

Surface
Checking
Agent

Lubricant

Anticorrosive
/Special Paint

Cleaner

Scribbling
Varnish

Mould
Releasing
Spray

Adhesive

Sealing Agent
/Others

One-liquid
Zinc-rich
Primer Spray

Stainless Steel
Surface
Treatment

Welding Spatter
Antifouling Agent
/Welding Support
Product

Groove Antirust
Spray

Joining Parts
Treatment Agent

JIP

CHEMICALS FOR MAINTENANCE
OF MACHINERY & EQUIPMENT

CATALOGUE

vol. 19

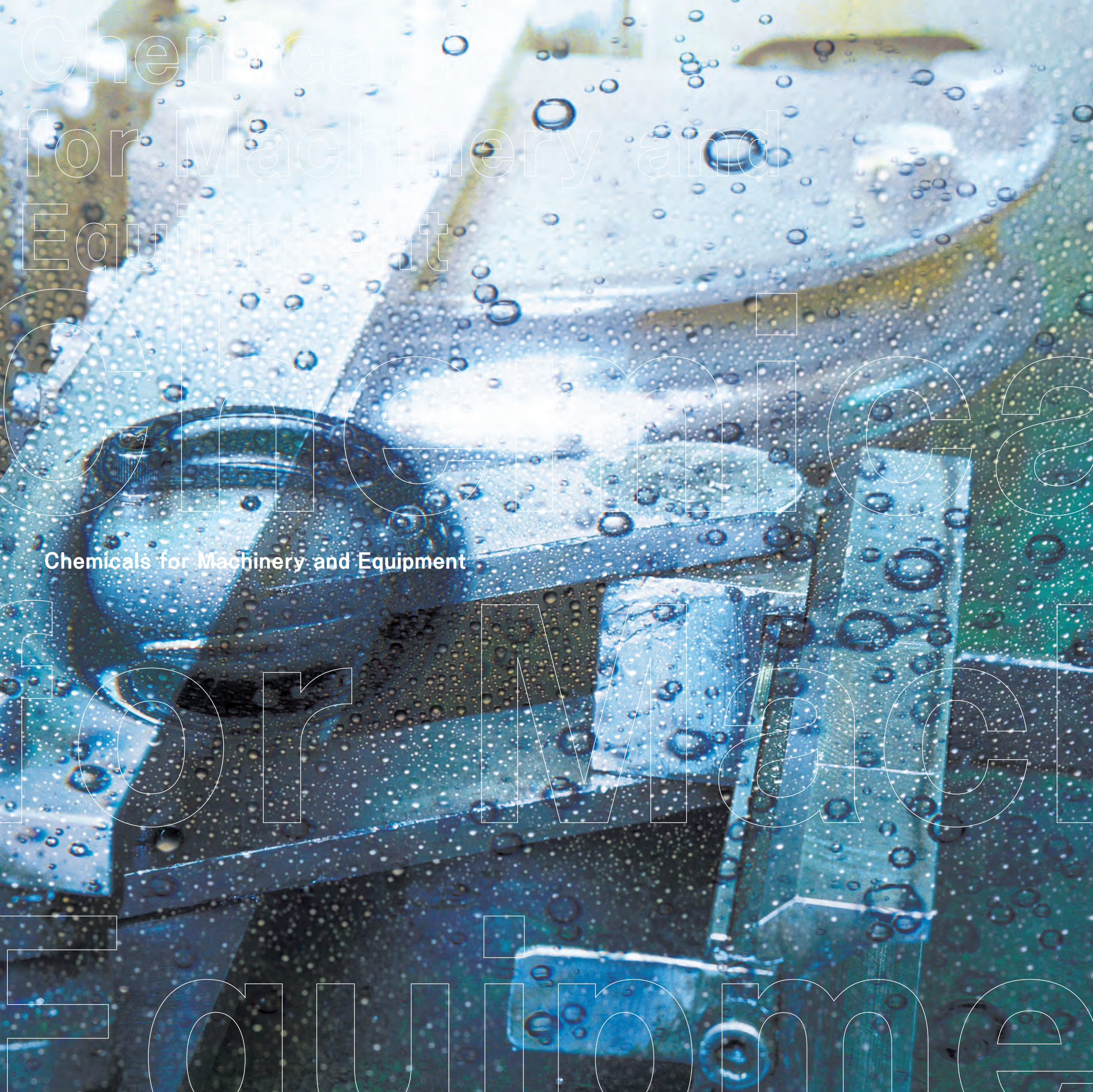
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Chemicals for Machinery and Equipment

