

Successful In-Process Rust Prevention

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Product Application Manager



Agenda

1. Proper corrosion inhibitor application.
2. Quaker Houghton RP Core Range.

Metal Protection

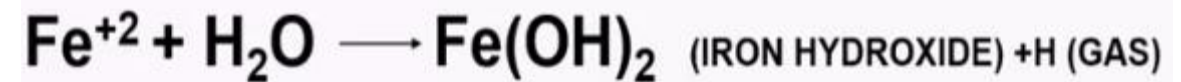
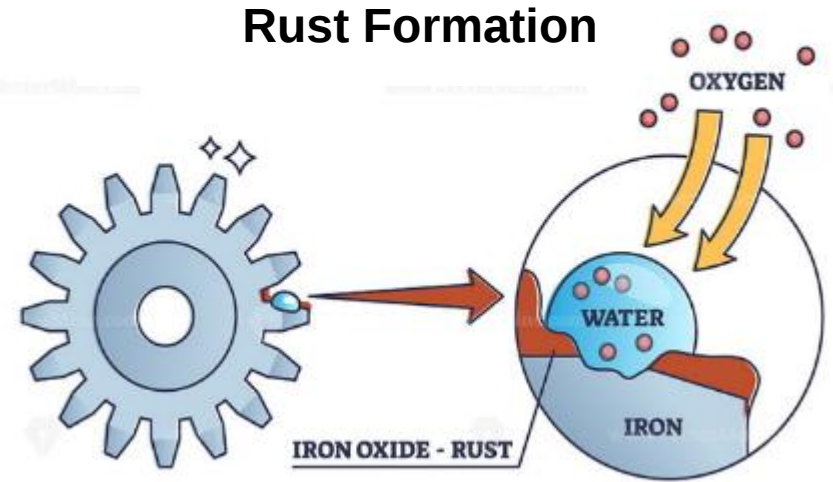
What is Corrosion, or RUST?

Corrosion is the deterioration of a metal as a result of **chemical reactions** between it and the surrounding environment.

Corrosion is a reactive coating on the top of metals which can **eventually disintegrate** the metal.

Caused by a flow of electrons from one metal to another, or from one section of a metal surface to another section of the same metal surface.

Rust is a form of corrosion that occurs when iron reacts with water and oxygen



RP Application

Corrosion Inhibitors excellent for preventing “Rust”

- **But...**

Proper Application is a necessity

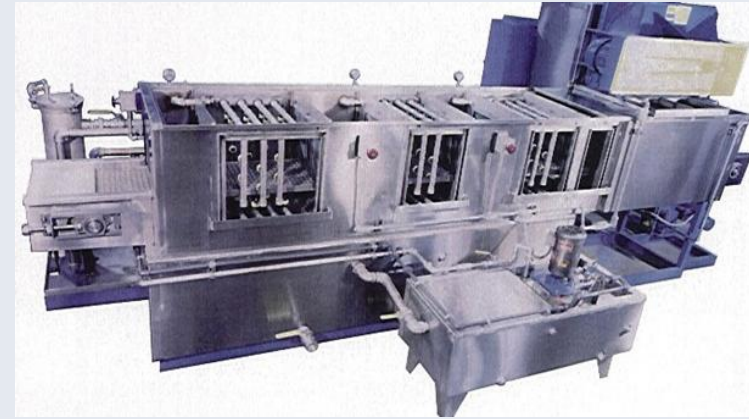


Metal Protection - Equipment

Immersion Washer – Complete Coverage



Spray Washer – (3) Stage



Conveyer Washer – Custom Three Lane



Drum Washer



Metal Protection

Equipment – Washer Manufacturers

- *Quaker Houghton technology utilized in many current washer processes and manufactures.*

Proseco	Crown
Ransohoff	Almco
JenFab	Alliance
Durr	Miwi
Ramco	Gerref

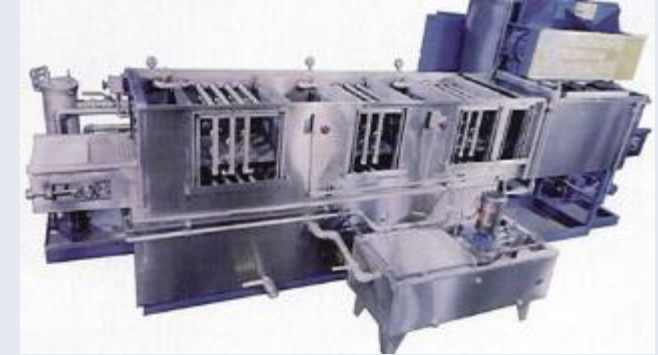
Metal Protection

Application Equipment

Dip Tank



Spray Washer
3 Stage



Paint Brush



Hand Sprayer



METAL PROTECTION – Improper Application

Inadequate coating time

- Allow sufficient time for rust inhibitor to thoroughly wet part surface and displace any water (30 - 60 seconds).

