

# TOUCH COATINGS PERFORM

#### Our Core Value

"Calico Coatings values the passion to win in a performance and technology driven industry. With a dependable and growth-oriented workforce, our goal is to be the number one coatings company in the world." "Professional auto racing has been the proving ground for all of our coatings because of the demanding environment of the racing industry. They're going racing every weekend with or without us, and it's our job to give them what they need, when they need it."

#### Tracy Trotter Owner, Calico Coatings



#### About Calico

Across numerous high-performance industries, Calico is applying coatings that can withstand extreme pressure, save fuel and reduce friction and wear. Calico's arsenal of coatings include PECVD, DLC, PVD, TiN, ceramic, Teflon<sup>®</sup>, thermal, dry film lubricants and more.

#### **Calico History**

In 1997, Calico Coatings was founded *by racers, for racers*. Calico owner, Tracy Trotter, was a racer himself who set out to develop the industry's most technologically advanced coatings that had the ability to perform under extreme conditions of high speed and engine wear. Calico gained a reputation as the leader in the automotive industry by working with race teams and engine builders.

After 10 years in business, Calico expanded their operation by adding a laboratory dedicated to the research and development of new coatings including their Diamond-Like Carbon and other thin film coatings. In 2012, they combined their operations into a state-of-the-art, 20,000 square foot manufacturing and research facility in North Carolina that also serves as their headquarters.

Today, their coating knowledge and expertise is in demand by engineers and manufacturers worldwide.

Calico supports a range of industries including U.S. Military, aerospace, molds and dies, industrial and others. Performance is everything, and Calico's coatings provide the needed edge for outstanding results.

#### Aerospace

Engineers within the aerospace manufacturing industry rely on Calico's high-performance coating technology for aircraft engines, critical aftermarket components and related parts. Coatings for the aerospace industry include a wide range of industrial, military and commercial applications.



#### Automotive Racing/Motorsports

Racing has been the proving ground for all of our coatings. Under the sport's intense conditions of high speed and engine wear — crew chiefs, engine builders and drivers rely on Calico's coatings to reduce friction and wear, improve fuel savings and provide maximum performance. Coatings can win championships and we want our customers to win.



#### Food Processing

Manufacturers of processed food products seek to remove toxins, increase food consistency and alleviate spoilage throughout the manufacturing process. Calico's coating solutions provide the wear resistance and lubricity needed for food packaging and containers that are made of steel, hardened steel, cast iron and aluminum. Our non-stick coatings provide a frictionless surface and are FDA compliant.



#### Chemical

Companies that produce industrial chemicals such as polymers and plastics are the primary source for most consumer goods in manufacturing, construction and service industries. Calico's range of high-performance coatings reduce costs and increase efficiencies in the production of rubber and plastic products.

#### Diese

Fleets and owner-operators who use Calico's coatings on their engine parts see an average benefit of 40 degrees reduction in oil temperatures, 2-3 additional pounds of oil pressure, significantly less wear on bearings and an MPG increase of 3-5%. All of that translates into increased horsepower and fuel economy. The Ultra Low Sulfur Diesel (ULSD) fuel has caused engines to experience less fuel mileage, piston cracking and melting in extreme conditions. Calico's coatings provide a more effective and even fuel burn throughout the combustion chamber resulting in a consistently higher temperature inside the chamber.

#### Energy

Management of renewable, sustainable and alternative energy requires a wide range of manufactured components. Calico's coating solutions provide corrosion protection, increased lubricity and low coefficient of friction for the petroleum, electrical, coal and nuclear power industries.

#### General Manufacturing

Manufacturers need efficiency and cost control to be competitive. Calico's coatings are protective and wear resistant, which extends part life and keeps replacement costs to a minimum. In some cases, coatings can restore the product quality to higher than the original equipment manufacturer.

## Marine

Engine builders in the marine industry are challenged with a number of ecological and environmental conditions. Calico's protective coating solutions provide the antifouling, non-stick and corrosion resistance needed for engine parts and components to endure these conditions.

Anti Scuffing

## IN DUSTRES

### Medical

Manufacturers of surgical tools and instruments trust Calico's hard coating solutions to provide edge retention, reduced galling and wear resistance. Our hard coatings, including PVD and CVD coatings such as AITIN, CrN and DLC are totally inert, provide exceptional oxidation resistance and extreme hardness. Calico's heightened internal process controls ensure quality, consistency and prolonged tool life — offering numerous benefits and cost savings to hospitals.

### Metal Forming

Due to the high loads and stresses associated with metal forming, Calico's coating solutions provide solid lubrication of parts subject to torque and contact stresses. They can be used in combination with oil, grease or paste and provide intermittent dry lubrication properties. Coating parts extends the average time between maintenance cycles, reduces vibration and noise and extends mean-time-to failure. Coating thickness varies to suit the application.

## **Rubber Molds**

Manufacturers understand the impact coatings can make on their operating efficiency. Calico's premium mold release coatings are non-stick with a polyamide-imide binder to reduce sticking tendency and provide a tough, durable film for dry lubrication and abrasion resistance.

### Nuclear

Nuclear engineers are faced with extreme environments of heat and corrosion where components are required to perform under conditions of high load. Calico provides the extreme wear and chemical resistance that is needed by applying their hard and nano-hard coatings. In some applications, the coating can be stripped and recoated.