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Surface Checking Agent
Lubricant
Anticorrosive /Special Paint
Cleaner
Scribbling Varnish
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Sealing Agent /Others
One-liquid Zinc-rich Primer Spray
Stainless Steel Surface Treatment
Welding Spatter Antifouling Agent /Welding Support Product
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Micro Check

Invisible flaw detection agent

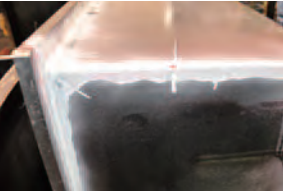
[Features]

- Micro Check is a one-touch aerosol spray of flaw detection agent which don't require any special equipment to be used.
- Tiny cracks and invisible flaws can be easily and accurately detected.
- It can be used everywhere no matter what material the applied objects are made of or what shapes the applied objects have (expect painted surfaces and plastics).
- Being non-corrosive, it can be safely used to aluminum alloy, magnesium alloy, etc.
- Possible to detect flaws and cracks at 0°C to 80°C.
- The detectability is width 1μm and depth 10μm. (10°C~50°C)

[Application]

The range of application is limitless; from metals, regardless of whether it is ferrous, nonferrous, magnetic or non-magnetic, to non-metals such as ceramics, glass, etc.

- 1) Cast parts—pin holes, folds due to hot water, cracks due to shrinkage.
- 2) Forged parts—cracks due to forging.
- 3) Welded point—cracks, cavity, and defective joints.
- 4) Metal fatigues—Cracks due to grinding, cracks due to backing, cracks due to cutting tools.
- 5) Leakage—tanks, boilers, pipes and others.
- 6) Seals—test of heat seal packages.



Crack detection test at welded point.



Crack detection test at heat seal package.

Micro Check Cleaner

PRTR
Not
Applicable

Toxicity
Low



[Performance]

Outward Appearance	Colorless Transparent Liquid
Applicable temperature	0~60°C

Item No	Product Name	Volumetric capacity•Packing
00141	Micro Check Cleaner	420ml x 24pcs
00142	Micro Check Cleaner 18L	18L x 1can

Micro Check Penetration

PRTR
Applicable



[Performance]

Outward Appearance	Red Liquid
Applicable temperature	0~80°C

Item No	Product Name	Volumetric capacity•Packing
00143	Micro Check Penetration	420ml x 24pcs
00144	Micro Check Penetration 18L	18L x 1can

Micro Check Development

PRTR
Not
Applicable

Toxicity
Low



[Performance]

Outward Appearance(After Dry)	White Powder Coat
Applicable temperature	0~50°C

Item No	Product Name	Volumetric capacity•Packing
00145	Micro Check Development	420ml x 24pcs
00146	Micro Check Development 18L	18L x 1can

[How to use]

It consists of following four steps
First : Clean the inspecting surface with Micro-check Cleaner
Second : Spray on the inspecting surface with Micro-check Penetration
Third : Remove excessive Micro-check Penetration by a cloth soaked with Micro-check Cleaner.
Forth : Spray Micro-check Development onto the inspecting surface.

①
準備
準備

Oils and rusts.

Remove the oils and rusts.

②
浸透
浸透

Penetrating solution

Penetration treatment time is normally 5-8min.

③
除去
除去

Remove excessive penetrating solution by a cloth soaked with Micro-check Cleaner.

④
顕像
顕像

Developing solution

Micro Check 6P Set

- Set Contents
- Microcheck Cleaner x 3 pcs
- Microcheck Penetration x 1 pc
- Microcheck Development x 2 pcs



Item No	Product Name	Volumetric capacity•Packing
00147	Micro Check 6P SET	420ml x 24pcs (4boxes x 6pcs)

Micro Check 4P Set

- Set Contents
- Microcheck Cleaner x 2 pcs
- Microcheck Penetration x 1 pc
- Microcheck Development x 1 pc



Item No	Product Name	Volumetric capacity•Packing
00148	Micro Check 4P SET	420ml x 24pcs (6boxes x 4pcs)

Water Washable Micro Check Penetration 18L

PRTR
Not
Applicable

Toxicity
Low



- Removable by water

[Performance]

Outward Appearance	Red Liquid
Applicable temperature	

Item No	Product Name	Volumetric capacity•Packing
24392	Water Washable Micro Check Penetration 18L	18L x 1pc