Incomplete coating

- Avoid brush or paint type application
- Use dip or spray whenever possible

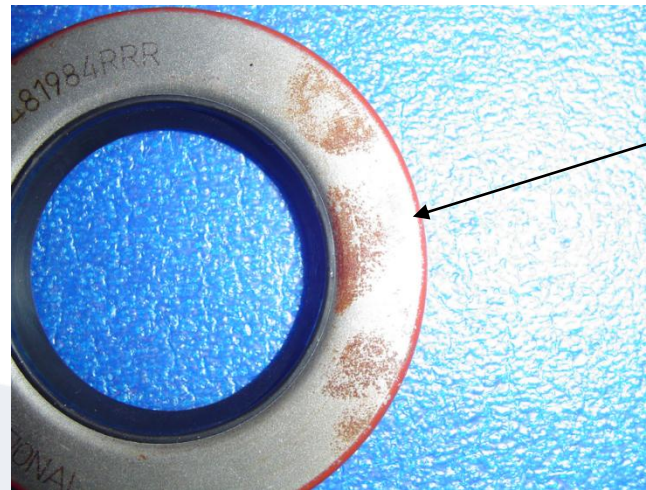


METAL PROTECTION – Improper Packaging

Parts packaged before carrier has evaporated

- Solvent or water trapped in container compromising the rust preventive film.
- Compatibility with packaging material.

Excessive handling of processed parts



FINGERPRINTS
FROM
EXCESSIVE
HANDLING

METAL PROTECTION – Improper Packaging **Solution**

Allow to dry

Use industrial grade fans to remove solvent faster

Elevated temperatures to evaporate water

Orient parts for drainage

Use vented containers

Avoid excessive handling

Wear gloves

Avoid high humidity/moisture environments.



RP Application

SOLVENT-BASED

PRODUCT	ITEM NUMBER	INDOOR PROTECTION (MONTHS)	OUTDOOR PROTECTION (MONTHS)	APPLICATION	IMMERSION	SPRAY	BRUSH	ELECTROSTATIC	FLASH POINT	VISCOSITY CST	FILM THICKNESS	VOC	EPA 24 (LBS/GAL)	ASTM E1686-10 G/L	NOTES
SOLVENT/MINERAL OIL TECHNOLOGY															
FERROCOTE® 5856 BF	013314	12+	N/A		●	●	●	●	194°F	13	0.15 – 0.2 mm		2.08	N/A	
FERROCOTE® 5856 BF T1	013315	12+	N/A		●	●	●	●	176°F	3	0.13 mm		3.48	N/A	
FERROCOTE® 5856 BF T3	013380	3-6	N/A		●	●	●	●	163°F	2.9	0.1 mm		5.69	N/A	
FERROCOTE® 5900	014215	12+	N/A		●	●	●	●	266°F	12.5	0.15 – 0.2 mm		0.997	N/A	
RUST VETO® 4214 HF	202092	12	N/A		●	●	●	●	155°F	1.5	0.1 mm		5.9	N/A	
WATER SOLUBLE TECHNOLOGY															
RUST VETO® 2212	200170	1	N/A		●	●	●	●	N/A	N/A	N/A		N/A	N/A	5-7% Conc
RUST VETO® 4221 NB	202106	9	N/A		●	●	●	●	350° F	N/A	N/A		N/A	N/A	5-10% Conc
RUST VETO® 4222 S	202107	12	N/A		●	●	●	●	280° F	6.46	N/A		N/A	N/A	5-10% Conc
OUTDOOR PROTECTION TECHNOLOGY															
FERROCOTE® 5815 LVO	013767	12	6		●	●	●	●	230° F	20,000 cps	2.0-3.0 mm		3.01	N/A	Thixotropic
RUST VETO® 342	201560	36	12		●	●	●	●	108° F	N/A	2.5 mm		N/A	402	
RUST VETO® 377 HF	202090	24	6		●	●	●	●	150° F	6.46	0.3 mm		N/A	574	
STEEL PRODUCT LINE															
FERROCOTE® 61A US	007734	N/A	N/A		●	●	●	●	380° F	125 SUS	N/A		0.0	N/A	
FERROCOTE® 6130	013705	N/A	N/A		●	●	●	●	425° F	130 SUS	N/A		0.44	N/A	

