

Tehnički list

Proizvod

Matrix Armor XT

Verzija / Version

Technical Data Sheet

Product

Matrix Armor XT

v26062501

1. Opis proizvoda

Matrix Armor XT je jednokomponentni akrilni premaz na vodenoj bazi, namenjen za zaštitu i dekoraciju metalnih površina. Formulisan je za primenu na površinama od čelika, livenog gvožđa i aluminijuma, gde formira ujednačen, dekorativan i zaštitni mat sloj.

Proizvod se odlikuje brzim sušenjem, dobrom adhezijom na pravilno pripremljene metalne podloge i jednostavnom primenom. Posebno je pogodan za industrijske procese gde je potrebna visoka produktivnost, naročiko kod nanošenja potapanjem.

Zbog vodene osnove i niskog sadržaja VOC-a, Matrix Armor XT predstavlja praktično rešenje za zaštitu i završnu obradu metalnih elemenata u proizvodnim i industrijskim uslovima. Nakon sušenja daje ujednačen mat izgled, uz jednostavno održavanje radnog procesa i čišćenje alata vodom.

2. Namena

Matrix Armor XT je namenjen za zaštitu i dekoraciju različitih metalnih elemenata od čelika, livenog gvožđa i aluminijuma. Koristi se u industrijskoj proizvodnji, pri obradi odlivaka, metalnih konstrukcija i drugih metalnih delova kod kojih je potreban ujednačen mat izgled.

Posebno je pogodan za nanošenje potapanjem, jer omogućava ravnomeran nanos premaza, dobru pokrivenost i visoku produktivnost u serijskoj proizvodnji. Može se nanositi i prskanjem, četkom ili valjkom, u

1. Product Description

Matrix Armor XT is a one-component water-based acrylic coating intended for the protection and decoration of metal surfaces. It is formulated for application on steel, cast iron, and aluminium surfaces, where it forms a uniform, decorative, and protective matte film.

The product is characterized by fast drying, good adhesion to properly prepared metal substrates, and simple application. It is especially suitable for industrial processes where high productivity is required, particularly in dip application.

Due to its water-based formulation and low VOC content, Matrix Armor XT represents a practical solution for the protection and finishing of metal elements in production and industrial conditions. After drying, it provides a uniform matte appearance, with easy maintenance of the working process and tool cleaning with water.

2. Intended Use

Matrix Armor XT is intended for the protection and decoration of various metal elements made of steel, cast iron, and aluminium. It is used in industrial production, in the processing of castings, metal structures, and other metal parts where a uniform matte appearance is required.

It is especially suitable for dip application, as it enables uniform coating application, good coverage, and high productivity in serial production. It can also be applied by spraying,

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zavisnosti od vrste elementa, proizvodnog procesa i zahtevanog kvaliteta završne obrade.

Područje primene obuhvata:

- Metalne konstrukcije
- Livene odlivke
- Čelične i aluminijumske delove
- Poklopce za šahte
- Slivničke rešetke
- Industrijske odlivke
- Dekorativne metalne elemente
- Druge metalne površine gde je potreban mat zaštitno-dekorativni premaz

Prednosti proizvoda:

- Vodena baza
- Nizak VOC
- Brzo sušenje
- Dobra adhezija na čelik, liveno gvožđe i aluminijum
- Ujednačen mat izgled
- Jednostavna primena
- Čišćenje alata vodom
- Pogodan za industrijsku i serijsku primenu

3. Uputstvo

Pre nanošenja, površina mora biti pravilno pripremljena. Metalna podloga mora biti suva, čista, odmašćena i bez nečistoća koje mogu negativno uticati na prijanjanje premaza. Sa površine je potrebno ukloniti ulja, masti, prašinu, pesak od livenja, rastresitu koroziju i sve slabo vezane delove.

Kod livenih odlivaka posebnu pažnju obratiti na uklanjanje ostataka peska od livenja, prašine i površinskih nečistoća. Kod površina

brush, or roller, depending on the type of element, production process, and required quality of the final finish.

