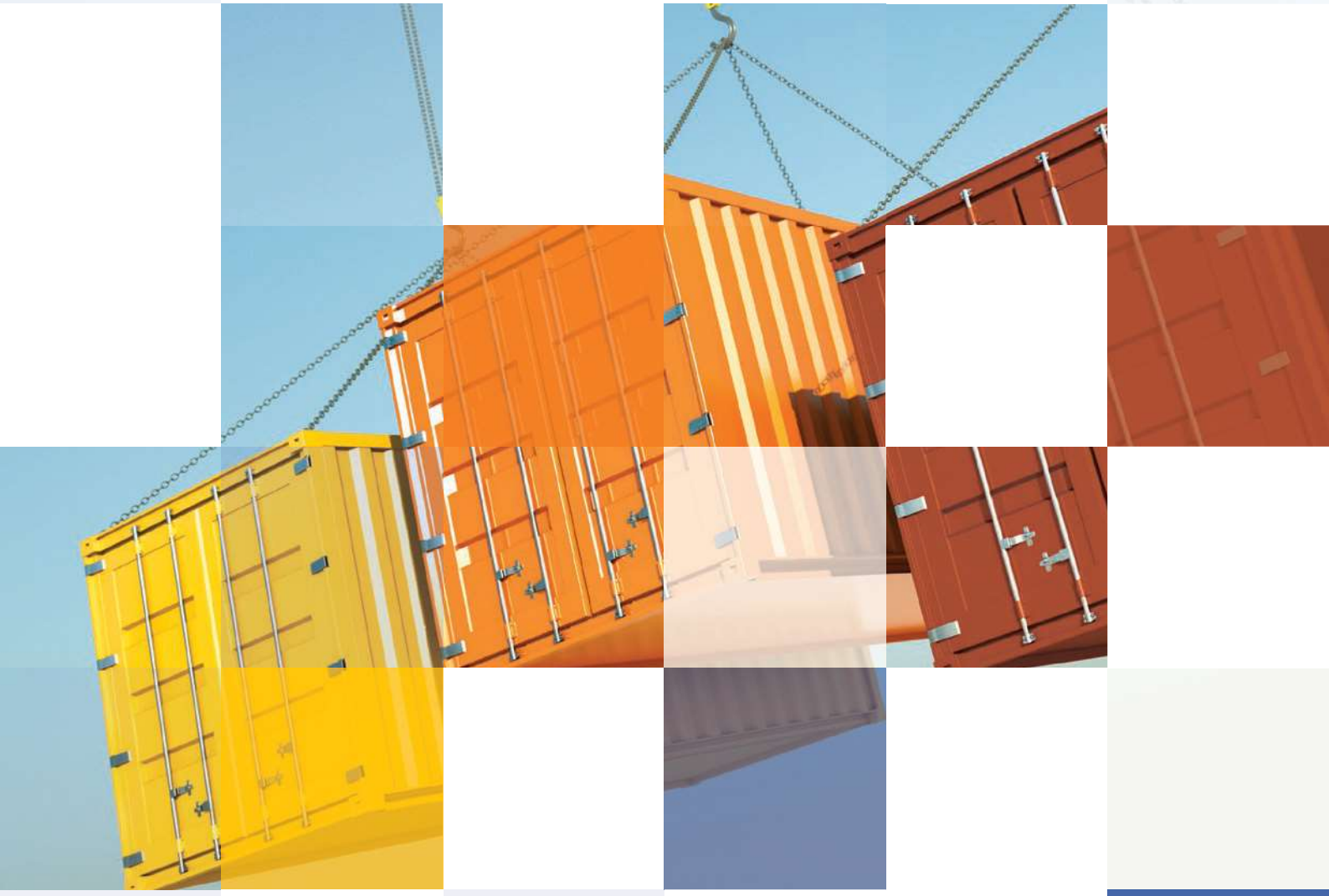
ASCOTEC

YOUR KEY PARTNER FOR ANTICORROSION



ASCOTEC

YOUR KEY PARTNER FOR ANTICORROSION

ABOUT US

With more than 20 years of experience, ASCOTEC, as an independent company, is considered as one of the major players in the anticorrosion field.

In Paints & Coatings, ASCOTEC is recognized by major manufacturers, with a complete range of innovative additives which meet all needs:

ASCONIUM®, anticorrosion additives for both solventborne and water-based metal coatings.

ASCOTRAN®, flash-rust inhibitors for metal substrate protection during the application of water-based coatings and for packaging protection.

ASCOTRUST®, rust-converting additives for direct application of water-based coatings on rusted substrates.

ASCOTEC can also handle corrosion problems in various metal machining processes, such as lubrication, stripping, degreasing, metal cleaning, storage and heat transfer fluids.

More than 70 countries covered

Customized solutions and a strong technical support

Approved Quality Management System

ASCONIUM®

AN INNOVATIVE ORGANIC AND LIQUID TECHNOLOGY FOR ENHANCED ANTICORROSION PERFORMANCE

A new technology, against ever stricter regulations.

