

Test Inks

for testing surface tension







arcotest GmbH is a manufacturer of test inks for measuring surface tension or surface energy on a wide variety of plastic, glass, ceramic and metal surfaces.

The company was founded in 2003 as an independent company and was integrated with arcotec GmbH.

A spin-off of Fritz Bloss Industrievertretungen, itself founded in 1976, arcotec GmbH was established in 1980 as a manufacturer of corona, plasma or flame pre-treatment devices.

To optimise the assessment of pre-treatment results, the test inks developed for that purpose were used.

These blue-tinted test inks were manufactured according to DIN 53364/ISO 8296 and must still be labelled as toxic.

To respond to market demands for non-toxic inks, such ink mixtures have been produced since 1980.

Although various inks from other manufacturers are called non-toxic today, it is important to note that this does not mean that they are non-hazardous, particularly if customers assume this because there is no corresponding labelling.

In 2020, the new, non-harmful test ink arcotest ORGANIC/BIO was developed, recognisable by its green dye and product body.

Today, arcotest GmbH is very well known among specialists and in many sections of the industry for its products for determining surface tension / surface energy with the help of test inks.



arcotest GmbH is a manufacturer of test inks

Test inks can be used to determine the surface tension (ST) / surface energy (SE) of solids made of plastic, glass, ceramic or metal.

The wetting pattern is used in particular to identify the surfaces' adhesive ability for printing, bonding and painting.

The surface tension is determined by applying a line of ink measuring just a few centimetres in length to the surfaces to be evaluated and observing the behaviour of this ink line. If the line contracts within 2 or 4 seconds—depending on the ink specification—the surface tension of the test area is lower than that of the test ink. Conversely, if the line spreads, this would show that the surface tension of the applied ink is lower than that of the surface.

If the line remains unchanged during the observation period, the value of the surface tension has been reached exactly or is slightly higher.

The same inks can be used **for all measurements**, whether on metal, plastic or other materials.

They can be used for both production and laboratories.

Alternatively, contact angle measuring devices are mainly only used in laboratories as the measurements are timeconsuming and need an expert to operate them.

Test inks are mixtures of chemical substances that can be graduated and therefore have a large detection range, i.e. 18 to 105mN/m (Dyn/cm), to evaluate the surfaces.

To use a simple example, there are water-repellent surfaces (pearl formation) and those that allow the absorption and spreading of water (73mN/m) and there are all the states in between them, where good adhesion values above 38mN/m are to be expected, depending on the properties of the printing ink, adhesive or paint.

In the metal industry, surfaces may be contaminated with oil to a greater or lesser extent depending on the production process. Cleaning is required, and the result of the cleaning process needs to be determined quickly and accurately bearing in mind that this contamination is not always distributed evenly over the surfaces.

Plastics, whether produced as foils or in an injection moulding process as moulded parts, , do not tend to have any contaminated surfaces. They are treated physically or chemically for printing, painting and bonding depending on the material, especially polyolefins, in order to bring the surface tension to the required values.

The test inks are supplied in bottles of 10 millimetres or more or in the shape of a pen and are available from stock.

Customer enquiries are promptly answered by an application technology department and sample testing is also possible.

The shelf life of the test inks is not subject to any special conditions. Generally, it is 6 months.

The usability is generally only limited by contamination that may accidentally be removed from the surfaces. This effect can be eliminated as far as possible by using disposable cotton-tipped applicators.



Testing surface tension with test inks

General information

When clean, solid bodies have a surface tension / specific surface energy, which decreases during the storage period. In many technical processes, such as bonding, painting and printing, surface tension plays an important role and is crucial for determining adhesive bond and wettability.

Surface tension is measured in mN/m and Dyn/cm. It is shown with test inks according to DIN 53364/ISO 8296 or other compositions. When compared to liquids, a solid body's surface energy can only be determined indirectly from the contact angle. In this case, a test liquid with a particular surface tension is applied a solid body's.

Applications of test inks / test pens

Metals:

Assessing surface cleanliness.
Assessing the suitability of cleaning fluids.

Plastics:

Determining the activation energy for further processing (E.g. for printing, bonding, painting, wetting).

