



# CONSUMABLES & TOOLS

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PRECISION OPTICS

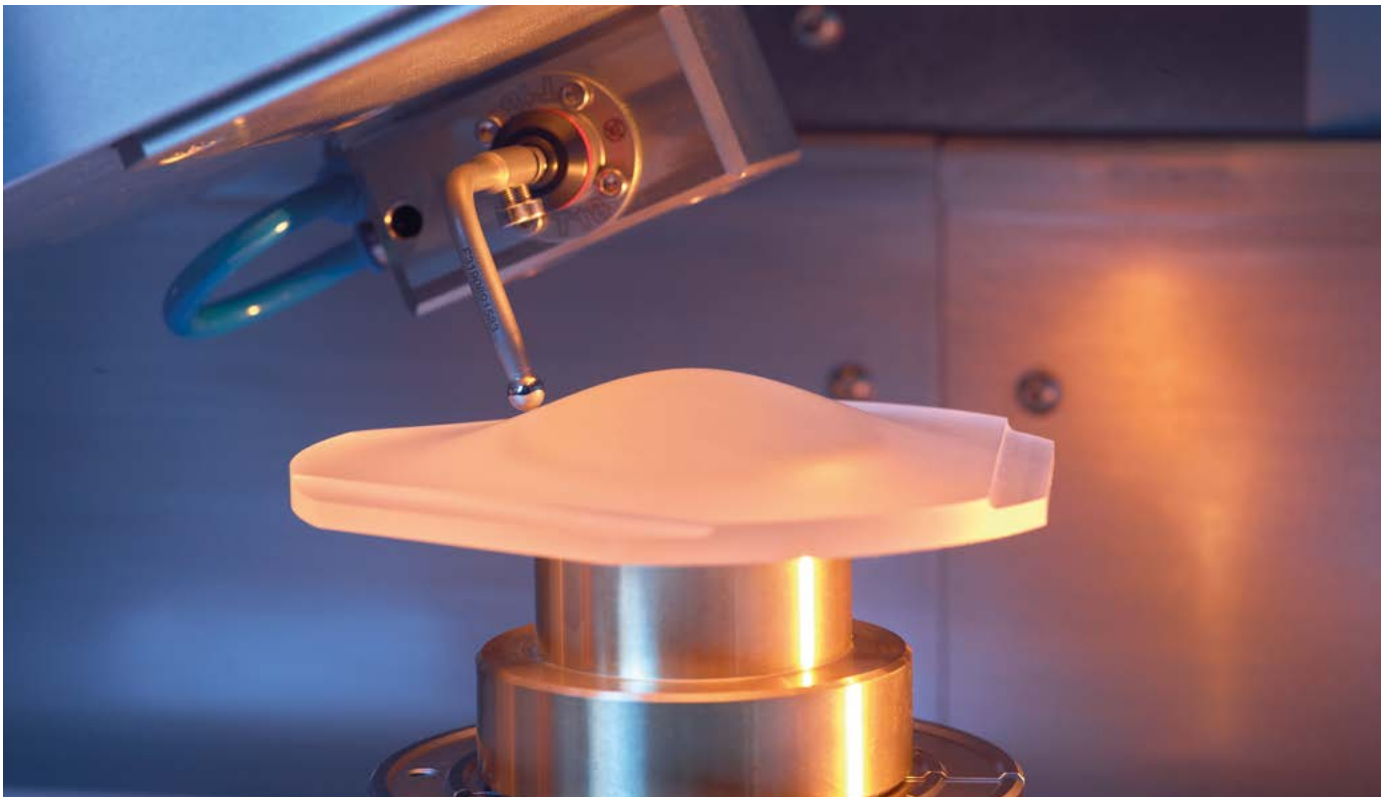
For more than 90 years we have provided optical facilities around the world with precision optical products and equipment. Our approach focuses on the integration of the industry's finest equipment matched with process consumables that ensure optimum results.

Be assured that each item in this catalog is designed and manufactured to maximize the efficiency and performance of your equipment. Our goal is to help give you a competitive edge by optimizing workflow and improving yields.

When choosing consumable products, it's important that the materials are suitable for the machine, they bring optimum results, and the quality is consistent. Be confident that our consumable products fulfill these requirements.

**For world-class service and more information on our products, contact our customer service department.**

**[precision@satislohusa.com](mailto:precision@satislohusa.com)  
800-866-5640**





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# COOLANT K 40



*Water-mixable coolant concentrate, containing mineral oil, for grinding and lapping of optical elements with sintered and electroplated diamond tools in ophthalmic and precision optics.*

## TECHNICAL DATA

Color: yellow  
pH-value: 9.6 (at 5%)  
Kinematic viscosity: about 1750 (cSt) mm<sup>2</sup>/s  
Refractometer factor: 1.25

## BENEFITS

High stock removal  
Excellent surface quality  
Free from chlorine, nitrite, phenol and PCB  
Usable in a wide field of application

## RECOMMENDATIONS

Before switching over from any other coolant to K 40, please clean thoroughly machines, tubes, pumping and coolant systems.  
Please check coolant suspension regularly with a hand refractometer, and if necessary, add K 40.  
In order to avoid foaming the return tube should be placed beneath the surface of the coolant. If foam forms in spite of that, add defoamer E 100.  
Store away from frost.

## APPLICATIONS

Working process	Satisloh diamond tool	Concentration	Temp.
Pre-grinding	wheels – all metal and plastic bonds	6%	<20°C
Pre-grinding	wheels, electroplated bonds	2,5%	<20°C
Pre-grinding	flat-grind tools with toothed smoothing rings	3%	<20°C
Pre-grinding	diamond pellets or segments	3%	<20°C
Form grinding	electroplated bonds	3%	<20°C
Rounding	rounding tools	3%	<20°C
Sawing	saw blades	5%	<20°C
Lapping	pellets & diamond pads	3%	<20°C
Centering	centering wheels	3%	<20°C
Bevelling	bevel sections	3%	<20°C

## ORDERING INFORMATION

		Order No.
Coolant K 40	200-kg-barrel	92-000-001
Coolant K 40	20-kg	92-000-004
Coolant K 40	1 gallon	92-010-286

## TECHNICAL DATA

- Color: clear blue liquid
- pH-value: 9.3 – 9.8

## BENEFITS

- Increase tool life
- Improve Surface Finish 20-30%
- Reduced Cycle Time, More Parts per Shift
- High levels of Biological Protection
- Fully Synthetic and Waste Treatable
- Will not affect most waxes

## RECOMMENDATIONS

A highly contemporary corrosion protection package that protects both ferrous and nonferrous metal substrates. LH-105 is non-petroleum based grinding fluid, able to be easily integrated into the existing plant production equipment and is highly waste treatable.

## APPLICATIONS

LH-105 is used for milling, drilling, grinding and lapping of optical, technical and medical optics.

## ORDERING INFORMATION

		<b>Order No.</b>
LH 105 Plus	55 gal drum	92-011-322
LH 105 Plus	5 gal pail	92-011-328

*Synthetic coolant ideal for finishing of precision and technical optical surfaces.*



# BIOCLEAN PLUS TANK CONDITIONER

*Tank side microbial control additive*



## TECHNICAL DATA

- Functional pH operating range: 8-12
- Non-volatile chemistry

## BENEFITS

- Works very well at low concentrations and is highly dilutable
- Keeps biological activity in check and keeps pH in a safe, non-hospitable range for biological growth
- Works well in hard water conditions up to 400-600 ppm in dilute form
- Compatible with anionic, cationic, and non-ionic compounds. Will not interfere with the functionality of materials such as flocs or coagulants.

## RECOMMENDATIONS

Simply identify the tank size in questions and add BioClean Plus Tank Conditioner at a dilution rate of 50:1; for example, one gallon of BioClean Plus Tank Conditioner for every 50 gallons of sump capacity. Add BioClean Plus Tank Conditioner to the coolant tank at the 50:1 dilution on a quarterly basis to ensure continual product performance, and whenever replacing the coolant charge in the tank system.

## APPLICATIONS

BioClean Plus Tank Conditioner is a highly effective tank side conditioner for both synthetic coolants and soluble oils. It can be used in grinding applications as well as machining. It is very useful in eliminating foul odors caused by microbial growth and excessive tramp oil contamination.

## ORDERING INFORMATION

		<b>Order No.</b>
BioClean Plus Tank Conditioner	1 gallon	92-010-458
BioClean Plus Tank Conditioner	5 gallon	92-011-389

# COOLANT OIL K 43

## TECHNICAL DATA

- Color: clear
- Viscosity (40°C): 4.8 mm<sup>2</sup>/s
- Water hazard classification: WHC 1
- pH-Value: ca.7,0

## BENEFITS

- Free from chlorine, nitrite, phenol and PCB

## RECOMMENDATIONS

- Please install oil vapour exhauster

## APPLICATIONS

Working process	Diamond tool	Concentration
Centering	centering wheels	pure
Bevelling	beveling wheels	pure

## ORDERING INFORMATION

		Order No.
Coolant Oil K 43	20-l-can	92-000-027
Coolant Oil K 43	208-l-barrel	92-000-026



A mineral oil for processing optical elements in precision optics if water soluble coolants cannot be used due to higher demands.

# ANTIFOAMING AGENTS

## BENEFITS

- Silicon free

## APPLICATIONS

Antifoam	Recommended for Coolants	To be added to 100 litres of the suspension
E 100	K 40	0.5 – 1 l
MP	all synthetic coolants	0.6 l

## ORDERING INFORMATION

		Order No.
E 100	1-kg-can	92-000-658
E 100	10-kg-can	92-000-657
MP	1-kg-bottle	92-005-078
MP	10-kg-can	92-005-079
E 100	200-kg-barrel	92-000-659



Anti-foam agents are destined for coolant, polishing and smoothing suspensions in ophthalmic and precision optics.



# EMERY LS SERIES



Highly sintered clay (aluminium oxide  $Al_2O_3$ ) for lapping optical components with loose grain.

Due to a special production process emeries LS get a disc like shape. LS emeries are especially successful in cases where working with diamond tools is not efficient due to limited-lot productions.

## TECHNICAL DATA

Different types with grain sizes between 6 and 40  $\mu m$  available.

## BENEFITS

- Scraping material removal
- Plane shape crystals enlarge the working surface
- High stock removal
- Minimum surface roughness
- Short cycle times
- Minimized process steps
- Minimum consumption of abrasives

## RECOMMENDATIONS

- LS should be used with the same concentration as previously used emery. In order to benefit from high stock removal rates it makes sense to find an optimum between desired removal rate and a reduced fraction of LS with the lapping suspension.
- We recommend starting with a concentration of 300 – 500 g/l.

