PBN COATINGS GMBH

Cerakote combines exclusive design and a special feel with performance properties, thereby setting new standards in surface finishing.

The future of surface coating

Cerakote is a state-of-the-art coating solution known for its exceptional durability, versatility and aesthetic adaptability. This product information provides a comprehensive overview of the properties, applications and benefits of Cerakote in various industries and application areas.

Welcome to PBN Coatings GmbH,

and warmly welcome to Cerakote.

Embark on a journey through the fascinating world of state-of-the-art coating technology. Cerakote is more than just a surface coating - it's an innovation that has transformed industries worldwide. With its exceptional durability, versatility and aesthetics, Cerakote has redefined the standards for performance and design.

In the next few pages you will have the opportunity to not only understand the fundamental aspects of this new technology, but also to discover some of its countless applications and benefits. From industrial to defense, automotive to sports equipment, Cerakote has established itself as an indispensable part of many products and applications

You'll learn how Cerakote can not only improve the performance and longevity of your products, but also add a touch of individuality and style that sets you apart from other

Be inspired and gain new insights that will hopefully help ignite your enthusiasm for this fascinating technology and open up new possibilities for your projects and products. Have fun while reading.

Simon Maurischat
Owner & Managing Director

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Content

About Us

It all started in 1984 with a small paint shop north of Hamburg

Over four decades ago, in 1984, we laid the foundation for our company with a modest paint shop north of Hamburg.

Our passion for quality and our commitment to customer satisfaction have been the cornerstones of our company from the beginning. Over the years, we have continually expanded our range of services to meet the changing needs of our customers. In 1994 we expanded our services to include powder coating, which has enabled us to offer an even wider range of finishes and cemented our position as a leading provider in the region.

In 2005 we reached an important milestone when we introduced our customers to the innovative technology of Cerakote Ceramic coatings. This state-of-the-art coating not only offers exceptional durability and durability, but also allows for an impressive variety of colors and surface effects.

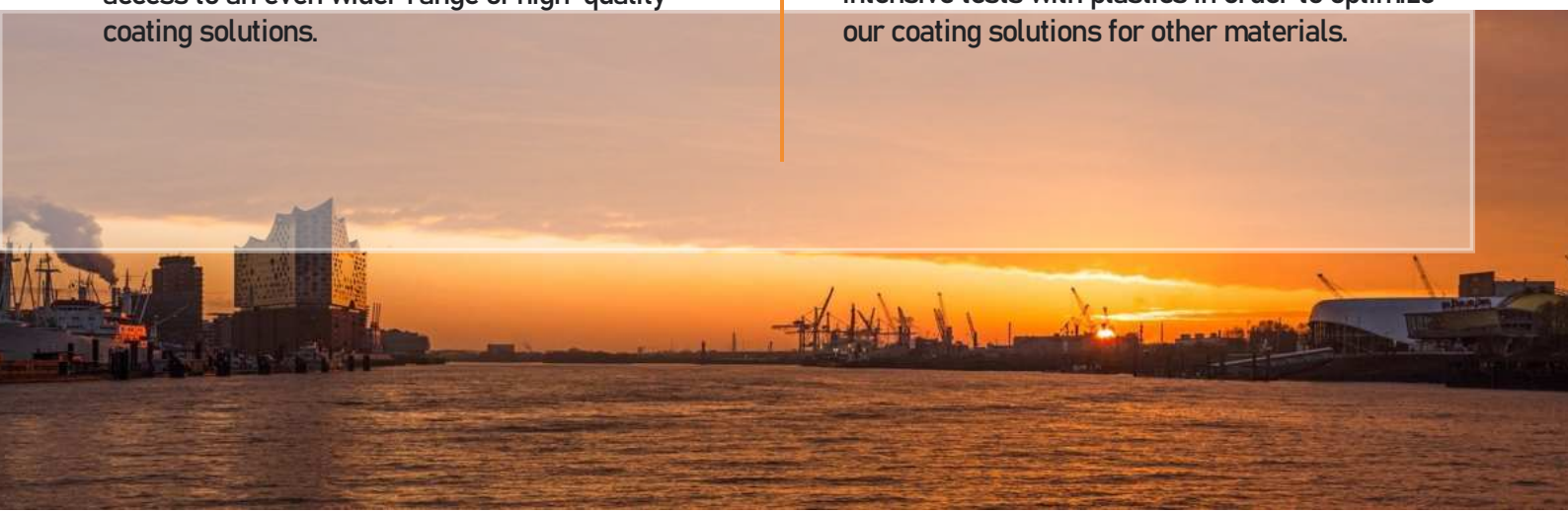
Our pursuit of excellence and commitment to excellence were rewarded in 2008 when we were proud to be appointed European distributor for all NIC Industrie Cerakote Ceramic products. This partnership has enabled us to offer our customers access to an even wider range of high-quality coating solutions.