Material	Metal / plastics / ceramic etc.
Surface impurities	Oils, dust, antistatic agents, lubricants, release
	agents, fingerprints
Surface cleaning / treatment	Plastics: with water / solvents / pre-treatment Metals: corona / plasma / physical pre-treatment (assuming preliminary cleaning of the surface)
Surface tension (untreated surface)	Metals: 25–35mN/m Plastics: < 38mN/m or higher
Surface tension (treated surface)	38mN/m or more (minimum value for cleanliness) 44mN/m or more (target value for further processing) As metal surfaces develop an oxide layer when exposed to air, the natural surface tension of metals (> 100mN/m) cannot be achieved simply by cleaning. Optimum cleaning results using arcotestCLEANER.

Application





Measuring surface tension

of solid bodies using test ink / pens

	Application		Further information
Measuring means	Ink/pens arcotest® ORGANIC: arcotest® PINK: arcotest® BLUE:	: 30–46mN/m, (non-toxic, non-harmful, non-hazardous according to the CLP Regulation (EC) No. 1272/2008) 22–60mN/m, (non-toxic) 18–105mN/m, (toxic 24–57mN/m) acc. to DIN ISO 8296 and ASTM D 2578-99a	Values established using different measurements (inks/pens/cotton-tipped applicators) or test ink series are not be comparable to the required level of accuracy. Please use only one type of ink (colour)!
Measuring temperature of environment and solid body	20°C +/- 3°C		If the temperature changes by +/- 10° C, the surface tension changes by +/- 1 mN/m.
Condition of the solid body to be tested	Surfaces should not b	oe touched with bare hands.	Fingerprints may reduce the surface tension. (Wear gloves)
Application	test ink and wipe off e Ink/pens: With a little 40mm without touch applications. Make su even, continuous line	tipped applicators only once	Use arcotest® cotton-tipped applicators on untreated metal. Commercial cotton buds are not recommended as they contain cosmetic oil. When using cotton-tipped applicators, ensure even application (as with the brush from bottled ink), i.e. do not apply too much ink to avoid minimal differences in the values shown (thick application amounts may show a slightly higher (1mN/m) value than thinner ones).
Observation period (after ink application)	arcotest® ORGANIC: arcotest® BLUE: arcotest® PINK:	30 to 46mN/m 2 seconds 18 to 105mN/m 2 seconds 22 to 26mN/m 2 seconds 28 to 44mN/m 4 seconds 45 to 60mN/m 2 seconds	If the edges of the ink line applied by brush/cotton-tipped applicator or pen contract within 2 or 4 seconds, depending on ink specification, repeat the measurement using the next-lowerest value. If the edges run, repeat the measurement with the next-highest value. The surface tension is achieved when the line remains straight for 2 or 4 seconds, depending on ink specification.
Result	 Homogenous, ever Bubbles form (poo Ink runs 		The surface tension has reached or slightly exceeded the set value indicated on the bottle. Not clean; repeat cleaning or pre-treat. Surface tension is lower than ink value. Surface tension is higher than ink value
Shelf life	6 months from open Unopened shelf life is		Individual components of the test inks evaporate at different rates. Close bottles and pens tightly after use.
Usability	This depends on how the ink is used. If contamination enters the bottles or markers, check if it affects the measuring		

values.

Surface tension of solid bodies

If surfaces are tested for their surface tension, the values can always change - towards lower values.

There are various influencing factors. Especially in the plastics sector, a reduction in surface tension occurs when the surfaces have been activated

The timing of the change depends on various factors, whereby the changes can generally take from days to several weeks.

The values of the surface tension should always be compared with further processing at the customer's site and be prepared with the values measured by the manufacturer of the arcotest goods before shipment. There is a possibility to increase surface tension values again, whereby the physical methods - corona - flame - plasma can be used. It makes little sense to repeat the cleaning process with washing and drying, especially if the physical treatment methods have the potential to significantly increase the surface tension values again, which is hardly possible through repeated cleaning.

Influencing factors are:

- · chemical structure of the material
- duration of storage period, if the materials are lying, whether uncleaned, cleaned or activated
- · temperature changes during storage
- possibilities of contamination during storage
- · oxidation of metal surfaces over time
- transport conditions of the material from the manufacturer to the customer

Material reference values of natural surface tension

Materials	Abbreviation	mN/m at 20 °C
Plastics		
Polyethylene	PE	32
Polypropylene	PP	30
Polyolefins (polyethylene, polypropylene, polybutylene / polybutene)	PE, PP, PB	30
Polyvinyl chloride	PVC	40
Polystyrene	PS	38
Polyurethane	PUR	37
Polyethylene terephthalate	PET	44
Polybutadiene	PU	45
Polytetrafluorethylene	PTFE	21
Polyacrylonitrile PAN	PAN	46
Polyether sulfone	PES	47
Polycarbonate	PC	42
Phenol formaldehyde resin	PF	42
Silicone		22
Epoxy resins		45
Aluminium foil		41
Glass		73
Steel		43-46
Reference value of surface tension for material cleanliness (metal, glass, ceramics, etc.)		38+