### Grain Sizes of different standards in comparison

Mesh	Micron	LS Emery	Fepa „F“ SCG, SCD	Microgrit
300	40	40	240	40
400	30	30	320	35 / 40
500	20	20	360	30
600	15	15	400	
	12	12	500	20
	9	9	600	12 / 15
	6	6	800	9

## ORDERING INFORMATION

### Order No.

LS 6 aluminium oxide with floating agent	6 $\mu m$	92-000-033
LS 9 aluminium oxide with floating agent	9 $\mu m$	92-000-034
LS 12 aluminium oxide with floating agent	12 $\mu m$	92-000-035
LS 15 aluminium oxide with floating agent	15 $\mu m$	92-000-036
LS 20 aluminium oxide with floating agent	20 $\mu m$	92-000-037
LS 20 aluminium oxide without floating agent	20 $\mu m$	92-000-041
LS 25 aluminium oxide with floating agent	25 $\mu m$	92-000-038
LS 30 aluminium oxide with floating agent	30 $\mu m$	92-000-039
LS 40 aluminium oxide with floating agent	40 $\mu m$	92-000-040

Packing unit: 25-kg-cardboard box





### **General notes from manufacturer of emery:**

- When filling in conventional abrasives such as fused AL<sub>2</sub>O<sub>3</sub> or SIC start with half the amount of abrasive.
- Stir the abrasive into the water. Not the other way round.
- Warm water will aid mixing.
- Allow sufficient time for thorough mixing and wetting the particles before start lapping operations .
- Because of the big surface area thorough wetting is most important as other wise agglomerates will remain.
- Agglomerates cause scratches!
- As the mixture loads with glass and metal particles ad only water to maintain the proper consistency.  
When the cutting rate finally does markedly decrease, clean and recharge the system.

LS – emery suspension (with floating agent)

Mixing is everything

Brush feed: Slurry mixture by weight

3 parts water – 1 part emery

Once through Systems: Slurry mixture by weight

4 parts water – 1 part emery

Recirculation Systems: Slurry mixture by weight

5 parts water – 1 part emery

# SILICON CARBIDE EMERY SCDL DARK



Emery made out of glass sand and coal with additives for processing optical elements in the precision optics.

## TECHNICAL DATA

Available: in grit sizes from F80 – F1200

## BENEFITS

The SIC, being dark colored due to inclusions and oxides, has a particularly high toughness.

## RECOMMENDATIONS

As an initial concentration Satisloh recommends 400- 450 grams per litre of water. In order to get optimum results in circular lubrication we recommend to add 2- 5 grams of wallpaper glue to 1 litre of water. Better suspension properties of the grits can be achieved by this.

## GRIT SIZE TABLE (FEPA)

Macro grits				Micro grits	
DIN-Description	Middle grit size (mm)	DIN-Description	Middle grit size (mm)	DIN-Description	Grit size (µm)
F 4	5.600- 4.000	F 36	0.600- 0.425	F 230	82.0- 34.0
F 5	4.750- 3.335	F 40	0.500- 0.355	F 240	70.0- 28.0
F 6	4.000- 2.800	F 46	0.425- 0.300	F 280	59.0- 22.0
F 7	3.350- 2.360	F 54	0.355- 0.250	F 320	49.0- 16.5
F 8	2.800- 2.000	F 60	0.300- 0.212	F 360	40.0- 12.0
F 10	2.360- 1.700	F 70	0.250- 0.180	F 400	32.0- 8.0
F 12	2.000- 1.400	F 80	0.212- 0.150	F 500	25.0- 5.0
F 14	1.700- 1.180	F 90	0.180- 0.125	F 600	19.0- 3.0
F 16	1.400- 1.000	F 100	0.150- 0.106	F 800	14.0- 2.0
F 20	1.180- 0.850	F 120	0.125- 0.090	F 1000	10.0- 1.0
F 22	1.000- 0.710	F 150	0.106- 0.063	F 1200	7.0- 2.5
F 24	0.850- 0.600	F 180	0.090- 0.053		
F 30	0.710- 0.500	F 220	0.075- 0.045		by 80%

## ORDERING INFORMATION

	Order No.
SCDL 80 silicon carbide dark	92-000-047
SCDL 120 silicon carbide dark	92-000-048
SCDL 150 silicon carbide dark	92-000-049
SCDL 180 silicon carbide dark	92-000-050
SCDL 220 silicon carbide dark	92-000-051
SCDL 240 silicon carbide dark	92-000-052
SCDL 280 silicon carbide dark	92-000-053
SCDL 320 silicon carbide dark	92-000-054
SCDL 360 silicon carbide dark	92-000-055
SCDL 400 silicon carbide dark	92-000-056
SCDL 500 silicon carbide dark	92-000-057
SCDL 600 silicon carbide dark	92-000-058
SCDL 800 silicon carbide dark	92-000-059
SCDL 1000 silicon carbide dark	92-000-060
SCDL 1200 silicon carbide dark	92-002-332

Packing unit: 25-kg-sack

# CERIUM OXIDE POLISHING COMPOUNDS

## TECHNICAL DATA

Detailed data sheets available on request.

## BENEFITS

### Quality control:

All batches are checked before delivery with the regard of the four main criteria, i.e. hardness, grit size, suspension properties and polishing efficiency.

## RECOMMENDATIONS

- Before changing over from any other polishing compound to Satisloh polishing compounds machine tubes, pumping and polishing systems have to be cleaned thoroughly.
- In order to avoid glass particles or other pollution getting into circulation, the polishing slurry should be filtered. e.g. with our filter tissue for polishing compounds or a nylon stocking which is placed at the return piping.

## APPLICATIONS (MINERAL GLASS)

Polish	Polishers	Pressure (bar)	Revolution (r.p.m.)	Fields of application
Opaline	Polishing pitch Plano Polishing Disc Polish supports KR and LR	> 0.25	5 – 180	Precision optics
SuperCerox 1663	Polishing pads: Standard Polyurethane 166, 126, 146 Multipol	0.8 – 1.5	800 – 3000	Ophthalmic RX-production Mass production Bifo-production
SuperCerox 1663 Cerox 1650	PU-foils 166, 126, 135, 125	0.8 – 1.5	400 – 3000	Plano optic Round optics Fibre optic
Cerox 1670	Polishing felt Synth. Felt Soft PU-foils 126, 146	0.25 – 0.8	180 – 400	Mirror bevels Flat glass Crystal glass



*Water-mixable polishing compounds based on cerium oxides made from rare earths for the polishing of optical elements. Mix polishing compounds with water.*

## POLISHING COMPOUND CEROX



### CONCENTRATION / POLISHING TEMPERATURE:

Apart from pressure and polishing speed, these are important parameters for a constant polishing quality. Both should be regularly checked with an aerometer and a thermometer.

Polish	Concentration per l/water	Temperature (°C)
Cerox 1650 / 1670	100 – 140 g	20- 25°
SuperCerox 1663	60 – 80 g	20- 25°
Opaline	100 – 120 g	20- 25°

### ORDERING INFORMATION

		Order No.
Cerox 1650	20-kg-carton	92-000-121
SuperCerox 1663	20-kg-carton	92-000-122
Cerox 1670	20-kg-carton	92-007-032
Opaline	20-kg-pail	92-000-124

## POLISHING COMPOUND HASTILITE PO



*Ready-mixed, stabilized cerium oxide polishing suspension for the highest surface quality requirements*

### TECHNICAL DATA

Color:	beige / white
pH – value:	6,5
Medium grit size:	0,8 µm
CeO <sub>2</sub> :	> 95%

### BENEFITS

- Ready to use – no additional preparation necessary
- Perfectly suited for the highest surface quality requirements

### APPLICATIONS

- The polishing suspension can be diluted at a ratio of 1 : 10 (depending on the polishing process)

### RECOMMENDATION

- Store and transport frost-free. Freezing of the suspension can impair its polishing properties.

### ORDERING INFORMATION

		Order No.
Hastilite PO	gallons per carton	92-003-838

## TECHNICAL DATA

Color:	creme-white
pH- value:	7,5
Particle size:	1 – 2 µm (D50) 6 – 9 µm (D99)

*Satisloh brand of cerium oxide polish for glass precision optics. Superior quality and high purity, with excellent stock removal rates. Cost effective alternative to Cerox 1650, 1670, and SuperCerox 1663.*

## BENEFITS

- Works on all pads and polishing bases
- Ideally suitable for spherical lenses

## APPLICATION

- Excellent polishing agent for polishing ophthalmic lenses and precision optics
- Spherical, high-speed applications

## RECOMMENDATIONS

- Add to de-ionized /soft filtered water and mix thoroughly
- Ensure proper mixing during the operation by stirring or circulation by pump
- The concentration can then be increased or reduced accordingly – to suit the application

## ORDERING INFORMATION

CE863

25 kg pail

### Order No.

92-010-679



# POLISHING COMPOUND CE 880

*Satisloh brand of cerium oxide polish for achieving premium quality surfaces on glass precision optics. Water mixable alternative to Opaline.*



## TECHNICAL DATA

Color:	creme-white
pH- value:	7,5
Particle size:	1,0- 1,1 µm (D50) 6 – 9 µm (D99)

## BENEFITS

- Works on all pads and polishing bases
- Ideally suitable for optical lenses

## APPLICATION

- Excellent polishing compound for polishing precision optical components

## RECOMMENDATIONS

- Add to de-ionized /soft filtered water and mix thoroughly
- Ensure proper mixing during the operation by stirring or circulation by pump
- The concentration can then be increased or reduced accordingly – to suit the application

## ORDERING INFORMATION

CE880

20 kg pail

**Order No.**

92-010-708

# POLISHING COMPOUND CE 600 T LIQUID

## TECHNICAL DATA

Color:	creme-white
pH-value:	7,9
Density:	1,02 g/cm <sup>3</sup>
Viscosity:	11s 4mm
DIN 53211	

*Satisloh brand of ready-to-use polishing suspension, specifically made for achieving premium quality surfaces on glass precision optics. A stabilized, agglomerate-free alternative to Opaline.*

EXCLUSIVE  
PRODUCT

## BENEFITS

- A combination of high stock removal in conjunction with high surface quality requirements
- The suspension has been optimized with regard to its floating properties
- Agglomerate-free
- Can be diluted at a ratio of up to 1:7
- No scratches on soft lenses

## APPLICATIONS + RECOMMENDATIONS

- Before filling, the system should be thoroughly cleaned and flushed out with clean water.
- Fill the tank with municipal water or distilled water and add CE 600 T Liquid at the required mixing ratio
- Store and transport frost-free. Freezing of the suspension can impair its polishing properties.

## ORDERING INFORMATION

CE 600 T liquid

5 kg can

**Order No.**

92-004-425

# POLISHING COMPOUND CE 480 ST

## TECHNICAL DATA

Color:	beige / white
pH – value:	6,5
Medium grit size	1,0 µm
CeO <sub>2</sub> :	> 95%

## BENEFITS

- Ready to use – no additional preparation necessary
- Perfectly suited for the highest surface quality requirements
- Designed for easily scratched, soft materials

## APPLICATIONS + RECOMMENDATIONS

- The polishing suspension can be diluted at a ratio of 1 : 10 (depending on the polishing process)
- Store and transport frost-free. Freezing of the suspension can impair its polishing properties.

