

**Applications of deconex® detergents for the optical and ophthalmic industry**

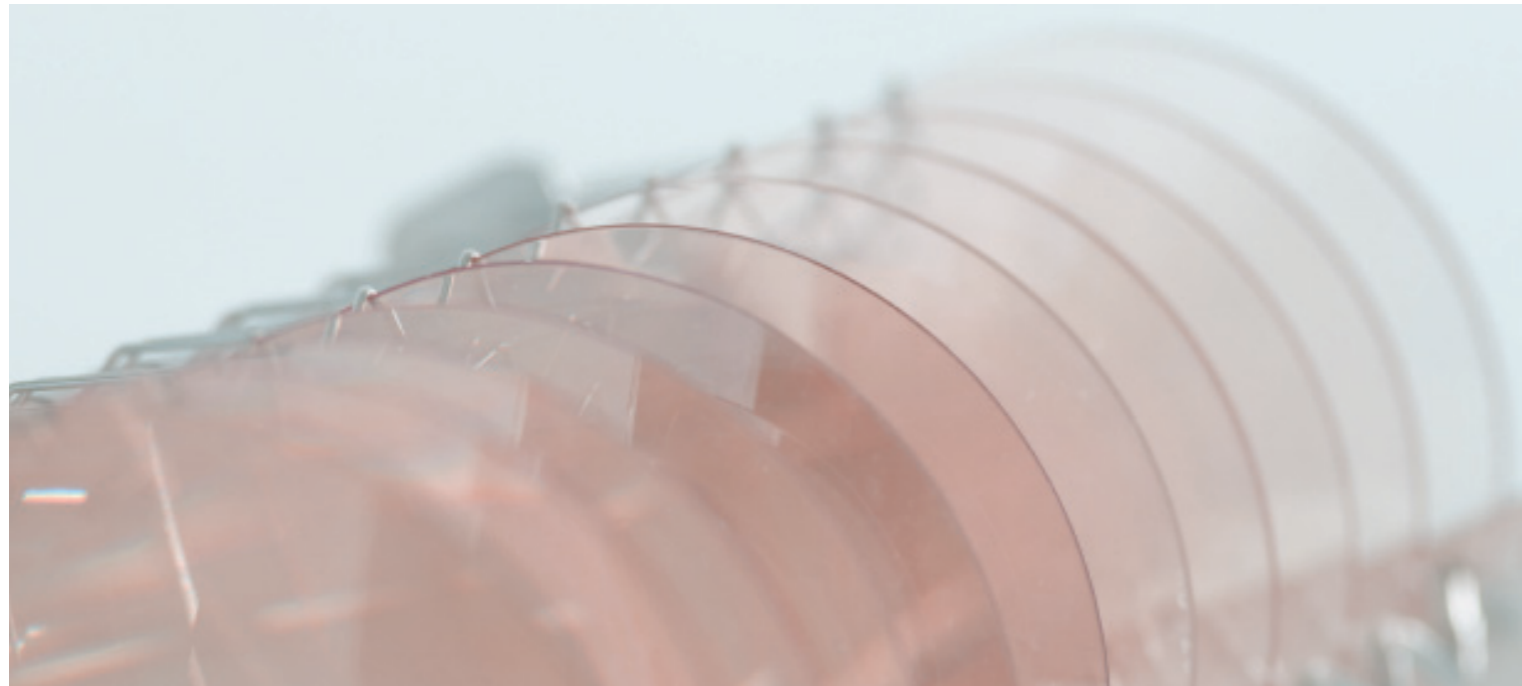
The deconex® OP product line is specifically designed for the cleaning requirements in ophthalmics and sun lens industry. Special products are available for the removal of coatings with quality defects. The deconex® products are modern, NTA-free and designed for the future.