Test Inks ORGANIC

- Non-toxic
- Not harmful to health
- Not subject to labelling Not harmful to the environment



arcotest® ORGANIC Test Inks are special testing liquids in ranges of defined surface tension – in green colour. They were developed to obtain non-toxic test inks that do not require labelling. The application and handling of arcotest® ORGANIC is based on DIN 53364/ISO 8296.

ORGANIC Test Inks are label-free according to the Ordinance on Hazardous Substances (EU) No. 1272/2008 (CLP).

The ORGANIC Test Inks are available in bottles or in pens from 30 to 46 mN/m (Dyn/cm).

arcoweb®

Disposable cloth

• 38 mN/m

• with accuracy +/- 1,0 mN/m

• observation time: 2 seconds

· application width: 25 mm





Test Pens ORGANIC

- from 30 to 46 mN/m
- with accuracy +/- 1.0 mN/m
- observation time: 2 seconds
- simple handling
- available in sets of 4, 6, and 8 or as single pens, 5 ml



Test Pens ORGANIC Jumbo

- from 30 to 46 mN/m in steps of 2
- with accuracy +/- 1.0 mN/m
- observation time: 2 seconds
- line width 15 mm
- optimal for testing large areas
- available in sets of 4, 6, and 8 or as single pens, 17 ml



Test Inks ORGANIC in bottles

- from 30 to 46 mN/m
- with accuracy +/- 0.5 mN/m
- observation time: 2 seconds
- available in bottles of 10, 100 or 250 ml or in sets of 7 bottles of 10 ml





Test Inks PINK

The Pink Test Inks are special testing liquids in ranges of defined surface tension. They were developed to get "non toxic" Test Inks . These pink Test Inks aremeant to substitute the blue coloured inks as they were declared to be toxic according to DIN 53364 / ISO 8296.

The Pink Test Inks are available in bottles or in pens. Non-toxic.



Test Pens PINK

- 22 to 60 mN/m
- with accuracy +/- 1.0 mN/m
- observation time: 22 to 26 mN/m: 2 sec. 28 to 44 mN/m: 4 sec. 45 to 60 mN/m: 2 sec.
- simple handling
- available in sets of 4, 6, and 8 or as single pens, 5 ml



Test Pens PINK Jumbo

- 30 to 50 mN/m
- with accuracy +/- 1.0 mN/m
- observation time: 30 to 44 mN/m: 4 sec. 46 to 50 mN/m: 2 sec.
- line width 15 mm
- optimal for testing large film areas
- available in sets of 4, 6, and 8 or as single pens, 17 ml



Test Inks PINK in bottles

- 22 to 60 mN/m
- with accuracy +/- 0.5 mN/m
- observation time: 22 to 26 mN/m: 2 sec. 28 to 44 mN/m: 4 sec. 45 to 60 mN/m: 2 sec.
- available in bottles of 10, 100 or 250 ml or in sets of 7 bottles of 10 ml





Test Inks BLUE

The Blue Test Inks are special testing liquids in ranges of defined surface tension (from 30 to 72mN/m in accordance with ISO 8296 / ASTM 2578 / DIN 53364). The surface tension of a substrate is checked by simply applying the Test Ink to the surface. The Blue Test Inks are available in a range from 18.4 to 105 mN/m. Available in bottles or in pen form (28 to 72 mN/m).

Colourless: 18, 76, 84, 90, 105 mN/m.

Toxic from 24 to 57 mN/m.