## ORDERING INFORMATION

CE480

1 gallon

**Order No.**

92-000-129



*Satisloh brand of ready-mixed, stabilized cerium oxide polishing suspension for the highest quality glass precision optics surface requirements. High performance alternative to Hastilite.*



# POLISHING COMPOUND CR 6, 15A, 85B/ POLY-PRO



An aluminium-oxide water-mixable polishing powder of high purity (99%, min. 98%) for the final polishing of special materials in precision optics such as: germanium, silicon, zinc selenide, zinc sulfide, gallium arsenide, cadmium sulfide, all kinds of metals, medical artificial limbs, resin surface, acrylics, ceramic substrates.



Premium polish for one-step polishing process.

## TECHNICAL DATA

### CR 6

- Color: white
- Grit size: from D20-D90 0.30 µm up to 1.50 µm

### CR 15A

- Color: white
- Grit size: from D20-D90 0.20 µm up to 0.90 µm

### CR 85B

- Color: white
- Grit size: from D20-D90 0.20 µm up to 0.70 µm

## BENEFITS

- High purity

## RECOMMENDATIONS

- Before changing over from any other polishing compound to polishing compound CR 6 / 15A / 85B, machines, tubes, pumping and polishing system have to be cleaned thoroughly.
- In order to avoid glass particles or other pollution getting into circulation, the polishing slurry should be filtered, e.g. with our filter tissue for polishing compounds or a nylon stocking which is placed at the return piping.

## ORDERING INFORMATION

			<b>Order No.</b>
CR 6 aluminium oxide	0,6 µm	1-kg-pail	92-000-126
CR 15A aluminium oxide	0,45 µm	1-kg-pail	92-000-127
CR 85B aluminium oxide	0,35 µm	1-kg-pail	92-000-128
Poly-Pro	2,0 µm	1 gal	92-005-015

## TECHNICAL DATA

- Particle size: approx. 125 nm
- Specific surface: 80 m<sup>2</sup>/g
- SiO<sub>2</sub>-quota: 30%
- Al<sub>2</sub>O<sub>3</sub>-quota: 2%
- Na<sub>2</sub>O-quota: 0.13%
- Relation SiO<sub>2</sub>/Na<sub>2</sub>O: 230
- pH-value at 20°C: 10.2
- Specific weight at 15.5°C: 1.20 g/ccm
- Viscosity at 20°C: 2.5 mPa-s
- Appearance: milky, thin liquid
- Quantities supplied: 50-l-barrel



*A ready-mixed polishing compound based on silicic acid / alu oxide for chemical polishing of sapphire using our polishing supports Policor, or synthetic felt 100 B.*

## BENEFITS

SY 30-85 can be thinned very easily with distilled water or fully desalted water to get any desired concentration.

## RECOMMENDATIONS

- It can furthermore be mixed with water-soluble acids (except hydrofluoric acid) and with ammonia as well as most of the amines.
- SY 30-85 is compatible with many watery dispersions, e.g. melamine urea, phenolic resin, PVA-adhesives, starch, etc.

## ORDERING INFORMATION

Polishing compound  
SY 30-85

50-l-barrel

### Order No.

92-000-138

# POLISHING COMPOUND 112-R PINK

*Zirconium Oxide Oxicon 112-R pink, a water-mixable compound powder, for pre-polishing optical elements in precision optics.*

## TECHNICAL DATA

- Color: pink powder
- pH-value (25 %): 6.5- 8.0
- Average grit size: D50 : 1.2 – 1.8 µm  
D3 : 5.0 µm
- Analysis: 77% Zr-Oxide, 15% Fe-Oxide

## BENEFITS

- High purity
- polish can partly be used alternative to Cerium-oxide

## RECOMMENDATIONS

- Before changing over from any other polishing compound to Unioxide, machines, tubes, pumping and polishing system have to be cleaned thoroughly.
- In order to avoid glass particles or other pollution getting into circulation the polishing slurry should be filtered, e.g. with our filter tissue for polishing compounds or a nylon stocking which is placed at the return piping.
- It is recommended to „pre-soak“ Unioxide for about 24 hours before filling into the machine and then to „pre-polish“ for about 8 hours. This will destroy any existing agglomerates.
- As a floating agent for circular lubrication usual wallpaper paste should work well. Adding about 2 to 5 grams to the water should be sufficient.

## ORDERING INFORMATION

Zirconium Oxide Oxicon 112-R pink	20-kg-pail	<b>Order No.</b> 92-002-520
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# POLISHING COMPOUND OXIDE 112-O WHITE

## TECHNICAL DATA

- Color: creme-white
- pH-value (25 %): 5.0- 7.5
- Average grit size:
  - D<sub>50</sub> : 1.0 – 1.5 µm
  - D<sub>3</sub> : 4.0 µm
- Analysis: Zr-Oxide and Fe-Oxide

## RECOMMENDATIONS

- Before changing over from any other polishing compound to Satisloh Oxicon, machines, tubes, pumping and polishing system have to be cleaned thoroughly.
- In order to avoid glass particles or other pollution getting into circulation the polishing slurry should be filtered, e.g. with our filter tissue for polishing compounds or a nylon stocking which is placed at the return piping.
- It is recommended to „pre-soak“ Oxicon for about 24 hours before filling into the machine and then to „pre-polish“ for about 8 hours. This will destroy any existing agglomerates.

## ORDERING INFORMATION

Zirconium Oxide Oxicon 112-O white

20-kg-pail

### Order No.

92-000-132



*Zirconium Oxide Oxicon 112-O white, a water-mixable compound powder, for pre-polishing optical elements in precision optics.*

# POLYURETHANE POLISHING FOIL



A film micro-cell polyurethane foam for the polishing of glass in precision optics and ophthalmic, ceramics, pick-ups, screens, seals, quartz crystals, illumination optics, etc.

The foils are available in the following thicknesses:

0.51 mm  
0.81 mm  
1.02 mm  
1.27 mm  
1.52 mm  
2.03 mm  
2.54 mm  
3.00 mm  
3.18 mm  
3.96 mm  
4.75 mm  
6.35 mm  
12.7 mm  
25.4 mm

Further information on request.

## TECHNICAL DATA

- Polyurethane polishing foil is available in sheets of 580 x 1400 mm
- Thickness from 0.51 mm up to 25.4 mm
- Further configurations on request
- Furthermore possible: cutting in special geometrics
- Quantities supplied: sheets or single polishing discs

## BENEFITS

- Available with or without filling material (cerium oxide or zirconium oxide)
- Filling material independent from polish

## RECOMMENDATIONS

- Satisloh recommends using either Pattex as an adhesive for polyurethane as per the directions given on the adhesive package.
- In order to secure constant polishing results we recommend roughing the foils from time to time with a soft file brush.

## APPLICATION

Type of tape	Color/Filler	Hardness Shore „D“	Application	Ophthalmic: O Precision optics: P
113	light-green cerium oxide	13- 19	glass sensitive to scratches crystal glass surfaces	P
125	grey unfilled	25- 33	color filter, reticles	P
126	pink zirconium oxide	33- 43	mass production (spherical) round optics, illumination optics, flat glass/ mirror glass	O O P P
135	grey zirconium oxide	33- 43	round optics, micro optics, plano substrates	P P
146	dark green zirconium oxide	20- 30	multifocal lenses (concave) sapphire, illumination optics TV screens	O P
157	white unfilled	30- 40	round optics for cameras microscopes, telescopes etc. laser optics	P P
166	red-brown cerium oxide	20- 30	special glasses (bulbs) round optics for cameras, binoculars, microscopes all kinds of plano optics illumination optics quartz crystals flat glass/bevel polishing moulds processing	P P P P P O
177	medium brown cerium oxide	22- 37	semi-conductors, magnet heads, quartz glass, laser optics	P
187	salmon-pink unfilled	45- 50	crystal glass gem processing	P
188	light-brown cerium oxide	60- 67	fibre optics crystal glass bevels	P
Laser	white		LP laser	P
26D	purple		LP 26D, filled with diamond for processing of GE, Si	P

## POLISHING FOIL POLICOR

### TECHNICAL DATA

- Policor polishing foil is available in sheets of 890 x 890 x 1.15 mm.

### BENEFITS

- Excellent polishing results

### RECOMMENDATIONS

- Policor polishing foil is usually stuck to tools with Pattex.
- The final polishing of silicon, germanium, zinc selenide, gallium arsenide is made with pitch as a polishing compound carrier (see polishing compound CR 6/15A/85B).

### ORDERING INFORMATION

Polishing foil Policor 890 x 890 x 1.15 mm, sheets

**Order No.**

92-000-246

*A velvety special polishing cloth for polishing special materials such as silicon, germanium, zinc selenide, gallium arsenide, special steel, special metals, ceramics, plastic (acrylic glass) etc.*



## POLISHING FELTS

### TECHNICAL DATA

- Polishing felt:  
Natural polishing felt, ground on both sides, medium hardness, for polishing in conjunction with cerium polishing compounds  
Color: white, grey

### ORDERING INFORMATION

		<b>Order No.</b>
Natural Felt 100	1000 x 1000 x 1 mm, 1pc	92-000-242
Natural Felt 300	1000 x 1000 x 3 mm, 1pc	92-000-243
Natural Felt 1000	1000 x 1000 x 10 mm, 1pc	92-000-244

**Order No.**

*A natural polishing felt, ground on both sides, medium hardness, for polishing in conjunction with cerium polishing compounds.*



# POLISHING DISC KR AND LR



*A polishing compound carrier of durable plastic with ribbed surface for polishing of plano surfaces and round optics in precision optics.*

## TECHNICAL DATA

- Available in round discs of 123 mm in diameter
- Polishing Disc LR-05 with longitudinal profile + polishing compound SuperCerox 1663 for pre-polishing plano optics
- Polishing Disc KR-05 with cubical structure + polishing compound OPALINE for finish polishing spheres

## BENEFITS

- Excellent polishing results
- Highly abrasion-resistant

## RECOMMENDATIONS

- Cutting out Polishing Disc KR and LR: Star-shaped, in segments or pieces. Parallel lines have to be arranged radially if possible. Make small round discs for big lenses and big discs for small lenses. They have to be arranged in sectors, if necessary with an additional circle for large diameters (more than 200 mm).
- Grind-in the tool with emery SCDL 320

## ORDERING INFORMATION

		<b>Order No.</b>
Polishing Disc KR	KR-05 123 mm	92-000-154
Polishing Disc LR	LR-05 123 mm	92-000-152



## TECHNICAL DATA

- **Softening points:**

Measuring method:	ISO 4625
Measuring tool:	ring and ball
no. 55	63-65°C
no. 64	64-68°C
no. 73	70-74°C
no. 82	73-77°C
no. 91	78-93°C
  
- **Penetration:**

Measuring method:	DIN / ISO 52010
Measuring tool:	with needle
Measuring time:	5 s
Measuring temperature:	20°C
Stress on needle:	50 g
no. 55	1.51 – 1.83 mm
no. 64	0.31 – 0.55 mm
no. 73	0.03 – 0.10 mm
no. 82	0.00 – 0.07 mm
no. 91	0.00 – 0.04 mm



*A polishing compound carrier based on wood tar resins, fatty acids, phenols and resin acids for polishing high precision optical elements in precision optics.*