With the increasing demand for our Cerakote Ceramic coatings, we started offering training courses for our customers in 2015. These training courses enable our customers to exploit the full potential of our products and further develop their application and design skills.

Another milestone in our success story was the appointment as exclusive sales partner for the NIC painting robot in Europe in 2019. This state-of-the-art technology has enabled our customers to benefit from more efficient and precise coating processes, increasing their productivity and quality.

After a year of intensive preparation and development, our web shop successfully went online in 2020. This platform offers our customers a convenient way to discover our products and services, order and keep up to date with news and offers.

In 2021 we took another step towards innovation by coating the first 3D printed exhaust systems. This groundbreaking technology opens up completely new possibilities for design and performance optimization in the automotive industry. At the same time, we carried out intensive tests with plastics in order to optimize our coating solutions for other materials.



In 2022, we successfully entered the market for coating additively manufactured plastic components. With our many years of expertise and our commitment to innovation, we strive to offer first-class coating solutions in this area and to meet the needs of our cunstomers.

With each of these developments we have demonstrated our commitment to quality, innovation and customer satisfaction. We are proud to always offer our customers the best products and services and look forward to tackling and successfully mastering new challenges together with you in the future.

Your contact person

Simon Maurischat is 35 years old, married and has 2 children. As a trained shipping clerk, he moved to PBN GmbH 5 years ago. During this time he has built up extensive know-how. During his trainee program he got to know all areas at PBN and is now a competent contact person for our customers. Simon prefers to spend his free time with his two sons.

Simon is responsible for the commercial area and sales. He consistently pursues the internationalization of the customer base and the digitalization of PBN Coatings GmbH. s.maurischt@pbncoatings.de

Marco Maurischat, born in 1960, founded PBN Coatings GmbH in 1987 and built it from a small painting company into an innovative company. Marco has always been interested in new products and introduced Cerakote to PBN in 2005, which has contributed significantly to its success in recent years. Even in his free time, Marco can't do without colors; his hobbies are “pinstriping” and “hand lettering”.

Marco takes care of the areas of quality management, product development, operations and human resources.
m.maurischt@pbncoatings.de

What is Cerakote

Cerakote is an inorganic polymeric thin film liquid ceramic coating that is designed to be applied directly to the base material in a single step.

It offers a variety of properties that improve your products, such as scratch and abrasion resistance, UV stability, chemical resistance, hydrophobic properties, color consistency and much more.

Cerakote was originally developed for use in the weapons industry to protect firearms against corrosion, abrasion and chemical influences.

However, it is now also used in many other areas such as the automotive industry, motorsports, aviation, jewelry design and even the medical field.

Cerakote has its origins in the USA and is widespread there. Development, production and sales are controlled from Oregon at NIC Industries INC.

We have been the exclusive distributor for all Cerakote products in the DACH region and other European countries for more than 10 years. We are also the official training center for Cerakote in Europe.

We train and certify companies that want to process Cerakote, whether they are painting companies or manufacturing companies.

Here are the key features and benefits of Cerakote:

Durability: Cerakote is extremely durable and resistant to abrasion, corrosion, chemicals and the elements.

Versatility: Cerakote is available in a wide range of colors and surface textures, from glossy to matte, and can be adapted to various surface materials such as metal, plastic, wood and even ceramic.

Heat Resistance: Cerakote can withstand high temperatures, making it particularly suitable for applications that are exposed to heat, such as engine components or oven interior surfaces.

Chemical resistance: The coating is resistant to many chemicals, oils and solvents, making it ideal for applications where high chemical resistance is required, such as in the chemical industry.

Lightweight: Cerakote is relatively lightweight compared to other coating materials, making it a good choice for applications where weight savings are important, such as aviation.