Test Pens BLUE

- from 28 60 mN/min steps of one by one from 62 – 72 mN/m in steps of two by two
- with accuracy +/- 1.0 mN/m
- observation time is 2 sec.
- simple handling
- no spilling
- available in sets of 4, 6, and 8 or as single pens, 5 ml





Test Inks BLUE in bottles

- 18.4 to 105 mN/m
- with accuracy +/- 0.5 mN/m
- observation time is 2 sec.
- available in bottles of 10, 100 or 250 ml or in sets of 7 bottles of 10 ml





QUICKTEST 38®

RAPIDTEST 38®

Quicktest 38®/ RAPIDTEST 38® serves to check if the treatment of polyolefins (polypropylene, polyethylene, polybutylene) has shown an effect. A stroke of the pen leaves a full line on the material if the material's surface tension has a value of 38 mN/m or more. If the material's surface tension is below 38 mN/m, the fluid contained in the pen will form small drops on the surface. The line applied with QUICKTEST 38 or RAPIDTEST 38 will dry within seconds and does not need to be wiped off.



not toxic to aquatic organisms
 does not cause eye damage
 not harmful to health

5 mm

QUICKTEST 38® Jumbo

RAPIDTEST 38® Jumbo



- better color presentation
- line width 15 mm
- optimal for testing large film areas



ADVANTAGES:

15 mm

- extremely easy to handle
- perfect for quick checks on polyolefins
- no wiping off necessary
- lasting display of result
- archiving of test result possible

ATTENTION:

15 mm

The test fluid of QUICKTEST 38®/RAPITEST 38® contains solvent. This may attack solvent-sensitive materials (e.g. PS) and lead to the erroneous interpretation of test results!

arcotestCLEANER

is a solution based on ethyl alcohol. It serves to improve cleanliness on various surfaces such as metals, glass and plastics. With arcotestCLEANER, tested parts can also be reused by wiping off the test ink. Given the different composition of surfaces, a suitability test should be carried out before each application.

- better cleanliness through surface cleaning
- solvent system based on ethyl alcohol
- no unpleasant odour
- dries very quickly
- can clean and possibly increase adhesive strength
- simple removal of the applied test ink in one single step
- available in 250 ml aluminium bottles



Cotton Tipped Applicators

for testing inks

approved, 100 pcs., 15 cm long

- ideal for handling ink from 100 ml and 250 ml glass bottles
- suitable for single use when the surface is dirty



Test Light

for improved visibility in case of low contrast between measuring surface and test ink, e.g. dark plastic / dark ink. 7 cm long



arcoweb[®]

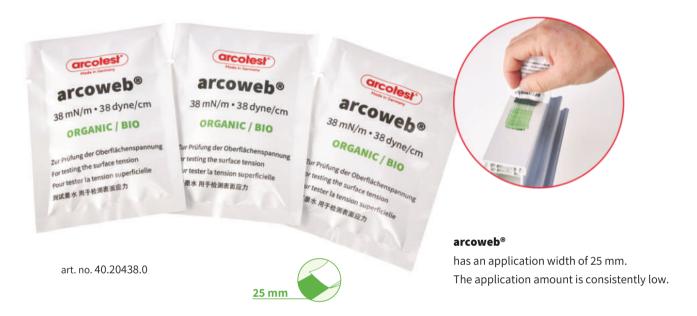
38 mN/m • 38 dyne/cm

Surface tension test with arcoweb®

Test inks can be used to determine the surface tension of plastic, metal, glass and other solid bodies.

They can identify the cleanliness and adhesive strength of the surfaces to be coated.

The mesuring value are given in mN/m (or dyne/cm). Results above 38 mN/m can be seen as useable.



arcoweb®'s tissues are intended for single use. They are sealed into a paper/aluminium/composite packaging. Thanks to the smaller amount of ink, they cannot run. Handling is such that no ink is spilled and your hands are not coloured by the green ink. The included test ink is non-hazardous according to the CLP Regulation (EC) No. 1272/2008, non-toxic and non-harmful.

ORGANIC / BIO

38 mN/m • 38 dyne/cm

Application width: ca. 25 mm

Accuracy: +/- 1 mN/m

Observation time: 2 seconds Available in individual packages Packaging size 60 × 80 × 6mm

Scope of application:

- Construction (welding of steel girders or on mineral surfaces)
- any large solid bodies

Benefits:

- ideal for large surfaces
- · consistently small application volume
- · no spilling
- easy handling
- · non-toxic
- non-harmful
- · cost-efficient

arcospray 38®

38 mN/m • 38 dyne/cm

The **arcospray 38®** test ink is a testing liquid with a surface tension of 38 mN/m. It has been designed to quickly detect whether the surface is grease-free, as values equal or greater than that mean freedom from grease. You can use thermal radiation—infrared—to remove arcospray 38[®] without residue. Tested parts can be used further. arcospray 38® makes it possible to quickly and easily assess large and small surfaces, such as chain links, alike.