## RECOMMENDATIONS

- The applicability of a polishing pitch depends on the polishing method, the ambient temperature and its softening qualities and fusibility. Polishing method mainly means the so-called cold polishing with circular lubrication and warm polishing with brush lubrication. The solidifying point should be slightly above the ambient temperature, the softening point (begin of plastic deformation) must not exceed the solidifying point by more than 5°C. The melting point should be by 30-50°C higher than the softening point.
- The pitch has to be flexible which is achieved by the influence of the polishing temperature. The pitch, however, has to be hard and brittle to achieve the required form exactness when polishing. In working practice the polishing pitch is slightly warmed up in order to fit the optical element. The pitch tool is then chilled by applying cold polishing compound (approx. 20°C) so that subsequent polishing takes place in the newly adjusted form.
- 92-000-814 lime wood flour as polishing additive for pitch

## APPLICATIONS

Recommended polishing compounds:

Cerox 1650:	round optics
> 3 Newton rings:	plano optics
Opaline:	round optics
< 3 Newton rings:	plano optics
CR6 / CR15 / CR85:	special optics, e.g. silicon, germanium, zinc selenide, gallium, arsenide

## ORDERING INFORMATION

		Order No.
Polishing Pitch No. 55	1-kg-tin	92-000-250
Polishing Pitch No. 64	1-kg-tin	92-000-251
Polishing Pitch No. 73	1-kg-tin	92-000-252
Polishing Pitch No. 82	1-kg-tin	92-000-253
Polishing Pitch No. 91	1-kg-tin	92-000-254

# SYNTHETIC POLISHING COMPOUND CARRIER ACCULAP®



*These polishing compound carriers have been especially designed for use in precision optics showing extremely stable and consistent properties.*

## TECHNICAL DATA

- Soft: hardness 9
- Standard: hardness 30
- Very firm: hardness 60

## BENEFITS

- High purity
- Precision formulated
- Non-drying
- Ultra consistent

## RECOMMENDATIONS

- Acculap® polishing compound carriers dominantly comprise styrenic polymers and consequently are highly stable against chemical attack, including high temperature oxidation or degradation. Suspensions containing alcohol can be used for polishing.
- Acculap® polishing compound carriers are not immediately water wetting. As polishing begins, however, wetting of the lap occurs quickly as slurry particles embed in the pitch surface.
- Warm or cold pressing with slurry will accelerate charging.

### Polishing characteristics:

Once charged, under given lapping conditions, Acculap® will polish much like natural pitch of comparable hardness. Just as with natural pitches, periodic dressing and trimming of the lap, as well as replacement of slurry, will be required.

### Cementing characteristics

The Acculap is also useful as an optical cement. It is very homogenous and can be applied in very thin layers.

## APPLICATIONS

In general, Acculap® polishing compound carriers are poured near 135°C (similar to natural pitch). At this temperature, Acculap® spreads and pours easily. Acculap® bonds well to most materials, particularly surfaces warm prior to application. Aggressive bonding is facilitated by pretreatment of surfaces with a coat of Acculap® dissolved in acetone. Once poured, Acculap® is somewhat more brittle than natural pitches, leading to some differences in channelling. Typically, however, only minor refinement of technique is needed to achieve excellent results. Sharp blades and fast cutting speeds work best.

## ORDERING INFORMATION

		<b>Order No.</b>
Synthetic polishing compound carrier Acculap® HA 9	0.333 kg	92-007-334
Synthetic polishing compound carrier Acculap® HA 30	0.333 kg	92-007-335
Synthetic polishing compound carrier Acculap® HA 60	0.333 kg	92-007-336

## RECOMMENDATIONS

The customer himself chooses the type of cement he needs because very different criteria have to be considered such as stress susceptibility of the optical elements, rising temperatures during polishing, cementing procedures, thickness of the cement coating, required resistance to oil, procedure of decementing and cleaning. Following our own experience and that of our customers we are, however, in a position to make recommendations for the different applications. As we deal with natural products variations cannot be excluded. However, these variations are within the range of toleration of the manufacturer.



*Ready-made optical cements of different compositions for cementing optical elements onto loose and fixed tools in precision optics, micro optics and plano optics.*

## TECHNICAL DATA

Product	Melting point	Oil resistance	solubility	Main components	Application	Packing unit	Order No.
Rounding cement red	approx. 75°C	limited oil resistance	not spirit soluble	colophonium shellac earth-spars	rounding	sticks 20 x 1.5 x 1 cm	92-000-418
Cement sealing wax brown No. 300	approx. 65°C	not oil resistant	spirit soluble	colophonium shellac earth-spars	plano optics and big lenses pitch malleting	plates 39 x 18.5 x 3,5 cm	92-000-413
Cement sealing wax black No. 13	approx. 70°C	limited oil resistance	spirit soluble	colophonium earth-spars resin	plano optics and big lenses pitch malleting	bars 18.5 x 5 x 3.5 cm	92-000-414
Cement sealing wax black No. 2	approx. 70°C	limited oil resistance	not spirit soluble	colophonium shellac earth-spars	small and medium size lenses	sticks 20 x 1.5 x 1 cm	92-000-415
Cement sealing wax black No. 1	approx. 70°C	limited oil resistance	not spirit soluble	colophonium shellac earth-spars	micro optics	sticks 20 x 1.5 x 1 cm	92-000-416
Cement sealing wax black No. 9 b/soft	approx. 50°C	limited oil resistance	limited spirit solubility	colophonium shellac earth-spars	micro optics	sticks 20 x 1.5 x 1 cm	92-000-417
Special cement sealing wax C/15 black	approx. 55°C	not oil resistant	spirit soluble	colophonium resinwax	plano optics big lenses sawing	bars 18.5 x 5 x 3.5 cm	92-000-421
Cement wax black No. 75	approx. 45°C	not oil resistant	not spirit soluble	resin, wax	small & medium size lenses	sticks 20 x 1.5 x 1 cm	92-000-423
Special cement C/30 Yellow mat	approx. 40°C	limited oil resistance	limited spirit solubility	colophonium wax	plano optics sawing	bars 18.5 x 5 x 3.5 cm	92-002-532
Special cement C/20 II yellow	approx. 40°C	limited oil resistance	limited spirit solubility	colophonium wax	plano optics sawing	sticks 20 x 1.5 x 1 cm	92-000-420
Colophonium	80-125 °C	well soluble in oil	spirit soluble	colophonium	component	50 kg	92-000-407
Cement C20/1	approx. 45°C	limited oil resistance	limited spirit solubility	colophonium wax	plano optics sawing	1 kg	92-003-943

# SYNTHETIC CEMENT ULTRA-SK



*A synthetic acid-free resin for cementing optical elements on loose and fixed tools in precision optics, micro optics and plano optics. This product is of low tension, does not leave spots on the polished surfaces when de-blocked and has a limited oil resistance.*

## TECHNICAL DATA

### Initial concentration:

Synthetic resin SK: 2 parts  
Ultramoll III: 1 part

## RECOMMENDATIONS

For cementing plano substrates susceptible to tension we recommend to:

- Make grooves of about 1 mm of depth into the carrier plate (either in spirals or of cube structure) so that the cement can come out without difficulties and to ensure a thin and even cementing layer.
- Place silk paper onto the warm cementing layer and brush once again with the warmed cement compound. After that press the pre-warmed plano substrates. This will protect the polished surface from damages and avoid any contact to metals.
- Soluble in organic solutions

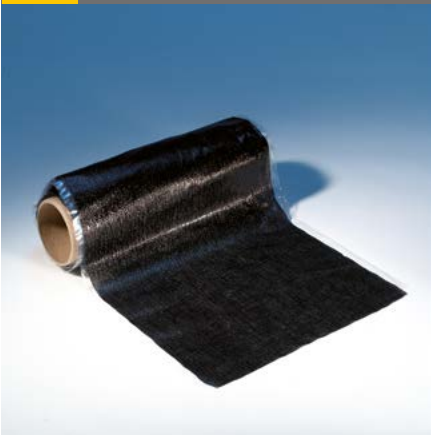
## APPLICATIONS

This cement is mixed by the user himself.  
Melting temperature depending on mixture, about 100-120°C.

## ORDERING INFORMATION

		<b>Order No.</b>
Synthetic resin SK	25-kg-sack	92-000-409
Ultramoll III	10-kg-can	92-000-411

# CEMENTING FOIL



*A special woven black material soaked in synthetic resin for cementing optical lenses and flat plano workpieces onto multiple blocks.*

## TECHNICAL DATA

- Width of roll: 30 cm
- Length of roll: approx. 60 m
- Thickness of tissue: approx. 0.22 mm
- Packing: per meter (on rolls)

## BENEFITS

- No metal contact of the lens with the multiple blocks which minimizes restraints
- The artificial resin coming out while cementing is also a protection lacquer for the polished surfaces.
- Acid-free filling avoids spots while decementing the lenses.
- Quick and clean working
- When the cementing temperature as well as the pressure is constant, cementing tolerances of +/-0.01 mm may be obtained.

## ORDERING INFORMATION

		<b>Order No.</b>
Cementing foil	ca. 60 m/roll	92-000-739

# SPECIAL PLASTERS FOR PRISMS

## TECHNICAL DATA

- Color: white
- Linear expansion: < 0.02 %
- Resistance: 2 N/mm<sup>2</sup> after 24 h
- Grit size: approx. 20 µm
- Quantities supplied: paper sack of 25 kg

## BENEFITS

This plaster has an extremely low expansion rate.

## RECOMMENDATIONS

- Add the special plaster to the water while stirring permanently.
- As soon as the powder has been fully soaked, stir briskly for 1-2 minutes and pour it as quickly as possible.
- To keep the expansion to a minimum, it is important that the total processing time is not longer than 6 minutes. After 16 min. the plaster is finally cured.
- It is vital to use clean tap water and clean mixing tools.
- To prevent a pre-hardening, please store the special plaster in a dry place.



*A synthetic special plaster for blocking prisms in precision optics.*

## ORDERING INFORMATION

		<b>Order No.</b>
Special plasters for prisms	25-kg-sack	92-000-412

# VITRALIT® 6128 VT UV/THERMAL CURE ADHESIVE

## TECHNICAL DATA

- Radiation cure time: within seconds in UV-A range 320 nm-390 nm
- Thermal cure time: 40 minutes at 120° C
- Free of heavy metals, PFOS, and Phthalates

## BENEFITS

- Short curing times
- Good adhesion to a variety of substrates, inclusive glass, metals, and many thermoplastics
- Easy handling
- Easily compensates unevenness and bridges gaps

## RECOMMENDATIONS

To obtain full cure at least one substrate must be transparent to the recommended wavelength. The curing speed will depend on the intensity of light, light source, the exposure time, and the light transmittance of the substrate. Increased mechanical properties are achieved after 12 hours.

## APPLICATIONS

Adhesive and substrate may not be cold and must be warmed up to room temperature prior to processing. After application, bonding of the parts should be done quickly.