We have been a partner to the automotive and motorcycle industries for many years

Cerakote is a ceramic coating known for its exceptional heat resistance, abrasion resistance and corrosion resistance. These properties make Cerakote a popular choice for exhaust system coating.

Our automotive customers include AMG, BRABUS, Buggati, McLearen and Ferrari. But Cupra also relies on Cerakote. We are particularly proud that we coat the tailpipes of the Bugatti Ciron. Cerakote can withstand temperatures up to 1000°C, the ceramic coating protects the metal from corrosion caused by moisture, salt and other environmental influences

KESSTECH is the leading company that specializes in the development and manufacture of high-quality exhaust systems for Harley-Davidson motorcycles. Kesstech exhaust systems have been coated with Cerakote for more than 10 years. KESSTECH stands for high-quality materials and workmanship to ensure a long service life and first-class performance for your exhaust systems

Aerospace

The aerospace industry is known for its demanding requirements for materials and technologies.

Cerakote is increasingly being used in aircraft, particularly in areas exposed to high temperatures, corrosion or abrasive wear. Here are some of the uses of Cerakote in aircraft:

Exhaust Pipes and Exhaust Systems: In aircraft, particularly high-performance aircraft such as fighter jets or high-performance propeller aircraft, the exhaust pipes and exhaust systems can be exposed to extreme temperatures. Cerakote provides excellent protection against heat and corrosion in these areas.

Engine and Engine Components: Some aircraft engine parts may also use Cerakote coatings to improve heat resistance and corrosion protection. This can help increase the service life and performance of the engines.

Air Brake Systems: In aircraft equipped with air brakes, Cerakote can be used on the surfaces of the air brake flaps to provide heat resistance and corrosion protection.

Composites: Cerakote can also be used on composite materials in aircraft to improve their performance and durability. Composites such as carbon fiber reinforced plastic (CFRP) or glass fiber reinforced plastic (GRP) are commonly used in modern aircraft for structural components such as fuselage panels, wings and co

SpaceX, Elon Musk's space company, uses Cerakote, a ceramic coating, for various applications in its rockets and spacecraft. Cerakote is known for its durability, resistance to extremely high temperatures, and resistance to corrosion, making it an attractive choice for aerospace use.

Here are some of Cerakote's uses at SpaceX:

Protection from extreme temperatures: Rockets and spacecraft, especially the parts that are exposed to extreme temperatures during re-entry into the atmosphere, require a heat-resistant coating. Cerakote can help protect the structure from the heat shock.

Corrosion protection: The spacecraft are often used in aggressive environments, be it in space or during takeoffs and landings in saline environments. Cerakote provides excellent corrosion resistance to protect the structure from damage caused by corrosion.

Low Maintenance: Cerakote requires less maintenance and has a longer lifespan compared to other coatings, making it a cost-effective solution for space applications.

Aesthetics meets endurance

Ceramicspeed from Holstebro in Denmark has been a well-known company in the international biker scene for many years. Ceramicspeed stands for high-performance products, innovation and design. Together with Ceramicspeed we have coated a limited edition of high-quality pulleys in different colors.

This partnership enabled us to leverage our respective strengths and create synergies to offer innovative solutions for the bicycle industry that meet the needs of professional and amateur riders alike.

Combining the technological expertise of both companies creates products that further increase the efficiency, durability and performance of bicycle components. Cerakote is an environmentally conscious choice. Free from harmful solvents and chemicals, it meets the growing demand for sustainable solutions in the eBike industry.

This version is limited by the manufacturer to just 100 pieces per color. The system consists of a carbon reinforced polymer cage with Cerakote coating and upper and lower pulleys. The pulley wheels are made of aluminum.

ceramicspeed

Innovation in lock design

Cerakote is also becoming increasingly popular in the field of security systems. The benefits are impressive:

Locks are subject to constant use and wear. Cerakote offers remarkable abrasion resistance, ensuring the coating remains intact even with frequent use. This means that the lock not only maintains its aesthetic appearance, but also its functional integrity over long periods of time.

The very thin coating of 10 - 40 µm allows the finest details and precision features of the lock to be retained. For complex locks with various grooves, grooves and mechanisms, it is important that the coating is not applied too thickly so as not to obscure or distort these details. A primer is not necessary; Cerakote is applied directly to the component.