Leak Foamer/NK Foamer

Gas and air leak detection

PRTR
Not
Applicable

Toxicity
Low



[Features]

- Easily detects gas leakage by creating bubble. Bubbling even slight "leakage".
- Non-flammable and no risk by chemical reactions
- Cleared the JIS-Z2329(Methods for bubble leak testing) foaming at a 30μm hole, under 4-5x103Pa differential pressure.
- Neutral type

[Application]

- Applicable to various gas piping, welded joint part of equipment and connecting parts.
- For detect refrigerant gas leakage from pipe jointing parts of machines such as air-conditioner and refrigerator.
- For detect gas leakage of town gas, propane gas, gas of industrial pipes and containers.
- Gas Leakage check for pneumatic brake piping of automobile.

[Performance]

Outward Appearance	Colorless Transparent Liquid
Applicable temperature	Normal temperature



Bubble Leak Testing (JIS-Z2329)

Item No	Product Name	Volumetric capacity•Packing
25240	Leak Foamer	345g x 24pcs
23362	NK Foamer	15kgs x 1can

Oil Leak Check

Oil leak detection

PRTR
Not
Applicable

Toxicity
Low



[Features]

- Easily detects oil leakage by making a visible white color film.
- Absorbing oil, detects oil leakage without pressurization.
- It doesn't soil inside part for the outside application.
- It is possible remove using water

[Application]

- Leak check for welded part or welded joint of various oil pipe. (Rubber hose is also available).
- Applicable to welded part or welded joint of various oil tank.
- Detects oil leaking from joint part of automobile oil pan or brake hose pipe, etc.

[Performance]

Outward Appearance (after dry)	White Powder Coat
Applicable temperature	0~50°C



Item No	Product Name	Volumetric capacity•Packing
00659	Oil Leak Check	150ml x 12pcs

Water Leak Check

Water leak detection

PRTR
Not
Applicable

Toxicity
Low



[Features]

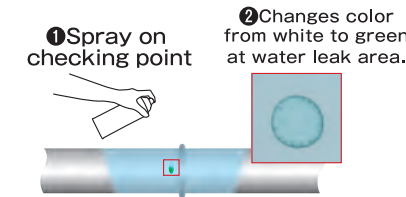
- Easily detects water leakage.
- Change the color of white coat film layer to green, if water is leaking.
- Removable by water

[Application]

- Leak detection for hydraulic test of tanks .
- Leak detection for pipes and coutainers.

[Performance]


Outward Appearance (after dry)	White Powder Coat
Applicable temperature	0~50°C





Item No	Product Name	Volumetric capacity•Packing
00612	Water Leak Check	420ml x 24pcs


Peneton A


Rust proof penetrating oil for equipment.


Water Replacement


Strong power


2 Ways


Bottom-Up Spray OK


Odorless

PRTR

Not Applicable

Toxicity

Low

[Features]

- Without unpleasant smell since it is odorless. Adopts 2-way nozzle, bottom – up spray is available.
- Rust proof effect is higher than other penetrating oil because of improved anti-rust formula.
- Penetrates rapidly into corroded metal surface. Activates on base metal under the rusty layer while lubricating the metal.
- Prevents rusting by water replacement.
- At an amazing speed, loosens binding screws, nuts etc., caused by rust.
- Solve the disconnection problem of electric system caused by moisture.
- Doesn't contain silicone oil.

[Applications]

- Loosens binding crews, nuts, etc. caused by rust or seizure.
- For anti-rust or lubricating metal ware.

[Performance]

Salt spray test	Over 72 hours
Indoor rust proof	Over 12 months
Weld Load	981N
Heat Resistance	120 ℃
Kinematic Viscosity(40℃)	9cSt (for reference only)
Applicable temperature	-10℃~130℃





Item No	Product Name	Volumetric capacity•Packing
00105	Peneton A	420ml x 24pcs
00605	Peneton A 18L	18L x 1can


PN55

Rust proof penetrating oil for equipment.


Water Replacement


2 Ways


Bottom-Up Spray OK


Odorless

PRTR

Not Applicable

Toxicity

Low

[Features]

- Without unpleasant smell since it is odorless. Adopts 2-way nozzle, bottom – up spray is available.
- Has super high lubricating effect comparing with other products because of PTFE compounded.
- Penetrates rapidly into corroded metal surface. Activates on base metal under the rusty layer while lubricating the metal.
- At an amazing speed, loosens binding screws, nuts etc., caused by rust.
- Prevents rusting by water replacement.
- Doesn't contain silicone oil.