## ORDERING INFORMATION

		<b>Order No.</b>
Vitralit	100 gram bottle	92-000-428

*Solvent-free radiation curing adhesive.*

## CONTACT ADHESIVE PATTEX



A polychloroprene-based special adhesive for applying polishing discs and polishing foils onto tools in ophthalmic and precision optics.

### TECHNICAL DATA

- Color: beige
- Specific gravity: 0.89 kg/l
- Consistency: low viscosity
- Solvents: gasoline, acetone
- Vapour pressure: approx. 165 mbar
- Viscosity at 20°C: approx. 1800 mPas

### RECOMMENDATIONS

- The surface must be clean and free from oil, dust and other residue. Use acetone or any other solvent for cleaning. If necessary, smooth the tools with loose abrasive to reach a rougher surface.
- Apply the adhesive evenly to both surfaces. The glue has to be dry (finger should not stick to the surface any more) before pressing the two surfaces together. The Processing temperature should be between 15°C and 20°C. Adhesion force depends on the height of pressure not on the durance of pressing. For pressing we recommend adequate pressing tools.

### ORDERING INFORMATION

		Order No.
Contact adhesive Pattex	tube, 125 ml	92-000-433
Contact adhesive Pattex	tin can, 650 ml	92-000-434

## TWO-COMPONENT ADHESIVE TECHNICOLL



A special adhesive based on epoxy resins for fixing diamond pellets to lapping tools in ophthalmic and in precision optics.

### RECOMMENDATIONS

- The surfaces have to be dry, clean and free from dust and oil. A perfect adhesion will be achieved after smoothing the tools with a loose abrasive such as silicone carbide SCDL 320 or LS 30. A thin adhesive film should be applied preferably on both surfaces to be put together (optimum = 0.1 mm joint = about 100g/m<sup>2</sup>). Press slightly. Mixing ratio for Technicoll 8266 = 1:1 (volumetric). Once the red color has changed to cream, the mixture is ready for use.
- It is recommended to have the adhesive harden in an oven.
- Curing times:
  - Technicoll 8266/8277 A + B
  - 50°C reduced to approx. 4 h
  - 75°C reduced to approx. 2 h
  - 100°C reduced to approx. 1 h
  - 125°C reduced to approx. 30 min
  - 150°C reduced to approx. 15 min

### ORDERING INFORMATION

		Order No.
Technicoll 8266/8267 A+B	130 g	92-000-436

## BENEFITS

Helps protect polished surfaces during fabrication process.

## RECOMMENDATIONS

- To reach the required spray viscosity special thinner should be added. Do not use other thinners because of possible side effects.
- We recommend applying a good coat of protective lacquers to the optical surface with a brush or spray gun. Do not use a rubber foam roll (bubble effect).

## APPLICATIONS

Protective lacquer:	Recommended thinner	Cleaning suggestion
AC 5801 black	thinner for protective lacquer AC 5801	acetone
protective lacquer grey beige black	universal thinner	Deconex OP-193

## ORDERING INFORMATION

			Order No.
AC 5801 black	11 l	spray	92-002-280
black	5 kg	liquid	92-011-178
grey beige	5 kg	liquid	92-011-349
Universal thinner	30 kg		92-004-578
Universal thinner	60 l		92-002-779



*For protecting prisms and lenses during subsequent processing after polishing.*



## SURFACE SAVER TAPE SUPERSTICK



### BENEFITS

- Very easy application on polished surfaces or surfaces to be protected
- Polished surfaces will be protected against contamination and damages when stored for a longer period of time
- Suitable for provisional and regular cementing
- Can be easily removed by hand without leaving residues

### ORDERING INFORMATION

		<b>Order No.</b>
Superstick	35 m x 10 cm	92-000-457
Auto Tape	33 m x 10 cm	92-010-303

*This flexible self-adhesive surface saver tape is used as an alternative to protection lacquer. Solvents are not required.*

## CENTERING TAPE

*Transparent plastic tape protects lenses from finger prints and scratches when centering.*

### TECHNICAL DATA

- Form: transparent plastic tape
- Dimensions: 100 m x 100 mm reel

### BENEFITS

- Excellently adapts to lens surfaces while ensuring high compression strength and non-slip
- The tape is not subject to any restrictions concerning shelf life.

### RECOMMENDATIONS

- Tailor the tape to the desired dimension and place between lens and clamping chucks.
- The Satisloh Centering Tape can be used with oil as well as with coolant additives.

### ORDERING INFORMATION

		<b>Order No.</b>
Centering Tape	100 m x 100 mm	92-004-888

# DECONEX OP 121

## TECHNICAL DATA

- Suitable for: lead crystal, ferrous metal, glass, rubber, ceramic, porcelain, quartz, steel
- Not suitable for: alkaline sensitive high precision optical glasses
- Exposure time at 60-80°C: 3-10 min. (dosage 0.5- 2%)

## BENEFITS

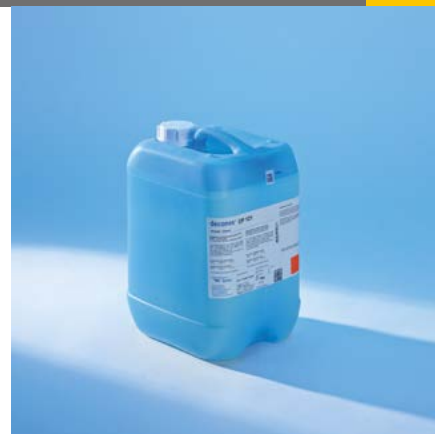
- Deconex OP 121 considerably reduces the surface tension of the cleaning solution and contamination is easily removed because of its good wetting performance.
- The excellent emulsifying and dispersing capabilities prevent removed particles from being redeposited.
- Special tension-active surfactants guarantee absolute rinsing of the cleaned surface.

## RECOMMENDATIONS

- Keep container tightly closed, store in a dry place and protect from sun. Recommended storage temperature: +5 to +25°C

## ORDERING INFORMATION

		Order No.
Deconex OP 121	14-kg-can	92-008-111
Deconex OP 121	35-kg-can	92-008-112



*For the use in ultrasonic cleaning systems. High performance cleaning concentrate for the optical industry. Deconex OP 121 is a liquid, mildly alkaline yet highly efficient concentrate for the spontaneous cleaning of delicate optical components prior to coating. Contaminations, such as dust, finger prints etc. which still adhere on the surfaces after inspection are removed self-acting and without any traces by Deconex OP 121.*

# DECONEX OP 148

## TECHNICAL DATA

- Suitable for: all kind of alkali compatible organic and mineral ophthalmic lenses and high precision optical glasses
- Not suitable for: Alkaline sensitive high precision optical glasses
- Exposure time at 60-80°C: 3-10 min (dosage 1-3%)

## BENEFITS

- Deconex OP 148 has excellent emulsifying and dispersing capabilities and contamination is easily removed because of its good wetting performance.
- An optimum compound of surfactant allows an easy rinse off without any traces of the cleaning solution left.

## RECOMMENDATIONS

- Keep container tightly closed, store in a dry place and protect from sun. Recommended storage temperature: +5 to +25°C

## ORDERING INFORMATION

		Order No.
Deconex OP 148	30-kg-can	92-008-117
Deconex OP 148	240-kg-barrel	92-008-118

*For the use in ultrasonic cleaning systems. Deconex OP 148 is a liquid, highly alkaline cleaning concentrate for the final cleaning of organic and mineral lenses prior to coating. Deconex OP 148 can also be used for the removal of abrasives and polishing compounds after manufacturing (cleaning process „ready for inspection“).*

## DECONEX OP 164



*Deconex OP 164 provides glass surfaces with a complete wetting and therefore guarantees a rapid, thorough cleaning and removing of slightly adhering organic and inorganic residues like fingerprints, dust etc. re-deposition of removed particles is avoided.*

### TECHNICAL DATA

- pH-value: solution at 1% in de-mineralized water, approx. 7.9
- Density concentrate: 1.06 g/ml
- Appearance concentrate: transparent, colorless to yellowish

### BENEFITS

- Intensive cleaning:  
“ready for inspection”, “ready for coating” and “ready for assembly”
- Liquid, neutral, phosphate-free concentrate
- Can be used for almost all materials in precision and ophthalmic optics
- Bath can be used for several cleaning processes
- Economical – only small dosage necessary

### RECOMMENDATIONS

Keep container tightly closed, store in a dry place and protect from sun.  
Recommended storage temperature: +5 to +25°C

### ORDERING INFORMATION

Deconex OP 164

10-kg-can

**Order No.**

92-008-121

## DECONEX OP 165

*For the use in soaking bath, ultrasonic cleaning systems and special brush and spindle cleaning machines. Tenacious deposits on the surfaces of organic and mineral lenses are often caused due to long storage times. In most cases, these deposits can only be removed by a mechanical pre-treatment. Deconex OP 165 is an agent for spindle and brush cleaning systems but at the same time, it can also be applied for the manual precleaning (with sponge or cloth).*

### TECHNICAL DATA

- Suitable for: all kind of organic and mineral glasses as well as alkaline sensitive high precision optical glasses
- Partly suitable for: acrylic glass
- Exposure time at 20°C- 60°C: 1-5 min
- Dosage: 1-3% (mechanical); app. 20% (manual)
- pH-values: 1%: 7.0 – 8.0; 20%: 7.0 – 8.0
- Density: 1.04 g/ml
- Surface tension: 1%, 36 dyn/cm

### BENEFITS

- Reduces the surface tension of the cleaning solution and removes contamination easily
- Supports the procedure for removing and emulsifying, respectively dispersing the contamination
- Prevents removed particles from being re-deposited
- The pH neutral formula guarantees for the highest possible protection of the material.
- Excellent wetting capabilities

### RECOMMENDATIONS

Keep container tightly closed, store in dry place and protect from sun.  
Recommended storage temperature: +5 to +25°C

### ORDERING INFORMATION

Deconex OP 165

10-kg-can

**Order No.**

92-000-724

Deconex OP 165

25-kg-can

92-000-725



*For use in ultrasonic cleaning systems. Deconex OP 190 is a liquid cleaning concentrate for spontaneous cleaning in the neutral field of persistent contamination of waxes and natural resins such as colophonium. Deconex OP 190 has to be applied in preliminary stage of the cleaning process „ready for inspection“ of optical components.*

## TECHNICAL DATA

- Suitable for: glass, precious stones, metals lead crystals, quartz, ceramic, synthetic material, stainless steel, iron
- Not suitable for: extremely alkaline sensitive high precision optical glasses
- Exposure time: 10-20 min (dosage 2-5%)

## BENEFITS

- Deconex OP 190 has excellent emulsifying capabilities and residues of resin and wax are easily removed because its good wetting performance.
- The coagulation of residues of waxes and resins prevents removed particles from being redeposited on cleaned surfaces.
- Etchant or corrosive substances have been omitted. Deconex OP 190 consists of mild substances which are at the same time kind to materials and meet the regulation of the environmental protection.