Regulations on chemicals and VOC have changed a lot over these past few years, and are still likely to evolve. Anticorrosive coatings manufacturers, therefore, have to develop new formulations with even more eco-friendly components, which often results in tricky additions and low performance.

ASCOTEC has developed the ASCONIUM® range to take up this challenge.

Thanks to their liquid form, ASCONIUM® products provide many benefits, both inside the coating layer and on the metal substrate.

LIQUID ANTICORROSION ADDITIVES

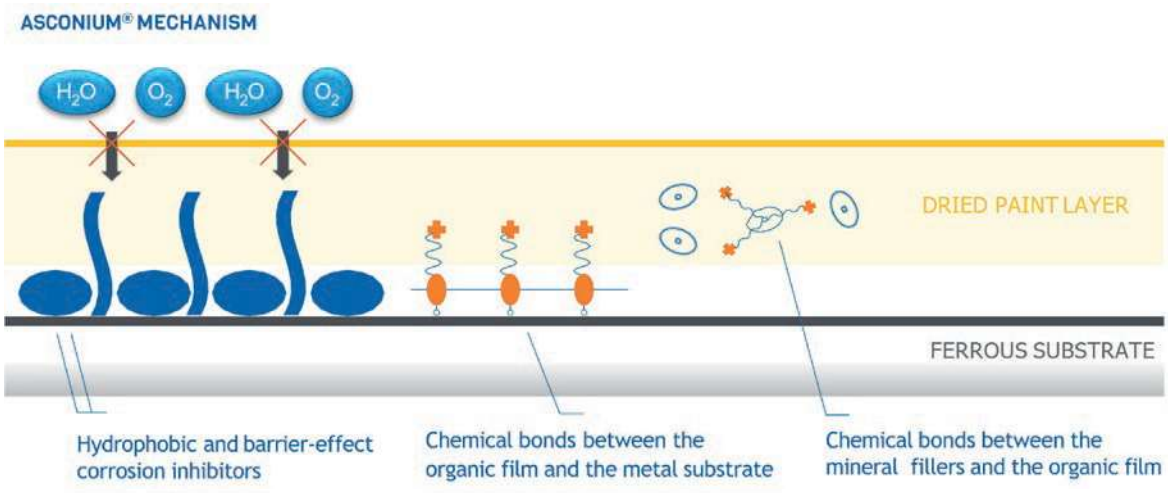
▪ p.4 ASCOTEC, your anticorrosion partner

FOUR FUNCTIONS FOR THE HIGHEST PERFORMANCE

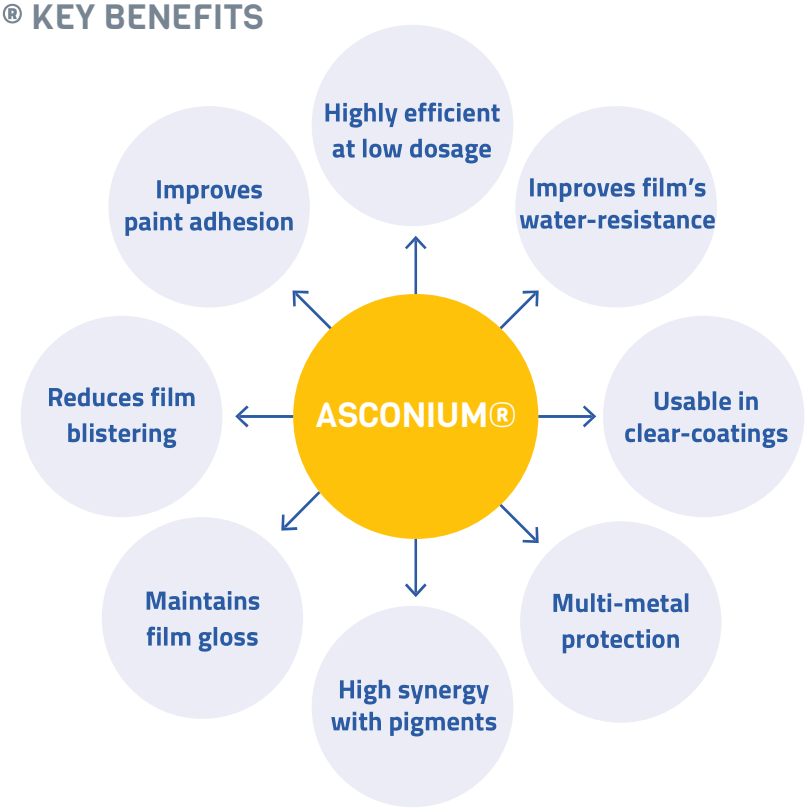
As ready-to-use liquids, ASCONIUM® additives can be used in WATER-BASED, as well as in SOLVENTBORNE coatings, either as single products or in combination with anticorrosion pigments.

Their high performance is based on 4 different functions:

- Creating a barrier effect through the inhibitor's adsorption onto the metal surface;
- Enhancement of the coating's water-resistance;
- Improvement of adhesion between the coating and the substrate;
- Improvement of the film cohesion.



