Get to know us

Discover how we can help you achieve your goals
with our top-quality products and services

DOAH

Specialist in Anti Friction Coating

"We develop customized lubricating coating products in cooperation with our customers and provide comprehensive support from A to Z to ensure your successful application."

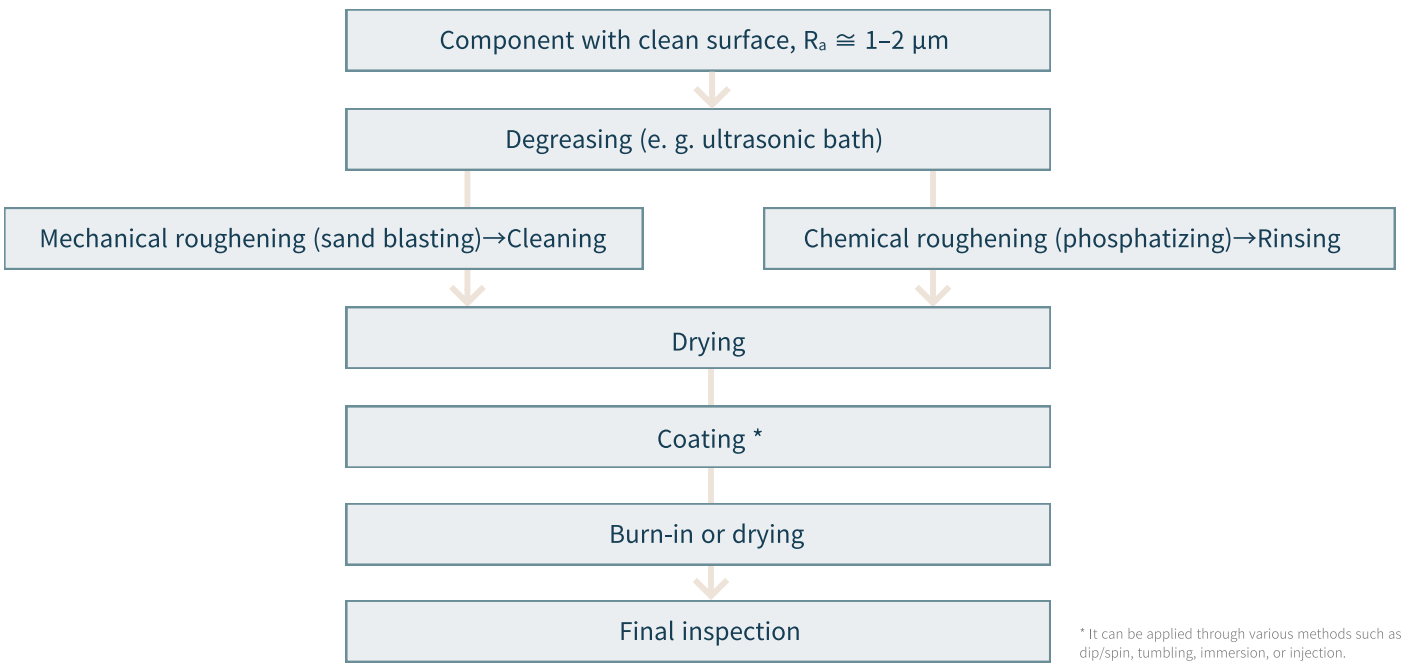
DOAH
anti friction coating

A Comprehensive Overview

Exploring Anti-Friction Coating Technology

Anti-Friction Coating is a process that applies a solid lubricant layer to a substrate to reduce friction and wear. It operates by forming a protective, uniform, and thin layer that adheres securely to the surface. The solid lubricants, such as PTFE (polytetrafluoroethylene), MoS_2 (molybdenum disulfide), or graphite, create a low-friction interface, even under extreme conditions like high temperatures or vacuum environments.

Anti-Friction Coating is essential across multiple industries, including automotive, aerospace, manufacturing, and medical sectors, where it reduces wear, improves efficiency, and enhances the longevity of critical components. Its versatility makes it invaluable for any application requiring smooth operation and durability.



Coating the path to a frictionless tomorrow

Our coating products are distinguished by the use of carefully selected raw materials, tailored designs to meet specific customer needs, and exceptional durability. These factors significantly contribute to extending the lifespan of components, providing a competitive edge in performance and reliability.

Perfect fit. Discover your customized solution with 1:1 consulting

Field-tested excellence. Driven by consinuous R&D and a diverse product portfolio

Progress powered by expert. Professional technical support for your success in application

DOAH at a glance

Moving toward our vision of putting customer value first

As a company specializing in lubricating coatings (AFC, Anti Friction Coating) to ensure long-term lubricating performance of parts, We are continuously investing in product innovation to stay ahead of increasingly sophisticated technological advancements and to adapt to the rapidly evolving demands of our customers. By doing so, we aim to deliver solutions that not only meet but exceed expectations in functionality, performance, and reliability.

