Application Manual

Product description:
See Technical Data Sheet TRIOCOR MASTIC 4500

TRIOCOR MASTIC 4500

Modified epoxy primer

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 product is applied to a prepared and dry metal surface with a temperature at least 3 °C above the dew point. The process includes the following stages: remedy imperfections to P2 in accordance with ISO 8501-3; remove oil and grease (if necessary); blast clean to Sa $2^1/_2$ in accordance with GOST R ISO 8501-1 with average surface profile in the range 50–75 microns, if maintenance clean damaged areas thoroughly to minimum P St 3, and remove salt (if necessary); dust, blast abrasives shall be removed from the surface after blast cleaning such that the particle quantity and particle size do not exceed rating 2 of ISO 8502-3.

When applying the product to a coated surface, the process of the surface preparation is determined by the condition of the surface of the previous coat.
The surface of the previous coat should be clean, without dirt, without dust, uniform and smooth before the product is applied. Impurities should be removed with drinking water treatment with pressure 35 MPa, and oils and fats should be removed with a thinner in accordance with GOST 9.402.
In case of the previous coat's damage, defects, chips, it is necessary to restore it in accordance with the coating manufacturer approved methods.

The product is applied to a clean dry surface after its preparation. The time interval between the surface preparation and the application of the product is determined by the environmental conditions and the characteristics of the materials used in accordance with the manufacturer's recommendations.

If the surface is exposed to precipitation, make sure it is completely dry and repeat the surface preparation procedure before applying the coating.

Avoid applying the product after exceeding the previous layer recoat interval recommended by the manufacturer of that product. If the recoat interval is exceeded, to ensure the adhesion of the corrosion resistant coating to the previous coat, roughen the surface by sweep blasting (light abrasive blast cleaning conducted at an angle of 30° to the surface and under half of the operating pressure) before applying the corrosion resistant coating.

PREPARATION FOR THE APPLICATION:

TRIOCOR MASTIC 4500 is a two component high-structure modified epoxy primer with zinc phosphate, with Volume Solid of 75±5 %, which is used with TRIOSOLV 0002 thinner.

The product is supplied as set: "Base – Additive" 20 L.
After opening containers and before applying mix separately Base and Additive. Mixing Ratio is given in product certificates of quality.
Prepared mixture should be mixed thoroughly by the volume until homogeneous liquid is obtained. Then mixture should be held before application for 2–3 minutes.

APPLICATION:

Application method: Airless spraying / Manual application.

Thinner: Thinner TRIOOSOLV 0002 (if necessary), up to 7,5% by volume with airless spraying.

For more information, contact O3-Coatings.

Diameter of the nozzle (recommended): .013"–.019"

Operating pressure (recommended): At least 150 bar.

Equipment flushing: Thinner TRIOOSOLV 0002.

Recommended application conditions:

- air temperature is at least minus 10 °C;
- relative humidity no more than 90 %;
- surface temperature at least 3 °C above the dew point;
- absence of direct precipitation.

IMPORTANT: The application is prohibited when the above-mentioned conditions are not met.

Before the beginning of each working shift the following parameters must be checked and documented in the operations log:

- environmental conditions (air temperature, relative humidity);
- dew point temperature;
- surface temperature;
- absence of moisture and oil contamination on the surface;
- absence of dust on the surface.

Before the application, use a thinner to clean the painting sprayer from previously used coatings. 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.

The product is applied with an airless sprayer; it can be applied with a brush or roller when applicating hard to reach or small areas.

When applied with an airless sprayer, minimum wet film thickness (WFT) with a single coat is 100 microns, which corresponds to dry film thickness (DFT) of 75 microns; maximum wet film thickness (WFT) with a single coat is 367 microns, which corresponds to dry film thickness (DFT) of 275 microns.

The drying times for **TRIOCOR MASTIC 4500** with dry film thickness of 75 microns is shown in Table 1.

Table 1

Drying time for 75 microns DFT								
Substrate temperature	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
To recoat:								
TRIOCOR MASTIC 4500	32 h	16 h	8 h	5 h	4 h	3 h	2 ½ h	2 h
TRIOCOR FINISH 5500	32 h	16 h	8 h	5 h	4 h	3 h	2 ½ h	2 h
To handle:	48 h	24 h	12 h	6 h	5 h	4 ½ h	4 h	3 ½ h

Drying time is thickness dependent. These figures are given as a guide only. Factors such as air movement and humidity must also be considered.

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 layer before reaching the required thickness of this coating.

It is recommended to use coating thickness gauges with a measuring range from 0 to 5000 microns to measure dry film thickness of the coating.

STORAGE CONDITIONS:

Epoxy primer **TRIOCOR MASTIC 4500** should be stored in a well-ventilated dry confined space at temperatures between 0 to plus 30 °C in the original sealed packaging, avoiding direct exposure to UV rays.

The shelf life of **TRIOCOR MASTIC 4500** is 24 months if the recommended storage conditions are met. The product should be used within the recommended shelf life indicated by the manufacturer. The decision to use material that is over 24 months old is made by a committee.

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.

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 GOST 12.0.004, 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 MASTIC 4500** is produced in accordance with TU 20.30.12-006-40141638-2025 and it is recommended for use for corrosion protection of various engineering structures, facilities, and housing, civil and industrial buildings.

The packaging of epoxy primer **TRIOCOR MASTIC 4500** must have a label with the exact name and designation of the product that it contains. Containers must be whole and have a tight-fitting lid.

In a case of an accidental spill, the spill area must be covered with sawdust or sand after ensuring respiratory protection. Contaminated thinners, sawdust, sand, rags, cloths must be collected in pails and removed to specially designated areas in accordance with the requirements of GOST 30772, GOST R 52107.

Eating and smoking are only allowed in designated areas.

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: after Packaging of the product – Containers	The packaging can be disposed of as domestic waste. Containers can be reused for technical purposes 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.