ASCONIUM® KEY BENEFITS



THE RANGE

			ASCONIUM-110	ASCONIUM-111	ASCONIUM-112	ASCONIUM-114	ASCONIUM-130	ASCONIUM-140	ASCONIUM-141S1	ASCONIUM-142DA	ASCONIUM-143	ASCONIUM-144DA
SOLVENTBORNE	ALKYD	clear	●●●	●●	●●●	●●	●●	●●	○	●●	●●●	●●
		paint	●●	●●●	●●●	●●	●●	●●	○	●●	●●●	●●
	2K PU	clear	●●	○	●●	●●●	●●	●●	●●	●●●	●●●	●●
		paint	○	●●	●●	●●●	●●	●●	●●●	●●	●●●	●●
	ACRYLIC	clear	●●	○	●●	●●●	●●	●●	○	●●●	●●●	●●
		paint	○	●●	●●	●●●	●●	●●	●●	●●●	●●●	●●
	2K EPOXY	clear	●●	○	●●	●●	●●●	●●	●●	●●●	●●	●●
		paint	○	●●	●●	●●	●●●	●●	●●●	●●●	●●	●●
WATER-BASED	ACRYLIC STYR/ACRY	clear	○	○	●●	●●●	●●	●●	○	●●	●●●	●●
		paint	○	●●	●●	●●	○	●●	●●	●●●	●●●	●●
	ALKYD	clear	○	●●	●●	●●●	○	●●	○	●●	●●●	●●
		paint	○	●●●	●●	●●●	●●	●●	●●	●●●	●●	●●
	PUD	clear	○	●●	●●	●●●	●●	●●●	○	●●●	●●	●●
		paint	○	●●	●●	●●●	●●	●●	○	●●●	●●	●●
	2K PU	clear	○	○	●●●	●●	●●	●●	○	●●●	●●●	●●
		paint	○	●●	●●●	●●	●●	●●	○	●●●	●●●	●●
	2K EPOXY	clear	○	○	●●	●●	●●●	●●	●●●	●●●	●●	●●
		paint	○	●●	●●	●●	●●●	●●	●●●	●●●	●●	●●
Ferrous substrates			●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●	●●●
Zn and alloys substrates			●●	●●	●●●	●●●	●●	●●●	●●	●●●	●●●	●●●
Alu and alloys substrates			●●	●●	●●	●●●	●●	●●●	●●	●●	●●	●●●

●●● Highly recommended | ●● Adapted | ○ Not used

TO MAKE YOUR RESEARCH EASIER :

