For classic car enthusiasts

GERMAN ENGINEERED

2015 SEMA GLOBAL MEDIA AWARDS WINNER

TÜV SAAR CERT ISO 9001

fertan®

Tips on treatment, restoration, maintenance and preservation



Quality products by FERTAN

Tank coating











TAPOX is developed as inner - tank coating for tanks in steel and aluminium.

The product is resistant to fuel and ethanol, heating oil and useful for ballast tanks of ships.

TAPOX can also be used for industrial applications and for concrete floors.



fertan

Dear classic car enthusiasts,

Every year billions of pounds worth of damage is caused by rust and corrosion.

For this reason it is understandable that more and more owners want to protect their cars and other metal property from this evil.
Firstly it is important to remember that more than 75% of car body rust takes place from the inside outwards.
A really effective protection must therefore strike at the root of the problem: in the cavities, double skinning and welds.

Our product FERTAN® Rust Converter is really effective in cavities, joints, etc. because of its viscosity, and so it is now possible to eradicate even pre-existing rust and protect the metal effectively from further rusting.

This obviously applies not only to cars, but also to all things made of metal. For this reason we also supply FERTAN® for industrial applications, pipelines, ships, harbour installations, etc…

Best wishes

The professionals at

FERTAN®





Do our classic cars have to rust?

Almost everyone who owns one or more classic cars (and who has therefore had to address rust!) asks themselves this question.

Firstly we should consider this question: What is rust?

Many scientists have argued about this question and have unfortunately come to different conclusions. But for the sake of simplicity we will confine ourselves to rust in classic cars (i.e. to rust in objects constructed from metal), which serves our purposes here.

According to the theory of Witney and Woody, rust is an ionic problem, but the electrical theory of Walker is also more or less applicable. So the phenomenon of rust in iron or steel arises from the effect of ions and electrical charges or the voltage difference between areas of the metal

surface. The fact that the ionisation of the metal releases electrons into the reaction mixture, which are absorbed by a water and oxygen system and then bind to hydroxide ions in order to yield a ferrous hydroxide (which we call rust), does not suffice to describe a phenomenon which is made more complicated by other factors.

In principle all of this should explain that the rust can't be considered, chemically speaking, as clearly defined and statically bonded to the iron, but rather as a heterogeneous and dynamic system that is constantly changing.



But what can be done to counteract this heterogeneous and dynamic system so that it doesn't degrade the whole of the classic car?

From many scientific studies that were already carried out it is clear that it is as ever important to remove all pre-existing rust as part of the preparation of a long-lasting protective coating. This is to prevent the rust from continuing as a dynamic system, albeit a concealed one.

So then how on earth do I get to grips with the rust, and how can I more or less economically conquer the whole thing?

If we scientifically examine the inner surface of an old car, either a monocoque construction with many welded joints or 'only' a car with a chassis, in the rust we will find among other things, for example, soluble salts of iron, calcium carbonate, magnesium carbonate and calcium chloride. However, in the rust particles there are also dampness and atmospheric oxygen.

Even if a protective coating (whatever it is made from) is applied over this heterogeneous and dynamic layer, to bring the dynamic system to a standstill by the removal of the oxygen, it will only look successful on the surface. This is because embedded under this 'protective layer' there are trapped rust particles along with the dampness and oxygen, and these will simply have to rust further, albeit now more slowly.

If you do this to your classic car, then you must be prepared to put up with these consequences sooner or later, and possibly have to sell it with a not-so-good conscience! ►

It is therefore absolutely vital to eliminate this heterogeneous and dynamic system completely before application of a protective coating. How to achieve this naturally depends on the areas to be derusted.

However we must differentiate between two possibilities:

1. Mechanical derusting
2. Chemical derusting

The mechanical methods have the advantage that with our modern technology such as dry ice removal a nearly perfect surface is attainable, which can then be covered with a high quality protective coating so that it can withstand corrosive attack in the long term. However mechanical removal of the rust layer is not possible in all places, as many people know from their own practical knowledge and experience.

To cut open a corroded box section with an angle grinder, to clean and derust it (but even then not between layers, joints, in corners, etc.) makes no sense. Furthermore the welding which is necessary afterwards creates new pollutants which are corrosive and reach the metal surface - where they are most definitely not wanted!

In all these mechanically unreachable areas, only a chemical removal of rust will help to completely remove the heterogeneous and dynamic system.

With care, the body can be removed from



the running gear, and all the constituent parts separated and dipped in a chemical bath. This can remove old filler, colours, underseal, cavity protection, etc., and can reveal the real state of the structure.

With a very valuable classic this is certainly an undertaking to be recommended, especially when the economic outlay is later rewarded with a higher sale price!

But what if the 'normal' Beetle, Escort, Spitfire or what have you, doesn't justify such treatment, on the grounds of cost?



In this instance, in order to remain within a normal budget, we need to assure the highest possible success with the lowest possible costs. A potentially successful way is to use chemical products for derusting and ideally for coating – i.e. a rust converter.
When this is carried out immediately after the dipping, it can protect the body from atmospheric corrosion in the drying-out phase, and thus protect it.
A modern rust converter has the advantage of removing the actual Fe3+ rust at the same time as coating the surface with a protective zinc phosphate layer, so that no new rust or atmospheric rust can form, either from water and dampness. It is vital to remove the water-soluble corrosive elements, e.g. salts, with water or wash them away.

Another way is to use chemical products for the derusting process, and ideally also for coating at the same time – in other words, a rust converter. This is often applied immediately after the dipping process, to prevent atmospheric corrosion in the drying phase of the body. If the heterogeneous and dynamic system is eliminated in this way, the task of actual protection can be begun, and in the exterior body area this begins with the application of filler, primer and paint. In box sections, sills, A-, B- and possibly C-posts, bonnets, etc., the best possible protection is obtainable by applying several thin coats of wax. These should be applied at room temperature, separated by several hours or days, in order to allow tiny cracks and splits in the individual coats to close up, and to achieve a homogeneous and extremely stable final coating, which will protect these especially vulnerable areas for a long period. To sum up it can be established that mechanical derusting where practicable, and also chemical derusting (or a combination of the two), is the best solution for a long-term protection of metallic and previously corroded surfaces.

FERTAN *is a product proven over many years, which makes it possible to paint over previously rusted surfaces. It is no longer necessary to remove the rust mechanically, because FERTAN converts and removes it. It is also really effective in cavities.*
Mechanical rust removal and sand blasting can fail because only the loose rust is removed. Just by painting with Fertan Rust Converter you can achieve a standard of rust removal exceeding SA2.5 and enjoy considerable cost savings and environmental benefits.

What does FERTAN mean ?

You can see some of the chemical formula in the name
FER = ferrous (iron and steel) and
TAN = tannin as natural ingredients

What is FERTAN?

FERTAN is a water-based product which penetrates the rust, converts it chemically and leaves 'bronzed' metal on the surface. It is important that FERTAN doesn't cover the rust, like other products, but dissolves it. The resulting black powder can simply be washed off and the layer which lies underneath is extremely well-protected by a

new bond to the metal.It replaces the rust until it has formed a bond with the metal underneath. On the surface it forms a compact layer – an iron/tannin compound which is insoluble in water and forms an ideal basis for further coverings.

FERTAN can be used as a protective coating on lightly rusted metal, stubborn rust and rust-free steel. Because FERTAN is water-based it forces its way into overlaps and seams, double skinning, welds and joints, and even blistered paint, and then reacts. It can be used on both dry and damp metal. It is not damaging to rubber, chrome, plastic, glass and undamaged paintwork. FERTAN only becomes active when it encounters metal or rust. It can be removed from all other surfaces simply by washing it off with water. It is not damaging to health, either by inhalation or by contact. In addition it is non-flammable and minimises the environmental damage of rust removal. As long as the surface treated is also treated with a protective coating, the effectiveness of FERTAN lasts for years. FERTAN can be used outside in all weathers except for frost.

Instructions for use:

First remove loose rust, grease, oil and dirt with a brush, dry cloth, pressure water jet or similar. Then apply FERTAN with a brush, roller, sponge or appropriate spray gun attachment. After about 1 hour dampen the treated surface (not necessary in damp conditions – e.g. cavities). Now allow FERTAN to work for at least 24 hours, or 48 hours in temperatures of less than 12 deg. C. Do not use in temperatures below 5 deg. C.
Before further treatment always clean the surface with water.

The prepared metal surfaces can be left from a few days to a maximum of six months before applying further treatments. Before further treatment (e.g. painting) the surface should be rinsed with water, or the black dust arising from the conversion of the rust should be wiped off with a soft cloth.