The areas of application include:

- Metal structures
- Castings
- Steel and aluminium parts
- Manhole covers
- Drainage grates
- Industrial castings
- Decorative metal elements
- Other metal surfaces where a matte protective-decorative coating is required

Product advantages:

- Water-based
- Low VOC
- Fast drying
- Good adhesion to steel, cast iron, and aluminium
- Uniform matte appearance
- Easy application
- Tool cleaning with water
- Suitable for industrial and serial production

3. Instructions

Before application, the surface must be properly prepared. The metal substrate must be dry, clean, degreased, and free from impurities that may negatively affect coating adhesion. Oils, grease, dust, foundry sand, loose corrosion, and all poorly bonded particles must be removed from the surface.

For castings, special attention should be paid to the removal of foundry sand residues, dust,

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sa prisutnom korozijom potrebno je ukloniti rastresitu koroziju odgovarajućim postupkom, brušenjem, četkanjem ili peskarenjem, u zavisnosti od stanja podloge i zahtevanog kvaliteta zaštite.

Proizvod je spreman za upotrebu. Pre primene potrebno ga je dobro promešati do potpune homogenizacije. Tokom rada, naročito kod dužih proizvodnih ciklusa i kod potapanja, preporučuje se povremeno mešanje kako bi se održala ujednačenost premaza.

Matrix Armor XT može se nanositi:

- Potapanjem
- Prskanjem
- Četkom
- Valjkom

Kod nanošenja potapanjem i prskanjem, proizvod se po potrebi može razrediti sa 5-8% čiste vode, u zavisnosti od željenog radnog viskoziteta, opreme, temperature i uslova rada. Za četku i valjak proizvod se najčešće koristi bez razređivanja, uz prethodno dobro mešanje.

Kod potapanja potrebno je obezbediti odgovarajući radni viskozitet, ravnomerno uranjanje i ceđenje viška premaza. Elementi treba da budu postavljeni tako da se omogući pravilno oticanje viška materijala i izbegne zadržavanje premaza u udubljenjima, oštrim uglovima ili spojnim mestima. Preporučuje se kontrola viskoziteta tokom rada i korekcija po potrebi malim dodavanjem vode.

Kod prskanja, parametre nanošenja podesiti prema opremi i obliku predmeta. Potrebno je postići ravnomeran film bez curenja,

and surface impurities. On surfaces where corrosion is present, loose corrosion must be removed using an appropriate method, such as sanding, brushing, or sandblasting, depending on the condition of the substrate and the required level of protection.

The product is ready to use. Before application, it must be thoroughly stirred until fully homogenized. During work, especially during longer production cycles and dip application, occasional stirring is recommended in order to maintain coating uniformity.

Matrix Armor XT can be applied by:

- Dipping
- Spraying
- Brush
- Roller

For dip application and spraying, the product may be diluted with 5-8% clean water, depending on the desired working viscosity, equipment, temperature, and working conditions. For brush and roller application, the product is usually used without dilution, after thorough stirring.

For dip application, it is necessary to ensure the appropriate working viscosity, uniform immersion, and proper draining of excess coating. Elements should be positioned in a way that allows the excess material to drain properly and prevents coating accumulation in recesses, sharp corners, or joints. It is recommended to monitor viscosity during work and adjust it, if necessary, by adding small amounts of water.

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nakupljanja i suvog nanosa. Kod četke i valjka, nanositi ravnomerno, u tankom i ujednačenom sloju, bez prekomernog razvlačenja materijala.

Temperatura metala i prostora mora biti iznad 15 °C. Optimalni uslovi za rad su temperatura od 20-30 °C i relativna vlažnost vazduha od 40-60%. Ne preporučuje se nanošenje pri niskim temperaturama, visokoj vlažnosti vazduha, na vlažnu podlogu ili u uslovima loše ventilacije, jer to može produžiti vreme sušenja i uticati na kvalitet završnog filma.

Preporučena debljina suvog filma iznosi 30-60 mikrona. Debljina nanosa treba da bude prilagođena nameni, obliku elementa i zahtevanom nivou zaštite. Prevelika debljina sloja može produžiti vreme sušenja i povećati rizik od curenja ili neravnomernog izgleda.