ASCONIUM® SELECTOR

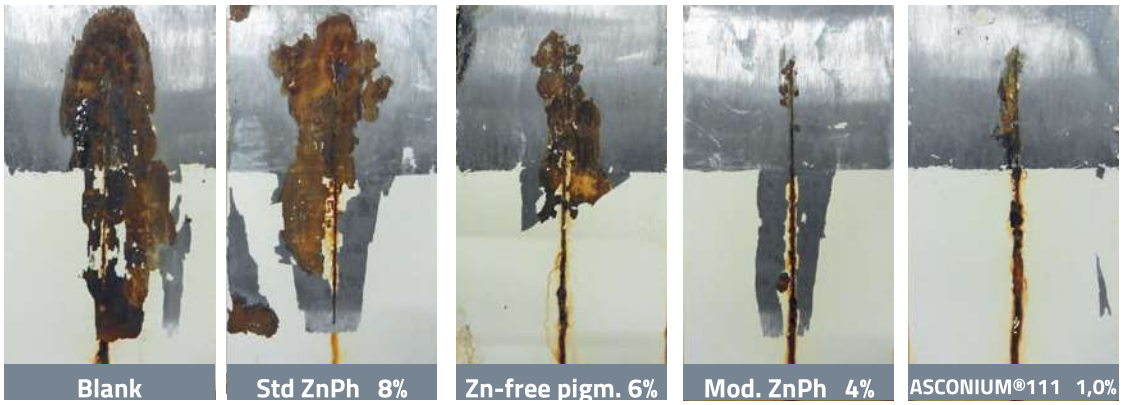
SCAN ME

▪ p.6 ASCOTEC, your anticorrosion partner

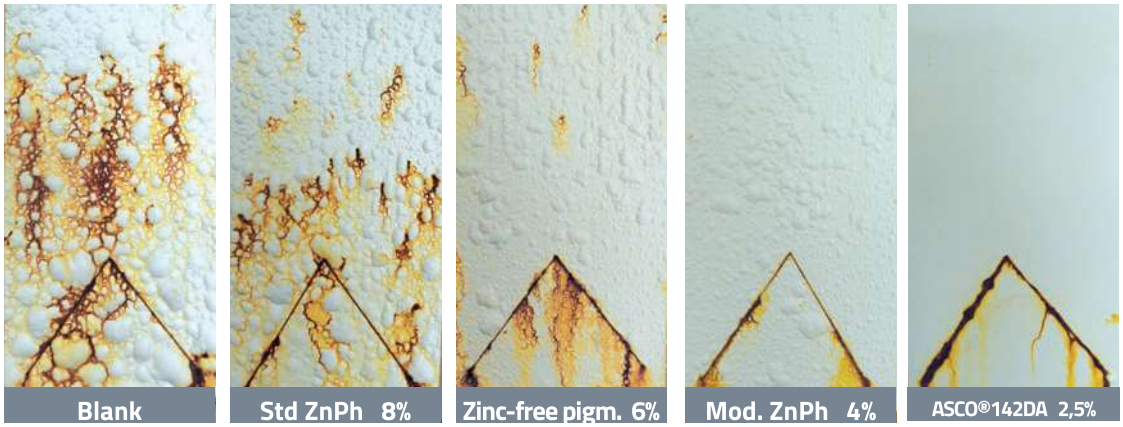
ANTICORROSION PERFORMANCE

ASCONIUM®, used as sole corrosion inhibitor into metal coatings, achieves better anticorrosion performance than usual anticorrosion pigments.

Solventborne Alkyd primer
Salt Spray ASTM B117 – 500h – DFT 60µm, CRS



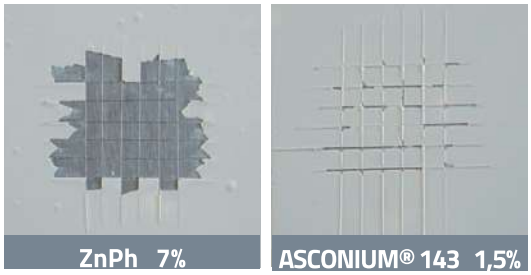
Water-based Acrylic coating
Salt Spray ASTM B117 – 1000h – DFT 60µm, CRS



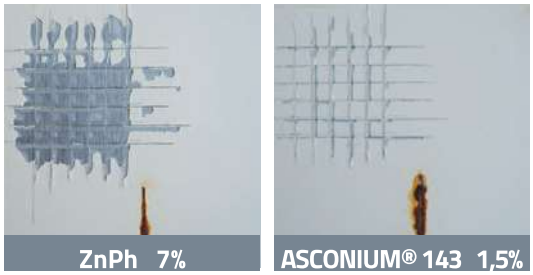
ADHESION IMPROVEMENT

ASCONIUM® provides excellent adhesion properties to the film on metal substrates, even after salt spray or humidity tests.

Solventborne 1K Alkyd-urethane primer + Solventborne Alkyd top-coat
DFT 125µm, CRS



Adhesion 2409 24h
after 120h Humidity Test ISO6270

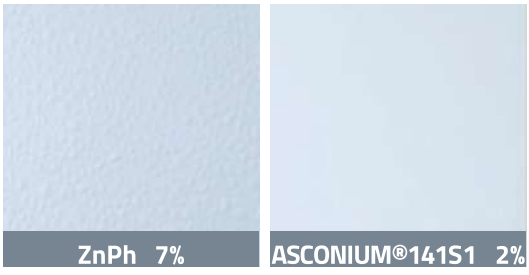


Adhesion 2409 24h
after 250h Salt Spray Test ISO9227

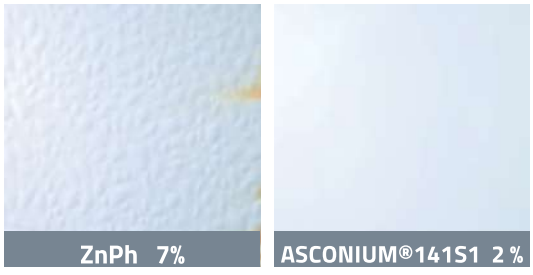
WATER RESISTANCE IMPROVEMENT

As hydrophobic anticorrosion agent, ASCONIUM® provides enhanced water resistance to the coating, when most usual anticorrosion agents, sensitive to hydrolysis, compromise this property.

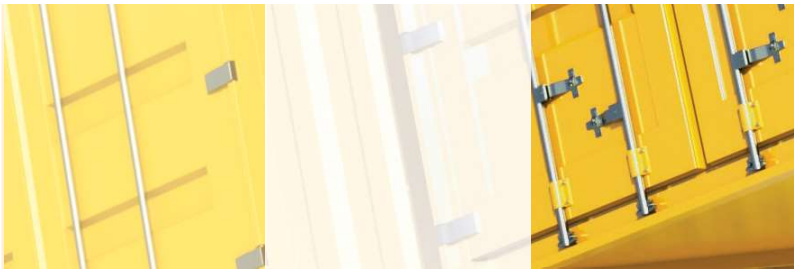
High Solid Monolayer solventborne 2K PU
DFT 75µm, CRS



54 days Humidity test 45°C

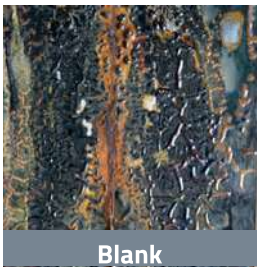


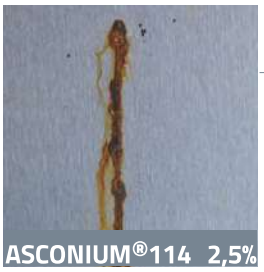
54 days Bac Ford test



USABLE IN CLEAR-COATINGS

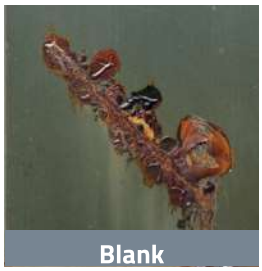
As clear liquid-form, ASCONIUM® can be used into non-pigmented coatings, without compromising the film appearance.