Survey Form

- Helps to expedite recommendation process
- Complete as much as possible
 - Need at minimum
 - Duration of protection
 - Material compatibility
 - Application process
 - Any Issues
 - If you have competitor SDS/TDS please provide



Corrosion Protection Product Recommendation Questionnaire

Date:

1. Customer Name:
2. Customer Location:
3. Account Manager:

PROCESS PARAMETERS

1. Application: (Spray, Dip, Brush)
2. Capacity (gal):
3. Part Metal Type: (Brass, Copper, Steel, Aluminum, Cast Iron, Titanium, Other)
4. Previous Operation: (Machining, Heat Treat, Quench, Lapping, Forming, Other)
5. Subsequent Operation: (Assembly, Shipping, Painting, Machining, Storage, Welding)
6. Fluid Compatibilities: (Brake Fluid, Seals)
7. RP Properties: (Water Displacement, Water Separation, Fingerprint Suppression/Removal, Lubricity, Film Thickness)
 - a. Film: (Dry to Touch, greasy, Oily)
 - b. Required RP protection: (Months)
8. Storage Conditions: (Indoor, Outdoor, Shed)
9. Part Soils: (None, Coolant, Oil, RP, grease, scale, other)
10. EHS Requirements: (VOC, Flashpoint, Other)
11. Waste Water Treatment Requirements:

WATER QUALITY (If Soluble Technology)

1. Tap Water Hardness (ppm):
2. Water Conditioning Capabilities:
Reverse Osmosis ☐ Sodium Cycle Softener ☐ Deionization ☐ Other
3. Water used for makeup: Tap Water ☐ Conditioned Water ☐

INCUMBENT FLUID

1. Incumbent Supplier:
2. Incumbent Fluid Name:
3. Incumbent Fluid Price:
4. Current Product Chemistry: (Solvent, Oil, Soluble)
5. Issues with Incumbent:
Rust ☐ Biological ☐ Tool Life ☐ Dermatitis ☐ Price ☐ Other



Metal Protection

Solvent-Based

Advantages

- Wide range of product selection
- Extensive range of performance properties - easily formulated to address special needs
- No special equipment needed – Fits all types of production environments
- Solvents evaporate naturally at ambient temps
- Most forgiving type of RP
- Easy to use and monitor

Disadvantages

- Possible flash point concerns
- May cause VOC/environmental issues
- Needs worker awareness
- Higher use costs
- Possible disposal issues
- Solvents evaporate naturally at ambient temps



Metal Protection

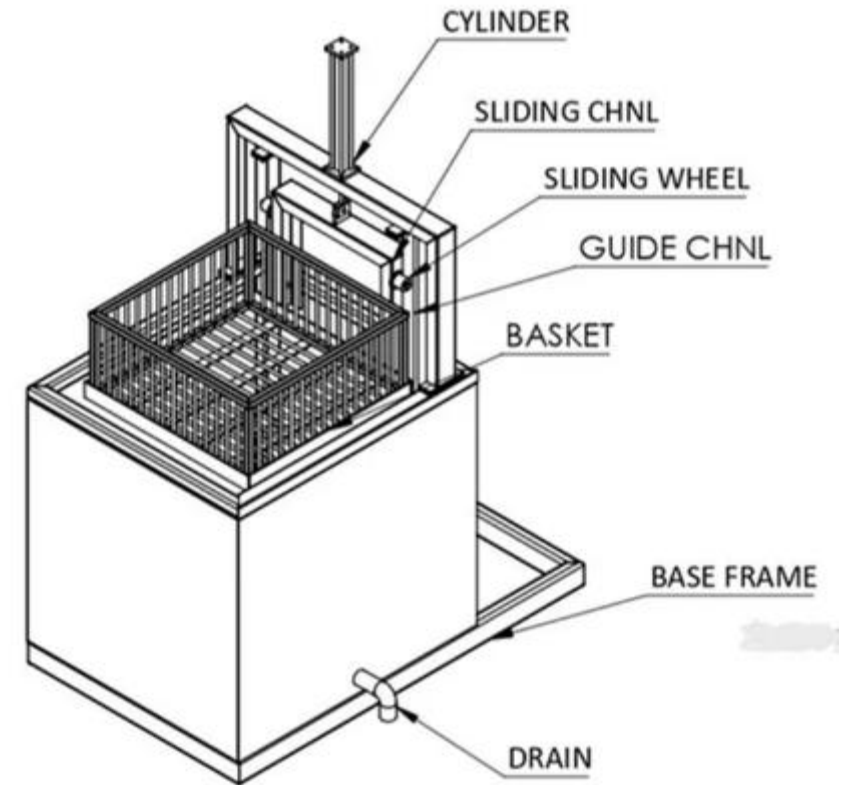
Care and Maintenance – Solvents - Application

Immersion – best method for full coverage

- False bottom design, with bottom drain
- Mild agitation during use
- Quiet time for water separation
- Tank cover to reduce evaporation
- Staging for drying – drainage areas, fans

Spray washers – not recommended

- Too much variation in coating
- Requires good ventilation
- Limited coverage
- Worker dependent



Metal Protection

Solvent-Based

Thin film, indoor storage. Water displacing & separating

RUST VETO® 4214 Series – General purpose RP

Water displacing



Water separating



FERROCOTE® 5856 BF T3

THIN FILM SHORT- MID TERM CORROSION PREVENTIVE

FERROCOTE® 5856 BF T3 is a kind of high quality corrosion preventive for ferrous and non-ferrous bearing surfaces in a medium to long term with long-term anti-rust, water replacement, and other excellent benefits, meeting the customers' requirement for environmental protection and universality of products.

Applications

This barium-free solvent-dispersed corrosion preventive provides medium to long-term indoor protection of ferrous and non-ferrous bearing surfaces.

- Wipe on
- Immersion
- Flow-on & Flood

This product is used as received via wipe on, immersion, flow-on, or flooding. Dilution is possible with the appropriate solvent. Please consult with your Quaker Houghton representative.

Reservoirs of this product should be checked regularly for moisture content, corrosion protection properties, and inorganic build-up to insure optimum product performance. Recommended fluid application temperature: 20-30°C

Properties

PROPERTY	TYPICAL VALUE	UNIT
Appearance	Clear light amber	
Odour	Bubble Gum	
Viscosity	<2.8	cst, 40°C
Flash point(COC)	> 65	°C
Density	820	kg/m ³ , 15°C

The Benefits

- FERROCOTE® 5856 BF T3, in original packaging, can provide 6 months of indoor protection from rust and corrosion, depending on storage conditions and critical requirements listed in our separate "protection statement" document.
- This product rapidly displaces moisture. It can be used to treat wet parts with no loss of protection.
- A high degree of compatibility with most bearing oils and greases means no need to remove the thin film. This reduces processing costs.
- This product provides versatility in a single product to protect many metals. This simplifies overall operations and reduces costs.
- The thin film protection is almost imperceptible. This makes inspection, handling, and packaging easier. The residual film will not stain or varnish on metal-to-metal contact.
- Environmental compliance is improved because this product does not contain any barium or other heavy metals.

Health, Safety and Handling

Please consult the Safety Data Sheet (SDS) for information on storage, safe handling and disposal. The conditions or methods of handling, storage, use and disposal of the product are beyond our reasonable control - we assume no liability for any ineffectiveness of the product or any injury or damage, arising out of or in connection with these conditions.

Quaker Houghton can supply this quality product in drums (165kg) or pails(16kg). This product has a container shelf life of 12 months. 4-43°C is the recommended storage temperature for all metalworking products.

To enhance process compatibility, use Quaker Houghton metalworking fluids and cleaners. Consult your Quaker Houghton representative.

FERROCOTE® 5856 BF T1

Corrosion Preventatives

FERROCOTE® 5856 BF T1 is a kind of high quality corrosion preventive for ferrous and non-ferrous bearing surfaces in a medium to long term with long-term anti-rust, water replacement, fingerprint removal and other excellent benefits, meeting the customers' requirement for environmental protection and universality of products.

Applications

This barium-free solvent-dispersed corrosion preventive provides medium to long-term indoor protection of ferrous and non-ferrous bearing surfaces.

This product is used as received via wipe on, immersion, flow-on, or flooding. Dilution is possible with the appropriate solvent. Please consult with your Quaker Houghton representative.

Reservoirs of this product should be checked regularly for moisture content, corrosion protection properties, and inorganic build-up to insure optimum product performance.

Recommended fluid application temperature: 20-30°C

Properties

PROPERTY	TYPICAL VALUE	UNIT
Appearance	Clear light amber	
Odour	Bubble Gum	
Viscosity	3.1	cSt, 40°C
Flash point(COC)	90	°C
Density	831	kg/m³, 15°C

The Benefits

- It can provide 12- 18 months of indoor protection from rust and corrosion.
- This product rapidly displaces moisture.
- Fingerprint neutralization attributes counteract the effect of acid residues from fingerprints.
- A high degree of compatibility with most bearing oils and greases will reduce processing costs.
- Versatility simplifies overall operations and reduces costs. The protection is equivalent of 20-25 days in the JAN H-792 Cabinet or 20-25 days, Timken Method.
- The thin film protection is almost imperceptible. This makes inspection, handling, and packaging easier. The residual film will not stain or varnish on metal-to-metal contact.

Health, Safety and Handling

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Quaker Houghton can supply this quality product in drums or pails. This product has a container shelf life of 12 months. 4-43°C is the recommended storage temperature for all metalworking products.

To enhance process compatibility, use Quaker Houghton metalworking fluids and cleaners. Consult your Quaker Houghton representative.

FERROCOTE® 5856 BF

LONG TERM RUST PREVENTIVE OIL

This product is a solved based corrosion preventive oil for medium term corrosion prevention for both final and in-process industrial applications. Its thin film leaves a slightly oily layer on the parts where applied. The product includes a vapour corrosion inhibitor and is formulated for long term storage of bearings and machined parts.

Applications

Concentration: Use as received.

Can be diluted with suitable solvent if required after consultation with Quaker Houghton representative.

Applicable only on clean and dry surfaces. The metal surface must be free of corrosion before applying our product.

Fingerprint, Noise reduction, ...

Recommendation for use

Quaker Houghton rust preventive products -if used properly- generally need a low level of maintenance.

For critical applications such as final preservation of bearing parts, it is advisable to test critical parameters periodically and to pay attention at all times to the application method to ensure good wetting properties and an evenly applied film. The 'dry film' coverage is critical to maintain the corrosion protection under good storage conditions. For dewatering products, when re-using the overspray it is recommended to keep a close eye if water has contaminated the fluid and the demulsification properties. If the overspray is stored, remember to regularly drain off any water separated prior to reapplying the product. For more detailed information or instructions please consult a Quaker Houghton representative.

Benefits

- Contains no Barium or other heavy metals
- It provides a thin adherent film on the parts where applied
- It does not create sticky residues even on moving parts
- Provides lubrication
- Compatible with most maintenance lubricants, so no cleaning of moving parts (bearings) is needed prior to assembly

Health, Safety and Handling

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This product has a recommended shelf life of: 12 months

Properties

PROPERTY	TYPICAL VALUE	UNIT
Appearance / Colour	Clear Amber	[-]
Viscosity	10	mm ² /s @ 40°C
Density	872	kg/m ³ @ 15°C
Flash point (COC)	72	°C
Pour point	<4	°C
Copper corrosion	1a	[-]
Drying time (mn)	90 - 120	mn
Coverage (gr/m ²)	4 - 6	g/m ²
Humidity Cabinet (cycle)	>55	rounds, ISO 6270 AHT
Salt Spray (h)	12	hours, DIN 50021 SS
Film type	Oily	mn
Protection Indoor (months)	12 - 24	month
Outdoor Storage (months)	2	month

RUST VETO® 4214-HF

SOLVENT-BASED RUST PREVENTIVE

RUST VETO® 4214-HF is exceptionally stable in wet conditions, particularly where there is alkaline, acid or solvent emulsion rinse water left on parts. It offers prolonged effectiveness where rinsing is not always thorough.

RUST VETO® 4214-HF releases displaced water within minutes and leaves a very thin, transparent protective film. Up to 12 months indoor corrosion protection leaving a dry-to-touch film. FORD TOX 32724 and 194021 and GM approvals.

Applications

Dip, spray or brush application. Offers high humidity protection and fingerprint suppression. Compatible with all metals

Recommendation For Use

Fast displacement and complete separation of water-after machining, cleaning, rinsing, wet tumbling. Inter-plant protection of packaged items.

Benefits

- Thin film protects your parts without excessive carry-off which reduces usage and cost.
- Low-odor nature of the products optimizes worker acceptance.
- Displaces water or process fluids from wet parts to rapidly begin the corrosion inhibition process.
- Separates any displaced water from itself to optimize both corrosion inhibition and bath life.
- The high flash point reduces the potential for flammability.
- Rapid drying permits handling of parts shortly after application which expedites process flow and packaging.
- Barium-free.

Health, Safety and Handling

Please consult the Safety Data Sheet (SDS) for information on storage, safe handling and disposal. The conditions or methods of handling, storage, use and disposal of the product are beyond our reasonable control - we assume no liability for any ineffectiveness of the product or any injury or damage, arising out of or in connection with these conditions.

Typical Physical Properties

PROPERTY	TYPICAL VALUE	
Flash Point, typical	155°F (68.33°C)	PMCC
% Non-Volatile	12	%
Film Thickness	0.1	mil
Coverage	1900	sq ft / gal
Dry to Set Time	2 - 4	hours
ASTM D-1748	Passes 30+ days (typical)	Humidity at 120° F

RUST VETO 4214 HF - variants

RUST VETO 4214 HF – Core Range Product

- **Barium Free Product**
- **Significant Approvals – GM, Ford**

RUST VETO 4214 –

- **Barium Containing**
- **Lower Flashpoint – 108F**

RUST VETO 4214 W –

- **Similar to RUST VETO 4214 HF performance**
- **Does not carry the approvals. FORD, GM**

FERROCOTE® 5900

METAL PRESERVATIVE – GLOBAL BEARING APPROVAL

FERROCOTE® 5900 is a barium-free, solvent-free oil dispersed corrosion preventive providing long-term indoor protection of ferrous and non-ferrous bearing surfaces. Its proprietary formulation provides a rare and distinctive low, constant torque during the break-in period.

Applications

FERROCOTE® 5900 is formulated with a unique balance of polar additives and waxes that provides exceptional corrosion protections. It offers excellent water displacing and fingerprint neutralization performance characteristics. Its inherent versatility offers application flexibility using spray, immersion, flood or flow-coat techniques.

Customers

- Timken

Fluid Maintenance

This product is used as received via wipe on, immersion, flow-on or flooding. Dilution is possible with the appropriate oil.

A reservoir of this product should be checked regularly for moisture content, corrosion protection properties and inorganic buildup to make certain the protection property of the product is maximized.

Recommended fluid application temperature of 68–85°F / 20–30°C.

Benefits

- Up to five years of indoor protection from rust and corrosion in original packaging depending on storage conditions and tight process control
- Rapidly displaces moisture and can be used to treat wet parts with no loss of protection
- Fingerprint neutralization attributes which counteract the effect of acid residues from fingerprints
- Protection of many metals, reducing costs and simplifying the overall operation

Properties

PROPERTY	TYPICAL VALUE	UNIT
Appearance	Clear Amber	
Pounds per gallon at 60°F	7.24	lbs/gal
Pour Point	-18 / < 0	°C/°F
Flash Point via COC	130/ 266	°C/°F
Odor	Light petroleum	
Coverage per Gallon	1,000 – 1,200	ft ²
Viscosity at 100°F	68 / 12.5	SUS / cSt
Copper Corrosion (max) ASTM D 130	1B	
Film Thickness (typical)	0.15 – 0.20	mils

RP Application

WATER-BASED

Metal Protection

Water-Based

- **Advantages**

- No flash points
- Oil-free (Synthetic Technology)
- Very dry films, low residue

- **Disadvantages**

- Requires daily testing
- Possible biological issues
- Film more susceptible to humidity and environment
- Needs drying stage before packaging
- **Typically does not offer same RP performance as solvent based technology**



Metal Protection

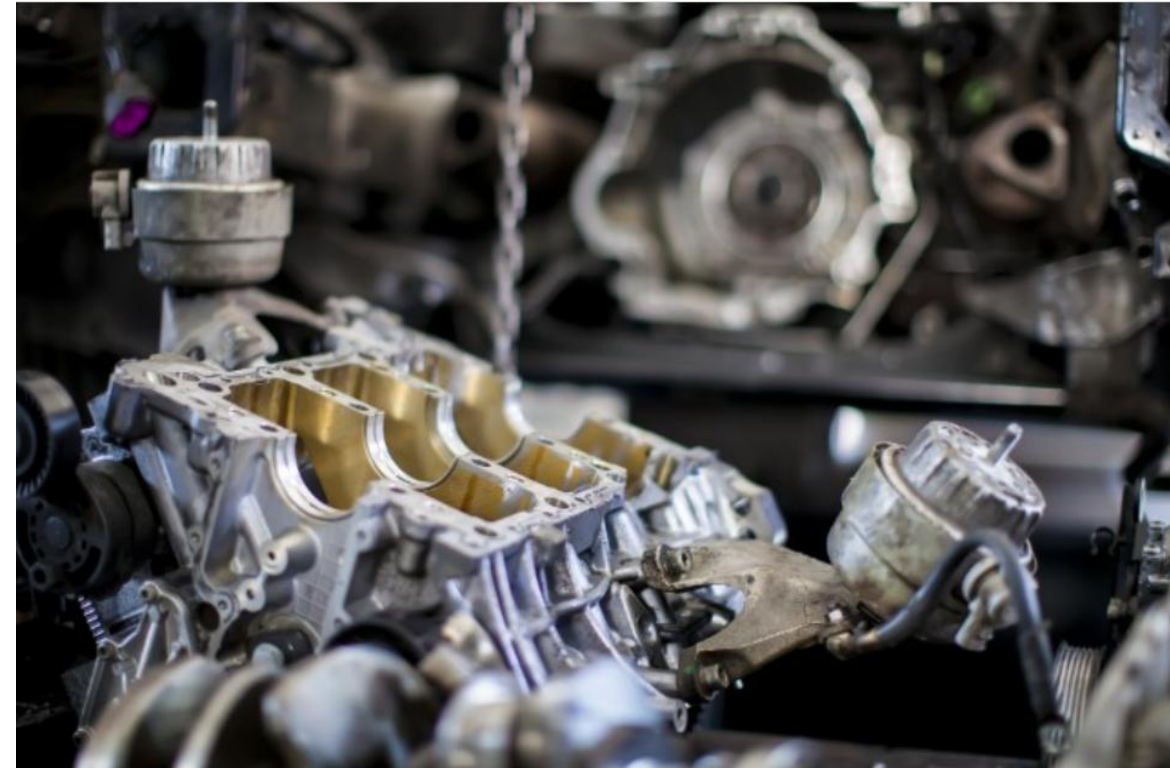
Care and Maintenance – Water Based - Application

Immersion – best method for full coverage

- Proper agitation – mild, consistent, no air
- 130° – 140° F for best performance
- Initial charge – warm water, oil to water, good agitation
- Staging for drying – drainage area, fans

Spray washer – 2nd or 3rd stage washer

- Low pressure, coarse nozzles, minimize filters
- Watch temperature control
- Water quality is important
- Ensure spray nozzles are oriented to the parts



Metal Protection

Care and Maintenance – Water Dilutable

Maintenance

- Physical appearance – emulsion (soluble oil)
 - Stable white emulsion, typical cream layer
 - Tan, brown, loose emulsions with heavy free oil indicate end of life
- Physical appearance – synthetic (water-based)
 - Clear and comparable to fresh dilution
- pH
 - Drop indicates possible biological issues
 - Can cause emulsion instability, separation, possible corrosion issues
 - Limited alkalinity reserve
- Elements
 - Hardness and chlorides can affect performance



RUST VETO® 2212

SYNTHETIC AQUEOUS RUST PREVENTIVE

RUST VETO® 2212 is an all synthetic aqueous rust preventive with a non-nitrited chemical rust inhibitor.

Being totally synthetic, the residual film can be easily removed in subsequent operations and does not contribute to tramp oil concerns.

Up to 4 weeks of corrosion protection leaving an imperceptible film.

FORD TOX 187008 and GM approval.

Applications

RUST VETO® 2212 is an excellent choice in process, following cleaning, and in heat treatment where short-term indoor protection is desired. It forms a clear solution and is recommended for use on ferrous and nonferrous metals.

Recommendation For Use

Use at 5% concentration.

Benefits

- No oil - eliminates disposal problems common with water base preservation
- No nitrites - eliminates health hazard associated with this chemical
- Hard water stable - solutions are stable in hard water, up to 500 ppm, while retaining rust protection
- Thin film protects your parts without excess carry-off which reduces usage and cost
- Rapid drying permits handling of parts shortly after application

Health, Safety and Handling

Please consult the Safety Data Sheet (SDS) for information on storage, safe handling and disposal. The conditions or methods of handling, storage, use and disposal of the product are beyond our reasonable control - we assume no liability for any ineffectiveness of the product or any injury or damage, arising out of or in connection with these conditions.

Typical Physical Properties

PROPERTY	TYPICAL VALUE
Appearance	Clear fluorescent green liquid
Total Alkali	9.4 ± 0.5%
pH	9.1 ± 0.2
Phosphates	None
Solubility	Freely Soluble

RUST VETO 2212- variants

RUST VETO 2212 – Core Range Product

- Boron-Free
- RP Performance (4 weeks)
- Approvals (GM, Ford)

RUST VETO 2212 G –

- Boron Containing -
- Reduced RP performance (2 weeks)
- No Approvals

RUST VETO® 4222-S

BARIUM-FREE WATER-EMULSIFIABLE RUST PREVENTIVE

RUST VETO® 4222-S is a water emulsifiable, barium free rust preventive which provides excellent humidity protection.

An emulsion of RUST VETO® 4222-S will deposit a thin, protective film on treated surfaces. Film removal is accomplished with hot water and detergent.

Up to 12 months corrosion protection leaving a light oily film. GM approval.

Applications

The thin film will typically provide corrosion protection on plain carbon or low alloy steel.

Recommendation For Use

Constant mild agitation is recommended with the emulsion heated to 120–140°F and will remain stable when hot to a maximum of 150°F.

If an emulsion is left standing still for several days, a layer of oil and/or cream may form on the surface. Any separated oil is easily mixed back into the emulsion.

Benefits

- Barium-free formulation reduces waste treatment concerns
- Excellent humidity protection
- Thin film protects your parts without excessive carry-off which reduces usage and cost.

Health, Safety and Handling

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Typical Physical Properties

PROPERTY	TYPICAL VALUE
Appearance	Clear, amber oil
Specific Gravity	.927
Viscosity @ 100°F	180
Flash Point	280° F
Use concentration	5 - 10%

RUST VETO® 4221-NB

BARIUM-FREE WATER-EMULSIFIABLE RUST PREVENTIVE

RUST VETO® 4221-NB is a water-emulsifiable rust preventive. The product is readily emulsifiable in either hard or soft water. RUST VETO® 4221-NB contains no barium.

An emulsion of RUST VETO® 4221-NB will deposit a thin film on treated surfaces. Film removal is accomplished with hot water and detergent.

Up to 9 months indoor corrosion protection leaving a light oily film. FORD TOX 143697 approval.

Applications

Parts can be dipped into an emulsion of RUST VETO® 4221-NB, or because of the product's low foaming tendency, parts can be successfully treated in the final stage of power spray washers.

RUST VETO® 4221-NB has received wide acceptance as a final preservative of blackened or phosphated parts.

Recommendation For Use

For cold weather conditions, it may be necessary to use warm or hot water to achieve proper mixing. Constant mild agitation is recommended with the emulsion heated to 120–140°F and will remain stable when hot to a maximum of 150°F.

If an emulsion is left standing still for several days, a layer of oil and/or cream may form on the surface. Any separated oil is easily mixed back into the emulsion.

Benefits

- Barium-free formulation reduces waste treatment concerns.
- Excellent humidity protection: Dependable rust preventive for indoor use.
- Emulsifies in water: Mixes easily with water at a temperature of 70°F in hard or soft water.
- No fire hazard: Flammable hazards are eliminated when RUST VETO® 4221-NB is used.
- Safe for use on aluminum

Health, Safety and Handling

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Typical Physical Properties

PROPERTY	TYPICAL VALUE
Appearance	Clear amber fluid
Specific Gravity	.932
Flash Point	350°F
ASTM D-1748	25 days minimum
Use concentration	5 - 10%

OUTDOOR Protection

FERROCOTE 5815 LVO –

- Thixotropic Properties
- 12 months indoor – 6 months outdoor

RUST VETO 342 –

- This Film Wax Coating
- 36 months indoor – 12 months outdoor
- Very Low Flashpoint 108F

RUST VETO 377 HF

- “Grease Like” coating
- 24 months indoor – 6 months outdoor

METAL PROTECTION

SUMMARY

Metal Protection

Summary

- Corrosion **eventually disintegrates** metal
- Metal Protection is a crucial step in the manufacturing process
- Proper application a **MUST**
 - Dirt, fluid, environment, improper application, improper packaging
- New Cleaner Technology may be able to replace dedicated RP applications.
- Consult supplier for best product application aligned with your production and shipping requirements.



Questions?

Thank You!