5 90 ± 5	2000 2500	hard

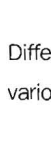
„soft" durometer
For big coloured surfaces and glazes as well as sensitive prints (for example glass and ceramic articles).

„medium" durometer
For nearly all applications and especially for hand squeegees.

„hard" durometer
For fine raster prints, fine-meshed screens and thin ink layers. Suitable for UV-inks.

The Profiles

Different profiles are available for various applications:



Profile A: The universal profile for graphic printing. By turning the squeegee over the edges can be used one after another before regrinding is necessary.

Profile B: Bevelled with flat edge. It is the special profile for body and round printing.

Profile C: Single sided angle. It is especially suitable for automatic printing machines.

Profile D: For thick ink layer. The round profile increases the pressure on the ink going through the screen. This profile is recommended for inks with high consistency and for textile printing.

Profile E: The same as „D", however for more fine-meshed screens.

Profile BS: Same application as „B", however, a higher pressure is applied on account of the pointed bevel.

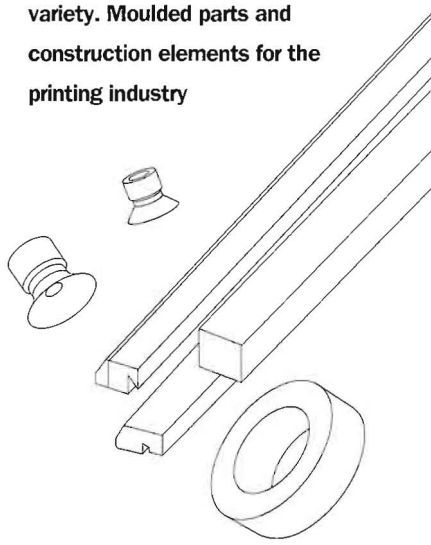
Combination squeegee (in profile A): New squeegee design with 3 layers (sandwich design). By means of the combination „soft/hard/soft" this squeegee combines the advantages of a harder material (higher stiffness) with softer materials (more uniform pressure).

Furthermore we refer to the recommendations of the printing machine manufacturers.

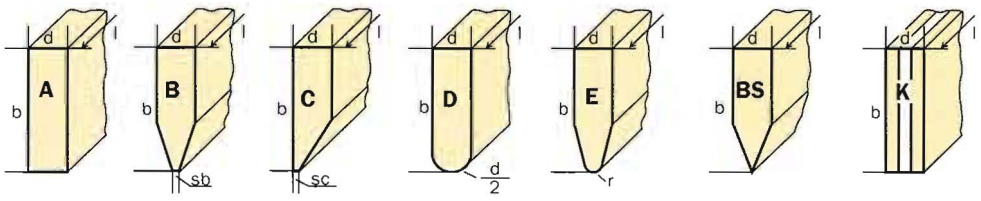
*Recommendations without engagement made on account of our knowledge.

The ACLA Squeegee Program

Competence and product variety. Moulded parts and construction elements for the printing industry



Standard manufacturing program



Profile A*
3000 x 14 x 6 mm
3000 x 20 x 5 mm
3000 x 25 x 5 mm
500 x 25 x 5 mm
3000 x 30 x 5 mm
3000 x 35 x 7 mm
3000 x 35 x 8 mm
3000 x 40 x 5 mm
3000 x 40 x 6 mm
3000 x 44 x 10 mm
3000 x 47 x 9 mm
3000 x 48 x 9 mm
3000 x 50 x 9 mm
3000 x 50 x 10 mm
3000 x 70 x 10 mm
6 ft x 2" x 3/8"
12 ft x 2" x 3/8"

Profile B *
3000 x 20 x 5 mm
3000 x 25 x 5 mm
3000 x 40 x 8 mm

Profile C *
available on request

Profile D *
3000 x 40 x 6 mm
3000 x 48 x 9 mm

Profile E *
3000 x 19 x 5 mm

Profile BS *
3000 x 20 x 5 mm
3000 x 22 x 4 mm
3000 x 22 x 5 mm
3000 x 25 x 5 mm
500 x 25 x 5 mm
10 ft x 7/8" x 3/16"

Combination squeegee in Profil A*
3000 x 35 x 7 (2/3/2) mm
3000 x 48 x 9 (3/3/3) mm

Special executions in profile, dimension and material combinations (combination squeegees) available on request.

*length x width x thickness

Deliverable Sizes		Tolerances	
length = l	up to 3.660 mm	length = l	± 1,5 % as per DIN 7715
width = b	from 14 mm on	width = b	± 1,0 mm
thickness = d	from 4 mm on	thickness = d	+ 0,15 mm/- 0,45 mm <70 Shore A
			± 0,3 mm >70 Shore A

Tolerances of the edges depend on size d

d	sb	sc	r
4 - 6 mm	1,0 ± 0,5 mm	1,5 ± 0,5 mm	1,0 ± 0,4 mm
over 6 mm	1,5 ± 0,5 mm	2,0 ± 0,5 mm	1,5 ± 0,5 mm

Besides squeegees ACLA offers a variety of many other construction elements for the printing industry. Especially moulded parts like suction cups, profiled and cutting bars, transport and feed rollers.

ACLATHAN® **ACLAN®**
ACLACELL® **AUTAN®**
ACLAMID® **ACLASYN®**

Basis for the comprehensive usability of our products is permanent work in developping new compounds and manufacturing techniques as well as extensive knowledge on account of experience in processing polyurethane elastomers for more than 35 years. Thus ACLA can assure a long-term quality standard on the highest level.

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