The surface tension is determined by spraying test ink onto the surfaces to be assessed.

Application:

- Hold the spray bottle at a distance of approx. 15 cm to the test surface
- Spray 2 to 4 times



Result:

If the test ink contracts, the test surface tension is smaller than 38 mN/m.

If the applied test ink remains unchanged, the surface tension value is 38 mN/m or slighly greater.

Surface tension value met

Ming / 100 ml

38 mN/m • 38 dyne/cm with accuracy +/- 1.0 mN/m Available in spray bottles

3,4 fl oz / 100 ml

art. No. 40.80238.0 UFI-Code: QA47-HK5E-6S3Q-G62J

arcospray 38 UII-Code: QA17-HKSE-653Q-662 Philung der Oberflächenspa Histing the surface tension

for tester la tension superficielle Probar la tensión superficial

texare la tensione superficier

逐步用于检测表置应力 3/1 floz / 100 ml

Surface tension value not met

- ideal for very small and large surfaces
- easy handling
- non-toxic
- non-harmful
- non-noxious
- residue-free testing of surfaces
- arcospray ink is easy to spray
- result visible within 2 seconds
- non-contact surface testing

arcotest® ORGANIC transport case

For the transport and storage of test ink bottles. Ideal for holding bottles during use.

In the production of our green cases, we have completely dispensed with the use of petroleum. It consists of 93% renewable raw materials such as glucose, natural waxes, minerals, as well as natural fibers. The case is completely recyclable.



Case SET



ORGANIC case **SET** 8-piece

Case content:

- ORGANIC 32-44 mN/m without brush
- cotton-tipped applicators



PINK case **SET 9-piece**

Case content:

- PINK set A 32-44 mN/m without brush
- arcotestCLEANER 250 ml
- cotton-tipped applicators



BLUE case **SET 9-piece**

Case content:

- BLUE set A 28-56 mN/m without brush
- arcotestCLEANER 250 ml
- cotton-tipped applicators

Transport case



Transport case, small for 7 test ink bottles of 10 ml, with separate storage for test pens or cotton tipped applicators



Transport case, small for 7 test ink bottles of 10 ml, with separate storage for test pens or cotton tipped applicators



Transport case, large for 24 test ink bottles of 10 ml

arcotest® Plasma Set

The arcotest® Plasma Set contains the piezobrush® PZ3 handheld plasma unit for manual surface treatment with atmospheric pressure plasma and an arcotest® OPTIONAL pen set of 4 pens. The set consisting of 4 test pens à 5 ml of your own choice. In addition, the set contains two different modules. Here, the **standard module** is suitable for the treatment of non-conductive materials such as plastics. The **Nearfield module**, on the other hand, is used for the treatment of conductive materials such as stainless steel or CFRP.



The arcotest® Plasma Set was developed as a compact handheld plasma device for use in laboratories, predevelopment and the assembly of small series. With a maximum power consumption of 18 W, the Piezoelectric Direct Discharge (PDD®) technology generates cold active plasma at a temperature of less than 50°C. At the heart of this portable plasma device is the **TDK CeraPlas™ piezo plasma generator** - a high-voltage discharge device for generating cold atmospheric pressure plasma. Atmospheric pressure plasma is used to set up the surface tension highly efficient on many materials and to reduce germs and odours.

Application examples:

- Activation and functionalisation of surfaces of various base materials
- Improvement of wettability
- Optimisation of bonding, painting, printing and coating processes
- Surface treatment of plastics, glasses, ceramics, metals, semiconductors, natural fibres and composites
- Fine cleaning and odour reduction

Product overview



Test Inks ORGANIC in bottles

from 30 to 46 mN/m // with accuracy measurement \pm 0.5 mN/m // without brush // not subject to labelling



32 34 36 38 40 42 44 mN/m

7 glass bottles of 10 ml art, no. 40,20000,4 without brush



OPTIONAL set of 7

30 to 46 mN/m

7 glass bottles of 10 ml of your choice art. no. 40.20001.4 without brush



10 ml

30 to 46 mN/m

standard and special art. no. 40.201XX.4 without brush



30 to 46 mN/m

Plastic bottle, especially for use in the food sector

art. no. 40.204XX.4 without brush



100 ml

30 to 46 mN/m

standard and special art. no. 40.202XX.0 art. no. 40.202XX.0 (SE)