Forget boring silver or gold! Cerakote allows you to personalize your locks with a variety of colors, from subtle to bold. This is not only functional, but also gives your security system a modern, individual touch.

Let's shape the future of security together!

In the defense industry, Cerakote is made up of several reasons used

Corrosion protection: Cerakote offers excellent protection against corrosion. This is particularly important for weapons and other equipment that are often exposed to extreme environmental conditions, including moisture, dirt, salt and other corrosive substances.

Abrasion resistance: Cerakote coating significantly improves the abrasion resistance of surfaces. This is critical for weapons and equipment that will be subjected to frequent use and heavy use without the coating chipping or wearing away.

Camouflage and Aesthetic Enhancements: Available in a variety of colors, Cerakote can be used to camouflage or aesthetically customize equipment. This is particularly important for military applications where camouflage plays a crucial role.

Heat Resistance: Cerakote also offers good heat resistance, making it ideal for weapons and other equipment that may be exposed to high temperatures,

for example during longer sequences of shots or in environments with high ambient temperatures. Chemical Resistance: Cerakote coating provides protection against a wide range of chemicals that may be found in military and defense environments, including cleaners, solvents and other potentially harmful substances.

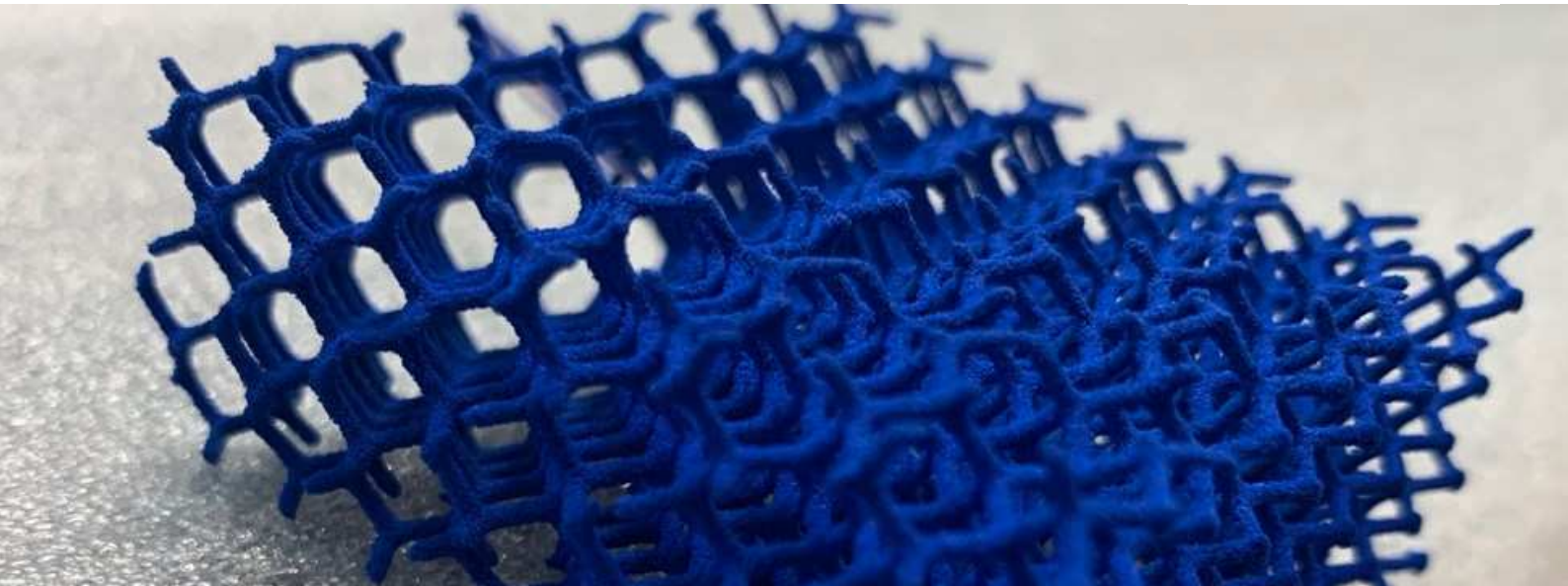
The 3D printing industry is the fastest growing industry in the world, and we are there

Cerakote can be applied to various materials including metals such as aluminum, steel and titanium, plastics and even ceramics. Because many 3D printed parts are made of metal or plastic, Cerakote can coat a wide range of 3D printed objects.