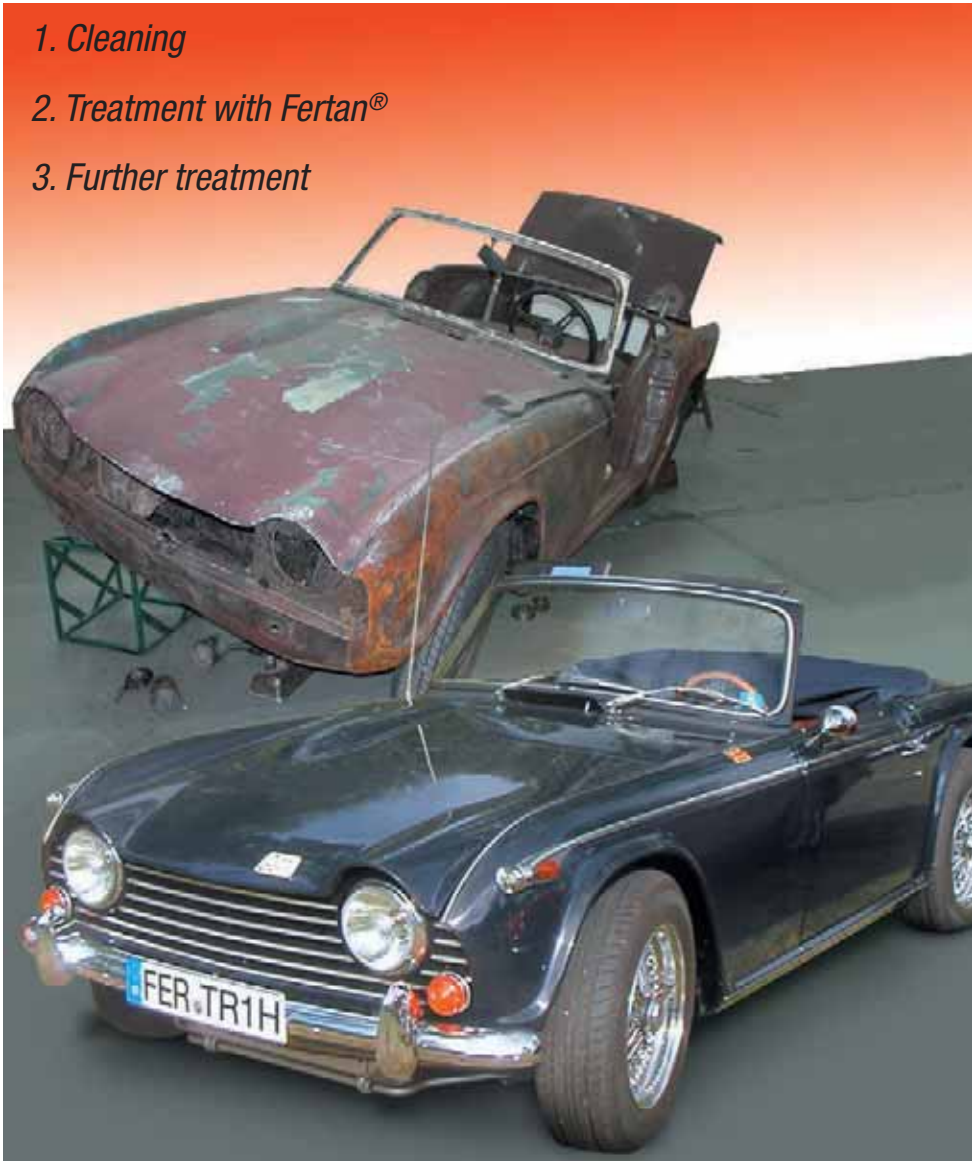
A litre of FERTAN is sufficient for an area of about 15 m2. FERTAN can mark paler surfaces, so you should cover the surrounding areas. If using a spray periodically wash out the spray attachment with water.

FERTAN is a dark fluid with an aromatic smell, lightly acidic and with a specific gravity of 1.18.

On contact with skin a simple rinse under running water is sufficient. Do not drink. In the closed container FERTAN will keep practically indefinitely. Store Fertan in a frost-free place.

The 3 most important steps in restoration

1. Cleaning
2. Treatment with Fertan®
3. Further treatment



1. Cleaning

Cleaning is an essential part of surface preparation. The finished product is only good as the preparation allows it to be. Please don't forget that before using FERTAN the metal surface to be treated must be perfectly clean but not rust-free. FERTAN is water-based and can never react with rust 100% effectively in the presence of dirt, oil, grease or silicon, so please first of all thoroughly clean the surface to be treated. The rust does not need to be completely removed from the surface, but must be thoroughly clean. With these cleaners that's no problem.

These also help with durability, because clean objects last much longer. Also take care not to overlook hidden silicon. Small traces of it remain in the metal pores and 'grain' of even clean, sanded metal and can only be removed well with a silicon remover.



2. Treatment with FERTAN®

FERTAN® treatment is actually very simple – and especially so when the surfaces to be treated have been cleaned in advance. However, in areas such as box sections a compressor and an injector with a 360° spray head are essential. You will find cavity pressure and gravity fed guns at the end of this brochure.

In this brochure you will also find specific instructions for all areas of car restoration. Please address any further questions to our technical customer service department.

FERTAN® is available in a wide variety of container sizes. These range from a small 30 ml bottle with built-in touch-up brush to a 1000 litre industrial container. The 1-litre can has a standardised connector which fits all common cavity and underbody spray equipment.



3. Further treatment

Further treatment is particularly important, because it is responsible not only for the protection of the object, but also the protection of the FERTAN® layer.

Please note:
*In a cavity or box section, after FERTAN® treatment, only cavity wax and nothing else should be used. Remember **never** to use any product which hardens (for example colour coat, primer, etc.).*
In the case of underbody protection you should take account of the demands that are likely to be placed on the object in future. For instance, a summer-use or concours car doesn't need three layers of underbody protection. In this kind of application a cosmetically attractive paint layer in body colour might be best, protected by transparent, fully-hardening wax.

You must decide for yourself, but please don't forget that wax as a final coating gives noticeably better durability than bitumen or tar-based products.

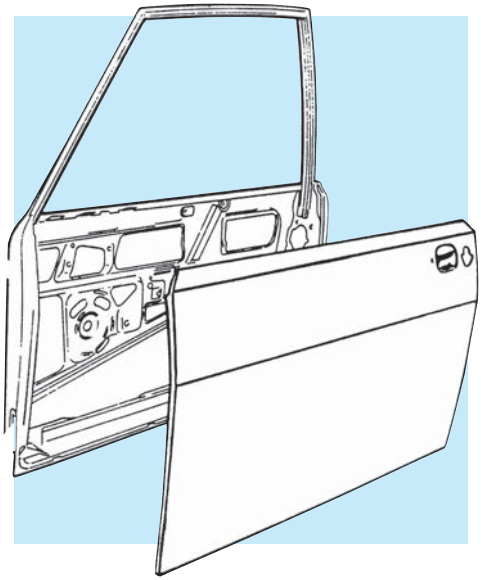
Please also take care to use the correct thickness of protection.



Removal of rust and corrosion in folds and seams 1

To begin with the outer areas of the folded seam are sanded smooth as preparation for the following treatments. Any rust pits and pinholes should not be treated until after the work on the folded seams has been completed, so as to avoid problems when applying filler etc.

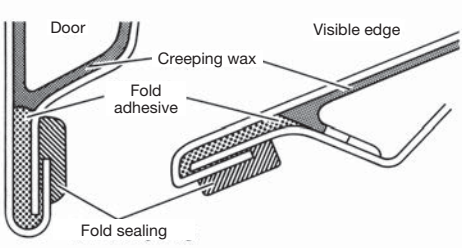
When treating folded door seams removal of the trim pad is recommended, partly to improve access and partly to avoid soiling the trim parts.



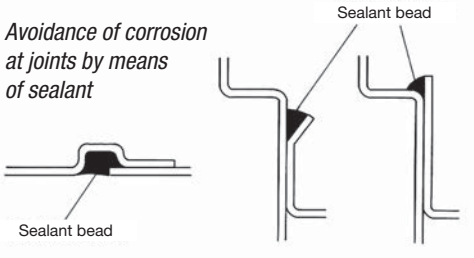
FERTAN should be applied directly to the inside of the folded seam with a spray gun using a pressure of about 4 bar (60 psi), and because of its viscosity it will then partly penetrate into the fold and partly come out of the lower part. To avoid spots and marking, FERTAN should be washed off with water as quickly as possible; however, this isn't important if the area is being painted afterwards.

In the folded seams, FERTAN should be allowed to act for 24 hours and then the fold should be treated liberally with clean water. This could also be done with a spray gun.
Water, as well as dirt and dust, flows out through the water drain holes, and it is therefore vital that these remain open. The folds are absolutely rust-free and are finally

Edge protection through folding and sealing

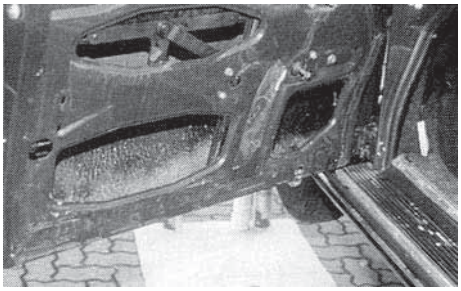


Avoidance of corrosion at joints by means of sealant



Removal of rust and corrosion in folds and seams 2

protected with wax.
When treating cavities in bonnets and doors a cavity spray attachment must be used, if possible in conjunction with a high pressure cavity spray gun, in the same way as with other cavities. The difference is that in these applications the openings are often much smaller than usual, and can't be reached with a normal (8-10 mm)

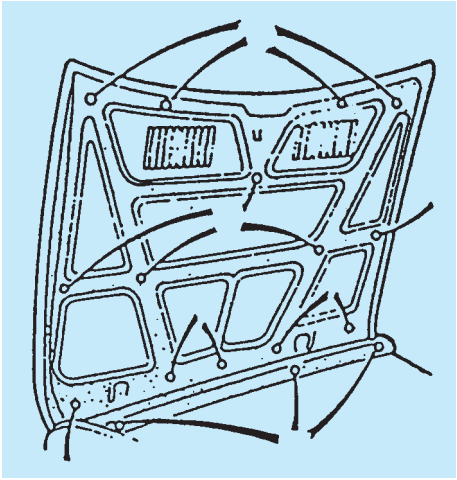


attachment.
The final protection medium (the HT wax) should not be applied so thickly that it creates problems later during painting. If bonnet, boot or door panel cavities show signs of excess wax leakage, this should be cleaned off with thinners.

With the cavity pressure gun both Fertan and the water necessary for rinsing out can be sprayed with a thin probe, and the damaging substances (salts) can be rinsed away until really only clean water is running out.

During the subsequent wax treatment, always apply first of all a thin layer of PREWAX, a seam-penetrating pre-treatment wax, and only then treat with cavity wax after at least 24 more hours. In this way the protection of the overlaps and welded seams is perfect and long-lasting.
In very small cavities in doors and bonnets, but also in A- and B-posts, the FERTAN hand pistol with 360° probe is especially suited for derusting and protecting these areas. Similarly, the pre-treatment with PREWAX and the after-treatment with HT cavity protection wax are also achieved by the spray can and 360° probe provided. IMPORTANT: After closing the water drain holes, don't forget to reopen them with a piece of wire.

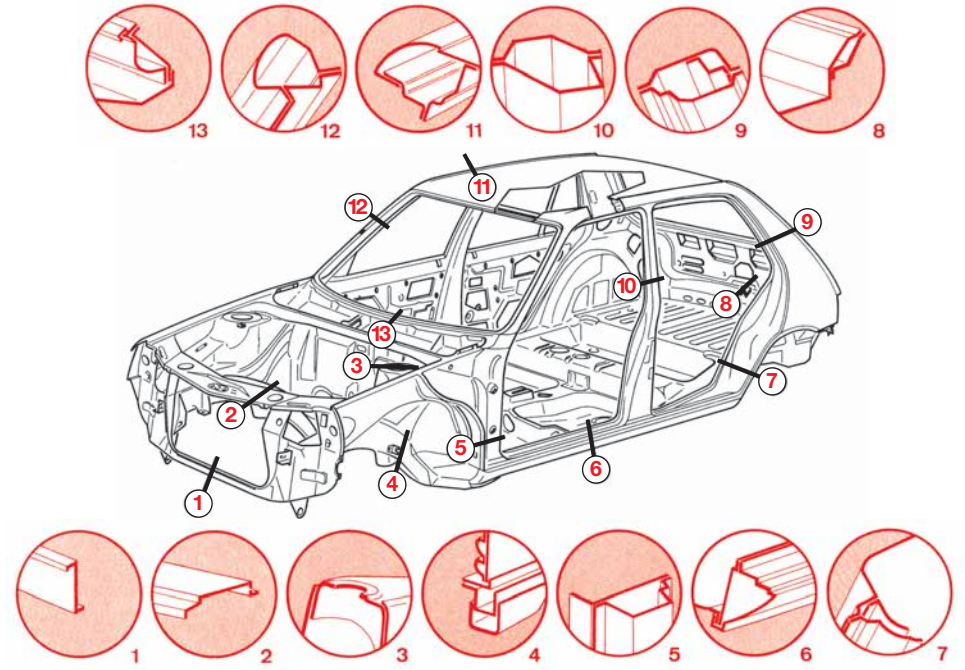
The exterior surfaces of the previously corroded door skins can be treated with a thin layer of FERPOX (Epoxy primer spray), and this affords extra protection against renewed corrosion.



Removal of rust in box sections 1

In box sections and cavities in bodywork, as well as in cavities in other metallic structures, we find rust and corrosion. To eliminate this as effectively as possible and to prevent future corrosion for as long as possible, we must first of all know how this corrosion has arisen. Only with a comprehensible diagnosis will we be able to deal successfully with the rust.

densed water which collects on metallic surfaces. There this dampness is enriched by salts. These salts combine to form an acid which aggressively attacks the metal, and any protective coatings which are present, and in the course of time causes massive damage. In practice it is not possible to prevent the ingress of damp; this is greatly increased if the car is used in winter on salted roads.



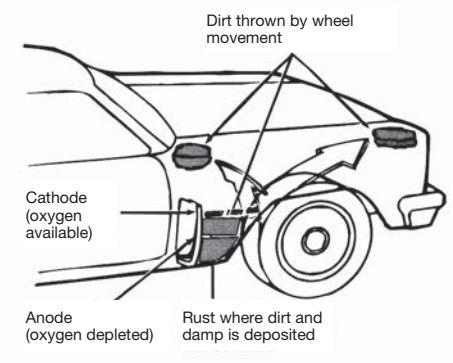
How rust arises

Corrosion arises via an electrochemical process which progresses ever more strongly unless specific derusting measures are carried out. The electrochemical process begins as a consequence of condensation forming on inner surfaces, and through con-

On some vehicles, because of the design of the chassis, particles of dirt are thrown up, get lodged and baked hard, and then cause heavy corrosion when they get wet again. Research has shown that large quantities of water and very high humidity levels are generally found in box sections and cavities.

Removal of rust in box sections 2

In these areas the temperatures in summer can reach nearly 90° and when the temperature drops in the night there will be a noticeable increase in atmospheric humidity as humidity in the temperature range from 20-30° Celsius increases by approximately 6.5% for every degree rise. This means that box sections and cavities must be considered as being damp or even wet all the time, day or night.



This often affects classic cars, because in these vehicles active corrosion protection was either wholly or partially absent. This means that welds and seam overlaps are often the critical weak spots. This deficiency in corrosion protection during the construction of the vehicle cannot be rectified at a later date, because it is inherent to the design.
If the box sections of a car are to be protected, mechanical cleaning and derusting will only be possible if all(!) cavities are opened up. This means that these will also have to be re-welded again afterwards, which then creates further problems because the new welds are unprotected.

Protecting an already-rusted box section only with a sealing layer of protection (e.g. paint or underseal) means that any rust, and the damaging chemicals present in the rust, are merely sealed in and can continue to cause damage. This can never be the correct solution! The rust, enriched with the damaging chemicals in a layer which is only superficial, causes blisters to form by chemical osmosis, and new, more serious corrosion can begin in them. Therefore it is vital that the rust be removed at the beginning and the damaging chemicals be removed. This is vital before any measures are taken to establish the actual condition of the bodywork, and to replace any heavily corroded sections in order to ensure the long-term stability of the bodyshell.

Rust-through



Removal of rust in box sections 3

It is useful to look into box sections with an endoscope.





If the bodyshell is sound, rust removal and treatment of the damaging chemicals by means of FERTAN is necessary as a preparation for the final protection which will follow.

To achieve this the product should be injected into all the box sections by means of a cavity injection gun and a 360° probe. Take care to ensure that with a pressure gun the pressure is kept at 7-9 bar and that with a cavity gun it is at 3-4 bar. Use of a hand spray gun is only recommended for doors, bonnets, etc., because this can only be used with a maximum pressure of approx. 1.2-1.5 bar, and that is not sufficient for complete atomization of the FERTAN product in normal box sections. Please note that the product must penetrate into all cavities, seams and double-skinned areas in order to work effectively.

On vehicles with loose flakes of rust which peel off and lie on the base of the box sections, two applications of FERTAN are recommended, because these flakes must firstly be sufficiently loosened that they can later be removed by rinsing with water. For this application you can mix FERTAN with up to 50% water for the first treatment, spray it in and allow it to react for at least 48 hours at 20° C. During this time the vehicle can be used normally. If the temperatures are lower than 20° C, for instance at night, the reaction time allowed should be at least doubled. FERTAN should not be applied at temperatures of less than 5° C.

Rinsing

After the reaction time has elapsed rinse the box sections and cavities thoroughly with water. Use approx 15 litres of water for every litre of FERTAN used, and operate the pressure gun at a pressure of 6 bar and the cavity gun at 4 bar. For this important rinsing do not park the vehicle on a pale surface, tiles, paving stones, etc., because the run-off water will stain them.

Now spray unthinned FERTAN into the stilldamp box sections as described previously, and allow to react again at 20° C for at least 24 hours. Again, the vehicle can be used normally, and the reaction time can be stretched to 6 months without any problem (e.g. in summer).

Removal of rust in box sections 4



Before the final treatment of the box section with protective wax it is vital that the box section be rinsed out once more with clean water.



This treatment may seem involved, but only in this way can all rust and damaging chemicals successfully removed from the box section and effectively protected

Operation

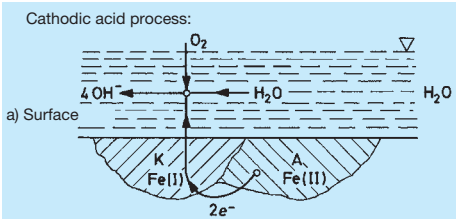
against new corrosion with protective wax. Here we would like to explain the operation of FERTAN, particularly in box sections and cavities.

The product has three main constituents, and they facilitate the removal of any Fe3, rust present, as well as mineral salts and acids, via their combined effect. In this way the bare metal is exposed and simultaneously provided with a zinc phosphate coating as a cathodic protective layer. This is then additionally protected by an Fe^3-free tannin complex (known as HOPEITE Zn3(P04).2 4H20 and Phosphophyllite Zn2Fe(P04) 4H20. This layer is absolutely insoluble in water and protects the metal for at least six months, during which time the protective treatment of the box section or cavity should be carried out. In order to remove the loosened rust particles as well as the pollutants and damaging substances, the cavity or box section should always be very thoroughly rinsed with water. In this instance it is advisable again to observe the rule of thumb: 15 litres of rinsing water for every litre of FERTAN. The rinsing water used in this process can't cause any new corrosion, because the layer which has been created on the surfaces of the box section is completely insoluble in water, and it should also be kept in mind that the running water thins the electrolytes and lets them run off in the rinsing water, which noticeably hinders the rate of corrosion. Please dispose of rinsing water in an environmentally responsible way after use.

Holes

In order to be able to treat box sections and cavities to the best effect with a cavity gun, all the water drain holes present in the body must obviously be opened up. If they are blocked, covered with underbody protection or are not present, new holes should be made in areas which do not affect the

appearance or integrity of the bodywork. When doing this, please firstly obtain suitable sealing grommets and then drill holes of the correct diameter, and while drilling the holes coat the drill bit with grease so that no swarf can enter the box section, as this could cause corrosion later. Drill the holes in such a way that all the cavities are accounted for, and make notes on a piece of paper to ensure this is the case. If a box section plan is available from the manufacturer, this should obviously be used as a guide.
To ensure that no rinsing water remains in the seams and low points, raise the vehicle with a jack (e.g.) firstly the left front, then the left rear, and so on, and allow the water to run out completely.
When the box section or cavity has been rinsed out completely, it is free of rust and damaging chemicals and after the surface has been dried it can be coated with wax.



Final protection

When applying final protection materials for box sections and cavities it is important to remember some points other.
Basically, final protection of box sections and cavities should only be carried out at temperatures of over 20 deg C. This applies to both the bodywork of the vehicle and the material itself. When applying a protective wax please observe the instructions on 'Wax Treatment'.

Wax pre-treatment

With PREWAX, a product newly-developed in 2010, it is possible to penetrate welded, spot-welded and overlapped panels completely, and so prevent the otherwise possible contact corrosion in these critical places on a long-term basis.

The spray can, with a pressure of 5 bar and a 360° probe provided, can be easily used in cavities, folds, bonnets, doors, overlaps, etc. Simply run a small quantity along each seam and the product, with its high natural wax content, penetrates it and protects it perfectly and durably, even in the thinnest of layers.