[Applications]

- Loosens binding crews, nuts, etc. caused by rust or seizure.
- For anti-rust or lubricating metal ware.

[Performance]

Salt spray test	Over 48 hours
Indoor rust proof	Over 6 months
Weld Load	1570N
Heat Resistance	120 ℃
Kinematic Viscosity(40℃)	9cSt (for reference only)
Applicable temperature	-10℃~130℃



Item No	Product Name	Volumetric capacity•Packing
00530	PN55	420ml x 24pcs

Jet Lube

Mucous oil, high grade lubricating and rust preventing agent.


Bottom-Up Spray OK


Water Replacement

PRTR

Not Applicable

Toxicity

Low

[Features]

- Provides long term lubricating, rust proof, corrosion proof effect because of strong adhesive properties of lubricating film.
- Long –life lubrication and rust preventing agent with water displacing property, therefore, it forms strong oily film under water even if water covers on the surface.
- Penetrates to narrow openings, doesn't soil surroundings because of little splashing.

[Applications]

- Rust prevention and lubrication for metal ware, precision instruments, tools, moulds and metal work desk.
- For manufacturing processes requiring extreme pressure, such as pressing and drilling works.
- For every kinds of bearings.

[Performance]

Weld Load	1570N
Heat Resistance	120 ℃
Kinematic Viscosity(40℃)	140cSt (for reference only)
Applicable temperature	-10℃~150℃



Item No	Product Name	Volumetric capacity•Packing
00031	Jet Lube	300ml x 24pcs

Visco-Lube

High extreme-pressure and high-adhesive lubricating agent.


Strong power

PRTR

Not Applicable

Toxicity

Low

[Features]

- The lubricating film, which has strong adhesive, anticorrosive and anti-rust effect, protects the coated surface from water, acid or alkaline atmosphere.
- Strong against extreme-pressures and does not get blackened owing to MCA and BN(white solid lubricating agent) compounded.
- Different from Molybdenum, doesn't contaminate surroundings.
- High adherent with least splashing.

[Applications]

- Used for outer lubrication of heavy load, rotary part of all kind of construction machines and automatic warehouse.
- Applies to open gears, chains and wire ropes.
- Outer lubrication of all kinds of bearings.

[Performance]

Weld Load	1570N
Heat Resistance	300℃ (Solid)
Kinematic Viscosity(40℃)	4000cSt (for reference only)
Applicable temperature	-10℃~150℃




Lubricating wire

Item No	Product Name	Volumetric capacity•Packing
00106	Visco-Lube	330ml x 24pcs

Silicone Sliding Agent

Sliding and polishing agent.


Odorless

PRTR

Not Applicable

Toxicity

Low

[Features]

- Contains high - penetrating silicone oil that offers quick sliding on complicated shapes of cutters.
- Non-solvent, don't stain fabric nor dissolve plastic.
- Harmless and odorless. Prevents cutters or machines from any rust.

[Applications]

- For all blades, garment cutters, paper cutters, tables for book binding machines, woodworking machines and dry plates of various cutting machines.
- For polishing and sliding of printed materials.
- For lubricating rubber products.
- Coin sliding agent for vending machines.

[Performance]

Applicable temperature	-50℃~200℃
------------------------	-----------



Sliding cutting machine

Item No	Product Name	Volumetric capacity•Packing
00135	Silicone Sliding Agent	420ml x 24pcs

High-Grade Grease

Long -term lubricating grease



PRTR
Not
Applicable

Toxicity
Low

2 Ways
Bottom-Up
Spray OK

[Features]

- By dissolving heat-resistant (200℃), rust-preventing and lubricating grease in gas, penetrates parts quickly and offers long term lubricating effect.

[Applications]

- Applies to rotating and vibrating parts of motors, chains and gears.
- Applies to rotating and vibrating parts of construction, agricultural machinery and machine tools.
- Stops squeaking noise from shutters, door hinges, chains of bicycles and steel furniture.

[Performance]

Base Oil	Mineral Oil
Thickening agent	Aluminum complex soap
JIS Category	1
Consistency	about 320
Weld load (WL)	981N
Heat Resistance	200℃
Salt spray test	Over 72 hours
Applicable temperature	-20~200℃



Item No	Product Name	Volumetric capacity・Packing
00020	High-Grade Grease	300ml x 24pcs

Soft Grease Spray

Long term anti-corrosive & lubricating grease



PRTR
Not
Applicable

Toxicity
Low

Waterproof 2 Ways

[Features]

- Superior in rust - proof & water-resistance and keeps long period of lubricant effect.
- With excellent penetrating property, penetrates into narrow openings.
- Almost no foaming and splashing.
- With excellent penetrating and heat-resistant characters.

