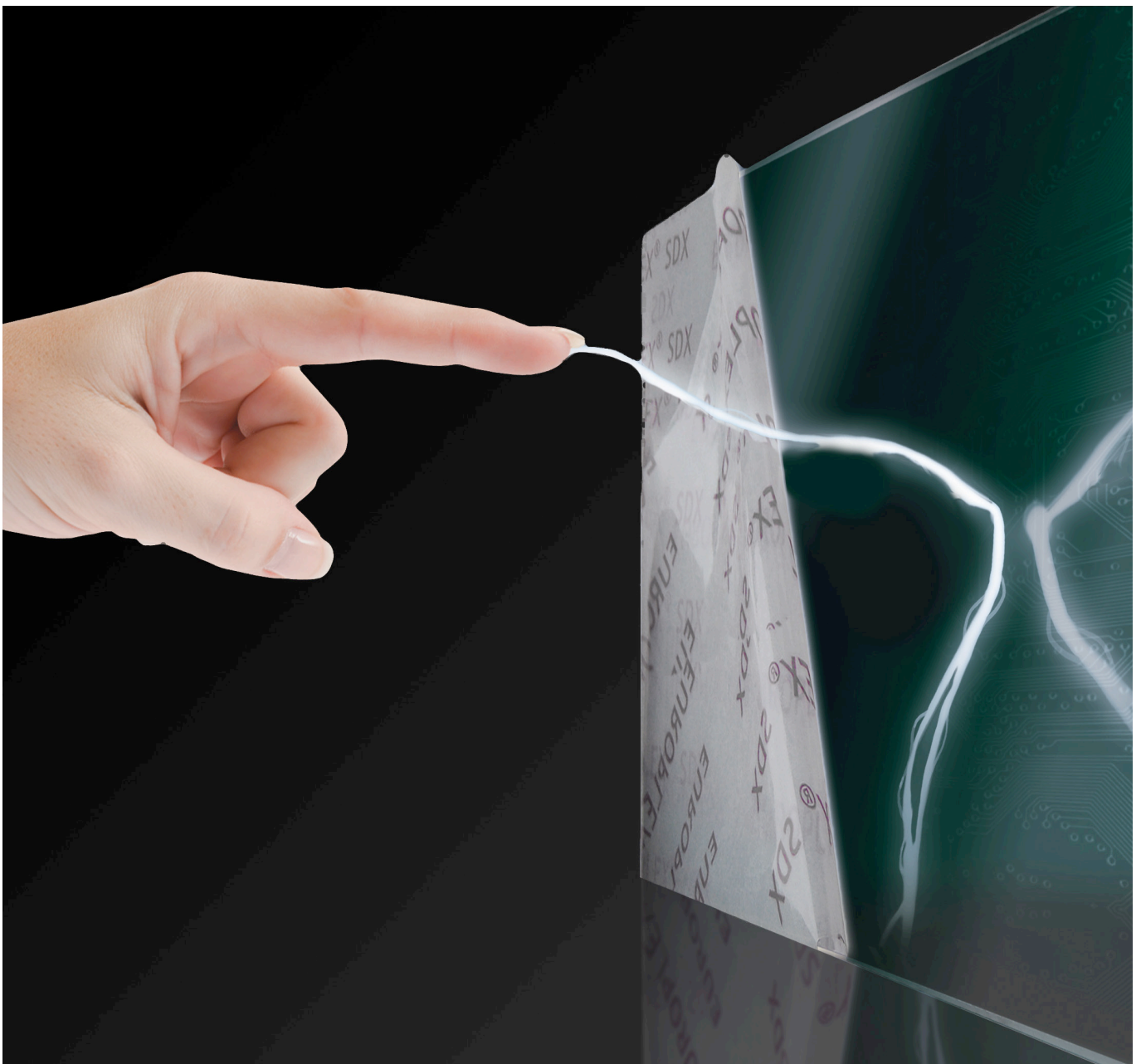


**EUROPLEX® SDX & SDX-F**

Electrostatic dissipative ESD-glazing



# EUROPLEX® SDX and EUROPLEX® SDX-F

## Electrostatic Dissipative XENIOS® Technology

Protection against electrostatic discharge events ESD: EUROPLEX® Glazings dissipate electric charges in a controlled way against earth.

## High Performance XENIOS® Surface Technology

The transparent dissipative EUROPLEX® SDX-Glazings out of high-grade polycarbonate are produced by applying an innovative layer based on XENIOS® Technology. Functional nanoparticles are distributed homogeneously in the overall coating matrix producing on both sides of the polycarbonate sheets an electrical dissipation capacity. Only the XENIOS® coating provides the polycarbonate sheets with a permanent electrical dissipation capacity and therefore presents a significant value-added process.

