

TECHNICAL INFORMATION

T102

Wet cleaning of powerails

Author: TB



CONTENTS:

1. Contact interruptions
2. General information
3. Safety instructions
4. Cleaning oiled powerails
5. Cleaning powerails with slightly hardened oil and grease
6. Cleaning powerails with hard and solidified dirt
7. Product description
8. Safety data sheets --> See Technical Information TI02 A (Appendix)
9. User manual sample --> See Technical Information TI02 A (Appendix)

1. Contact interruptions, general information:

Powerails and conductor lines have for many years been used as secure transmission systems for electricity.

However, various situations, such as sensitive transmission voltage possibly combined with heavy soiling, can still cause contact interruptions.

The main causes in detail:

- a) Insufficient contact force of the current collectors
- b) Insufficient transmission voltage
- c) Soiling of the powerails and carbon brushes
- d) Oxidation on the powerails.

This technical document only deals with soiling caused by moist substances, such as oil, etc..

Note that:

- Contact interruptions "causes / avoidance / remedial measures"
- Other cleaning methods

are contained in the Technical Information TI06.

2. General information:

Soiling of the powerails caused by oil or other moist substances can result in the following negative effects for the powerail installation:

- a) An increase in the contact resistance between the carbon brush and the powerail, resulting in insufficient contact
- b) An increase in the contact resistance between the carbon brush and the powerail caused by adherent local soiling, resulting in insufficient contact
- c) Negatively influence the service life of the carbon brushes

Therefore, these installations should be occasionally cleaned with cleaning agents approved by us.

These are usually suitable for all the plastics in use and do not harm them. (See Section 5 for exceptions.)

Since wet cleaning involves spraying the cleaning agent directly onto the soiled powerails, the procedure is not suitable for powerail enclosed conductor systems.

3. Safety instructions:

Ensure that the following safety instructions are followed for all cleaning tasks:

- ATTENTION:

Powerails, conductor lines and current collectors are live !

Therefore, always follow "**the five golden safety rules**"

in accordance with DIN VDE 0105 T. 100:

1. Disconnect completely;
2. Secure against reconnection;
3. Verify that it is disconnected;
4. Carry out earthing and short circuiting;
5. Protect against adjacent live parts

- Read product descriptions

- Read safety data sheets

- Only reconnect the installation once:

- The cleaning agent has dried completely
- All required tools and equipment have been removed
- Correct re-installation of the current collector / collector trolley has been carried out

4. Cleaning oiled powerails:**a) Cleaning agent:****Rivolta S.L.X. 1000**

(Special safety cleaner for all electric installations and devices)

--> Suitable for food companies (NSF-K2 listed)!

b) Package contents:

- | | |
|---|-----------|
| - 300 ml aerosol can, ID no.: | 110 69 63 |
| - 4 kg canister, ID no.: | 250 71 52 |
| (for compressed air sprayer) | |
| - 15 kg canister, ID no.: | 251 32 38 |
| (for compressed air sprayer) | |
| - Compressed air sprayer Profi (1.5 l), ID no.: | 251 32 41 |

c) Cleaning process:

- Always follow the safety instructions!
- Spray cleaning agent directly onto the oiled (soiled) powerails. The oil is then chemically dissolved on the surface of the powerail and flushed off by the pressure of the spray.
The cleaning agent does not have to be wiped off, e.g. with a cloth, since it evaporates directly.

5. Cleaning powerails with slightly hardened oil and grease:**a) Cleaning agent:**

--> Preliminary cleaning: **Rivolta O.C.X.**

(Oxide remover for eliminating faults at "electrical contacts")

ATTENTION: The plastics PC and PPO only

have limited resistance to this cleaning agent.

This is the reason why the hanger clips and the
current collectors should not be sprayed.

If it is not possible to prevent these parts coming into contact
with the cleaner, our approval is required prior to cleaning
the respective installation.

--> Subsequent cleaning: **Rivolta S.L.X. 1000**

b) Package contents:**- Rivolta O.C.X.:**

- 400 ml aerosol can, ID no.: 251 32 39

- 10 l canister, ID no.: 251 32 40

(for compressed air sprayer)

- Compressed air sprayer Profi (1.5 l), ID no.: 251 32 41

- Rivolta S.L.X. 1000:

- --> See 4. b)

c) Cleaning process:

- Always follow the safety instructions!