## RECOMMENDATIONS

Keep container tightly closed, store in a dry place and protect from sun.  
Recommended storage temperature: +5 to +25°C

## ORDERING INFORMATION

		<b>Order No.</b>
Deconex OP 190	10-kg-can	92-000-729
Deconex OP 190	25-kg-can	92-003-432
Deconex OP 190	220-kg-barrel	92-003-431

# DECONEX OP 193



*Neutral NMP-free special cleaner for precision optical components – suitable for dipping baths and ultrasonic equipments.*

## TECHNICAL DATA

- Suitable for: precision optics, prisms, quartz, sapphire, Zerodur, calcium fluoride
- For materials not mentioned please make your own specific compatibility tests or consult your supplier
- Residence time: 3-10 min (dosage 100%)
- Temp. 25-45°C

## BENEFITS

- Due to excellent wetting properties and small ultrasonic absorption the undiluted product guarantees a rapid, thorough removing of strongly adhering contaminations.
- Deconex OP 193 shows good emulsifying properties for removed contaminations and this consequently increases the life time of the bath. Its formulation is N-methylpyrrolidone-free.

## RECOMMENDATIONS

- Deconex OP 193 is used undiluted at the precleaning stage of precision optical components for removing protective lacquers, cements, resins and pitches. The product is used primarily in the first step of ready-for-inspection cleaning. It is used in ultrasonic or dipping baths respectively in ultrasonic cleaning units.
- Keep container tightly closed in a dry place and protected from sun. Storage temperature between +5 and +25°C

## ORDERING INFORMATION

		<b>Order No.</b>
Deconex OP 193	25-kg-can	92-006-716
Deconex OP 193	220-kg-barrel	92-006-717

## TECHNICAL DATA

- Ingredients: Alkalis, complexing agents, solvents, solubilizer, surfactant
- Suitable for: Alkali-insensitive organic and mineral glass, quartz, sapphire, ceramics
- Incompatible with the following materials: ABS, PVC, Viton™, Kynar™ (PVDF), Lexan™, Buna-N (NBR), Noryl™ EN-265 (For materials not mentioned here, you must conduct your own compatibility tests or commission the company Borer Chemie AG to do them)
- Exposure time at 50-60°C: 3-10 min (dosage 20-50%)

## BENEFITS

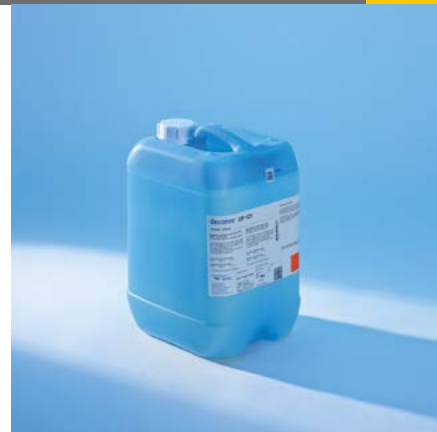
- Due to its composition, Deconex OP 197 has an excellent wetting capability and a high removal capacity for organic dyes and inorganic color pigments, as well as for protective lacquers.
- The alkaline properties of the product support the removal of polishing agents after the protective lacquers have been removed.

## RECOMMENDATIONS

The company Borer Chemie AG has a special range of products for removing the polishing agent directly after the use of this product. Please contact us for details.

## ORDERING INFORMATION

		Order No.
Deconex OP 197	25-kg-can	92-000-731
Deconex OP 197	220-kg-barrel	92-000-732



*Suitable for soaking baths and ultrasonic systems. Deconex OP 197 is a liquid, highly alkaline cleaning concentrate for removing color markings, protective film, cement and protective lacquer residues. It is primarily used in the first ultrasonic cleaning stage.*

# AREOMETER/MEASURING CYLINDER



Measuring spindle with matching measuring cylinder (250 ml) to ascertain the concentration of polishing slurries.

## BENEFITS

The life time of the polishing slurries can be increased by frequent checking and recovering of density.

## RECOMMENDATIONS

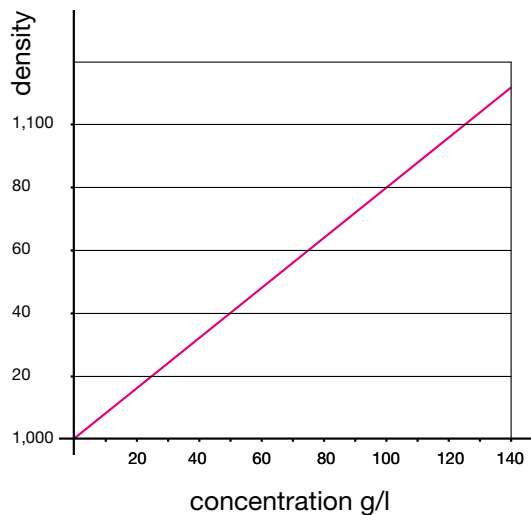
- Fill 250 ml of the homogenized polishing slurry into the measuring cylinder at a temperature of 20°C.
- In order to homogenise the suspension, shake the cylinder for about 1 min. After that, the areometer is immersed into the liquid without touching the cylinder sides.
- After a period of 3.5 minutes the display of the areometer is checked on the top level of the liquid. Find the same value in the vertical axis on the chart and draw a horizontal line to the curve. Vertically below the point of intersection the concentration rate can be found on the concentration axis.

## APPLICATIONS

Type of polish	Recommended concentration values	Field of application
SuperCerox 1663	60-80 g/l	serial production ophthalmic
SuperCerox 1663	60-70 g/l	RX-production ophthalmic
SuperCerox 1663	70-90 g/l	precision optics

## ORDERING INFORMATION

	Order No.
Areometer for mineral w/o measuring cylinder	92-000-482
Measuring cylinder for areometer mineral	92-000-484





# MANUAL REFRACTOMETER

## BENEFITS

Quick establishing of the concentration of coolant suspensions.

## RECOMMENDATIONS

Measuring cooling lubricants:

It is recommended to use the scale which is in the refractometer as a reading scale and to multiply- according to the kind of lubricant applied- the indicated value by a conversion factor, usually contained in data sheets, or this factor may be established by the user as follows:

- Zero point has to be adjusted with the water which is used to prepare the mixings (tap water): By turning the adjusting screw the boundary line is exactly adjusted to „0“ at a temperature of 20°C.
- Prepare required lubricant concentration in water, shake well; e.g. mixture by 5%
- Measuring this mixture with the hand refractometer at the same temperature as when adjusting the zero point; this will result in reading value a. Establishing conversion factor: e.g.  $F = 5/a$
- If any mixture by p-% is prepared, this will result in a conversion factor to  $F = p/a$
- The temperature correction once effected as described before causes that all further measurements are to be multiplied by this established factor in order to obtain the concentration of the cooling lubricant.

## APPLICATIONS

- Fold up lighting plate and put 2 or 3 drops on the horizontally held measuring surface
- Shut lighting plate: The measuring surface should be completely wetted by the sample liquid
- Adjust the instrument to a wide-range light source and look through the eyepiece. If necessary, adjust to scale by turning

## TEMPERATURE ADJUSTMENT

The scales have been determined for a temperature of 20°C. If measured at a different temperature the read-off value is to be corrected. Please increase by 0.4.

## ORDERING INFORMATION

Manual refractometer T32

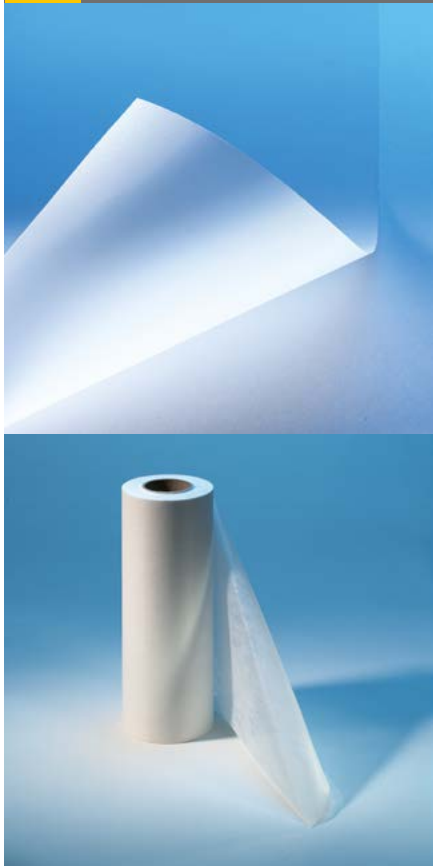
**Order No.**

92-000-480



*A measuring instrument for checking the concentration of coolant suspensions in ophthalmic and precision optics. Besides an easy handling, this hand refractometer offers a clean measuring method with only small test quantities and no chemicals required.*

# FILTER CLOTH



## TECHNICAL DATA

- Weight: 20 g/m<sup>2</sup>
- Thickness: 0.09 mm
- Tensile strength dry: length 60 N; cross 8 N
- Tensile strength wet: length 20 N; cross 1.5 N
- Pore size dry: 157-235 µm
- Pore size wet: 115-170 µm
- Pore volume: 85%
- Dimensions: 150m x 35 cm

## BENEFITS

- Longer life of the coolant suspension.

## RECOMMENDATIONS

- Filter paper to be used on Satisloh coolant filter equipments.

## ORDERING INFORMATION

Filtering paper 150 m

Other roll dimensions on request.

**Order No.**  
92-000-738

*A micro filter paper for filtering glass particles in coolant suspensions.*

# DIAMOND SUSPENSION MAGNUM-TOP

## TECHNICAL DATA

- Monocrystalline diamond grit
- Narrow calibration, free from agglomerates, free from oil and solvents, odourless
- Water-based

## BENEFITS

- Perfectly suitable for spray guns to prevent nozzles and hoses from clogging
- Will not subside for months
- Does not clog

## RECOMMENDATIONS

Diamond suspension (spray) should only be used before polishing. During polishing we recommend diamond lubricants. This improves your polishing results, because of the even abrasion effect of single diamond grain. Permanently adding diamond suspensions or-spray will impair the polishing results.

## ORDERING INFORMATION

			Order No.
Magnum-Top	0,10 µm	1000 ml	92-003-828
Magnum-Top	0,25 µm	1000 ml	92-003-830
Magnum-Top	1 µm	1000 ml	92-003-831
Magnum-Top	3 µm	1000 ml	92-003-832
Magnum-Top	6 µm	1000 ml	92-006-721
Magnum-Top	15 µm	1000 ml	92-009-355



# DIAMOND LUBRICANT YELLOW-S

## TECHNICAL DATA

- Suitable for pitch polishing
- Water based

## ORDERING INFORMATION

		Order No.
Diamond lubricant Yellow-S	10 l	92-003-952

All listed products are available from stock.