## EUROPLEX® SDX-Glazings

for planar installations have a highly-crosslinked abrasion-proof and chemical resistant surface. In production and assembly applications, in which working safety and operational reliability as well as high quality requirements are of prime importance, EUROPLEX® SDX dissipative glass guarantees an effective long term protection against static discharge events.

## EUROPLEX® SDX-F

polycarbonate sheets are most suitable for warm forming to manufacture bended machine housings as well as angled covers of conveyor belts. The warm bending process makes high demands on the performance of a dissipative coating with respect to its thermal resistance and non-destructive tensile strength. EUROPLEX® SDX-F meets these requirements of the industry at best.

Transparent static dissipative EUROPLEX® SDX-Glazings provide:

- Protection of electronic components against electrostatic discharge
- Protection against explosions
- Protection against dust adhesion and particle contamination



### Protection against Electrostatic Discharge (ESD).

Protective measures against electrostatic events are described in DIN EN 61340-5-1. In an ESD-protected work environment all materials and surfaces must discharge electrostatic charges controlled against earth.



# EUROPLEX® Polycarbonate

## Transparent and electrostatic dissipative

### Quality features

Due to the use of our innovative XENIOS® surface technology EUROPLEX® SDX-Glazings are characterized by a specific combination of properties:

#### **Permanence in electrostatic dissipation**

The electrostatic charge control is permanent and independent from humidity. Temporary ionization is not needed.

#### **Efficient protection against electrostatic discharge events in compliance with industrial standards**

Connected to earth ESD-Glazings dissipate electric charges in a controlled way.

#### **EUROPLEX® SDX-Glazings conform to the requirements of the standard DIN EN 61340-5-1 for the protection of electronic components against electrostatic phenomena (ESD-Protection).**

#### **In the field of explosion protection the use of EUROPLEX® SDX-Glazings complies with the „ATEX“ Directive 94/9/EC, II 2 GD.**

#### **Ask for the die EUROPLEX® test certificates! An exclusive service of Röhm.**

#### **Best optical transparency**

The excellent light transmission always guarantees a crystalclear view on products and processes.

#### **Extremely break-resistant**

The impact strength of EUROPLEX® SDX-Glazings are 250 times higher than that of glass. The polycarbonate sheets are shatter-proof. Thus EUROPLEX® is ideally suitable as transparent machine glazing. Both man and machine are perfectly protected.

### Application areas and product benefits

EUROPLEX® SDX-Glazings increase the safety of your production processes: No operational faults caused by electrostatic charging!

#### **Lower scrap rates in electronic assembly**

Uncontrolled electrostatic discharges of only a few volt are enough to damage or destroy electronic components. EUROPLEX® SDX-Glazings dissipate electric charges controlled against earth preventing both immediate and

latent ESD caused defects. Higher production yields and less customer complaints are the result: ESD-Protection according to the standard DIN EN 61340-5-1.

#### **Prevention of explosions in production areas handling explosive materials**

In explosive atmospheres static electricity causes fire and explosions due to spark formation. Properly grounded the use of EUROPLEX® SDX-Glazings safeguard industrial facilities against explosion: Explosion protection conform to ATEX.

#### **Less machine shutdowns in dust intensive productions**

EUROPLEX® SDX-Glazings protect machines and materials against local accumulations of dust and dirt particles. The operation reserve of optical sensors is significantly increased. Safety and availability of production facilities are improved.

#### **Examples of use**

##### **Semi-conductor and electronic industries**

- Hoods and vision panels of assembly machines, robot cells and conveyer belts
- Wafer storage containers
- Covers for conveyor belts

##### **Cleanroom industry**

- Clean room systems (doors, windows, room partitions)
- Mini-environments, climate boxes and laminar flow-boxes

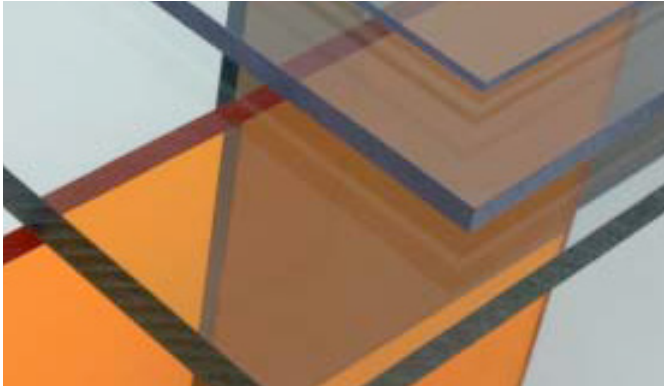
##### **Chemical, pharmaceutical and food industry**

- Housings and inspection windows of dosing, filling and packaging machines for bulk solids, solvents and fuels

##### **Printing and paper industry**

- Optical sensors, safety light barriers and light grids

# Our tailor-made ESD-Polycarbonate Glazings



## EUROPLEX® SDX

The wear-resistant ESD-Glazing for planar installations.

### High wear resistance grants long-term ESD-Protection

The abrasion resistance of EUROPLEX® SDX surpasses by far the hardness of the standard polycarbonate sheet. The dissipative coating does not wear out and is not rubbed off by intensive cleaning and polishing. Even after 2000 rubbing cycles with a dry brush over the sheet surface the ESD-Performance retains unchanged (Rubbing test DIN 53778).

### Processing

EUROPLEX® SDX for planar installations can be machined, e.g. sawing, drilling and milling, in the same way as standard polycarbonate. For this purpose commonly available factory tools are suitable. The minimum bending radius corresponds to 300 times the sheet thickness. The protective foil should be kept on the plate until the end of processing.

## EUROPLEX® SDX-F

The transparent dissipative ESD-Glazing for heat bending.

### Static dissipation at the bending edge fulfills the ESD standard DIN EN 61340-5-1

The electrostatic dissipation at the bending edge also meets the requirements of the ESD standard after thermal and mechanical stress of the coated EUROPLEX® SDX-F by deformation.

### Excellent optical transparency

With a light transmission of 85 % (3 mm sheet thickness) the bendable EUROPLEX® SDX-F provides a unique optical quality. The bending edge retains the clear transparency.

### Processing

EUROPLEX® SDX-F is suitable for heat bending. Forming and bending of the EUROPLEX® SDX-F polycarbonate sheets allow the manufacturing of one-way moulded parts. The processing is done in the same way as the handling of standard polycarbonate sheets. With commonly available factory tools the sheet is linear heated in the temperature range of 150 °C to 160 °C. The heating time depends on the material thickness. After bending the EUROPLEX® SDX-F formed part can be machined like standard polycarbonate.

### Röhm complements its product range:

The warm forming EUROPLEX® SDX-F polycarbonate sheet is suitable for the manufacturing of bended machine housings and angled covers for conveyor belts.

# Product range and technical overview

## Product range EUROPLEX® SDX and SDX-F-Glazings

Variety	Sheet thickness	Sheet size
EUROPLEX® SDX 88100 PC C2 transparent	2 – 3 – 4 – 5 – 6 – 8 mm	1980 x 3000 mm
EUROPLEX® SDX-F 88500 PC C2 transparent	3 – 4 – 5 – 6 – 8 mm	1980 x 3000 mm

Short delivery times due to our extensive stock of products. Special product types are available on request.

## Technical overview of EUROPLEX® SDX and SDX-F-Glazings (3 mm Sheet)

	EUROPLEX® SDX	EUROPLEX® SDX-F
Surface resistivity	$10^{5-7} \Omega/\text{sq}$	$10^{5-7} \Omega/\text{sq}$ dissipation at the bending edges conforming to standards
Light transmission	85 %	85 %
Abrasion resistance ASTM D 1044 – Taber Haze, 500 g, CS10, 100 cycles	<4% more resistant than standard-polycarbonate	comparable to standard-poly-carbonate
Hot deformation	only planar installation	suitable for heat bending; machining comparable with standard-poly-carbonate
Chemical resistance	very good *see list	good *see list
Quality assessments by approved test institutes	Test certificate ESD-Protection DIN EN 61340-5-1 Test certificate explosion protection ATEX-Directive 94/9/EG, II 2 GD	

## Röhm – a powerful business partner

Our plus:

- High product quality
- Competence in materials
- Close to customers
- Service
- Innovative research and development



## SUSTAINABILITY

**The Sustainable Development Goals (SDG), adopted by the United Nations in 2016, all have one goal: By 2030, all inhabitants of planet Earth should be able to live in dignity.**

To this end, the United Nations has formulated 17 goals to support global sustainability efforts. The SDGs are our compass in aligning our sustainability-strategy, creating innovations and identifying new business opportunities and take advantage of them.

Products and solutions from Röhms make a measurable contribution to achieving these goals. This is how we assume responsibility.



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