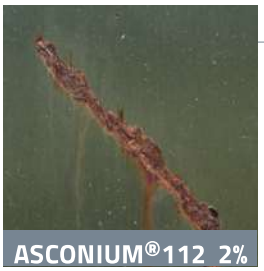




Water-based
PUD based clear-coating

Salt Spray ISO9227 400h, DFT 35-40µm, CRS





Solventborne
1K Alkyd clear-coating

Salt Spray ISO9227 820h, DFT 70µm, CRS

MULTI METAL PROTECTION

ASCONIUM® is not only active on ferrous substrates, but also on aluminium, copper and zinc-based metals, used in specific fields like coil-coatings and aerospace applications.

Solventborne 2K
PU primer

Salt Spray ISO9227 300h, DFT 10µm

Aluminium

Solventborne Polyester coating

Salt Spray ISO9227 1500h, DFT 20µm

Galvanized steel

ASCOTRAN®

ELIMINATE FLASH-RUST AND PRESERVE FILM WATER-RESISTANCE

Whatever the field is, Construction, Do-it-yourself or Industry, water-based coatings are widely developed to meet new VOC and regulatory requirements.

Everytime a water-based coating is applied on metal, flash-rust phenomenon, which is immediate corrosion of metal substrates, is a matter of concern.

In order to meet this new demand, ASCOTEC has developed a complete range of flash-rust inhibitors ASCOTRAN® containing **bio-based substances.**

They are effective in many different situations, whatever the substrate that needs to be protected or the nature of the coating may be.

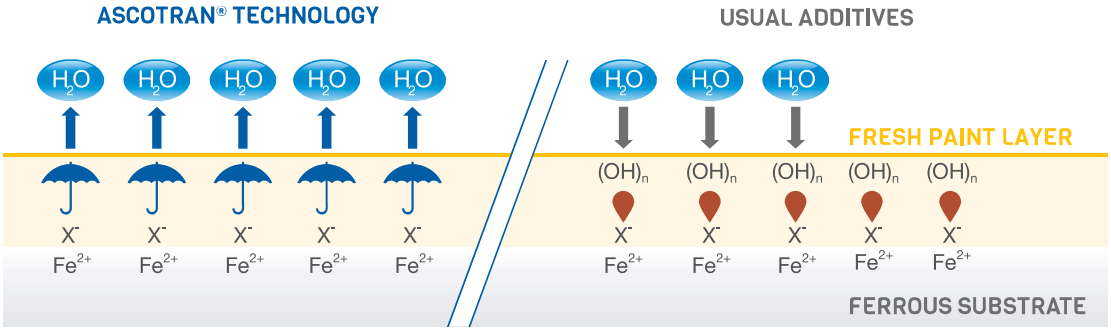
FLASH-RUST INHIBITORS

A COMPLETE RANGE OF FLASH-RUST INHIBITORS

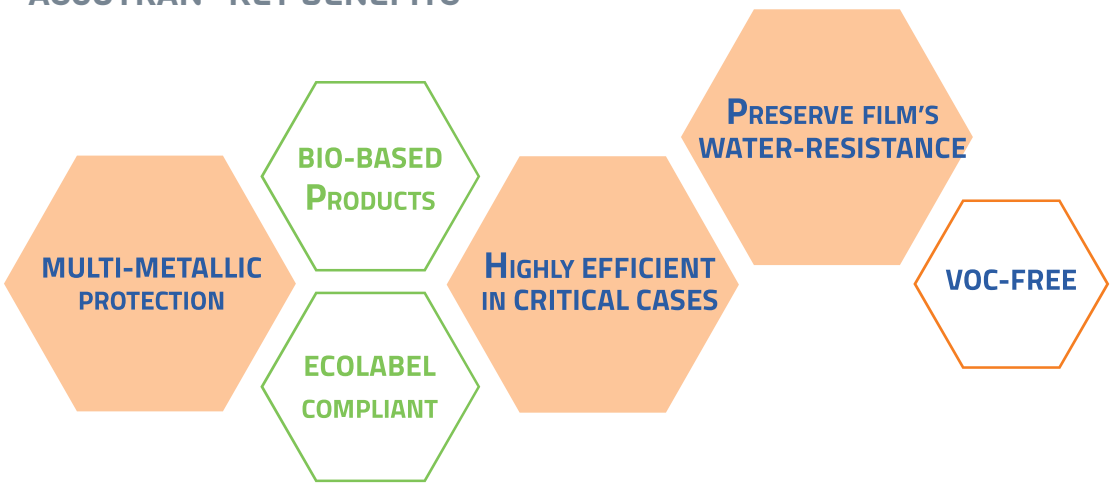
Ready-to-use liquids, ASCOTRAN® are compatible with the main resin systems used for water-based formulation.