Operation	Product																	
	deconex® OP 121	deconex® OP 141	deconex® OP 146	deconex® OP 148	deconex® OP 149	deconex® OP 152	deconex® OP 153	deconex® OP 164	deconex® OP 165	deconex® OP 171	deconex® OP 172	deconex® OP 192	deconex® OP 193	deconex® OP 196	deconex® OP 197	deconex® de-coat 500	deconex® de-coat 510	deconex® de-coat 600
cleaning prior to inspection		●	●	●	●		●			●								
cleaning after moulding		○	○							○		○	○	○				
cleaning after injection moulding		○	○	○	○					○								
removal of packaging residues			○			○			○									
removal of residues from protection tape												○	○	○	○			
removal of centre marks												○	○	○	○			
brush cleaning prior to inspection						○	○				○							
brush cleaning prior to hard-coating						○	○				○							
brush cleaning prior to antireflex-coating						○	○				○							
cleaning prior to hard-coating		○	○			●	●		○									
cleaning prior to anti-reflex coating	○	○	○			○	○			○								
cleaning of glass moulds	●	●							●			●	●	●	●			
cleaning after tinting	○	○										○	○	○	○			
decoating of anti-reflex-coating layer																□		□
decoating of hard-coating layer																	□	

○ organic material   ● mineral material   □ product to be used in case of coating defects



**Products and processes for residue-free cleaning in the ophthalmic industry**



## Cleaning detergents for optics and ophthalmic industry

### About Borer Chemie AG

#### Competence in aqueous based cleaning

Borer Chemie AG is a leading provider of cleaning detergents with the brand name deconex®. Products are designed for top quality requirements in high tech applications and are distributed globally. Borer Chemie AG develops cleaning processes which are adapted to the specific requirements of the customers. When the process is installed, Borer Chemie AG supports the clients with on-site assistance and thus laying the foundation for best results from the very beginning.

The research & development team establishes processes and formulations in our in-house technical department for the cleaning demands of our customers. The entire manufacturing, filling, labelling and packaging process as well as on-time shipping of the over 150 highly specialised products also takes place at our headquarter in Switzerland. The company is equipped with state-of-the-art installations and is certified ISO 9001:2008 and ISO13485:2003.

We have agencies in many countries which are responsible for sales and technical customer support. The specialists in our agencies offer targeted, industry-specific training to support the customers in the best use of the products, thereby bringing their expertise to the shop floor.

The company was founded in 1965 and today about 60 employees work at his headquarter in Switzerland. Borer Chemie AG is divided in four divisions and each provides to the specific needs for their market: Industry, Medical, Pharma and Laboratory. The products for the optics and ophthalmic industry are distributed through the industrial division.

deconex®: concentrated detergents for the production of organic and mineral lenses, sun lenses and other optical devices

## Authority of cleaning processes

### Residue-free cleaning in the optical and ophthalmic industry

In the ophthalmic and sun lens industry deconex® is used for either cleaning for inspection or both prior to hard-coating and anti-reflex-coating. Further, deconex® is widely used for any application prior to vacuum coating in any industry.

deconex® is recognized for better yield and higher output; the products are highly concentrated and of reproducible quality. This results in a longer bath lifetime of the detergent and far better reliability of the process. The specific needs on cleaning in the ophthalmic and sun lens industry require purposeful adaption of the deconex® products and the appropriate cleaning process.

In the focus of the various cleaning processes are:

- precleaning of lenses ready for inspection with removal of
  - polishing pastes
  - centre marks
  - residues of protection tapes
  - fingerprints and dust
- fine cleaning of lenses and sun lenses prior to hard coating
  - etching of the surface for better adhesion
  - removal of fingerprints and dust
- fine cleaning of lenses and sun lenses before anti-reflex coating with removal of
  - fingerprints and dust
  - any kind of particles
- pre- and fine cleaning with brushing equipment
- cleaning of sun lenses after injection molding with removal of
  - fingerprints and dust
  - any kind of particles
  - mould release
- removal of anti-reflex layers and hard-coat layers in case of coating defects
  - from lenses and sun lenses
  - fixtures and carriers
- cleaning of spectacle frames
- cleaning of glass moulds to remove polymeric organic residues
- cleaning for metal injection moulds as used in sun lens production
- cleaning of lenses after tinting