Proizvod je predviđen za sušenje na sobnoj temperaturi, ali i za ubrzano sušenje u komorama na 60 °C. Vreme sušenja zavisi od temperature, ventilacije, relativne vlažnosti vazduha, debljine nanosa i oblika predmeta.

Orijentaciono vreme sušenja:

- Na 20 °C:
 - o Suvo na dodir: oko 30 minuta
 - o Potpuno suvo: oko 8 sati
- Na 60 °C:
 - o Suvo na dodir: oko 10 minuta
 - o Potpuno suvo: oko 60 minuta

Nakon upotrebe, alat i opremu oprati vodom odmah nakon završetka rada. Osušeni materijal se teže uklanja.

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For spraying, the application parameters should be adjusted according to the equipment and shape of the object. A uniform film must be achieved without runs, build-up, or dry spray. When applying by brush or roller, apply evenly in a thin and uniform layer, without excessive spreading of the material.

The temperature of the metal and working area must be above 15 °C. Optimal working conditions are a temperature of 20-30 °C and relative air humidity of 40-60%. Application is not recommended at low temperatures, high air humidity, on damp substrates, or in conditions of poor ventilation, as this may extend drying time and affect the quality of the final film.

The recommended dry film thickness is 30-60 microns. The coating thickness should be adjusted according to the intended use, shape of the element, and required level of protection. Excessive film thickness may prolong drying time and increase the risk of runs or an uneven appearance.

The product is designed for drying at room temperature, as well as for accelerated drying in chambers at 60 °C. Drying time depends on temperature, ventilation, relative air humidity, film thickness, and the shape of the object.

Approximate drying time:

- At 20 °C:
 - o Touch dry: approximately 30 minutes
 - o Fully dry: approximately 8 hours
- At 60 °C:

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Pre početka serijske proizvodnje preporučuje se probno nanošenje na reprezentativnom uzorku, u realnim uslovima rada, kako bi se proverili prijanjanje, izgled, debljina filma, vreme sušenja i kompatibilnost sa podlogom.

4. Tehničke karakteristike

- **Osnova proizvoda**
 - o Jednokomponentni akrilni premaz na vodenoj bazi.
- **Namena**
 - o Zaštita i dekoracija površina od čelika, livenog gvožđa i aluminijuma.
- **Boja / Nijanse**
 - o Crna (RAL 9005)
- **Završni izgled**
 - o Ujednačen crni mat sloj
- **Viskozitet**
 - o 70-90 sekundi, Ford čaša 4mm
- **Radni viskozitet**
 - o 30-60 sekundi, Ford čaša 4mm
- **Razređivanje**
 - o Kod potapanja i prskanja: 5-8% vode
 - o Kod nanošenja četko ili valjkom: po potrebi, nakon prethodnog mešanja
- **Specifična težina**
 - o 1,1 – 1,3 g/cm³
- **VOC sadržaj**
 - o Max. 3%
- **Suva materija**
 - o 50 ± 3%
- **Preporučena debljina suvog sloja**
 - o 30-60 mikrona
- **Vreme sušenja na 20 °C**
 - o Suvo na dodir: oko 30 minuta
 - o Potpuno suvo: oko 8 sati

- o Touch dry: approximately 10 minutes
- o Fully dry: approximately 60 minutes

After use, tools and equipment should be washed with water immediately after completing the work. Dried material is more difficult to remove.

Before starting serial production, a trial application on a representative sample under actual working conditions is recommended in order to check adhesion, appearance, film thickness, drying time, and compatibility with the substrate.

4. Technical Characteristics

- **Product base**
 - o One-component water-based acrylic coating.
- **Intended use**
 - o Protection and decoration of steel, cast iron, and aluminium surfaces.
- **Color**
 - o Black (RAL 9005)
- **Final appearance**
 - o Uniform black matte film
- **Viscosity**
 - o 70-90 seconds, Ford cup 4mm
- **Working viscosity**
 - o 30-60 seconds, Ford cup 4mm
- **Dilution**
 - o For dipping and spraying: 5-8% water
 - o For brush or roller application: as needed, after prior stirring
- **Specific weight**

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- **Vreme sušenja na 60 °C**
 - o Suvo na dodir: oko 10 minuta
 - o Potpuno suvo: oko 60 minuta
- **Potrošnja**
 - o 5-6 m²/kg pri 50 mikrona suvog filma
- **Način nanošenja**
 - o Potapanje, prskanje, četka, valjak
- **Radni uslovi**
 - o Minimalna temperatura metala i prostora: iznad 15 °C
 - o Optimalna temperatura: 20-30 °C
 - o Optimalna relativna vlažnost vazduha: 40-60%
- **Čišćenje alata**
 - o Vodom, odmah nakon upotrebe
- **Rok trajanja**
 - o 12 meseci od datuma proizvodnje, u originalnoj zatvorenoj ambalaži.

5. Bezbednost i rukovanje

Matrix Armor XT je premaz na vodenoj bazi sa niskim sadržajem VOC-a. Pri radu je potrebno pridržavati se opštih pravila bezbednog rukovanja hemijskim proizvodima i industrijskom premazima.

Izbegavati kontakt sa očima i produžen kontakt sa kožom. Tokom rada obezbediti dobru ventilaciju radnog prostora. Kod nanošenja prskanjem preporučuje se upotreba zaštitne maske, zaštitinih naočara i odgovarajuće zaštitne odeće, kako bi se izbeglo udisanje i kontakt sa očima.

- o 1,1 – 1,3 g/cm³
- **VOC content**
 - o Max. 3%
- **Solids content**
 - o 50 ± 3%
- **Recommended dry film thickness**
 - o 30-60 microns
- **Drying time at 20 °C**
 - o Touch dry: approximately 30 minutes
 - o Fully dry: approximately 8 hours
- **Drying time at 60 °C:**
 - o Touch dry: approximately 10 minutes
 - o Fully dry: approximately 60 minutes
- **Coverage**
 - o 5-6 m²/kg at 50 microns dry film thickness
- **Application method**
 - o Dipping, spraying, brush, roller
- **Working conditions**
 - o Minimum temperature of metal and working area: above 15 °C
 - o Optimal temperature: 20-30 °C
 - o Optimal relative air humidity: 40-60%
- **Tool cleaning**
 - o With water, immediately after use
- **Shelf life**
 - o 12 months from the date of production, in the original sealed packaging.

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U slučaju kontakta sa kožom, isprati vodom i sapunom. U slučaju kontakta sa očima, odmah isprati istom vodom više minuta i po potrebi potražiti lekarsku pomoć. U slučaju gutanja, ne izazivati povraćanje i odmah potražiti savet lekara.

Proizvod držati van domašaja dece. Ne sipati ostatke proizvoda u kanalizaciju, vodotokove ili zemljište. Sa ostacima proizvoda i ambalažom postupati u skladu sa važećim propisima i bezbednosnim listom proizvoda.

Pre upotrebe obavezno pročitati bezbednosni list proizvoda.

6. Skladištenje i transport

Proizvod čuvati u originalnoj, dobro zatvorenoj ambalaži, u suvom i provetrenom prostoru, zaštićenom od direktne sunčeve svetlosti, izvora toplote i smrzavanja.

Proizvod ne sme da smrzne. Izlaganje niskim temperaturama i smrzavanje mogu trajno narušiti kvalitet i upotrebljivost proizvoda. Preporučuje se skladištenje na temperaturi od 15 °C do 25 °C.

Ambalažu nakon otvaranja pažljivo zatvoriti kako bi se sprečilo isparavanje vode, kontaminacija i promena viskoziteta. Tokom skladištenja potrebno je sprečiti unošenje nečistoća, prašine, ulja i drugih materija u proizvod.

Transportovati u uslovima koji sprečavaju mehanička oštećenja ambalaže, prevrtanje, prokišnjavanje, izlaganje ekstremnim temperaturama i smrzavanje. Tokom zimskog

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5. Safety & Handling

Matrix Armor XT is a water-based coating with low VOC content. During work, general rules for safe handling of chemical products and industrial coatings must be followed.