Panoramic view

Inside view

Our major products

We have a portfolio of lubricating coatings to reduce friction of parts made of various materials such as metal, plastic, and rubber. Based on lubricating coating technology and know-how, we design an optimized coating solution that allows permanent lubrication by considering all environmental factors, such as the materials of the application area and driving type.

Category	Application	Product name
Coating	Automotive air conditioner & industrial compressor piston	DOAH COAT P 1
		DOAH COAT P 1 K
	Mechanical engineering such as swash plate	DOAH COAT S 1
	The vehicle interior part where the noise occurs	DOAH DRY 1
		DOAH S-DRY 1
Oil	Industrial cutting oil	DOAH OIL C 1

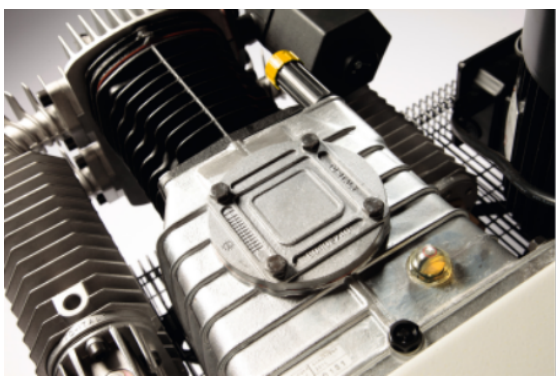
Explore more - homepage

www.doahcompany.com

DOAH COAT P 1

Lubricating coating agent for piston

Fluorinated resin based lubricating coating agent that can improve wear and load resistance of automotive air conditioning system



Performance features

- Productivity increasion due to excellent metal adhesion
- Extend the life of parts due to excellent wear resistance
- Good load resistance ensures consistent quality and lifetime lubrication

DOAH COAT P 1 is a lubricating coating agent specifically designed for piston of automotive air conditioning system and can be applied to precision engineering and automotive engineering. Curing conditions may vary depending on the actual working environment, but typical curing schedule at objective temperature is 30 minutes at 90°C, 30 minutes at 150°C, 45 minutes at 200°C and 45 minutes at 230 °C. For the convenience of manufacturing process operation, it is possible to classify the product by its appearance(DOAH COAT P 1 K with greenish brown color). It can be compatible with R134A refrigerant and PAG based oil. The minimum shelf life is approx. 4 months if the product is stored in the original closed container in a dry place.

Specification	Unit	Test methods	Test results
Component	-	-	PTFE + Organic binder
Appearance	-	-	Black
Package	-	-	5kg Can
Volume of non-volatile matter (1g/230°C/90min)	%	KS M ISO 3251	34 ± 3
Brookfield viscosity (Spindle No. S64/20rpm/25°C)	cP	ASTM D 2196	25000 ± 4000
Cross cut	grade	ASTM D 3359	3 B
Pencil hardness (Load: 1.4kg/Speed: 350㎜/min)	grade	KS M ISO 15184	4 H

Note: The above data constitutes neither an assurance of product properties nor does it release the user from the obligation of performing preliminary field tests with the product selected for a specific application

DOAH COAT P 1 K

Lubricating coating agent for piston

Fluorinated resin based lubricating coating agent that can improve wear and load resistance of automotive air conditioning system

Performance features

- Productivity increasion due to excellent metal adhesion
- Extend the life of parts due to excellent wear resistance
- Good load resistance ensures consistent quality and lifetime lubrication

DOAH COAT P 1 K is a lubricating coating agent specifically designed for piston of automotive air conditioning system and can be applied to precision engineering and automotive engineering. Curing conditions may vary depending on the actual working environment, but typical curing schedule at objective temperature is 30 minutes at 90°C, 30 minutes at 150°C, 45 minutes at 200°C and 45 minutes at 230 °C. For the convenience of manufacturing process operation, it is possible to classify the product by its appearance(DOAH COAT P 1 with black color). It can be compatible with R134A refrigerant and PAG based oil. The minimum shelf life is approx. 4 months if the product is stored in the original closed container in a dry place.

Specification	Unit	Test methods	Test results
Component	-	-	PTFE + Organic binder
Appearance	-	-	Greenish brown
Package	-	-	5kg Can
Volume of non-volatile matter (1g/230°C/90min)	%	KS M ISO 3251	34 ± 3
Brookfield viscosity (Spindle No. S64/20rpm/25°C)	cP	ASTM D 2196	25000 ± 4000
Cross cut	grade	ASTM D 3359	3 B
Pencil hardness (Load: 1.4kg/Speed: 350㎜/min)	grade	KS M ISO 15184	4 H

Note: The above data constitutes neither an assurance of product properties nor does it release the user from the obligation of performing preliminary field tests with the product selected for a specific application

DOAH COAT S 1

Excellent wear resistant coating agent under high load

PTFE based coating agent with excellent adhesion to metal/metal combination part

Performance features

- Excellent wear resistance to extend the life of applied part
- High load-carrying capacity maintains lubrication performance
- Ensure long endurance life after heat curing coating process

DOAH COAT S 1 is a heat curing dry film lubricant specifically designed to prevent wear even under high load for precision engineering and automotive engineering such as automotive air conditioner swash plate. It can be applied to metal/metal combinations at medium to high loads and used on alloy and aluminium parts as well. Curing conditions may vary depending on the actual working environment, but typical curing schedule at objective temperature is 10 minutes at 100°C and 90 munutes at 230°C. The minimum shelf life is approx. 4 months if the product is stored in the original closed container in a dry place. It is formulated for application by spray and stirring is required before use.

Specification	Unit	Test methods	Test results
Component	-	-	PTFE + Organic binder
Appearance	-	-	Gray
Package	-	-	1kg Can
Volume of non-volatile matter (1g/120°C/1h)	%	ASTM D 1353	36 ± 3
Brookfield viscosity (Spindle No. S64/20rpm/25°C)	cP	ASTM D 2196	400 ± 100
Pencil hardness (Load: 1kg/Speed: 350㎜/min)	grade	KS M ISO 15184	3 ~ 4 H

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DOAH DRY 1

Fluorinated dry coating lubricant

It is composed of fluorinated resin and water-based binder to reduce friction noise by forming a stable lubricating film.

Performance features

- Low coefficient of friction and a wide operating temperature range
- Easy to apply as a room-temperature curing dry coating lubricant
- Applicable to metal/plastic surfaces under low speed and low load

DOAH DRY 1 is a dry coating lubricant specifically designed to reduce friction noise in various automotive interior components such as door trims, door panels, armrests and consoles. It can be applied to friction areas involving metal/plastic, synthetic leather and painted car body surfaces under low speed and low load condition.

The minimum shelf life is approx. 12 months if the product is stored in the original closed container in a dry place. It is a water-based, dry coating lubricant with a room-temperature curing type that dries within 10 minutes after application, allowing for easy handling without staining the applied surface or contaminating the surrounding areas.

Specification	Unit	Test methods	Test results
Component	-	-	Fluorinated resin + water-based binder
Appearance	-	-	Milky white
Package	-	-	1kg Can
Curing condition	-	-	25°C / Less than 10 minutes
Specific gravity	g/㎤	KS M 2002	1.32
Evaporation residue	wt%	MS 513-01	48.03
Thermal cycling durability	%	MS 513-01	0.7

Note: The above data constitutes neither an assurance of product properties nor does it release the user from the obligation of performing preliminary field tests with the product selected for a specific application

DOAH S-DRY 1

Fluorinated semi-dry coating lubricant

It is composed of fluorinated solvent, resin and oil to prevent the squeak noise and foam thin lubrication film

Performance features

- Excellent lubricity on the part of rubber and plastic part
- Prevent the stick-slip and noise due to stable lubrication film
- Compatible with most materials such as rubber and plastic

DOAH S-DRY 1 is a semi-dry coating lubricant specifically designed to prevent the stick-slip and noise for automotive interior parts such as sun-visor, arm-rest, console cover, radiator grill, stop lamp, switch and door trim etc. It can be applied to precision driving part in electrical and electronic industry and various precision instruments with plastic/rubber and metal/plastic friction part requiring noise prevention.
The minimum shelf life is approx. 36 months if the product is stored in the original closed container in a dry place. It is composed of solvent and lubricant and precipitation can happen due to specific gravity difference of lubricant's ingredient so it has to shake enough and disperse active ingredient before using in order that only solvent is not applied.

Specification	Unit	Test methods	Test results
Component	-	-	Fluorinated solvent + resin + oil
Appearance	-	-	Milky white
Package	-	-	1kg Can
Service temperature	-	-	-65°C ~ 170°C
Specific gravity	g/㎤	KS M 2002	1.70
Evaporation residue (80°C/6h)	wt%	-	5
Flash point	°C	KS M ISO 2592	Non-flammable

Note: The above data constitutes neither an assurance of product properties nor does it release the user from the obligation of performing preliminary field tests with the product selected for a specific application

Engineering Inquiry

Component description

Name of components: .....

Materials: .....

Surface condition as delivered: ..... depth of roughness (R_a): ..... µm

Material of sliding partner: ..... depth of roughness (Ra): ..... µm

Intended use: .....

Technical requirements

Is it possible to coat the entire part? (any covered areas?) .....

Surface pressure: p= ..... N/mm2 (constant, alternating, impact)

Movement: uniform ☐ oscillating ☐

n= ..... rpm v= ..... m/s frequency: ..... to ..... Hz

amplitude: ..... to ..... m

Thermal resistance +/– °C: .....

Resistance to chemicals: .....

Dirty environment: .....

Ambient media: .....

Vacuum: .....

Desired service life (cycles): .....

Corrosion protection: yes ☐ no ☐

Further requirements/specifications/

technical delivery instructions: .....

Estimated consumption (units/year): .....

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