*Suitable for aqueous diamond suspensions.*

# DIAMOND SUSPENSION MAGNUM-TOP-DUO



## TECHNICAL DATA

- Containing closely calibrated, blocky, monocrystalline diamonds in low-viscous suspension
- Low surface tension and thus very good wetting properties
- A combination of the two well-known components  
Diamond suspension Magnum-Top and Diamond lubricant yellow

## BENEFITS

The combination of both components offers:

- Easier handling
- Higher stock removal
- Better surface quality

## ORDERING INFORMATION

			<b>Order No.</b>
Magnum-Top-Duo	0.10 µm	2500 ml	92-009-996
Magnum-Top-Duo	0.25 µm	2500 ml	92-006-553
Magnum-Top-Duo	1 µm	2500 ml	92-007-791
Magnum-Top-Duo	3 µm	2500 ml	92-008-158
Magnum-Top-Duo	6 µm	2500 ml	92-008-159
Magnum-Top-Duo	9 µm	2500 ml	92-008-160

# DIAMOND SUSPENSION POLY-TOP



## ORDERING INFORMATION

			<b>Order No.</b>
Poly-Top	0.10 µm	1l	92-003-833
Poly-Top	0.25 µm	1l	92-003-834
Poly-Top	1 µm	1l	92-003-835
Poly-Top	3 µm	1l	92-006-423
Poly-Top	6 µm	1l	92-006-721
Poly-Top	15 µm	1l	92-009-355

# POLISHING CLOTHS SWING-PLUS, QUICK-STEP, MAMBO

## TECHNICAL DATA

- **Swing-Plus:**

Color: grey-black

Flocked universal polishing cloth with very low flocking, self-adhesive flocked on a solid support suitable for ¼, 1, 3 and 6 µm diamond polish and for O.P.S. and alumina.

Hardness\*\*, Stock removal\*\*\*, Marginal sharpness\*\*\*, Life time\*\*\*

- **Quick-Step:**

Color: white

Solid artificial fibre cloth for 6, 9, 15 and 30 µm diamond polish self-adhesive also suitable for 3 µm in case of ceramics.

Hardness\*\*\*, Stock removal\*\*\*+, Marginal sharpness\*\*\*+, Life time\*\*\*+

- **Mambo:**

Color: black

Chemically resistant, spongy oxide polishing cloth, suitable for polishing with oxide polishing suspension (O.P.S.). Ensuring a very good marginal sharpness and non-deforming surfaces.

Hardness\*\*, Stock removal\*\*, Marginal sharpness\*\*\*+, Life time\*\*\*

\*= satisfactory, \*\*= good, \*\*\*= good to very good, \*\*\*+= very good



*All polishing cloths can be used for alcoholic and watery polishing suspensions and lubricants.*

*The cloths are available in diameters 200 mm, 250 mm and 300 mm. All other dimensions: customized*

## ORDERING INFORMATION

### Order No.

Poliertuch Swing-Plus/Quick-Step/Mambo	200 mm Ø	VE = 5 pcs.
Poliertuch Swing-Plus/Quick-Step/Mambo	250 mm Ø	VE = 5 pcs.
Poliertuch Swing-Plus/Quick-Step/Mambo	300 mm Ø	VE = 5 pcs.
Poliertuch Swing-Plus/Quick-Step	400 mm Ø	VE = 5 pcs.
Poliertuch Swing-Plus/Quick-Step/Mambo (rosette)	7.5 mm Ø	VE = 50 pcs.





## OPTICAL COATINGS

Benefit from Satisloh's complete set of consumables for optical coatings- well proven and perfectly suited for box coaters and sputter coating systems. Products offered are: crucible liners, evaporation boats, evaporation materials for optical coatings, consumables for ion guns, top coats, monitor crystals and sputtering materials.

Please ask your sales representative for further details.

# EVAPORANTS FOR OPTICAL COATINGS



High quality, high performance evaporation materials.

## TECHNICAL DATA

- High purity and consistency

## BENEFITS

- Guaranteed consistent high quality and high performance for AR coating processes
- High quality materials
- Approved quality

## RECOMMENDATIONS

- Store in a dry place
- Keep containers closed

## APPLICATIONS

- All types of optical coatings
- Can be used in all types of coaters that work with thermal or EB evaporation sources

## OXIDES

Product	Product	Form	Specification	Unit	Order No.
aluminium oxide	Al <sub>2</sub> O <sub>3</sub>	granules	1-3 mm	250 g	92-007-269
hafnium (IV) oxide	HfO <sub>2</sub>	granules	0.5-5 mm	250 g	92-005-922
silicon dioxide	SiO <sub>2</sub>	granules	1-4 mm	500 g	92-005-994
silicon dioxide	SiO <sub>2</sub>	granules	2,5-4 mm	500 g	92-005-993
silicon dioxide	SiO <sub>2</sub>	granules	1-3 mm	5000 g	92-005-897
silicon monoxide	SiO	granules	2-4 mm	250 g	92-005-986
adhesion material	SiO/Cr	granules	1-3 mm	250 g	92-007-274
tantalum pentoxide	Ta <sub>2</sub> O <sub>5</sub>	granules	1-4 mm	250 g	92-005-265
tantalum pentoxide	Ta <sub>2</sub> O <sub>5</sub>	pills	0.5 g	250 g	92-005-920
titanium (II) oxide	TiO	pills	1 g	250 g	92-005-997
titanium (III) oxide	Ti <sub>2</sub> O <sub>3</sub>	pills	1 g	250 g	92-005-943
titanium dioxide	TiO <sub>2</sub>	pills	2 g	250 g	92-005-936
titanium oxide S	TiO 1.7	granules	1-4 mm	250 g	92-005-331
zirconium dioxide grey	ZrO <sub>2</sub>	pills	13.5 x 9.5 mm	250 g	92-007-265
zirconium dioxide grey	ZrO <sub>2</sub>	pills	17.5 x 6 mm	250 g	92-007-267
zirconium dioxide white	ZrO <sub>2</sub>	pills	21 x 6 mm	250 g	92-007-258
zirconium dioxide white	ZrO <sub>2</sub>	pills	21 x 8 mm	250 g	92-007-260
zirconium dioxide white	ZrO <sub>2</sub>	pills	21 x 8 mm	5000 g	92-007-261
zirconium monoxide	ZrO	granules	0.5- 4 mm	250 g	92-005-895
titanium oxide	Ti <sub>3</sub> O <sub>5</sub>	granules	0.1-3 mm	250 g	92-011-338
indium tin oxide	ITO	pills	8 x 4.5 mm	100 g	92-007-678
indium tin oxide	ITO	granules	1-2 mm	250 g	92-008-131

## FLUORIDES

magnesium fluoride	MgF <sub>2</sub>	granules	1-2.5 mm	500 g	92-005-914
magnesium fluoride	MgF <sub>2</sub>	granules	1-4 mm	500 g	92-005-913
magnesium fluoride	MgF <sub>2</sub>	granules	2.5-4 mm	500 g	92-005-912

## METALS

chromium	Cr	granules	1-4 mm	250 g	92-005-984
chromium	Cr	discs	20 x 5 mm	2 pcs.	92-005-983
chromium	Cr	powder	<1 mm	5000 g	92-006-962

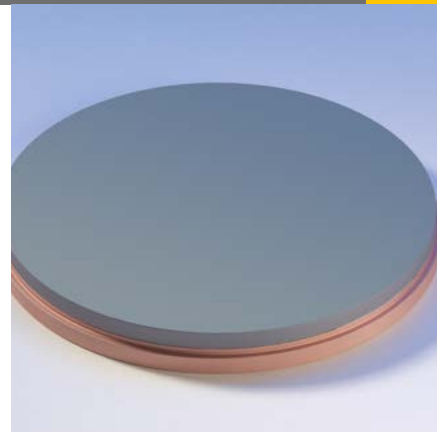


## BENEFITS

- Optimized for Satisloh coating processes and machines
- Assure high proven quality and high performance for Satisloh Sputtering processes
- High performance materials and design
- High purity and consistency
- Process guarantee with Satisloh sputtering processes
- Lowest pre-sputtering times
- Designed for extremely high current density

## RECOMMENDATIONS

- Store in a dry place
- Always replace a target together with seals and contact foil

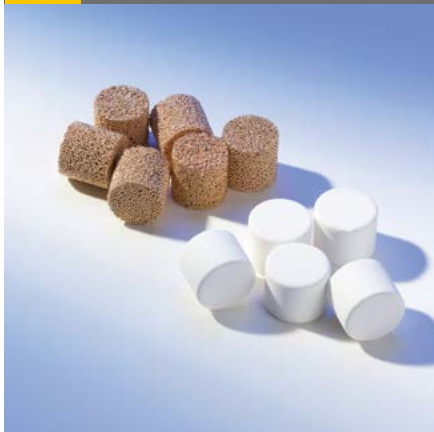


*Ensure optimum performance for Satisloh sputtering processes.*

## ORDERING INFORMATION

Product	Specification	Unit	Order No.
oil for roughing pump SP-100	bottle	1 kg	92-006-115
oil for turbo pump SP-100	bottle	1 pc.	92-005-391
ultrasonic cleaner TO4-310	can	5 l	92-006-079
hydrophobic towelettes		50 pcs.	92-005-276
filter element ONF		1 pc.	92-006-251
SI target (high purity)		1 pc.	92-009-192

# SATISLOH TOP COATS



*Provide highest top coat performance.*

## TECHNICAL DATA

- Satisloh provides simple water repellent hydrophobic products up to latest super easy to clean oleophobic products.
- Materials available for application of top coatings in the coating chamber as well as application in a separate chamber

## BENEFITS

- Evaporants for highest super top coat performance
- Easy to handle hydrophobic materials
- Easy to apply towelettes available
- Proven quality

## RECOMMENDATIONS

- Keep dry, because materials are moisture sensitive
- Keep containers closed
- Keep SATIN products refrigerated (-15 to -20°C) for extended shelf life
- Consult your Satisloh sales person to find out which hydrophobic or oleophobic product best suits your needs

## APPLICATIONS

- Top coats in high vacuum chambers integrated in coating process
- Top coats in separate chambers
- Wipe on applications

## ORDERING INFORMATION

### Hydrophobic materials

<b>Product</b>	<b>Form</b>	<b>Packing</b>	<b>Unit</b>	<b>Order No.</b>
Cleanvac	pills	bottle	100 pcs.	92-005-258
Hydrophobic tablets	pills	bottle	100 pcs.	92-007-316
Aulon	pills	bottle	100 pcs.	92-006-296
Top 8 pills	pills	bottle	5 pcs.	92-006-302
Hydrophobic towelette	towelette	individual packets	50 pcs.	92-005-276
Mirage AR	solution	bottle	50 ml	92-009-196



*Used for high precision coating thickness control.*

## TECHNICAL DATA

- Monitor crystals in diameter 13.9 mm
- Available with gold and alloy coating
- Usable in most available coating systems

## BENEFITS

- Proven quality
- Provide high precision

## RECOMMENDATIONS

- Store in a dry place

## APPLICATIONS

- Optical coatings by quartz crystal monitoring

## ORDERING INFORMATION

<b>Product</b>	<b>Nominal Frequency</b>	<b>Diameter</b>	<b>Unit</b>	<b>Order No.</b>
gold, double anchor, IT	5.98 MHz	13.9 mm	10 pcs.	92-005-881
gold, double anchor	5.98 MHz	13.9 mm	10 pcs.	92-010-531
silver, full electrode	5.98 MHz	13.9 mm	10 pcs.	92-010-532

# CRUCIBLE LINERS FOR ELECTRON BEAM EVAPORATION



## TECHNICAL DATA

- Liners are made of a special refractory material
- Specifically designed liners available for evaporating materials in pill form

## BENEFITS

- Optimum results when utilizing Satisloh coating processes, machines and materials
- Proven quality
- Process guarantee with Satisloh processes
- Long lifetime

## RECOMMENDATIONS

- Store in a dry place

## APPLICATIONS

- For Satisloh coating processes using electron beam evaporation systems
- For customized coating processes using electron beam evaporation systems
- Applicable in most of the commercial electron beam evaporation systems

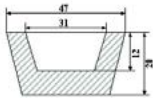
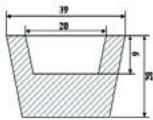
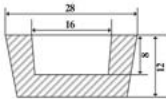
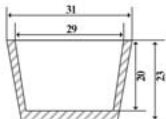
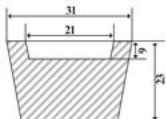
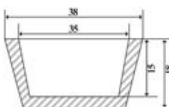

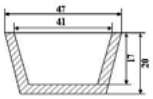

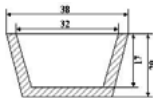
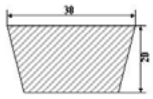
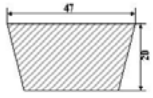
Provide optimum coating results for all electron beam guns used in Satisloh and most other coating systems.