250 ml

30 to 46 mN/m

standard and special art. no. 40.203XX.0 art. no. 40.203XX.0 (SE)



arcoweb®

38 mN/m

Application width 25 mm art. no.40.20438.0



arcospray 38®

38 mN/m labeling required

for small and large areas art. no. 40.80238.0

Test Pens ORGANIC

from 30 to 46 mN/m // with accuracy measurement ±1.0 mN/m // not subject to labelling



STANDARD set of 8

30 32 34 36 38 40 42 44 mN/m

8 test pens art. no. 40.25000.0



OPTIONAL set of 8

30 to 46 mN/m

8 test pens of your choice art. no. 40.25001.0



OPTIONAL set of 6

30 to 46 mN/m

6 test pens of your choice art. no. 40.25002.0

not subject to labelling



OPTIONAL set of 4

30 to 46 mN/m

from 30 to 46 mN/m in steps of 2 // with accuracy measurement ± 1.0 mN/m //

4 test pens of your choice art. no. 40.25003.0



TEST PEN

30 to 46 mN/m

standard and special art. no. 40.251XX.0

Test Pens ORGANIC Jumbo



STANDARD set of 8

30 32 34 36 38 40 42 44 mN/m

8 test pens art. no. 40.26000.0



OPTIONAL set of 8

30 to 46 mN/m

8 test pens of your choice art. no. 40.26001.0



OPTIONAL set of 6

30 to 46 mN/m

6 test pens of your choice art. no. 40.26002.0



OPTIONAL set of 4

30 to 46 mN/m

4 test pens of your choice art. no. 40.26003.0



TEST PEN Jumbo

30 to 46 mN/m

art. no. 40.261XX.0



Test Inks PINK in bottles

from 22 to 60 mN/m // non-toxic with accuracy measurement ± 0.5 mN/m



STANDARD set A

32 34 36 38 40 42 44 mN/m

7 glass bottles of 10 ml art. no. 40.60000.0 with brush art. no. 40.60000.4 without brush



PET 10 ml

32 to 44 mN/m

Plastic bottle, especially for use in the food sector art. no. 40.700XX.0 with brush art. no. 40.700XX.4 without brush

STANDARD: 30 32 34 36 38 40 42 44 46 48 50 52 54 56 58 60 mN/m $22\ 24\ 26\ 28\ 31\ 33\ 35\ 37\ 39\ 41\ 43\ 45\ 47\ 49\ 51\ 53\ 55\ 57\ 59\ mN/m$ SPECIAL(SE):



OPTIONAL set of 7

22 to 60 mN/m

7 glass bottles of 10 ml art. no. 40.60001.0 with brush art. no. 40.60001.4 without brush



100 ml

22 to 60 mN/m

standard and special art. no. 40.602XX.0 art. no. 40.602XX.0 (SE)



10 ml

22 to 60 mN/m

standard and special art. no. 40.601XX.0 with brush art. no. 40.601XX.4 without brush



250 ml

30 32 34 36 38 40 42 44 mN/m

22 to 60 mN/m

standard and special art. no. 40.603XX.0 art. no. 40.603XX.0 (SE)

Test Pens PINK



STANDARD set of 8

30 32 34 36 38 40 42 44 mN/m

8 test pens art. no. 40.45001.0 from 22 to 60 mN/m // non-toxic with accuracy measurement ± 1.0 mN/m



OPTIONAL set of 8

22 to 60 mN/m

8 test pens of your choice art. no. 40.45000.0



OPTIONAL set of 6

22 to 60 mN/m

6 test pens of your choice art. no. 40.45002.0



STANDARD:

OPTIONAL set of 4

22 to 60 mN/m

4 test pens of your choice art. no. 40.45003.0



TEST PEN

22 to 60 mN/m

standard and special art. no. 40.451XX.0

Test Pens PINK Jumbo

from 30 to 50 mN/m // non-toxic // with accuracy measurement ± 1.0 mN/m



STANDARD set of 8

30 32 34 36 38 40 42 44 mN/m

8 test pens art. no. 40.46000.0



OPTIONAL set of 8

30 to 50 mN/m

8 test pens of your choice art. no. 40.46001.0



OPTIONAL set of 6

30 to 50 mN/m

6 test pens of your choice art. no. 40.46002.0



OPTIONAL set of 4

30 to 50 mN/m

4 test pens of your choice art. no. 40.46003.0



TEST PEN Jumbo

30 to 50 mN/m

art. no. 40.461XX.0

Product overview



Test Inks BLUE in bottles

from 18 to 105 mN/m // toxic from 24 to 57 mN/m // with accuracy measurement \pm 0.5 mN/m // 30 to 72 mN/m according to ISO 8296 (DIN 53364 and ASTM)