Cerakote offers good heat resistance, which can be beneficial for 3D printed parts that are exposed to high temperatures, such as in engines, exhaust systems, or other high-temperature applications. We successfully implemented this with 3D printed tailpipes from BRABUS that were installed in the Porsche 911.

We support SLS, SLA, MJF, FDM, FFF, DLSM, Polyjet, Binderjet and Metal Jet processes. Overall, Cerakote is an excellent coating option for 3D printed parts because it offers a combination of protection, durability, versatility, and aesthetic possibilities.

As a partner of formlabs and HP, we are well connected in the industry and with new ones Innovations directly involved.



An industrie in transition

Innovative ideas and new trends are changing our kitchens and bathrooms. Individuality, technology and sustainability are the trends. We support our customers with a variety of strong colors and high durability.

Cerakote H-900 Electrical Barrier

Cerakote H-900 Electrical Barrier is designed to provide an electrically insulated, high quality and durable surface. Cerakote H-900 Electrical Barrier is a tough, corrosion-resistant dielectric (non-conductive) spray-on coating that provides unparalleled adhesion and resistance to solvents and chemicals. The basis for Cerakote H-Series coatings is a unique ceramic technology that gives the finished coating both excellent flexibility and wear resistance.

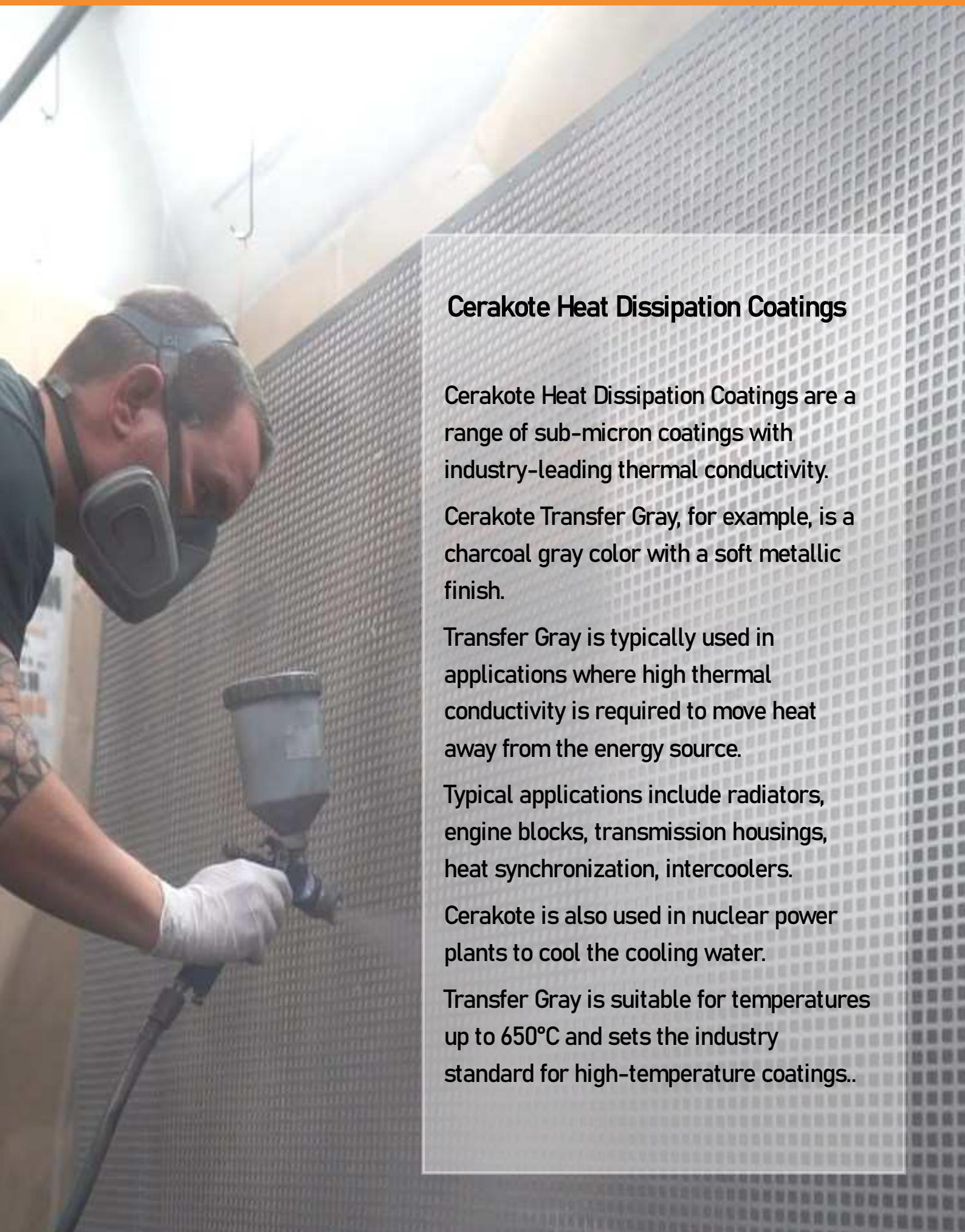
The maximum operating temperature of this coating is 200°C. Cerakote-H 900 provides reliable insulation against electrical currents, minimizing the risk of short circuits and other electrical disturbances.

Electrical barrier

Code: H-900 | Special features: Dielectric | Surface: Solid |Temperature: up to 150°C | Drying: Oven Dielectric strength (V/mil) 3000

"Anti-spatter" refers to a type of coating designed to prevent or minimize the adhesion of weld spatter that may occur during the welding process. During welding, molten metal droplets can jump off the weld and settle on surrounding surfaces, causing so-called weld spatter. These splashes are not only unsightly, they contaminate the work environment and equipment.

Cerakote anti-spatter coatings provide additional protection against weld spatter during the welding process. They make it easier to clean the coated surface after welding because the weld spatter adheres less and is easier to remove. This can reduce working time and increase efficiency..



Cerakote Heat Dissipation Coatings

Cerakote Heat Dissipation Coatings are a range of sub-micron coatings with industry-leading thermal conductivity.

Cerakote Transfer Gray, for example, is a charcoal gray color with a soft metallic finish.

Transfer Gray is typically used in applications where high thermal conductivity is required to move heat away from the energy source.

Typical applications include radiators, engine blocks, transmission housings, heat synchronization, intercoolers.

Cerakote is also used in nuclear power plants to cool the cooling water.

Transfer Gray is suitable for temperatures up to 650°C and sets the industry standard for high-temperature coatings..

CERAKOTE

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As NIC Industries Cerakote Training Center, we have trained and certified more than 600 participants from 21 countries. Would you like to use Cerakote in your home? Contact us. We will work with you to develop a training concept tailored to your requirements.

Thanks to our wide network of partners, you can find a coating company in your area with just a few clicks that will carry out your orders quickly and with high quality. .

Food grade

Food safety standards require that all materials that come into contact with food are not only safe, but also easy to clean and disinfect. Cerakote offers excellent resistance to chemicals, abrasion and corrosion, reducing the risk of contamination from bacteria, mold and other harmful substances.

Cerakote is often used on surfaces of equipment, machines and tools that come into direct contact with food.

Test Report

Toxicity testing of a material extract. Cytotoxicity Test

CYTOX

Result: The Cerakote™-coated Polyamid 11 test specimen did not cause a cytotoxic effect.

Description of the test procedure:

Cerakote is robust and durable. It withstands high temperatures, cleaning agents and mechanical wear to which equipment and surfaces are exposed in the food industry. By using food-grade Cerakote, companies can ensure their equipment and surfaces last longer and are less susceptible to damage, which in turn reduces operating costs.

Overall, the use of food-grade Cerakote in the food industry is critical to ensure consumer safety.

Skin Friendly

It is of great importance that Cerakote is skin-friendly as it is used in various applications where direct contact with the skin is unavoidable.

3D printed Orthotics from Cure Lab Hamburg

Some people have sensitive skin and are allergic to certain chemicals or materials.

LABORATORIUM DER URKANTONE

Kopie

Prüfbericht A22-3270

Sustainability is important to us and that's why we have 65 photovoltaic modules, with one Power of 57KwP installed on our roof. This means we reduce our energy consumption from fossil fuels by around 50%.

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