Application Manual

Product description:
See Technical Data Sheet TRIOCOR ZINC 1700

TRIOCOR ZINC 1700

Epoxy zinc-filled coating

CONTENTS:

The Manual describes the surface preparation; the product preparation for the application; technical application process and equipment; storage conditions; occupational safety; fire precaution measures; environmental protection; first aid measures.

SURFACE PREPARATION:

The material is applied to a prepared and dry metal surface with a temperature of at least 3 °C above the dew point. The preparation process includes the following operations: elimination of surface defects to P2 according to ISO 8501-3; degreasing the surface (if necessary); Surface cleaning to the degree Sa $2^1/_2$ in accordance with GOST R ISO 8501-1 with a recommended roughness profile of 50–75 μm, if maintenance clean damaged areas thoroughly to minimum P St 3, desalination of the surface (if necessary), dust removal of the surface to a degree of 2 with a particle size of not more than 2 classes in accordance with ISO 8502-3.

PREPARATION FOR THE APPLICATION:

Material is supplied in containers: base – 10 liters, hardener – 3 liters.

After opening the container, the base and hardener must be mixed separately before application. Mix in a 4: 1 ratio (base: hardener) by volume, mix thoroughly until smooth.

TRIOCOR ZINC 1700 – a two-component epoxy primer with a high zinc content with a volume solids – 62 ± 5%.

APPLICATION:

Application method:

Airless spraying / Manual application.

Thinner:

Thinner TRIOSOLV 0002. Dilute in 1 % vol. increments.
The recommended dilution rate is:
- when applying by airless spraying – (0–5) % vol.;
- when applying by pneumatic spraying – (0–15) % vol.;
- when applying by brush or roller (strip painting, complex-shaped items, areas up to 1 m2) – (0–5) % vol.

For detailed information, contact «O3-Coatings»

Nozzle size (recommended):

.009 "–.017"

Working pressure (recommended):

(120–160) bar.

Cleaning of tools:

TRIOSOLV 0002.

Application conditions:

- air temperature is at least minus 10 °C;
- relative air humidity is not higher than 85 %;
- the temperature of the surface to be painted is at least 3 °C above the dew point;
- lack of direct precipitation;

IMPORTANT: Work is prohibited if the above parameters do not match the required parameters.

Before every work shift begins and every 4 (four) hours, it is recommended to check and fix the following parameters:

- environmental conditions (air temperature, relative humidity);
- dew point temperature;
- surface temperature;
- absence of moisture and oil contamination on the surface;
- no dust on the surface.

Before the application, use a thinner to clean the painting sprayer from previously used paint materials. The choice of the thinner directly depends on the type of the previously used materials. The equipment cleaning procedure must be also conducted at the end of each working shift.

Apply the material by airless spraying; can be applied by brush or roller when applied in hard-to-reach areas or on small surfaces.

When applied by airless spray, the recommended wet film thickness (WFT) per pass is 97 µm, which corresponds to a dry film thickness (DFT) of 60 µm.

The drying time at a dry coating thickness of 60 µm is given in Table 1.

Table 1 – TRIOCOR ZINC 1700 drying time at DFT 60 µm

Drying time for 75 microns DFT								
The temperature of the surface to be painted	0 °C	5 °C	10 °C	15 °C	20 °C	25 °C	30 °C	35 °C
To touch	9 h	5 h	2 ½ h	1 ½ h	1 ¼ h	1 h	55 min	¾ h
Dry before applying the next coat:								
TRIOCOR MASTIC 4500	8 h	4 h	3 h	2,5 h	2 h	1,5 h	1 h	0,5 h

Drying times presented in this section have recommendatory character. It is necessary to take into account the presence of air flows and relative humidity when assessing actual drying time.

The wet film thickness control is determined by the last notch of a wet film thickness gauge that touched the film surface. Above each notch of the gauge the difference between its length and the length of the outside base notches (zero datum reference) is indicated.
When conducting measurements, the gauge should be set perpendicular to the coated surface. After each measurement, the parts of the gauge that were in contact with the coat must be carefully wiped with a clean cloth.

Wet film thicknesses of the coating must be recorded.

The quality control of the finished coating is done using the following characteristics:

- appearance (no sagging, cracking, peeling, etc.) – uniform, grey-colored coating;
- dry film thickness is determined by the 80–20 rule: 80 % of all measurements must not be below the thickness given in a specification (nominal thickness), 20 % of the measurements must be at least 80% of the nominal thickness.

IMPORTANT: Do not apply the next coat until the appropriate thickness of the coating is achieved.

To measure the thickness of the dry coating film, thickness gauges with a measuring range of 0 to 5000 µm are recommended.

STORAGE CONDITIONS:

Material **TRIOCOR ZINC 1700** is recommended to be stored in a well-ventilated dry room at a temperature of 0 to plus 30 °C in a hermetic factory package, in a closed environment, and avoid direct exposure to UV rays.

The shelf life of the **TRIOCOR ZINC 1700** is 18 months, subject to storage conditions. The material should be used within the manufacturer's recommended shelf life. The decision on the use of material with a shelf life of more than 18 months is taken by the commission.

OCCUPATIONAL SAFETY:

General rules:

Works is carried out in accordance with the requirements of GOST 12.3.002, GOST 12.3.005, GOST R 12.3.052, order of December 2, 2020 No. 849n “On approval of the Rules for labor protection when performing painting works”.