28 35 38 41 44 48 56 mN/m

7 glass bottles of 10 ml art. no. 40.30001.0 with brush art. no. 40.30001.4 without brush



Set B

28 32 35 38 41 44 48 mN/m

7 glass bottles of 10 ml art. no. 40.30000.0 with brush art. no. 40.30000.4 without brush



Set C

STANDARD:

SPECIAL (SE):

30 32 34 36 38 40 42 mN/m

7 glass bottles of 10 ml art. no. 40.30003.0 with brush art. no. 40.30003.4 without brush



18 (colourless) 20 22 24 26 29 30 31 33 34 36 37 39 40

42 43 45 46 47 49 50 51 52 53 54 55 57 58 60 62 64

28 32 35 38 41 44 48 56 mN/m

66 68 70 72 mN/m

18 (colourless) 20 to 72 mN/m

7 glass bottles of 10 ml of your choice art. no. 40.30002.0 with brush art. no. 40.30002.4 without brush



10 ml

18 (colourless) to 72 mN/m

standard and special art. no. 40.301XX.0 with brush art. no. 40.301XX.4 without brush



100 ml

18 (colourless) to 72 mN/m

standard and special art. no. 40.302XX.0 art. no. 40.302XX.0 (SE)



250 ml

18 (colourless) to 72 mN/m

standard and special art. no. 40.303XX.0 art. no. 40.303XX.0 (SE)



74 76 84 90 105 mN/m

special art. no. 40.301XX.0 (SE) with brush

Test PENS BLUE

from 28 - 60 mN/m in steps of one by one // from 62 - 72 mN/m in steps of two by two toxic from 24 to 57 mN/m // with accuracy measurement +/- 1.0 mN/m



OPTIONAL set of 8

28 to 72 mN/m

8 test pens of your choice art. no. 40.35001.0



OPTIONAL set of 6

28 to 72 mN/m

6 test pens of your choice art. no. 40.35002.0



28 to 72 mN/m

4 test pens of your choice art. no. 40.35003.0



28 to 72 mN/m art. no. 40.351XX.0



QUICKTEST 38®



QUICKTEST 38®

38 mN/m approx. quick check for polyolefins, 5 ml art. no. 40.55100.0



QUICKTEST 38® Jumbo

38 mN/m approx. quick check for polyolefins, 15 ml, 15 mm line width art. no. 40.55100.4



RAPIDTEST 38®

38 mN/m approx. quick check for polyolefins, 5 ml art. no. 40.66100.0

RAPIDTEST 38®



RAPIDTEST 38® Jumbo

38 mN/m approx. quick check for polyolefins, 15 ml, 15 mm line width art. no. 40.66100.4

Case SET



arcotest ® PINK case SET

Case content:

- PINK set A 32 44 mN/m without brush
- arcotestCLEANER 250 ml
- cotton tipped applicators

art. no. 40.60000.8 art. no. 40.60001.8 (optional set)



arcotest ® BLUE case SET

Case content:

- BLUE set A 28 56 mN/m without brush
- arcotestCLEANER 250 ml
- cotton tipped applicators

art. no. 40.30001.8

art. no. 40.30002.8 (optional set)



arcotest ® ORGANIC case SET

Case content:

- ORGANIC set 32-44 mN/m without brush
- cotton tipped applicators

art. no. 40.20000.8

art. no. 40.20001.8 (optional set)

Case



TRANSPORT CASE, large

for 24 test ink bottles of 10 ml without contents art. no. 40.31900.0



TRANSPORT CASE, small

art. no. 40.31800.5 (green)

for 7 test ink bottles of 10 ml, with storage for test pen (set of 4) or cotton tipped applicators without contents art. no.40.31800.0 (blue)





arcotest®Plasma-Set

Case content:

- handheld plasma device piezobrush® PZ3 for manual surface treatment
- arcotest® 4 test pens of your choice art. no. 40.00000.8

Accessories



COTTON-TIPPED APPLICATORS

approved, 100 piece/pack, 15 cm long art. no. 40.31700.0



TEST LIGHT

for use in case of low contrast between measuring surface and test ink art. no. 40.31600.0



optimizes cleanliness content 250 ml art. no. 40.32000.0







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