Once the coating is applied onto the metal, ASCOTRAN® will be immediately adsorbed onto the metal surface.

Whereas usual flash-rust inhibitors reduce coatings water-resistance, the ASCOTRAN® technology combines excellent antiflash-rust performance with hydrophobic properties at low dosages.



ASCOTRAN® KEY BENEFITS



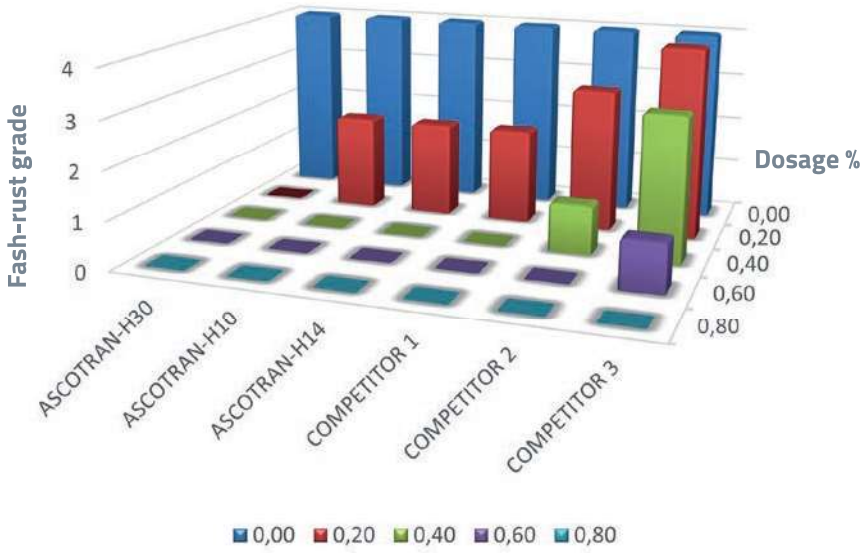
THE RANGE

	Specificities
ASCOTRAN®- H10	The most universal.
ASCOTRAN®- H14	Multi-metal substrates. High water-resistance properties.
ASCOTRAN®- H30	For substrates very sensitive to flash-rust. NEW !
ASCOTRAN®- H18	High compatibility level, especially into 2K systems.
ASCOTRAN®- AL4	Multi-metal substrates. Nitrite-free.
ASCOTRAN®- HPB	Complies with most international & national standards for eco-friendly labels. Nitrite-free.

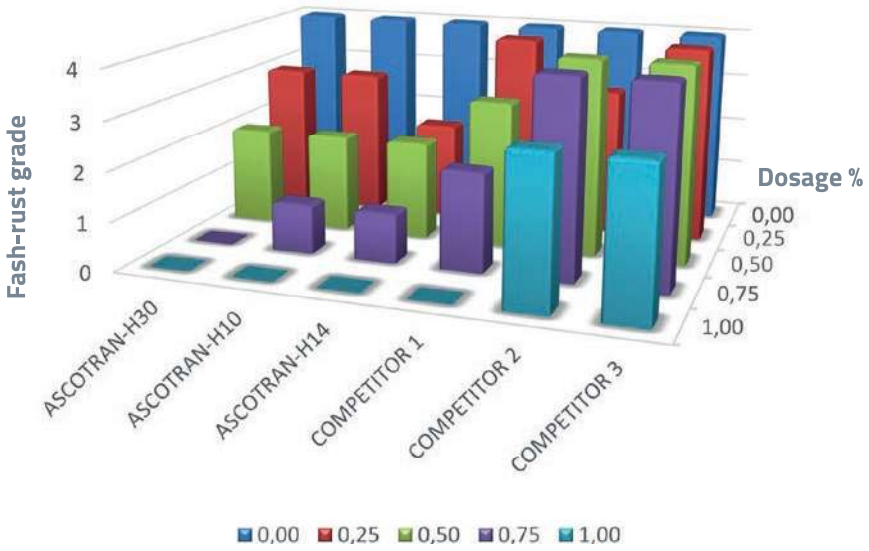
ANTIFLASH-RUST PERFORMANCE

ASCOTRAN® additives provide highest levels of flash-rust inhibition at low use dosages. They outperform high nitrite-containing additives or usual flash-rust inhibitors, even when film dries under severe humidity conditions.

Flash-rust comparative* test into a 1K Water-based Acrylic DTM
Application on cold-rolled steel under normal drying conditions



Flash-rust comparative* test into a 1K Water-based Acrylic DTM
Application on sand-blasted cast-iron under severe drying conditions



* COMPETITORS 1, 2 and 3 are high nitrite-content additives.