## ORDERING INFORMATION

Product	Dimensions	Material	Unit	Order No.
Liner vol. = 27.8 cc		granules	1 pc.	92-005-146
Liner vol. = 2.1 cc		pills	1 pc.	92-005-147
Liner 3P vol. = 10 cc		S3F	1 pc.	92-005-148
Liner vol. = 4 cc		granules	1 pc.	92-005-149
Liner vol. = 7 cc		pills	1 pc.	92-005-150
Liner vol. = 18.5 cc		granules	1 pc.	92-005-151


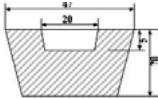
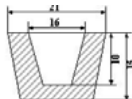
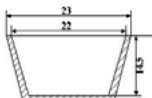

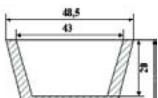

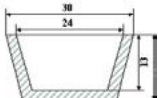
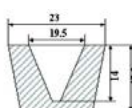
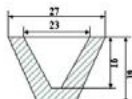
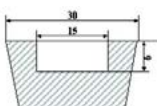
# CRUCIBLE LINERS FOR ELECTRON BEAM EVAPORATION

## ORDERING INFORMATION

Product	Dimensions	Material	Unit	Order No.
Liner vol. = 7 cc		S15G	1 pc.	92-006-146
Liner vol. = 2.4 cc		granules	1 pc.	92-005-152
Liner vol. = 28.5cc		pills	1 pc.	92-005-585
Liner vol. = 9 cc		granules	1 pc.	92-005-153
Liner vol. = 2.4 cc		granules	1 pc.	92-005-154
Liner vol. = 8.5 cc		S15G	1 pc.	92-006-666
Liner vol. = 4 cc		granules	1 pc.	92-005-113
Liner vol. = 18 cc		granules	1 pc.	92-005-339
Liner vol. = 7 cc		granules	1 pc.	92-005-134
Liner vol. = 10 cc		granules	1 pc.	92-005-135
Liner			1 pc.	92-005-520
Liner flat top		pills	1 pc.	92-006-152

# CRUCIBLE LINERS FOR ELECTRON BEAM EVAPORATION

## ORDERING INFORMATION

Product	Dimensions	Material	Unit	Order No.
Liner vol. = 1.5 cc		pills	1 pc.	92-005-136
Liner vol. = 1.5 cc		granules	1 pc.	92-005-430
Liner vol. = 1.4 cc		granules	1 pc.	92-005-138
Liner CV		pills	10 pcs.	92-005-139
Lover, CV		granules	10 pcs.	92-005-140
Liner vol. = 22.5 cc		granules	1 pc.	92-006-150
Liner vol. = 1.4 cc		granules	1 pc.	92-005-141
Liner vol. = 4 cc		granules	1 pc.	92-005-142
Liner vol. = 1.8 cc		granules	1 pc.	92-005-143
Liner vol. = 2.85 cc		granules	1 pc.	92-005-340
Liner			1 pc.	92-005-144

# EVAPORATION BOATS FOR THERMAL SOURCES

## TECHNICAL DATA

- Liners are made of special refractory metals

## BENEFITS

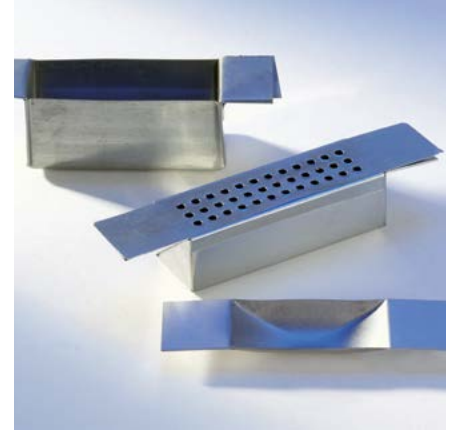
- Optimized for Satisloh and other coating processes, machines and materials
- Proven quality
- Process guarantee with Satisloh processes
- Longlife

## RECOMMENDATIONS

- Store in a dry place

## APPLICATIONS

- For Satisloh coating processes with thermal evaporation
- For customized coating processes using thermal sources
- Applicable in most of the commercial thermal sources



*High quality evaporation boats used for all thermal sources in Satisloh coaters and most other coaters.*

## EVAPORATION BOATS MOLYBDENUM

Product	Machine Type	Material	Unit	Order No.
Boat no. 7	Box coaters, 900, 1200 series	color substances	10 pcs.	92-006-298
Boat CV	Box coaters, 900, 1200 series	color substances	10 pcs.	92-006-295
Boat no. 14	Box coaters	color substances	10 pcs.	92-006-157
Boat SA1G	Box coaters	SA1G	10 pcs.	92-007-627
Boat top coat	Box coaters	Top coats	10 pcs.	92-007-628
Tantalum boat BCA	Box coaters	various	20 pcs.	92-006-147
Tungsten boat no. 8	Thermal sources	HSAK	50 pcs.	92-006-163

# CONSUMABLES FOR ION GUNS



## BENEFITS

- Proven quality
- Process guarantee for Satisloh processes

## RECOMMENDATIONS

- Store in a dry place

## APPLICATIONS

- All evaporation processes for optical applications

*Satisloh offers a large variety of high quality standard and customized consumables for ion guns.*

## ORDERING INFORMATION

Product	Material	System	Unit	Order No.
anode	graphite	Ion gun Mark 1/ Mark 1+	1 pc.	92-005-222
anode	inox (stainless)	Ion gun Mark 1/ Mark 1+	1 pc.	92-005-387
gas distributor	graphite	Ion gun Mark 1/ Mark 1+	1 pc.	92-006-019
insulator	sapphire ball	Ion gun Mark 1/ Mark 1+	1 pc.	92-006-018
gas distributor, special	graphite	Ion gun Mark 1/ Mark 1+	1 pc.	92-005-224
gas distributor, special	inox (stainless)	Ion gun Mark 1/ Mark 1+	1 pc.	92-005-228
insulator	ceramic	Ion gun Mark I, Mark II	1 pc.	92-006-015
gas distributor	inox (stainless)	Ion gun Mark II	1 pc.	92-006-017
anode	inox (stainless)	Ion gun Mark II	1 pc.	92-006-016
gas distributor	graphite	Ion gun Mark II	1 pc.	92-005-227
anode	graphite	Ion gun Mark II	1 pc.	92-006-014
gas distributor	titanium	Ion gun Mark II	1 pc.	92-006-013
anode	stainless steel	Ion gun Mark II+	1 pc.	92-007-278
gas distributor	graphite	Ion gun Mark II+	1 pc.	92-007-292
thermal transfer plate		Ion gun Mark II+	1 pc.	92-007-278



## RECOMMENDATIONS

- Store in a dry place

## APPLICATIONS

- For all coating processes



*Satisloh witness samples monitor the quality of coatings.*

## ORDERING INFORMATION

Shape	Dimensions	Surface	Unit	Order No.
round	54.8 mm	mirror	100 pcs.	92-006-181
round	40 mm	clear	100 pcs.	92-006-161
round	24.6 mm	frosted	100 pcs.	92-005-197
rectangular	40 x 44.5 mm	clear	100 pcs.	92-005-877
rectangular	40 x 44.5 mm	mirror	100 pcs.	92-005-429
square	45 x 45 mm	frosted	100 pcs.	92-005-882
rectangular	54.5 x 40 mm	clear	100 pcs.	92-006-430
round	54.8 mm	clear	100 pcs.	92-005-999

## OIL AND GREASE



*Satisloh oil and grease are the optimal choice to maintain the reliability of vacuum coating equipment.*

### APPLICATIONS

Ensure performance of your coating system

### ORDERING INFORMATION

Product	Specification	System	Unit	Order No.
grease	silicon grease		1 pc.	92-005-161
grease	Fomblin		1 pc.	92-006-252
oil for roots pump	P3	roots pumps	5 kg	92-006-116
oil for turbo pump	TL 011	turbo pumps	1 pc.	92-005-163
oil for rotary pump	ultrgrade 19	rotary pumps	4 l	92-005-167
oil for roots pump	ultrgrade 20	roots pumps	4 l	92-005-165
oil for rotary pump	ultrgrade 70	rotary pumps	4 l	92-006-113
fomblin oil	SP-100	roughing pumps	1 kg	92-007-810
oil for turbo pump	SP-100	turbo pumps	1 pc.	92-005-391
oil	silicon oil	diffusion pumps	1 gal.	92-009-635

## VACUUM SYSTEM MAINTENANCE

*Vacuum grade sturdy aluminum foil for lining chamber walls and shielding during production.*

### ORDERING INFORMATION

Vacuum Grade Aluminum Foil      roll      **Order No.** 92-005-174

*Water chiller corrosion inhibitor.*

### ORDERING INFORMATION

Dow Frost      5 gal pail      **Order No.** 92-010-384

Manufacturing high precision optical components is complex and versatile. Therefore Satisloh offers intensive customer support, from the initial concept to the final process and beyond. This also includes extensive customer service for tools and accessories.

In our Tool Catalog you can find Satisloh standard- tools such as:

- **Receptions & Accessories**

- Grinding, polishing and centering chucks
- Seal lips, membranes
- ADAPT tools

- **Diamond tools**

- Pre and fine grinding tools
- Dressing tools
- Asphere tools
- Centering wheels
- Prism tools

On request we can offer customized solutions as well.

To give you a simple order process, we provide all important information in our Tool Catalog. You can order our products directly via the order form, which you find in that catalog.

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**You can find the catalog on our website**

<http://www.satisloh.com/home/consumables-tools/precision-optics/>  
for download or you can get it from precision optics sales department.

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**precision@satislohusa.com**  
**800-866-5640**



## CONTACT

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