- Preliminary cleaning: Spray with Rivolta O.C.X.

- Let it stand for approx. 15 – 20 minutes

- Subsequent cleaning with Rivolta S.L.X. 1000, as described under 4.c)

6. Cleaning powerails with hard and solidified dirt:

Wet cleaning will **not** remove this type of soiling.

A mechanical cleaning process is required.

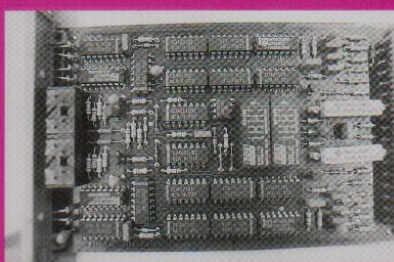
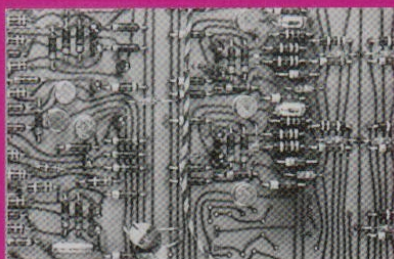
--> Insert powerail cleaners in the form of current collectors with cleaning "carbon".

- Refer to the relevant technical information for the product contained in the Technical Information **T106 "Contact interruptions"**.

7. Product descriptions:

The manufacturer's product descriptions provide a concise overview of:

- Use
- Application
- Characteristics
- Safety measures

**Rivolta®
S.L.X. 1000**

BREMER & LEGUIL GMBH

Am Burgacker 30-42 · 47051 Duisburg

☎ 02 03/99 23-0 · FAX 02 03/2 59 01

**The special safety cleaner for difficult
cleaning tasks in electronics and mechanics.**

**For cleaning live, supersensitive electronic
installations, components and devices.
Switching off or dismantling is no longer
required.**

**For cleaning tasks at oxygen carrying parts,
e.g. instruments, filters, lines, etc.**

- non-flammable and non-explosive
- no flashpoint
- dielectric strength 50,000 Volt/cm
- evaporates quickly, completely and residue free
- not a health hazard in accordance with the German Ordinance on Hazardous Substances (GefStoffV)
- zero ozone depletion potential
- almost odourless
- no harm to materials
- intensive cleaning power
- simple application
- versatile use



The special safety cleaner for difficult cleaning tasks in electronics and mechanics. For cleaning live, supersensitive electronic installations, components and devices. Switching off or dismantling is no longer required. For cleaning tasks at oxygen carrying parts, e.g. instruments, filters, lines, etc.

Always observe VDE Directive 0105 Part 100 "Operation of electrical installations" when working at live parts and BGR 500 Chapt. 2.32 "Operation of oxygen installations" when working at oxygen carrying parts!

SAFE

S.L.X. 1000 meets the highest safety demands. Non-flammable and non-explosive. No flashpoint. Dielectric strength of 50,000 Volt/cm. Evaporates quickly and completely. Leaves absolutely no residue. Not a health hazard in accordance with the German Ordinance on Hazardous Substances (GefStoffV) Not skin irritating. Almost odourless. No harm to common metals, contact coatings, insulation, paints, varnishes, rubber, plastics, etc.

ECONOMICAL

With S.L.X. 1000 it is possible to clean all live electronic installations and devices during normal working hours. And since the expensive and time-intensive dismantling of parts is not required, huge savings can be achieved.

EFFECTIVE

S.L.X. 1000 cleans effectively and thoroughly thanks to its low surface tension and high specific weight. These two factors ensure that S.L.X. 1000 even gets into microscopically small crevices and cracks. It removes oil, grease, dust deposits as well as other dirt and foreign objects which create contact resistance, contact problems and faults.

SIMPLE APPLICATION

Via spray, dip or brush cleaning. The best results are usually achieved when S.L.X. 1000 is applied as a fine spray via an aerosol can or electric spray gun with attached needle jet nozzle. S.L.X. 1000 can also be used in an ultrasonic bath.

VERSATILE

S.L.X. 1000 is used to clean measurement and control installations and devices, electro-medical apparatuses, electronic equipment and installations, ICs, PCBs, RAMs, PLCs, microcontrollers, processors, sensors, pressure control panels, photocells, optical systems, magnetic heads, measuring instruments, amplifiers, collectors, contacts, potentiometers, relays, switches, movements, meters, etc.

S.L.X. 1000 is also used to clean oxygen carrying parts, e.g. instruments, filters, lines, etc.

Application areas include: Electronics, power engineering, telecontrol engineering, actuating elements (drive engineering), process control engineering, EDP, radio and television engineering, telecommunication engineering, navigation engineering, medical engineering, microsystem engineering, robotics, sensor systems, communication engineering, etc.

The specifications and data in this publication are believed to be accurate and reliable and are continuously checked. They are based, amongst other things, on vast industrial experience. However, we accept no liability for their accuracy or usage. Prior to each application of our product, please test its usability and be completely satisfied with its performance. Our examples of use and suggestions should not be considered as an incitement to infringe any patents or copyrights.



BREMER & LEGUIL GMBH

Am Burgacker 30-42 · 47051 Duisburg
☎ 02 03/99 23-0 · FAX 02 03/2 59 01

Oxide remover

for eliminating faults at electrical contacts.

O.C.X. dissolves:

- Oxide and sulphide layers
- Hardened oil and grease
- Metal residue

O.C.X.:

- is excellent value for money
- has a flashpoint > 65°C
- is non-conductive; does not generate eddy currents
- is not skin irritating
- has a weak mild odour
- is compatible with metals and solvent-resistant materials
- can be stored indefinitely
- is easy to use

O.C.X.:

- helps during production facilitates repairs cuts service costs

O.C.X. - if you value good contacts



Oxide remover

Clean contacts are essential when operating electric and electronic equipment. The operational safety and functioning of electric and electronic installations essentially depend on excellent contacts. In contrast, oxidation, corrosion and soiling are often the cause of substantial faults or even complete breakdowns. O.C.X. oxide remover is a reliable and essential partner when eliminating these specific problems.

EFFECTIVE

The O.C.X. oxide remover is a new, very economical and effective cleaning agent and care product for all types of contacts on which sulphide and oxide layers have formed. O.C.X. removes even the most stubborn oxide and sulphide layers as well as hardened oil and grease, metal residue, etc. O.C.X. helps to prevent faults which are caused by unacceptably high contact resistance and faulty contacts.

ECONOMICAL

O.C.X. is excellent value for money. O.C.X. means that the time-intensive dismantling of difficult-to-access contacts or parts is no longer necessary. It allows you to carry out in just a few minutes, repairs or maintenance tasks which used to take hours. The achieved savings are often in excess of 70%.

SAFE

Flashpoint above 65°C. Non-conductive and thus does not generate eddy currents.

Is not skin irritating. Weak mild odour. Compatible with metals and solvent-resistant materials, e.g. paints, plastics and elastomers. Can be stored indefinitely. Free of halogen-hydrocarbons (CHC and CFC).

SIMPLE APPLICATION

Via a fine, well-directed spray; with aerosol cans via the supplied elastic straw; with loose materials via airless, electric spray guns with attached needle jet nozzle.

Spray the surface with O.C.X. and let it stand, the longer the better, but at least for 15-20 minutes.

Then wipe off the dissolved oxide and sulphide layers, which are the main culprits for high contact resistance and poor contact, with a S.L.X. series product. This is particularly important since the dissolved layers will harden again after a certain period and you will be back to square one.

The installations, devices, contacts, etc. are absolutely clean after treatment and usually look brand new.

VERSATILE

O.C.X. can be used during production, repairs and service for all electric and electronic installations, apparatus and devices, no matter whether it is high-frequency, communications or power engineering.

The specifications and data in this publication are believed to be accurate and reliable and are continuously checked. They are based, amongst other things, on vast industrial experience. However, we accept no liability for their accuracy or usage. Prior to each application of our product, please test its usability and be completely satisfied with its performance. Our examples of use and suggestions should not be considered as an incitement to infringe any patents or copyrights.

8. Safety data sheets: --> See Technical Information **TI02 A** (Appendix)

The safety data sheets in accordance with EC Directive 91/155/EEC must be read prior to use.

The safety data sheets with the "Aerosol" supplement are for aerosol cans.

9. User manual samples: --> See Technical Information **TI02 A** (Appendix)

The user manual samples are designed to provide additional information at the workplace.

The user manual samples with the "Aerosol" supplement are for aerosol cans.