Occupational hazards and harmful should be eliminated or reduced to acceptable levels.

When organizing and carrying out painting works, a physiologically justified work-rest schedule should be provided.

Qualification requirements:

The application of the corrosion resistant coating can be conducted only by adults who are at least 18 years old that have undertaken:

- safety training in accordance with Resolution of the Russia Federation № 2464 of 24.12.2021, including occupational hygiene, fire and electrical safety;
- professional training.

The executive officers are held responsible for complying with the occupational and industrial safety requirements when conducting the application works, in accordance with the requirements of SNiP 12-03 and SNiP 12-04.

Workers must know about:

- hazards, harmful occupational factors, harmful substances in the materials that affect the air in the workplace and how they can affect the human body;
- application instructions and procedures, and requirements for the workplace maintenance;
- workplace safety guidelines, fire safety, industrial health;
- personal hygiene requirements;

- requirements for using personal protective equipment (PPE);
- first aid procedures.

Safety requirements for preparing and painting surfaces:

For any work related to the application of coatings in confined spaces, the general supply-exhaust ventilation and local exhaust ventilation are a prerequisite in accordance with GOST 12.4.021. The ventilation must ensure that the content of harmful substances in the air of the workplace does not exceed the maximum allowable concentrations, in accordance with the requirements of GOST 12.1.005, SanPiN 1.2.3685.

Workers engaged in degreasing the surface, preparing and applying paintwork materials should be provided with the following personal protective equipment:
- disposable or reusable protective suit for painting which has zipper runs for length of the product, elastics at wrists, ankles and at the waist, and hood;
- rubber technical gloves according to GOST 20010;
- safety glasses according to GOST 12.4.253 (EN 166:2002), symbol 3 or similar which has similar functional purpose;
- filter respirators which have isolating front part in form of half-mask according to GOST 12.4.296 equipped with combined filter, which provides the protection from gases, vapors and aerosols according to GOST 12.4.235 AZRZ (brown-white), AHRZ or similar which has similar functional purpose;
- shoes made from leather which has solid toes to avoid the injury of feet in case of the fall of a heavy object; sole must be protected with the metal plate.

IMPORTANT: Working without using the PPE is forbidden!

Storage of organic thinners in the workplace is permitted in hermetically sealed containers in amounts that don't exceed two working shift doses.

When working with thinners observe the following safety requirements:

- use PPE for respiratory and eye protection;
- work with the activated ventilation system that ensures sufficient air exchange.

When preparing the surface, workers conducting abrasive blasting must wear protective suits made from dust- proof material and helmets MIOT-49 type, use respirators PRB-5 with forced air supply.

Requirements for handling toxic substances:

Epoxy primer **TRIOCOR ZINC 1700** is produced in accordance with TU 20.30.12-005-40141638-2025 and is recommended for use for corrosion protection of steel structures for various purposes by industrial facilities, oil and gas sector and infrastructure, operated in atmospheric environments corrosion category C5 (ISO 12944-2).
The container in which the TRIOCOR ZINC 1700 epoxy primer is located must have a label with the exact name and designation of the material contained therein. The container must be intact and have a tight-fitting lid.
If the spill is accidentally spilled, cover the strait with sawdust or sand, before protecting the respiratory system. Polluted solvents, sawdust, sand, rags and rags should be collected in buckets and removed to specially designated places in accordance with the requirements of GOST 30772, GOST R 52107.

Eating and smoking are allowed only in specially designated places.

FIRE PRECAUTION MEASURES:

Fire precaution measures during coating application works must be carried out in accordance with the technical regulations related to fire safety requirements (July 22, 2008 № 123-FZ) and other regulatory documents.

The coating materials are considered to be fire-hazardous, therefore, fire precaution measures in accordance with GOST 12.1.004 and Resolution of the Russia Federation № 1479 of 16.09.2020 "Rules of the Fire Fighting Regime in the Russian Federation" are carried out at the workplace.

IMPORTANT: Do not use water to extinguish fires.

When preparing the surface for coating application and when applying coating, it is prohibited:

- to smoke, make a fire, conduct welding within a radius of 25 m from the workplace and along the vertical line below and above the area;
- to heat the production facilities and protected objects with electrical appliances in a conventional way.

In the event of a fire, evacuate all people from the area, report the fire to the fire service, remove coating materials from the workplace, and proceed to extinguish the fire with the available means in strict accordance with the approved plan.

ENVIRONMENTAL PROTECTION:

Coating application produces solid and liquid waste described in **Table 2**.

Table 2

Type of waste	Method of waste management
Solid waste: Packaging of the product – Containers	The packaging can be disposed of as domestic waste. Containers can be reused for technical purposes after the product remaining on the inner walls of the container has dried.
Liquid waste: - Thinner / flushing liquid for cleaning the painting sprayer - Remains of the product	The waste is disposed of by the product user in accordance with GOST 30772, GOST R 52107

FIRST AID MEASURES:

General information: In the case of a suspected poisoning, seek medical help.

After inhalation: In the case of inhalation of the product, take the affected person to fresh air, keep them at rest and seek medical help.

After eye contact: In the case of an eye contact with the product, flush the eyes with a lot of clean running water and seek medical help.

After skin contact: In the case of skin contact, remove contaminated clothes and thoroughly clean the area of contact with soap and water. Do not use thinners or diluents.

After swallowing: In case of swallowing, keep the affected person at rest and immediately seek medical help.

IMPORTANT: Do not induce vomiting.