[Applications]

- Anti-rust and lubrication for the rotating and vibrating parts of the chains, gears etc.
- Applies to rotating and vibrating places where probably moistened by water, vapor and seawater; and to the places where lubricating and penetrating required at high temperature.
- Stops squeaking noise from shutters, door hinges, chains of bicycles and steel furniture.

[Performance]

Base Oil	Mineral Oil
Thickening agent	Special complex soap
JIS Category	1
Consistency	about 330
Weld load (WL)	1961N
Heat Resistance	200℃
Salt spray test	Over 500 hours
Applicable temperature	-20~170℃



Item No	Product Name	Volumetric capacity・Packing
00109	Soft Grease Spray	300ml x 24pcs

Chain Grease

White penetrating grease (compounded with white solid lubricant)

[Features]

- Containing white solid lubricating agent with strong abrasion resistance and noise reduction effects.
- Super high - grade adhesive, waterproofing, acid & alkali resistance.
- This grease, which has excellent penetrating performance, spreads to any complicated places.
- Strong against corrosion.
- No performance reduction under water splashing conditions.
- Do not have any effect on O-Ring, such as seal chain.
- High adherent with least splashing.

[Applications]

- Applies to open gears, guide rail, slide rail, wire rope, crane wire, gear coupling, motorcycle and chains.
- As a lubricating agent for the components where penetrating and waterproofing are necessary.
- Applies to narrow openings.
- Spray to the places where scattering or grease trickling is in question.

[Performance]

Base Oil	Mineral Oil
Thickening agent	Lithium soap
JIS Category	0
Consistency	About 370
Weld load (WL)	1961N
Heat Resistance	100℃
Salt spray test	Over 120 hours
Applicable temperature	-15~120℃



Grease up of open-chain where scattering is avoided

Item No	Product Name	Volumetric capacity・Packing
00512	Chain Grease	300ml x 24pcs

Lithium Grease

General purpose grease spray

PRTR
Not
Applicable

Toxicity
Low

[Features]

- Available for Long time application, excellent consistency because of its super mechanical stability.
- Stands up to long time usage, due to its excellent water-proof, anti-rust and oxidization stabilities.

[Applications]

- Applicable to every kind of wheel bearing, gear and pin.
- Sliding and rolling for every kind of industrial machines, bearings.

[Performance]

Base Oil	Mineral Oil
Thickening agent	Lithium soap
JIS Category	1
Consistency	323
Weld load (WL)	1236N
Heat Resistance	150℃
Salt spray test	Over 72 hours
Applicable temperature	-20~150℃



Item No	Product Name	Volumetric capacity・Packing
00511	Lithium Grease	420ml x 24pcs

Silicone Grease / Silicone Grease Spray

Heat resistant, cold resistant & water-proof grease



PRTR
Not
Applicable

Toxicity
Low

Waterproof

[Features]

- Prevents rubber and plastic from wearing off and dwindling down.
- Applicable temperature from -40~180℃
- Different from common grease, no dripping at high temperature and no hardened at low temperature. Chemically an inert product.

[Applications]

- Lubrication for Disk Brakes O ring.
- Seals for cup rubber of wheel cylinder.
- Lubrication for wiper motor.
- Lubrication for Clutch・Pilot and Bearing
- Lubricates the bumping point of Back plate and brake shoe
- Lubricates and seals gear vibrating part.
- Anti-rust and water proof for battery terminal connector.

[Performance]

Base Oil	Silicone Oil
Thickening agent	Lithium soap
JIS Category	2(00025)/1(00026)
Consistency	260(00025)/320(00026)
Weld load (WL)	—
Heat Resistance	180℃
Salt spray test	48 hours
Applicable temperature	-40~180℃



Lubrication of plastic parts

Item No	Product Name	Volumetric capacity・Packing
00025	Silicone Grease	100g x 24pcs
00026	Silicone Grease Spray	220ml x 24pcs

※Not applicable to Silicone Rubber and Nature Rubber.
※Not applicable to boundary lubrication of steel and steel.

Damp-Proof Grease for Connector

Damp-proof lubricating grease for couplers



PRTR
Not
Applicable

Toxicity
Low

Bottom-Up
Spray OK Waterproof

[Features]

- Lubricating and anti-moisture grease for coupler housing of various machines.
- Makes coupler easy attachable and removable, prevents terminal from damaging by PTFE.
- Prevents coupler from moistening in high humidity environment.
- Improves electrification, recovers electric conduction, terminal.
- Meanwhile, protecting contact point from rusting by its excellent anti-rust property.

[Applications]

- Used as lubricating and moisture proof agent for coupler and terminal.
- Rust and moisture proof from the reverse side of solderless terminal.
- Lubricating and anti-moisture for coupler of automobile, vessels and various machines.

[Performance]

Base Oil	Synthetic oil
Thickening agent	Lithium soap
JIS Category	2
Consistency	about 290
Weld load (WL)	1236N
Heat Resistance	150℃
Salt spray test	over 120 hours
Applicable temperature	-55~130℃



Item No	Product Name	Volumetric capacity・Packing
00285	Damp-proof Grease for Connector	180ml x 24pcs

Moly-Attack

High concentration molybdenum disulfide paste spray



PRTR
Applicable

Toxicity
Low

Strong power

[Features]

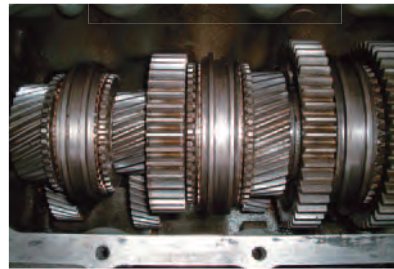
- Forms moist molybdenum disulfide film. Maintains high chemical stability and able to be used in the places immersed in water or organic solvents.
- With extremely low coefficient of friction, from low temperature to high temperature (-30~400℃), keeps high lubricating effect, strong against extreme high pressure.
- Able to be mixed with ordinary lubricating oil to increase lubricity.

[Applications]

- Prevents high - pressure sliding and rotating place from burning, seizure, abrasion and squeaking for machine tools and construction machinery.

[Performance]

Salt spray test	—
Indoor rust proof	—
Weld Load	2452N
Heat Resistance	400℃
Kinetic Friction Coefficient	0.10
Applicable temperature	-30℃~400℃



Item No	Product Name	Volumetric capacity・Packing
00022	Moly-Attack	300ml x 24pcs



Anti-Seize Spray

Preventing high temperature screw adhesion

PRTR
Applicable

Toxicity
Low

[Features]

- Prevents screw from seizing, sticking and burning under high temperature and high load.
- Prevents parts from damaging.
- Temperature range : -40~1,200℃
- With rust-proof effect.(indoor rust proof).Keeps high performance for long period.
- With lubricity, screw can be easily detached.

[Applications]

- Prevents machine screw, bolt or nut used for high temperature blast furnace or quenching furnaces from seizing, sticking and burning.

[Performance]

Salt spray test	Over 120 hours
Indoor rust proof	Over 1 Year
Weld Load	2452N
Heat Resistance	1,200℃
Kinetic Friction Coefficient	—
Applicable temperature	-40℃~1,200℃



Item No	Product Name	Volumetric capacity・Packing
00199	Anti-Seize Spray	300ml x 24pcs



Dry Lubricant

Dry film lubricating agen “PTFE” dispersion type



PRTR
Not Applicable

Bottom-Up Spray OK

[Features]

- Not sticky. Dry film(PTFE Powders), dust is not attachable.
- Most suitable for the plastic part lubricating.
- Stops v - belt squeaking noise.

[Applications]

- Stops squeaking noise of V-Belt.
- Lubrication for door locks, hinges, chains, etc.
- Lubrication for oil seal and rubber hose jointing.

[Performance]

Heat Resistance	250℃
Kinetic Friction Coefficient	0.04~0.07
Applicable temperature	Below 250℃



Item No	Product Name	Volumetric capacity・Packing
00186	Dry Lubricant	65ml x 48pcs



Food Machinery Lubricant

Oil spray applied to NSF-H and 3H grade food machines



PRTR
Not Applicable

Toxicity
Low

2 Ways

[Features]

- This lubricant, itself is eatable. Produced on Food oil line.
- Liquid lubricating oil, with vegetal fatty acid of a high degree of purity as major ingredient.
- The properties of liquidity, permeability, digestible and absorbable, which cannot be found in other general vegetable oil.
- Super oxidation stability (preservation), able to keep long lubricating effect.
- Biodegradable and non-toxic. The composition - Triglyceride is used for processing food and medicine.

[Applications]

- