

Product Information

Tarnish protection

x-tec® TP 4054

-Technical Application-

Product Description:

x-tec® TP 4054 is an aqueous inorganic one-component composite material (SiO₂ base) for coating metal. After curing, x-tec® TP 4054 forms an abrasion-resistant, transparent catalytic coating that breaks down soot at temperatures from approx. 280°C. On stainless steel substrates, x-tec® TP 4054 avoids the formation of tarnishing colors at higher temperatures.

Characterisation*:

Active agent:	Inorganic composite material based on SiO ₂
Colour:	Slightly milky liquid
pH:	Alkaline
Solubility:	Can be diluted with water if necessary
Solid Content:	Approx. 23% by weight
Stability:	The tightly closed original containers at least 4 weeks (not yet fully tested), have to be stored at 5°C to 25 °C (protect from direct sunlight). Opened container should be processed quickly. The expiration date of each batch is shown on the product label. Storage beyond the specified period also does not necessarily mean that the product is unusable. A check-up of the necessary properties for the specific application is essential in this case for reasons of quality assurance.
Handling:	Refer to safety data sheet. During processing appropriate personal protective equipment must be ensured.



Application:

For safety assurance, we recommend that smock, goggles and gloves must be worn. Splashes on skin have to be rinsed with water and soap thoroughly. The product contains alcohol, therefore the compatibility with sensitive surfaces has to be checked. Ensure that the work place is well ventilated.

The processing is accomplished in three steps: 1. Cleaning, 2. Application, 3. Curing.

1. *Cleaning:*

Surfaces have to be cleaned thoroughly from dust, dirt, oil and grease. We recommend using an abrasive cleaner, an alkaline or an acidic cleaner (compatibility has to be tested). Please use only cleaner without drying agents! Please rinse surfaces after cleaning with demineralized water in order to remove surfactant residues. An indicator for a properly cleaned surface is an even laminar wetting with the clear rinse water. If the surface is still showing hydrophobic properties, please repeat the cleaning step. After rinsing, the surface has to be dried, e.g. with compressed air. Please make sure that the compressed air is oil-free!

2. *Application:*

Brush application, dip, spray or flood coating. Spraying or dipping is particularly recommended on metal surfaces. To improve wetting, an addition amount of 0.1 to 0.4% by weight of the silicone surfactant Byk 348 from Altana is recommended. The surfactant must be added and mixed homogeneously immediately before application.

3. *Curing:*

Thermal treatment of the applied wet film is required to dry and harden the layer. Coated substrates are allowed to flash off for approx. 5 minutes and then treated in a circulating air oven at 250 °C for 15 minutes. This information is a guideline. For complex or massive components, the exact hardening parameters must be adjusted.



Concluding remarks:

The above-mentioned details reflect the criteria regarding our quality inspections. They do not constitute any legal assurance of particular product features or of the suitability for a specific application. All of the values are applicable at the time when the product leaves the supplier's factory. The values stated are reference points, they are subject to being continually updated within the scope of product maintenance. A written sales agreement shall be required for the information concerning product specifications to have a binding character. Please refer to our warning notices, our product information sheets and safety data sheet.

Should you require further information and technical advice, our Applications Engineering Department and the relevant R&D Department are at your disposal.

Our product information and (applications) engineering consultancy services, whether communicated orally, in writing or by means of tests, are in accordance with the current status of the knowledge and experience gained by us.

We reserve the right to modify and update our products within the scope of technical progress and further developments within the company. This information is provided without engagement. The sole purpose of such information is to provide details on the properties of our products and their potential applications. It does not constitute any guarantee and is not intended to be an assurance of any particular properties or suitability for a specific application. The client or user is thereby not exempt from carrying out his/her own testing to determine the suitability for the intended processes, purposes and applications by members of staff with the appropriate qualifications. This also applies with regard to the protection of proprietary rights of third parties. Brand or trade names of other companies are mentioned merely by way of example and do not constitute any endorsement, the use of other products of the same nature is not excluded.

*No concluding knowledge is yet available regarding trial products still in the testing stage. Their specifications have not yet been conclusively determined and may change at any time during the testing stage. Therefore, it is not possible to make conclusive statements with regard to characteristics including, but not limited to their processability as well as the parameters for production and applications engineering. Subject to technical modifications and amendments.