The following pictures show cavity protection wax being applied in several thin layers.



Protective wax application

Protective wax should whenever possible be built up in several thin layers. In the process allow at least 12 hours drying time between coats. In this way the solvents can evaporate and the tiny cracks which unavoidably open up in each coat can be closed up by the following coat. In this way a very stable, durable and long-lasting final protection is built up, which is considerably more stable than a thickly-applied coat which can begin to show cracks again after a number of years. In this way it is similar to paint, where several thinly-applied layers are notably more stable and durable than a thick coat applied in one layer.

The recommended pressure for applying cavity wax protection is 7.5-9.5 bar for a pressure gun and 3.5-4.5 bar for a cavity gun.



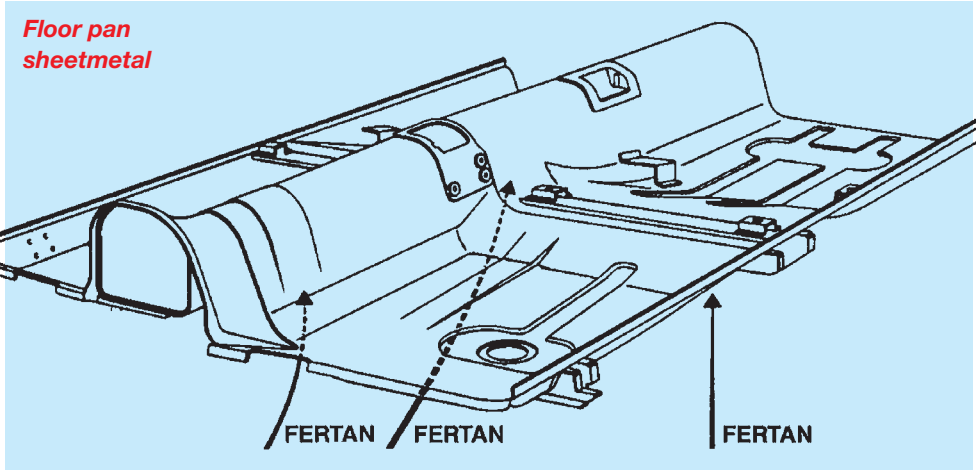


Removal of rust and corrosion in the underbody

1. *Firstly the chassis should be cleaned of loose dust, dirt, oil, grease and silicon contamination. A pressure washer is recommended for this.*

2. *FERTAN is then applied to the chassis while it is still wet, by means of a spray gun or possibly a Schutz gun, at a pressure of approx. 1-3 bar.*
The remains of the old underbody protection should be removed as far as possible. This also applies to the remains of PVC treatments, which are often used in the area of engine mountings. Treatments and layers which are securely attached to the underbody may be allowed to remain, because in general no corrosion is present here. However, it should be carefully checked that there are no areas where the rust has lifted areas of the paint and penetrated under it. When restoring a classic car complete removal of the old underbody protection is always recommended. The complete removal of all coatings (e.g. underbody protection) can be carried out via dry ice pressure-spraying. Dry ice pressure-spraying has proven itself as the best treatment preparatory to FERTAN-treatment itself, because the removal of the old layers can be controlled very accurately, and no pollutants find their way into the pores of the metal.
The FERTAN which has been applied should be allowed to act for at least 24 hours, during which time the vehicle may be used as normal, except on salt-treated roads.

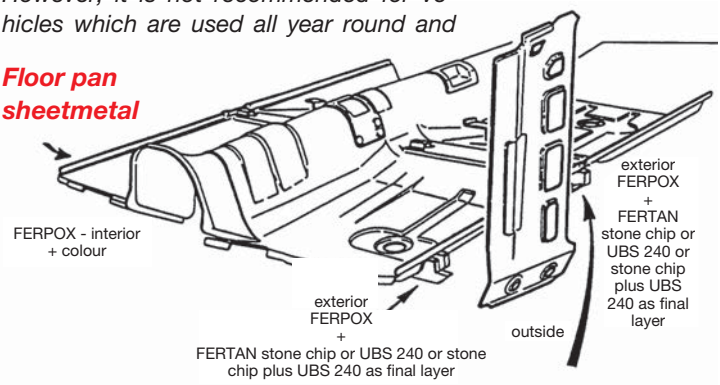
3. *Before the final protection is applied, if possible within 6 months of applying the FERTAN, the chassis should again be thoroughly washed with water. If final underbody protection is not being used, the FERTAN treated underbody is protected from further corrosion by the iron-tannin treatment for a period of min. 6 months.*



Coating the rust-free underbody after the FERTAN treatment

First of all the user should be aware what demands will be placed on the underbody of the vehicle in the future. Only then can the chosen coating produce the desired result, and the restored vehicle be given long-term protection. On vehicles which are only used in summer or which are used primarily for shows, it is often wished to paint the underside in (e.g.) body colour. This paint coat can be very effectively protected by a glass-clear wax, PROTEWAX BP 527.

This layer is also very suitable for painted suspension mountings, steering parts, etc. However, it is not recommended for vehicles which are used all year round and are exposed to (e.g.) road salt in the winter months. Here a more durable coating must be used. If the corroded underbody has been treated with FERTAN, if must first be rinsed with water – if possible with the use of a pressure washer. Then the appropriate coating can be applied according to the individual situation.



Here are the important decisions to make:

a) *Paint in body colour; in this instance paint may be applied directly to the FERTAN layer (according to the manufacturer's instructions), and then a wax is applied to complete the process. When doing so always treat the overlapped joint areas first with PREWAX, and then PROTEWAX BP 527 as mentioned before, or with the extremely resistant underbody wax UBS 240.*

b) *In situations where heavy demands are to be placed on the treated panel (for instance year-round usage), FERPOX (a 1 part epoxy primer) or FERTAN stone chip protection may be used as a base coat but always take care to treat the overlapped joints with PREWAX. These coatings are both overpaintable.*

c) *If a paint coat is being omitted, there are several choices of coatings that can be used. FERTAN stone chip protection SPS (black) or FERTAN stone chip protection SPG (grey) serve as a long-lasting body protection or stone-chip layer – or wax alone (e.g. UBS 240) may be used.*

It is very important to understand that on vehicles which are subjected to flexing or heavy duty as part of their construction (e.g. convertibles), or normal service (e.g. 4x4s), it is recommended always to use a non-hardening coating such as UBS 240. This flexible coating will almost never tear – unlike the coatings that harden. If cracks appear in the underseal coat, that's the ideal breeding place for new corrosion!

Removal of rust in outer body areas

1. *When removing rust from outer body areas some important things need to be kept in mind: more than 80% of rust in car bodies begins in cavities, box sections, seams, etc., and progresses from inside to outside, increasing in extent as it progresses. It is therefore vital that removal of rust which is already present must also begin in the cavities – that is to say, from the inside. Only in this way can you be sure that no rust-through will destroy the panel from inside.*

2. *In the case of rust treatment on exterior panels it is absolutely vital to clean the area to be treated BEFORE treatment with FERTAN. It is also important in this process to remove completely the remains of any previous treatments which may have forced their way into the paint layers.If this is not possible, in the case of silicon cleaners, the old paint layer should be sanded right down to bare metal. It is vital that this sanding be carried out BEFORE the application of the FERTAN, because the protective power of the iron-tannin bond produced by the FERTAN is removed by subsequent sanding.*

Bare shell



3. *In order to remove the pores from the rust-pitted areas of the thoroughly cleaned and sanded body, FERTAN should be applied very thinly with a paint brush. Before beginning the painting process it is important to wash the bodywork thoroughly again. A sponge facilitates this process, and in all cases the use of tools should be avoided, as they could damage the FERTAN coating. After the area has been dried, only a very thin FERTAN film is visible, and some areas may appear completely untreated; this does not affect the action of the FERTAN.*

4. *The prepared bodywork can now be prepared by applying a paint coating preceded by filler, primer, etc., according to each manufacturer's instructions. The use of an Epoxy primer (e.g. Ferpox, EP filler, etc.) as the first coat is particularly effective.*

5. *Removable panels such as (e.g.) bolt-on wings should in every case be treated with epoxy primer, and they should be supplied with non-metallic gaskets where they make contact with the next panels.*

6. *The above-described procedure for removing rust from outer bodywork areas has been tested by leading vehicle manufacturers and is recommended by them and their affiliated official repairers.*

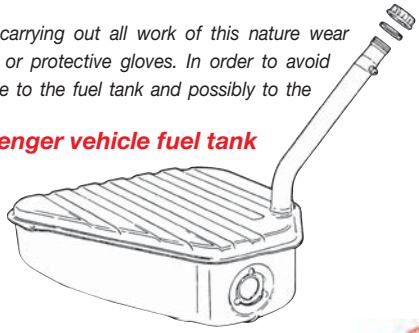
Removal of rust in tanks

Because of the use of the additive MTBE (Methyl Tertiary-Butyl Ether) as an anti-knock additive in lead-free fuels, steel and aluminium tanks in vehicles corrode from the inside. In order to remedy this in the long term, an inner coating is practically essential. Degreasing is the first step in the removal of sediment. Empty the tank completely and remove it from the motorcycle or car. Please carefully store or safely dispose of any remaining fuel. Then rinse out the tank completely with water. Next add approximately an eggcup full of washing up liquid and fill the tank approximately half full of warm water. Shake and turn the tank so that sediments are loosened, and finally fill it completely with warm water. After approximately 1-2 hours remove this fluid and take it to an approved disposal station. Then add the appropriate amount of FERTAN alkaline engine cleaner to the tank according to its size), shake and turn the tank so that all the remaining residue is loosened, and let this solution react again for approximately 1-2 hours. Then empty out the cleaner and catch it in a container. You can use this cleaner for other cleaning jobs – e.g. engine/gearbox and axle cleaning; if the engine cleaner contains large particles it may be cleaned by means of a (coffee) filter. Now wash the tank out very thoroughly with water using lukewarm water for the final rinse.

Now we have the option to remove the rust from the inside of the tank using FEDOX rust remover to get back to bare metal and then stablise the surface with FERTAN or get get straight on with converting the rust using FERTAN. Both methods produce excellent results with surface being smoother if you use FEDOX.

When carrying out all work of this nature wear rubber or protective gloves. In order to avoid damage to the fuel tank and possibly to the ceramic of the sink, always place it on a soft pad. Don't allow the FERTAN products to run out onto pale stones, tiles, paving stones, etc., because it could mark them. Keep FEDOX off painted surfaces and rinse thoroughly and immediately with water (not necessary if the tank is ultimately to be repainted) if spillage occurs.

Passenger vehicle fuel tank



FEDOX: pour seven litres of water of warm water (60° C) into a bowl or the tank and slowly mix in one litre of Fedox. Then mix in three more litres of heated water. Keep at 20° C for 12 to 24 hours. Tip the FEDOX through a fine filter into a plastic container (it can be used for cleaning tools and components). Rinse out the tank thoroughly with tap water and dry. The surface of the metal is very active at this time and you should apply a protective coat immediately. Bright steel in the normal UK conditions will start to rust after fifteen minutes, just as it would from shot blasting.

If you using FERTAN do not dry the tank. Put FERTAN into the damp tank and turn the tank, rotate it and invert it so that it becomes completely coated on the inside. While doing this take extra care that in the case of motorcycle tanks the internal frame, and/or baffles if applicable, become fully coated – then let the fluid run completely out into a clean container. Next allow the tank to cure for a minimum of 24 hours at a temperature of 20 deg C (maximum six months), to facilitate the complete reaction with the oxide. Then rinse the tank thoroughly with water and reintroduce the previously saved quantity of FERTAN rust converter, and then completely fill the tank with water. Once more allow the tank to cure for 12-24 hours and then empty it completely and rinse it ***very*** *thoroughly with water until no more black particles are visible in the water. Clean the filler cap, petrol tap, etc. immediately with clean water. Clean off any possible spots which land on the painted surface immediately with water (not necessary if the tank is ultimately to be repainted). In this time-consuming and dirty way a complete and cost-effective derusting can be achieved without removing sound material. After it has been dried the tank will be fully rust-free.*

In the case of other tanks and types of tanks, e.g. heating oil and ships' tanks, etc., please ask for our free instruction manual.

Tankinterior coating

The tank should always be degreased and derusted before coating as described on the previous page, in order to ensure optimal adhesion of the coating.

The coating is carried out by means of a 2-pack epoxy resin which can withstand the constant contact with fuel and oil, but is also resistant to alkalis and various acids.

The product TAPOX comes in a 1 kg tin container. TAPOX should be mixed thoroughly before use, with the required hardener, TX-10. The mixing process can be carried out in TAPOX container itself using an small beater or a screwdriver.

Mask off the outside of the tank in order to avoid contaminating the paint (not necessary if the outside of the tank is to be painted). Remove the petrol tap and plug the hole by means of sticky tape, a cork, etc.

Put the well-mixed TAPOX and TX 10 into the tank through the filler hole, seal this securely against leaks and then turn, twist, shake and invert the tank and coat the interior thoroughly.
Remove the petrol tap hole plug and allow all the excess product to run out into the original container and immediately place in the fridge at approx. 0 to 4 deg C max. Reseal the petrol tap hole.

Now allow the coating to dry for approx. 10 minutes, and then remove all plugs, place the tank with the large opening downwards and direct a gentle flow of air into the tank through the large opening and allow it to exit through the smallest opening (e.g. the petrol This can be achieved with a compressor or with another kind of air pump, and the pressure must not be allowed to exceed 0.2 – 0.4 bar, so as not to damage the still-soft coating. Run the air for 3 hours.



THE PROFESS

Next, the tank should be allowed to dry thoroughly for at least 72 hours at a temperature of approx. 20 deg. C; do not warm the tank additionally during this period. After it has dried the TAPOX coating is resistant up to a temperature of 70 deg. C, so if the exterior of the tank is to be painted the paint oven temperature should not exceed 70 deg. C.

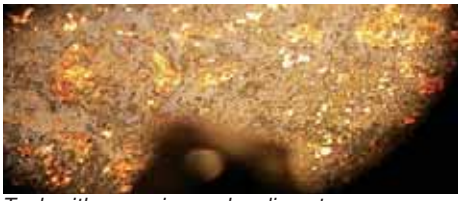
***Note:** The quantity of tank sealant which remains in the original container can be used for any other application on metal, and provides an extremely resistant and overpaintable surface on it. (E.g. garden fences, banisters, cars, etc.)*

Usable life is however 12 hours max, when kept below 4 deg. C.

The stream of air which has to be played through the tank during the drying process has the great advantage that the thinners contained in the product, which are heavier than air, can exit through the large opening (which is pointing downwards), and do not affect the still-soft coating during the drying process (thixotropic effect).

***Important:** The exiting airflow can cause an explosive effect!*
Ensure adequate ventilation!
No smoking – no fire – no naked flames.
Do not use any electrical equipment (e.g. vacuum cleaners)

Additional information:
Please remove any splashes or spots imme diately with thinners (universal cellulose thinners).


Tank with corrosion and sediment


After cleaning


After derusting with FERTAN


After final coating with TAPOX

Further information from:
www.fertan.de
www.fertan.com
Email: verkauf@fertan.de

GB:
www.fertan.co.uk
Email: info@fertan.co.uk

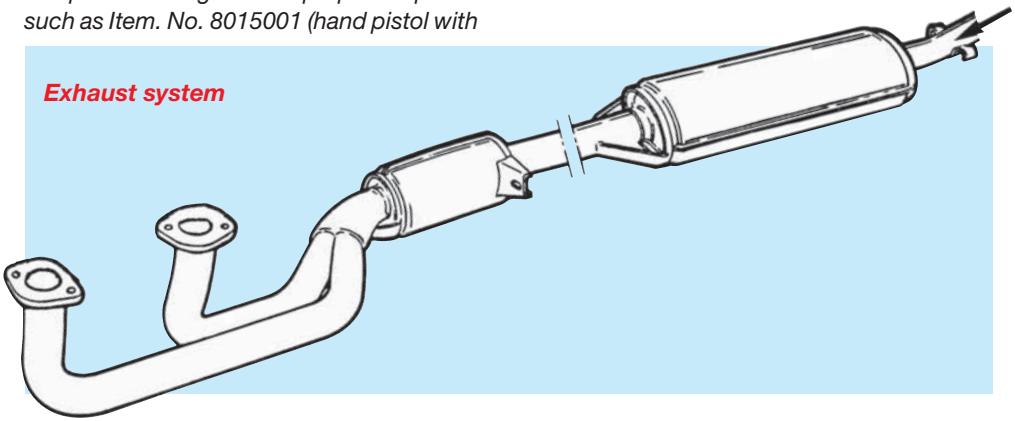
Rust in exhaust systems

Expensive exhaust systems often rust from inside outwards, for instance when cars remain for longer than expected at the dealer's, or in the case of classic cars which are kept in exhibition halls. Even when vehicles are standing inside in the garage in winter, the exhaust systems can rust through.

***1.** The FERTAN is sprayed into the back box via a thin probe or even via a simple piece of thin plastic tubing.For this purpose a probe such as Item. No. 8015001 (hand pistol with 60 cm long probe) is inserted between the baffles as far as possible, and then FERTAN is sprayed gradually in as the probe is withdrawn. As FERTAN is water-based, it combines with the condensation that accumulates, to form a corrosion-inhibiting solution which prevents rusting-through for a considerable period.*

***2.** As FERTAN is non-inflammable, the engine can be started at any time without risking any damage or impairing the effect of the FERTAN, as long as the temperature in the back box does not exceed 400 deg C.*

***3.** FERTAN can be used for other exhaust system parts only if they can be coated mechanically – i.e. by means of a probe. Drilling into any possible intermediate silencer boxes is not recommended.*



***N.B.** FERTAN must not be allowed to get into catalytic converters.*



Removal rust in outer bodywork areas, chassis and chassis frame parts

1. *First remove all loose rust and dirt from the chassis, and take special care to remove traces of oil, grease and silicon. For this purpose a high-pressure cleaner is recommended.*

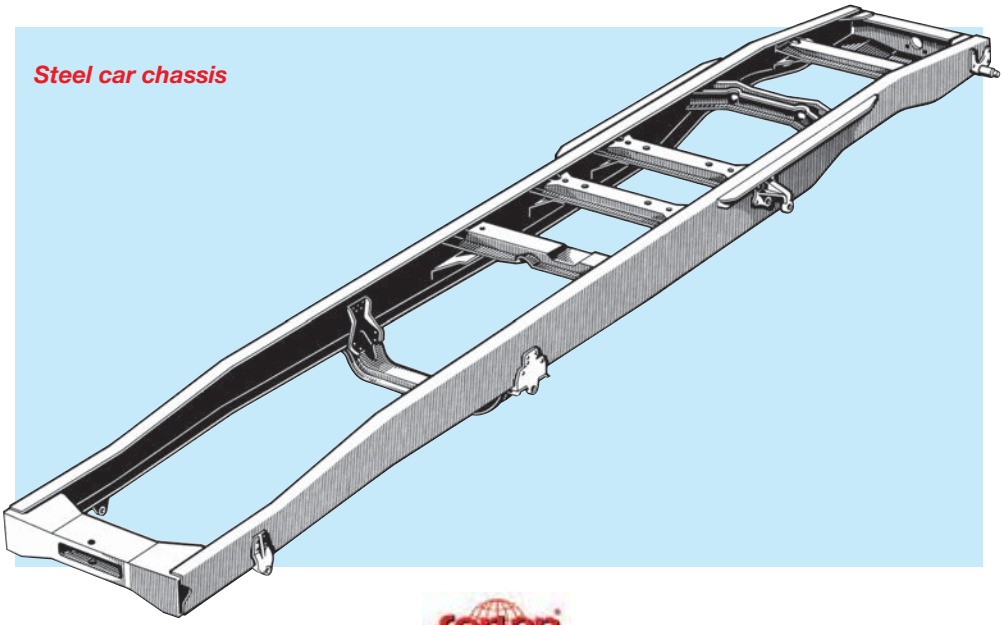
2. *FERTAN is applied to the still-damp chassis by means of a brush, roller or spray at low pressure (approx. 1-3 bar). In hollow and box sections FERTAN should be sprayed into the inner surfaces, if possible with a probe or 360 deg spray nozzle. FERTAN should be allowed to work for at least 24 hours in these areas, and during this period the vehicle may be used as normal.*