PRESERVE FILM WATER RESISTANCE

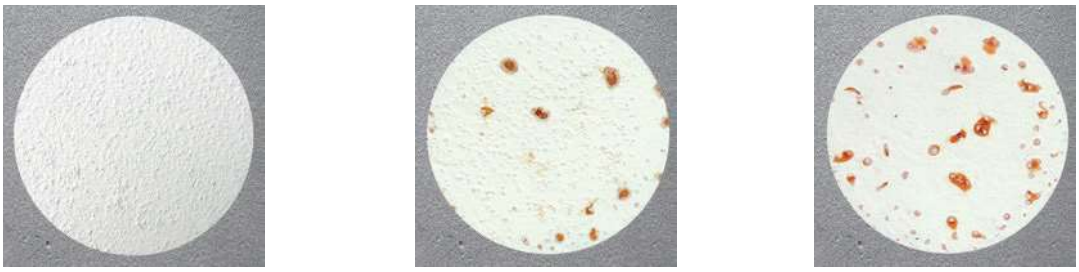
Whereas usual flash-rust inhibitors reduce coatings water-resistance, the ASCOTRAN® technology combines excellent antiflash-rust performance with hydrophobic properties.

WB 2K EPOXY PRIMER
ASTM D870 (40°C) 250H, DFT 70 µm, CRS
Dosage in Flash-Rust Inhibitor : 0,5%

ASCOTRAN® H14 | COMPETITOR (Nitrite-containing) | Sodium Nitrite, Sol. 15%

WB 1K ACRYLIC PRIMER

DFT ~ 70 µm, GRIT BLASTED CAST-IRON DRYING 2H UNDER A CAP + @ FREE RT
Dosage in Flash-Rust Inhibitor : 1%



ASCOTRAN® H30 | COMPETITOR (Nitrite-containing) | Sodium Nitrite, Sol. 15%

PACKAGING PROTECTION

Coatings can be highly corrosive and can cause, in most cases, corrosion of metallic cans which contain them. ASCOTRAN® flash-rust inhibitors also provide in-can protection.

Wall-paint | Waterborne wood varnish

IN-CAN PROTECTION

Examples of corrosion tests without/with ASCOTRAN®

ASCOTRUST®

A NEW GENERATION OF RUST-CONVERTERS

Regulations on chemicals and VOC are forcing binder manufacturers to develop performing water-based systems for Direct-To-Metal applications. Even though a metal coating shows high levels of performance, it can lose its properties once applied on rusted or poorly prepared metal surfaces.

The current techniques to get around this problem focus on rust pre-treatment methods and are not fully satisfactory:

- Solventborne «oils» or pre-treatment clear-coatings
- Chemical surface-treatments & mechanical treatments
- Acid rust-converting coatings

ASCOTRUST® is the solution to obtain high-performance results with metal coatings directly applied on rust, or poorly prepared substrates, without using expensive methods or specific binding systems.

RUST-CONVERTING ADDITIVES

A RANGE OF INNOVATIVE, LIQUID-FORM, AND TANNIC ACID-FREE RUST-CONVERTING ADDITIVES FOR WATER-BASED COATINGS

ASCOTRUST® additives provide rust-converting properties to the coating layer and enable direct applications on rust or poorly prepared substrates.

They ensure an efficient rust-blocking effect as soon as the paint is applied and form a passivation layer between the substrate and the coating layer; this helps to maintain the coating's anticorrosion performance, despite adverse substrate conditions.

Water-based clear-coating just applied on a rusted steel panel

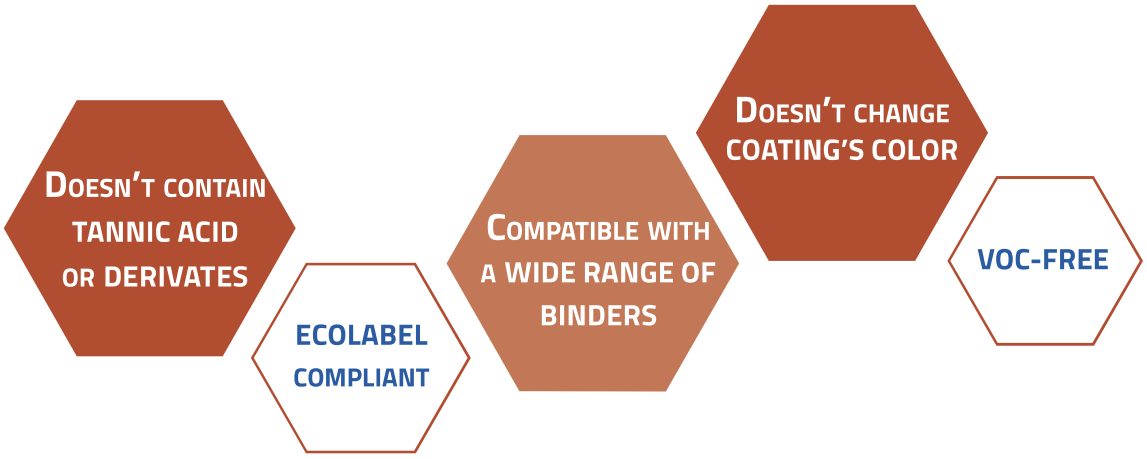
without ASCOTRUST®

The rust is immediately solved into the film.

with ASCOTRUST®

The rust is converted and blocked on the metal substrate.

ASCOTRUST® KEY BENEFITS

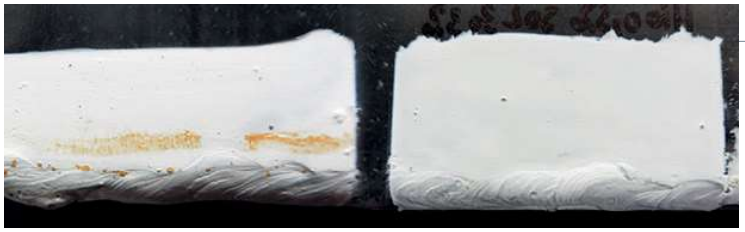


THE RANGE

	Specificities
ASCOTRUST®- X1	The most universal. Ideal for iron oxide - based coatings.
ASCOTRUST®- X2	Good compatibility in clear-coatings.
ASCOTRUST®- X3	High synergy with flash-rust inhibitors. Mainly used for primers.
ASCOTRUST®- X4	High water resistance. Ideal for DTM coatings.

ASCOTRUST® ENHANCE FILM FLASH-RUST PERFORMANCE

ASCOTRUST® completes the action of the flash-rust inhibitor on very sensitive substrates:
sand-blasted steel, cast-iron and soldered joints.



Exemple on soldered joint

Water-based coating with flash-rust inhibitor only

Water-based coating with flash-rust inhibitor + ASCOTRUST®

ASCOTRUST® FOR RUST-CONVERTING PRE-TREATMENTS

A water-based anticorrosion clear-coating containing ASCOTRUST® can be used as a rust-converting pre-treatment with better performance than tannic acid-based formulations or solventborne alkyd-based oils.

WB Coating DFT 25µm

Clear-Coating DFT 20µm

SST (250h) on rusted steel panels

ASCOTRUST BASED PRETREAT

TANNIC ACID BASED PRETREAT

SOLVENTBORNE ALKYD OIL

ASCOTRUST® FOR RUST-CONVERTING PAINTS

ASCOTRUST® based water-based metal paints

- **Prevent from rust "migration" through the water-based coating, even on superficial rust.**
- **Preserve the coating's color.**
- **Avoid strong de-rusting operations before painting without loss of performance.**
- **Don't compromise the coating anticorrosion performance on non-rusted substrates.**

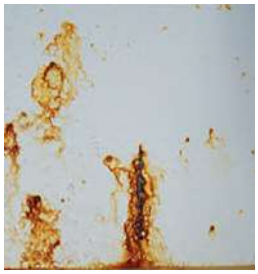
Paint without ASCOTRUST®

Paint with ASCOTRUST®

Paint with tannic acid-based additive

WB paint applied on superficial rust

with 1 layer (DFT 40 µm)



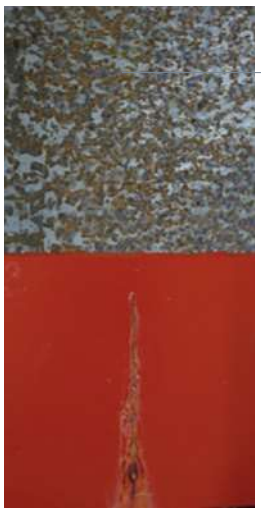
Metal paint without ASCOTRUST®

Metal Paint with ASCOTRUST®

SST (300h) on rusted steel panels

with 1 layer of metal paint (DFT 100 µm)

Metal paint without ASCOTRUST®



Metal Paint with ASCOTRUST®

SST (300h) on rusted steel panels

with 1 layer of metal paint (DFT 80 µm)

TECHNICAL SUPPORT

The ASCOTEC® R&D laboratory can offer tailor-made studies for paint formulation development and/or anticorrosion pigment replacement.
ASCOTEC® R&D laboratory is equipped with the main reference testing equipments for corrosion.

Testing	Standard	Evaluated Performance
Salt spray	ASTM B117 ISO 9227	Barrier effect, water-resistance, delamination resistance
Condensation	ASTM D4585 ISO 6270-1	Water-resistance (direct condensation on film layer)
Humidity	ASTM D2247	Water-resistance (high humidity exposition)
Bac ford	ASTM D870 ISO 2812-2	Water-resistance (complete immersion)
Climatic (condensation/UV)	ASTM D5894 ISO 11507	Barrier effect, water-resistance, delamination resistance
Adhesion	ASTM D3359 ISO 2409 ISO 2812-3	Adhesion on various substrates Adhesion test after chemical contact
Hardness	ASTM D3363 ISO 15184	Determination of film hardness by pencil test

YOUR KEY PARTNER FOR ANTICORROSION

ASCOTEC

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ASCOTEC FRANCE

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