Avoid contact with eyes and prolonged contact with skin. Ensure good ventilation of the working area during application. When applying by spraying, the use of a protective mask, safety goggles, and appropriate protective clothing is recommended in order to avoid inhalation and contact with eyes.

In case of contact with skin, wash with water and soap. In case of contact with eyes, rinse immediately with clean water for several minutes and seek medical advice if necessary. If swallowed, do not induce vomiting and seek medical advice immediately.

Keep the product out of reach of children. Do not discharge product residues into drains, watercourses, or soil. Product residues and packaging should be handled in accordance with applicable regulations and the product safety data sheet.

Before use, always read the product safety data sheet.

6. Storage and transport

Store the product in its original, tightly closed packaging, in a dry and well-ventilated area, protected from direct sunlight, heat sources, and freezing.

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perioda obezbediti zaštitu od niskih temperatura.

Rok trajanja proizvoda je 12 meseci od datuma proizvodnje, ako se čuva u originalno zatvorenoj ambalaži i propisanim uslovima skladištenja.

7. Napomena

Informacije navedene u ovom tehničkom listu zasnovane su na dostupnim podacima, internim ispitivanjima i iskustvu u primeni proizvoda. One predstavljaju smernice za pravilnu upotrebu proizvoda, ali ne mogu obuhvatiti sve moguće uslove rada, vrste podloga, načine pripreme i metode nanošenja.

Kvalitet završnog premaza zavisi od pravilne pripreme površine, stanja metala, stepena očišćenosti i odmašćenosti, prisustva korozije, debljine nanosa, načina aplikacije, temperature, vlažnosti vazduha, ventilacije i uslova sušenja.

Pre početka rada, naročito kod serijske proizvodnje, preporučuje se probno nanošenje na manjoj reprezentativnoj površini ili uzorku, u realnim uslovima primene. Na taj način se proverava prijanjanje, izgled, pokrivenost, debljina filma, vreme sušenja i ukupna pogodnost proizvoda za konkretnu namenu.

Proizvođač ne može preuzeti odgovornost za nepravilnu upotrebu proizvoda, neadekvatnu pripremu podloge, nanošenje u neodgovarajućim uslovima ili primenu izvan preporuka navedenih u ovom dokumentu.

The product must not freeze. Exposure to low temperatures and freezing may permanently affect the quality and usability of the product. Recommended storage temperature is between 15 °C and 25 °C.

After opening, carefully reseal the packaging to prevent water evaporation, contamination, and changes in viscosity. During storage, prevent the introduction of impurities, dust, oils, and other substances into the product.

Transport under conditions that prevent mechanical damage to the packaging, overturning, exposure to rain, extreme temperatures, and freezing. During winter periods, protection from low temperatures must be ensured.

The shelf life of the product is 12 months from the date of production, provided it is stored in the original sealed packaging and under prescribed storage conditions.

7. Note

The information provided in this technical data sheet is based on available data, internal testing, and experience in product application. It represents guidelines for proper product use but cannot cover all possible working conditions, substrate types, preparation methods, and application techniques.

The quality of the final coating depends on proper surface preparation, the condition of the metal, the degree of cleaning and degreasing, the presence of corrosion, film thickness, application method, temperature,

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Ovaj dokument se može ažurirati u skladu sa razvojem proizvoda i novim tehničkim saznanjima. Korisnik treba da se uveri da poseduje važeću verziju tehničkog lista pre upotrebe proizvoda.

8. Podaci o proizvođaču

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air humidity, ventilation, and drying conditions.

Before starting work, especially in serial production, a trial application on a smaller representative surface or sample under actual application conditions is recommended. This allows adhesion, appearance, coverage, film thickness, drying time, and overall suitability of the product for the specific intended use to be checked.

The manufacturer cannot assume responsibility for improper use of the product, inadequate substrate preparation, application under unsuitable conditions, or use outside the recommendations stated in this document.

This document may be updated in accordance with product development and new technical knowledge. The user should ensure that they have the valid version of the technical data sheet before using the product.

8. Manufacturer Information

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