#### Military

Our men and women in the armed forces rely on Calico's coatings to perform during training and on the battlefield. Calico's coatings protect against the extreme stress and environmental conditions that military equipment must endure, helping to keep our soldiers safe. **Defense Logistics Cage Code (47SQ4)** 



## Oil & Gas

Engineered to withstand a wide variety of environmental conditions, these coating solutions provide protection against corrosion in the world's harshest industrial and offshore environments. Both onshore and offshore production facilities of major petroleum and gas producers rely on Calico's coatings to provide superior adhesion to the substrate in a range of thicknesses.



## Weaponry

Manufacturers and the military need durability and protection against corrosion and abrasion in the field. Calico's coatings are technologically developed to resist chemicals, oils and solvents. They also provide increased lubricity to parts subject to torque or contact stresses. We offer a variety of finishes for the highest performance and precision.

Calico holds a Federal Firearms License (FFL).



PFA

#### Many factors determine the effectiveness of our coatings, the methods of application and the performance properties

#### Anti Scuffing — ст-з

Used in combination with a lubricating oil, grease or paste, this Dry Film Lubricant coating reduces scuffing, friction and adhesive wear. It provides intermittent dry lubrication, is not affected by dust or dirt, has a low coefficient of friction, increased load carrying capacity, chemical resistance and corrosion protection.

## Ceramic Coating — CT-2, CoolKrome, CoolBlack, CT-26

Non-stick, heat-dissipating coatings that use extremely fine particles with excellent thermally conductive properties. Designed to protect steel, stainless steel and non-metallic substrates, they can withstand temperatures of 1650° F without flaking from the substrate. They maintain excellent adhesion properties through repeated thermal cycling while providing corrosion resistant characteristics to most and no reaction to repeated thermal shock.

#### Dry Film Lubricant - CT-1, CT-10, CT-101, CT-102, CT-103

These coatings provide increased lubricity, have a low coefficient of friction and reduce abrasive, corrosive wear. They are not affected by dust or dirt and were specifically engineered to withstand the extreme conditions of today's high performance engines with increased embedability, strength and durability.

MIL-PRF-46010G SAE AS5272 Type I, Type II and Type III

#### FEP Coating

#### <mark>→</mark> <u>CT-15, CT-62, CT-63, CT-65,</u> CT-69, CT-601, CT-605, CT-610, CT-613, CT-614

Non-stick coatings with a polyamide-imide binder that are used on aluminum, steel and stainless steel substrates to reduce sticking tendency and provide a tough, durable film for dry lubrication and abrasion resistance. Premium mold release coatings for industrial applications. Some are FDA compliant.

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Black Manganese Phosphate, also known as Parkerizing, is a process that reduces friction and resists corrosion. Phosphate produces a fine, dense crystalline coating on ferrous metal substrates. This reduces wear and facilitates break-in of surfaces and can be applied to virtually any ferrous metal component. It is especially effective to reduce running-in wear of sliding parts, galling and scoring and has optimum torque-tension properties.

MIL-DTL-16232, Type M, Class 1, Class 2 and Class 3 MIL-STD-171F 5.3.1.2



CT2 & CT3





Diesel

# COATINGS



CT-401

CT-42

### PFA Coatings — CT-68 PFA (Standard)

This black, non-stick coating offers high temperature resistance, excellent mold release and is capable of conforming to complex shapes with thick or thin films. The coating was developed for industrial/medical processing, chemical handling and commercial cookware applications. FDA conformance is determined by choice of primer.

#### - CT-606 (Reinforced)

CT-606 is a PFA gray non-stick coating that offers high temperature resistance, excellent release and abrasion resistance. This coating is designed for industrial/ medical processing, chemical handling and commercial cookware applications. FDA compliant.

**PTFE** Coating

- CT-41, CT-42, CT-43, CT-44, CT-45, CT-47, CT-49, CT-401, CT-402, CT-4, CT-51,

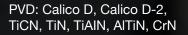
Available in several colors, these non-stick oil-shedding coatings for aluminum, steel, and stainless steel substrates assist in returning lubricating oil back to the reservoir. Doing so reduces parasitic drag or windage on rotating assemblies. PTFE coatings with a polyamide-imide binder reduce sticking tendency and provide a tough, durable film for dry lubrication and good abrasion resistance.

#### Surface Finishing — Super Finishing, Micro Finishing

This unique surface finishing technology combines chemical and mechanical processes to remove microscopic peaks and component stresses by eliminating stress risers generated during machining operation. A minimal amount of material removal (3/10000 of an inch) leaves an isotropic or uniform surface finish of less than 1 micro-inch.

#### Thin Film Coatings - Diamond Like Carbon (DLC)

These Diamond Like Carbon (DLC) coatings are a dense, metastable form of hydrogenated amorphous carbon containing significant SP3 bonding. The process of bonding carbon and hydrogen confers valuable 'diamond-like' properties such as mechanical hardness, low friction, optical transparency and chemical inertness.



Physical vapor deposition (PVD) coatings have a high hardness with greater thermal stability than any other conventional coating. They are typically used in extreme environments and have excellent abrasive wear resistance. Can be stripped and recoated.



Super Finishing





Marine

## PROVIDING ADVANTAGES

Defense Logistics Cage Code (47SQ4)







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5883 Balsom Ridge Rd., P.O. Box 901, Denver, NC 28037 p: 704.483.2202 | f: 704.483.2145 | calicocoatings.com

Connect with us online. **t f in**