3. *Before the final protection is applied, if possible within 6 months of the application of the FERTAN, it is important to spray the chassis frame again thoroughly with water.*

4. *Any colour and any kind of paint may be used as final coating, but the use of an epoxy primer is always recommended as the first coat on the FERTAN-treated areas. These epoxy primers have a very high resistance to all things that affect them, such as mechanical impacts such as stone chipping, environmental effects, or chemical corrosion and dampness.*

5. *As FERTAN does not attack plastic, rubber, copper, etc., it is not necessary to dismantle wiring looms or hydraulic and brake lines. The procedure described above offers a considerable cost saving over the practices used hitherto, such as sandblasting, and a result of at least equal effectiveness is achieved. Experience shows that chassis frames derusted with FERTAN are protected against new corrosion for considerably longer than shotblasted ones.*

Steel car chassis



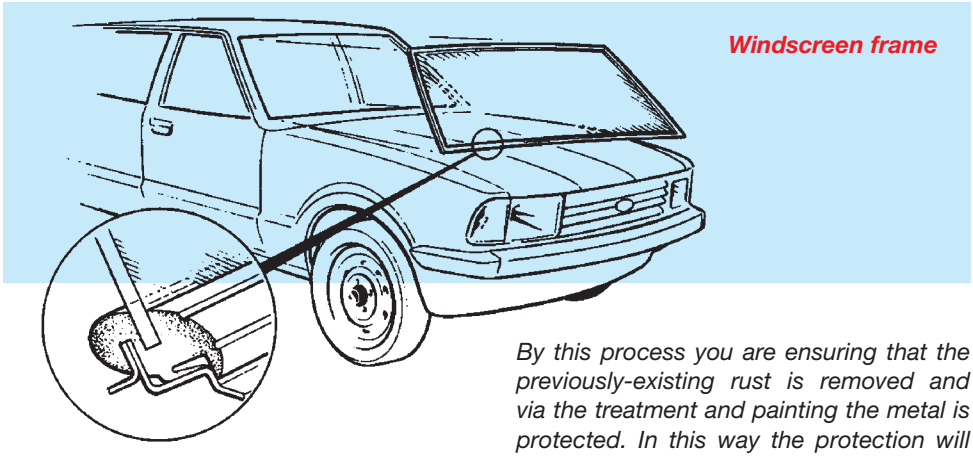
Derusting windscreen/ window frames

On many older vehicles rust builds up under the windscreen and window frames.

Affected by dampness which finds its way in, in conjunction with aggressive chemicals from the atmosphere, first of all the paint layer and then the protective coatings underneath are damaged, and finally the phosphate coating my be removed. Then the destructive process inevitably begins, and will lead to further corrosion if it is not halted. This problem is visible when damp and possibly rainwater leave brown stains trailing from the window frames onto the bodywork. Unfortunately these visible signs are not always present in the case of modern (therefore bonded) screens, and the damp remains, causing corrosion, in the seams.
By the time this happens the protective layers situated behind the window frames are already destroyed and must urgently be replaced if greater rust-through is to be avoided.

Please treat these areas as follows:

1. *Remove glass.*
2. *Remove all traces of any remaining sealant.*
3. *Mechanically remove superficial rust as far as possible..*
4. *Thoroughly clean surface with a silicon remover (please do not use any other product, in particular NO mineral products).*
5. *Apply FERTAN with a small brush to the affected areas and allow to react.*
6. *After the FERTAN® has been allowed to react, clean the surface with water, but do not allow run-off of FERTAN or water to dry on the bodywork (to avoid marking the paintwork).*
7. *After drying treat the area with appropriate coatings, primer and paint, and replace the glass.*



Windscreen frame

By this process you are ensuring that the previously-existing rust is removed and via the treatment and painting the metal is protected. In this way the protection will last as long as the coatings used and/or the final paint coating remain stable.

De-rusting of Brake Rotor/ -drums/-calipers and treatment

Ph-neutral, solvent-free, environmentally-friendly rust remover ideal for vertical surfaces. Gel version of FeDOX®

Object: 1987 Porsche 924S
March 2015
Time: 30 Minutes (Plus 3 hour wait time)







1. *Fedogel® applied. Absolutely no surface preparation required! Same process used with caliper. Wait time = 3 hours.*





2. *Condition of rotor and caliper after 3 hours.*
Next step: Clean surfaces with water to neutralize.





3. *Primed and painted.*
Beautiful finished result!


eDOX
MM30
Multifunktionale
METALL
Beschichtung
FeDOGEL
Rostentferner
FeDOGEL ist ein Gel zum Entfernen von Rost und Korrosion von eisenhaltigem Stahl.
Der Gel-Film in ca. 3-5 mm Stärke aufgetragen löst die Korrosion.
Motorrad
Reiniger
Gel

Product catalogue











FERTAN®
Rust converter
30 ml

High tech rust converter with inbuilt paint brush for easy application.

Item No. 20001 German
Item No. 20002 French
Item No. 20003 Dutch
Item No. 20004 English
Item No. 20005 Italian

Packaging unit
24 items in blister pack



FERTAN®
Rust converter
1.000 ml

1 litre standard bottle; fits the thread of all normally-available underbody protection and cavity injection guns. Hand pistol with suitable adaptor and probe:
See Item No. 425000

Item No. 22601 German
Item No. 22604 English
Item No. 22605 Italian

Packaging unit 6 items



FERTAN®
Rust converter
250 ml

Spray bottle and brush for correct application.

Item No. 22001 German
Item No. 22004 English
Item No. 22005 Italian

Packaging unit
12 items in blister pack



FERTAN®
Rust converter
5.000 ml

Handy 5 litre container for the workshop and industrial uses

Item No. 22802 French
Item No. 22803 Dutch
Item No. 22805 Italian
Item No. 22830 German + English

Packaging unit 4 items



FERTAN®
Rust converter
250 ml

Spray bottle in single pack for placing and hanging on Euro hooks

Item No. 22201 German
Item No. 22202 French
Item No. 22203 Dutch

Packaging unit
18 items in single carton



FERTAN®
Rust converter
50 litre

50 litre plastic barrel with tap for industrial use

Item No. 23002 French
Item No. 23003 Dutch
Item No. 23005 Italian
Item No. 23030 German + English

Packaging unit
1 item / Palette 4 items

HT transparent cavity protection wax

Very high quality wax with resin elements for optimal and flexible coating of body cavities and inside boxes, particularly after de-rusting with FERTAN. Best creeping characteristics; a thin, runny liquid that won't drip out of holes after application, long lasting flexibility.



HT cavity protection wax

500 ml spray can
with 360 deg. spray nozzle and 60 cm probe

Item No. 28204
Packaging unit 12 items

1.000 ml standard can
(fits all normally-available underbody and cavity injection guns)

Item No. 28404
Packaging unit 6 items

5.000 ml workshop package
with tap

Item No. 28604
Packaging unit 4 items

(Not shown)
200 litre barrel

Item No. 28804
Packaging unit 1 item



PREWAX pre-treatment wax with probe

Extremely low viscosity, seam-penetrating pre-treatment wax for welded seams and overlapping joints in box sections, folds and underbodies.

500 ml spray can
Item No. 26204
Packaging unit 12 items

Coatings

ferpox 1 - K Epoxy Primer

Exceptionally durable 1K epoxy primer for surfaces which are subject to heavy wear. Withstands temperatures from -40 deg C to 250 deg C. Lead- and chromate-free. Overpaintable with all 1K and 2K paints. Sprayable and brushable. Colour: Basalt grey RAL 7012



800 ml tin

Item No. 24604
Packaging unit 6 items

Not shown:
2 l bucket

Item No. 24704
Packaging unit 6 items



ferpox 1 - part spray

For an optimum of film thickness, also at small repairs

400 ml spray

Item No. 24850 4 languages; German/English/Italian/Dutch
Packaging unit 12 items



MM30

400 ml spray

Multi Metal Coating as active cathodic long-term protection based on aluminium-titan-zinc. Perfect adhesion and overpaintable by 1 or 2 part commercial lacquers and paint. Spot welding possible. Correspond to DIN EN ISO 1461. Useful at car body, disc break and drum, steel frames, heating systems, industrial use.
High resistance in salt fog.

Item No. 26030
Packaging unit 12 items

Protective waxes



Protewax BP 527
Contents: 1.000 ml
Glass-clear polyacrylic protection wax for aluminium, brass, galvanised and painted surfaces. Quick-drying and UV-resistant.

400 ml spray can
Item No. 29255
Packaging unit 12 items

1.000 ml standard can
Item No. 29440
Packaging unit 6 items



Protewax BP 527
Contents:
5.000 ml canister
Item No. 29640
Packaging unit 4 items

Not shown:
170 kg plastic barrel
Item No. 29840
Packaging unit 1 item



UBS 240 underbody protection wax spray
Contents: 500 ml
transparent – amber coloured
Very resistant tough elastic wax with optimum resistance. Long-lasting protection against stones, water and corrosion. Simple to apply. Premium quality.

Item No. 27204
Packaging unit 12 items

UBS 240 for spray guns
Contents: 1.000 ml
Item No. 27404
Packaging unit 6 items

Not shown:

UBS 240 barrel
Contents: 200 litres
Item No. 27804
Packaging unit 1 item

Stonechip protection

Bodywork protector and stonechip protection with complex wax formulae, optimum adhesion to body surfaces and overpaintable.



FERTAN stone chip protection SPG Bodywork protector and stonechip protection
grey
Spray can with
500 ml contents
Item No. 25104
Packaging unit 6 items

1.000 ml standard can
Item No. 25204
Packaging unit 6 items



FERTAN stone chip protection SPG Bodywork protector and stonechip protection
black
Spray can with
500 ml contents
Item No. 25304
Packaging unit 6 items

1.000 ml standard can
Item No. 25404
Packaging unit 6 items



Car body and stone chip protection PREMIUM
With very special advantages for high value and classic cars with special additives and low solvent
Exceptional and highest protection with long-term stability for underbody, wheel arches etc.

Item No. 25601
Packaging unit 6 items

THE EVOLUTION

Derusting and Tank coating



FeDOX Derusting concentrate

FeDOX is a product developed specially for derusting the inner surfaces of tanks and for derusting steel parts, and it makes possible a complete removal of the oxide layer, so that the inner surfaces of the tank and the steel parts are completely shiny.

The product is added to water in a 10% solution. When using in ultrasonic locations the concentration should be raised to 20%.

1.000 ml bottle
Item No. 23630
Packaging unit 6 items



FeDOGEL Rust remover 500 ml

FeDOGEL is a Gel form to remove rust and corrosion from iron steel. The film with about 3 - 5 mm applied dissolve the corrosion, useful on vertical parts too.

500 ml bottle
Item No. 23543
Packaging unit 12 items

Brake Kit

Product assembly for quick de-rusting of brake discs, brake drums and calipers

Content

- *500 ml FeDOGEL GEL for de-rusting*
- *Brush*
- *Sponge*
- *400 ml spray can M M 30 Multi Metal coating temp. resistant up to 300 deg. C Colour silver*

Item No. 23430 1 kit

Kit for min 1 car or 4 brakes. Application see on www.fertan.de

NEW



POWER SPRAY

is a brand new product developed to dissolve rust in threads and corroded plug connections. The product dissolves the corrosion in the threads, not just lubricates it as an oil would. It cleverly dissolves the rust in the thread or connection and allows quick and easy release.
The product penetrates extremely well so threads and connections are freed in a few seconds.
POWER SPRAY contains NO MINERAL OIL
POWER SPRAY contains NO ACIDS
Additionally and as a world first it is drip free
250 ml
Item No. 23304
Packaging unit 12 items



Derusting and Tank coating



Tank inner coating set for small tanks up to approx. 20 - 45 liters

depending on construction
Contents: Engine cleaner / degreaser 1.000 ml
Rust converter FERTAN 250 ml
2 part protective TAPOX coating 445 ml
Item No . 24501

Tank inner coating set for larger tanks up to approx. 80 liters

depending on construction
Contents: Engine cleaner / degreaser 1.000 ml
Rust converter FERTAN 1.000 ml
2 part protective TAPOX coating 890 ml
Item No. 24401

2K Epoxy coating with specially-developed hard epoxy coating for tanks

Is resistant to all fuels, lye, and many acids. TAPOX may be used for the inner coating of tanks such as: fuel tanks from steel and aluminium, fuel- or heating oil tanks, ballast tanks of ships, water tanks, etc. (not for drinking water tanks).

TAPOX can also be used in industrial application and for coating concrete floors which are subjected to a lot of wear.

Item No. 24030 for small tanks up to 45 litre (car) and 25 litre (bike) Content 445 ml
Packaging unit 6 items

Item No. 24330 for bigger tanks until 80 liter (car) until 45 liter (bike) content 890 ml.
Packaging unit 6 items

Hardener for TAPOX TX-10



IMPORTANT: The extra large tin is constructed so that the hardener can be mixed in the same tin.

Cleaners



GRAND PRIX Wheel cleaner

Spray bottle
Contents 1000 ml
Convincing cleaning power at a particularly reasonable price

Item No. 82201
Packaging unit 12



F1 - Wheel cleaner

Spray bottle
Contents 1000 ml
The best cleaning power. For the best and simplest wheel cleaning, even from cooling slots and ridges. Also for treating very dirty alloy and steel rims and plastic hubcaps.

Item No. 70201
Packaging unit 12



F1 - special Wheel cleaner

Spray bottle
Contents 1.000 ml
Specially developed wheel cleaner for chrome spoked wheels and chromed or highly polished aluminium and steel wheels. With highly reflective effect. After cleaning, the chrome looks as if it has been freshly polished! Completely acid-free and does not attack the chrome of the spokes or fittings on spok ed wheels.

Item No. 78701
Packaging unit 12



F1 - Engine cleaner

Spray bottle
Contents 1.000 ml
Anti-emulsificant Separates oil/grease and water, does not attack paint, rubber, plastic, etc.

Item No. 79701
Packaging unit12



F1 - universal cleane (plastic)

Spray bottle
Contents 1000 ml
Effortlessly removes deposits, marks, oil, grease, etc. from plastic and man-made materials. Ideally suited for cleaning and treating plastic such as: dashboards, door trims, coverings, bumpers, etc. Also for garden furniture, kitchens, etc.

Item No. 80201
Packaging unit 12



F1 - insect remover and glass cleaner

Spray bottle
Contents 1.000 ml
Quick cleaning of glass and paint surfaces from insects, bird droppings, etc. Harmless to paint/chrome/plastic/glass etc. Exterior glass surfaces, windows, etc. become clean and free from residue.

Item No. 70701
Packaging unit 12



F1-cabriolet/convertible roof cleaner

Spray bottle
Contents 1.000 ml

Simple cleaning of convertible tops, reliably removes dirt, deposits, staining, etc., from plastic or composite tops. Does not attack adhesives used in top.

Item No. 81201
Packaging unit 12



Upholstery foam

Spray bottle 600 ml

Very effective for cleaning and care of upholstery and cloth.

Item No. 81760
Packaging unit 12



F1 Glass cleaner

Concentrated and alcohol based cleaner for all smooth surfaces. Developed for streak fee cleaning of glass, ceramics, plastic, chromed surfaces etc.

Item No. 78201
1.000 ml Spray bottle
Packaging unit 12 items

Item No. 78301
5.000 ml can
Packaging unit 4 items



Tyre Sheen cleaner

600 ml spray

FFERTAN tyre sheen cleaner for cleaning and optical revalorization of tires.
FERTAN tyre sheen cleaner cleans tyres and leaves a long lasting deep gloss shine.
The foaming product cleans and protect tyres. Do not apply on brake parts and treads.

Item No. 81851
Packaging unit 12 items



Spray gun 1000 adjustable

With 250 mm adjustable spray lance and adjustable pressure. Platinated metal for carbody and object cleaning. Cup 1.000 ml aluminum. Rated pressure: 5 – 6 bar (90 PSI) Max. pressure: 10 bar (150 PSI)

Item No. 8013004 Packaging unit 1



Silicon Remover

Surface cleaning product should be used before FERTAN rust converter is applied and in preparation for any kind of surface painting

Item No. 77604 ***250 ml***
Packaging unit 12 items

Item No. 77730 ***1.000 ml***
Packaging unit 6 items

Item No. 77830 ***5.000 ml***
Packaging unit 4 items

Special cleaners



DE 26/27 De-waxer/cleaner

Contents 1.000 ml
Special cleaner for polyacrylic waxes – e.g. for Protewax BP 526 or BP 527 products.

Item No. 80701
Packaging unit 12 items



Motor-bike cleaning gel

Removes dirt, grease and oil deposits from all motorcycle parts. Even stubborn dirt is easily removed. The product is acid-free and does not attack finished surfaces.
pH 8.2

Item No. 83701
Packaging unit 12 items



Aluminum and stainless steel cleaner

Remove corrosion easily. Surfaces will not change physically but even the deepest pores will be clean.

Item No. 73701
1.000 ml Spray can
Packaging unit 12 items

Item No. 73801
5.000 ml can
Packaging unit 4 items



Quickclean Oil binding agent of the latest generation

Extremely cost-effective through its ability to be used in very small quantities. The product absorbs 2.5 times its own weight. No water is absorbed. Oil and chemicals are separated from the water by Quickclean. Optimum effectiveness even on wet surfaces, etc.. Because very small quantities are used the clean-up costs are very small too.



Trade cleaner concentrate

Cleaning concentrate for cleaning workshop floors, acid-proof stones and tiles; may also be used around swimming pools. Removes even the worst contamination, even from car wash installations, etc.
CAUTION: Do not allow to get into the washing water

Canister, Contents 5.000 ml
It.No. 76601 Ord.quan.: 4
Barrel, Contents 50 litre
It.No. 76701 Ord.quan.: 1



3 litre DiY bag
Item No. 30001
Packaging unit 12

20 litre sack
Item No. 31001
Packaging unit 1

Sand blasting guns



Spray head for 1 litre standard canisters

with E42 adapter and 60 cm probe with 360° nozzle. Nozzle outlet only Ø 4.2 mm for special applications.

Item No. 8015001
Packaging unit 1



Sandblasting gun

Sandblasting gun in metal with 1.000 ml aluminum cup and high effective air nozzle.
Air usage approx.:
200 – 400 Lit /min.
Rated pressure:
4,5 bar (70 PSI).
Max pressure:
10 bar (150 PSI)

Item No. 8017001
Packaging unit 1



Workshop-pressure sprayer

Contents 1.250 ml with scaling

Plastic coupling, also for alkaline cleaners. Also for uphand spray.

Item No. 8016001
Packaging unit 1



Sandblasting gun

With sand recycling and different connectors for perfect use.
Air usage approx.:
200 – 400 lit /min.
Rated pressure:
4,5 bar (70 PSI) max. pressure: 10 bar (150 PSI)

Item No. 8018001
Packaging unit 1



Air hose wire spiral

For all usual in te trade air pressure guns and compressors.

Connectors 1/4“ quick coupling ans socket.
Inside diameter: 5 mm, outside diameter: 8 mm, Polyethylene PE

Length: 5 meter
Item No. 8050101
Packaging unit 1

Length: 10 meter
Item No. 8050201
Packaging unit 1

Length: 15 meter
Item No. 8050301
Packaging unit 1

Length: 25 meter
Item No. 8050401
Packaging unit 1

Cleaning guns



Blowgun
short version

Item No. 8010001
Packaging unit 1



Blowgun
long version

Item No. 8010101
Packaging unit 1



Blowgun
with variable nozzles

- *Round nozzle*
- *Short nozzle*
- *Long nozzle*
- *Fan shaped nozzle*
- *¼" air connector*

Item No. 8010201
Packaging unit 1 item



Underbody-protection-Cavity-/inside box gun

Large intake hole for wax, metal coupling. With cavityprobe 600 mm and 360° jet.

Item No. 8011501
Packaging unit 1



Cavity pressure gun

Absolutely professional set-up with metal accessories. Undercoat nozzle 1.4 mm, underbody protection nozzle, 750 mm probe with 360° nozzle. 1050 mm probe with 360° split nozzle, cleaning set, quick-release coupling for changing probes. Further probes and nozzles available as accessories.
Item No. 8011001
Packaging unit 1



Spray apparatus

Self-filling. Enamelled cup interior. Contents 700 ml. Coupling with 2 spray heads (narrow spread and cone), air filling also by means of hand pump. Working pressure: 5 bar, maximum pressure: 10 bar. Not for alkaline cleaners.

Item No. 8014004
Packaging unit 1

5-part replacement spray head

Item No. 8514012
Packaging unit 1

Paint-, primer-, airpressure-, sprayguns



Primer- and filler spray gun

Primer and filler spray gun in anodized brass for longlife and easy cleaning. With 600 ml plastic cup, jet Ø 2,0 mm. Suitable for waterborne paints, needle and nozzle made of stainless steel. With round- and flat spray pattern, can be adjusted to any object.

Item No. 8012201
Packaging unit 1



NEW 125 Final Finish Gun PROFESSIONAL

Very professional finishing gun with nozzle 0,8 mm and 125 ml cup.
Also available nozzles in 0,5 and 1,0 mm for round and flat pattern Nozzle and jet in stainless steel.
Useful for waterbased and NANO paint systems

Item No. 8012001



Paint gun Standard nozzle ø 1,4 mm

Paint gun with infinitely variable round and flat spray for perfect paint work. Jet 1,4 Ø mm in stainless steel – plastic cup 600 ml with outflow protection Useful for paint work at car bodies, metal structures, but too for plastic and wood

Item No. 8012101
Packaging unit 1



Paint Gun LS 30 PROFESSIONAL

Special high grade paint gun for professional paint work. Round and flat spray. Forged aluminum body fine polished. Air cap in chromed brass and fluid tip in tempered stainless steel.
For body works at cars, car parts, metal objects, plastic bodies and parts and wood objects.
Nozzle 1,3 mm with 600 ml cup

Item No. 8012501



Final Finish Gun F2 with 0,5 mm nozzle and lateral cup

„Very special finishing gun, perfect useful for small parts, spot repair and for NANO and water based paint. With laterally mounted paint cup for optimized application.
Jet 0,5 Ø mm – Nozzle set in stainless steel – paint cup 125 ml aluminum" "

Item No. 8012401
Packaging unit 1

Air pressure guns and accessories



Tyre inflator VS

Tyre inflator with valve connector in metal.
Ø 60 mm diameter gauge and anti-shock protection.
Gauge 0 – 15 bar (0 – 220 PSI) (0 – 1500 kPa).
Rated pressure: 6 bar (90 PSI). Max. pressure: 10 bar (150 PSI)

Item No. 8019001
Packaging unit 1

Winter items



Winter set for the car

Ideal for every driver.
Contents:
1 bottle of lock oil/ frost oil
1 glycerine stick for rubber gaskets and seals
1 deer tallow stick for door seals
1 anti-mist sponge
1 window cloth 40 x 35 cm

Item No. 9071010
Packaging unit 15 items



Car window doth

Size: 40 x 35 cm

Item No. 9071002
Packaging unit 1 item



Original Sesam-winter assort-ment

Typ A
24 deer tallow sticks
24 Vaseline sticks
16 glycerine sticks
27 frost and lock oils
18 graphite oils
9 universal oils

Item No. 9043501

Original Sesam-winter assort-ment

Typ B
32 deer tallow sticks
16 Vaseline sticks
16 glycerine sticks
27 frost and lock oils
18 graphite oils
9 universal oils

Item No. 9043502



Sesam deer tallow stick

Contents: 25 gr

Deer tallow is a proven natural product, odour-free and completely non-toxic. It prevents sticking and freezing of door and window rubbers. It stops weathering and makes old rubber mouldings serviceable again.
Working temperature:
15 - 25° C.

Item No. 9010224
Packaging unit 24 items



Sesam Vaseline stick

Contents: 25 gr

Technically proven product for rubber mouldings. Odour-free and non-toxic. Prevents sticking and freezing of rubber seals. Especially effective because of its softness.
Working temperature:
5 - 25° C.

Item No. 9011224
Packaging unit 24 items



Sesam lock oil/frost oil

Contents: 50 ml

Frees frozen locks quickly and reliably; further freezing is subsequently inhibited. Double effect: lock is lubricated permanently. Bottle with special, thin nozzle.

Item No. 9020324
Packaging unit 24 items in display package



Sesam Graphitol

Contents: 50 ml
with special metal nozzle

The quick-unsticker for locks! Frees and cleans dirty and stuck locks and permanently lubricates them. When everything fails, Graphitol helps!

Item No. 9021324
Packaging unit 24 items in display package



Sesam glycerine stick

Contents: 50 ml

Preservative for rubber mouldings, contains silicon. Liquid product, also usable in frosty weather. Prevents sticking and freezing of rubber seals and mouldings. Simple application by means of a special sponge.
Working temperature:
5 - 25° C.

Item No. 9012324
Packaging unit 24 items in display package



Hand cleaners and skincare products



Waschlin Hand cleaner

Concentrated, alkaline-free and sand-free hand washing paste with skin protector. Removes oil, grease, paint, printing ink, bitumen, etc. Simply rub into soiled hands until the dirt is dissolved. Add some water and then thoroughly wash and rinse again.

Contents 10 litres
Item No. 53001



Manuclean Hand cleaner

Cleaning cream with base of natural raw materials for sparing and gentle skin cleaning. Highly concentrated and high quality product, pH neutral, for light soiling. Distributed by dispenser, e.g. for office personnel.

Contents 10 litres
Item No. 52021

Contents 500 ml
Item No. 52011



Hansalin® Hand cleaner

Hand-cleaning cream with skin protection and lanolin. Easily and sparingly removes oil, grease, tar, paint, printing ink, bitumen, as well as chain oil, etc. Rub a little cream into the soiled hands without water until the dirt is dissolved, and rinse with water. If no water is available, can also be wiped off with a cloth.

3 litre bucket
Item No. 50021

1 litre refill bag (not shown)
Item No. 50041







Star Hand cleaner

Concentrated, alkaline-free hand cleaner with double effect. Easily and sparingly removes oil, grease, tar, paint, printing ink, bitumen, etc. Rub dirty hands with some FERTAN-Star until the dirt is dissolved. Add some water and thoroughly wash again.

Contents: 3 litre bucket
Item No. 51021

Contents: 10 litre bucket
Item No. 51031

Contents: 250 ml tube
Item No. 51011



Manuprotect pre-work skin protector

Non-greasy, silicon-free, preservative-free wide-range protection. Protects from moisture, bitumen, various solvents, acids, lye, oils, grease, paint, cooling lubricants, hydraulic fluids, etc. Does not clog pores, skin remains breathable and doesn't dry out. Care and protection ingredients.

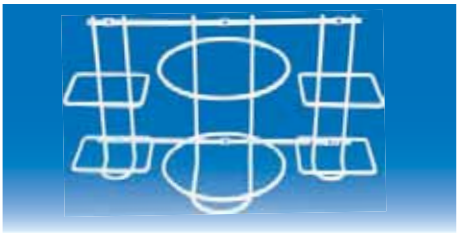
Contents 1.000 ml
Item No. 54001



Manusoft post-work skin protector

Silicon-free skin care cream which contains anti-inflammatory and binding substances. Works in quickly, is pH neutral and grease-inhibiting. Specially developed for brittle and dry skin. Use after cleaning hands, periodically during work, and after work, to restore protective coating on skin, as well as to prevent drying out.

Contents 1.000 ml
Item No. 55001



Wall holder

with 3 distributors for 1 x 3 litres and 2 x 1 litre,
(contents not included), with wall plugs and screws.

Item No. 40001



Wall holder

with distributor for 1 x 3 litres
(contents not included), with wall plugs and screws

Item No. 40002

above
Dispenser
for 1 x 1 litres
Item No. 40005

below
Dispenser
for 1 x 3 litres
Item No. 40003



Wall holder angled

to hold 1 x 1 litre,
(contents not included), with wall plugs and screws

Item No. 40006

Wall holder angled

to hold 1 x 1 litre,
(contents not included), with wall plugs and screws

Item No. 40004



BikeCare products
Care and cleaning



K1 BikeClean Gel

Using cleaners that contain acid damages the material and the environment.

NOT with BikeClean Gel. Due to its special Gel-Structure the cleaner adheres brilliantly, even to slick and vertical surfaces and cleans perfectly.

Even the most persistent pollutants will be detached residue free.

Contents: 1.000 ml
Item No. 74701



K1 ChainClean

The cleaner for champions.

The K1 ChainClean is based on the powerful Gel-Formula. Cleaning is fast and through – removes dirt, grease, oil and even stubborn deposits.

Contents: 1.000 ml
Item No. 82701



K1 Chainoil

This extremely light running chain oil ensures maximum drive train efficiency. It stands out due to extreme durability, awesome smoothness and ultimate quietness.

It reduces the friction between chain and sprocket so the cyclist can really feel the strain reduction.

Due to the formula it is very easy to apply and do not run off. Additionally it is a corrosion protective and reduces chain wear.

Contents: 100 ml
Item No. 22401



K1 EASY FIX friction paste

K1 Easy Fix is the best way to eliminate unwanted creaks, prevent slippage and prevent corrosion of carbon fiber or aluminum components. It avoids having to clamp down on delicate bolts by increasing the friction between parts and creating a better hold.

Suitable for all connections between carbon, steel and alloy (i.e. seat post, stem, pedals, crank)

Contents: 50 g
Item No. 60501




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By professionals for professionals



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Vehicle academy,
Schweinfurt



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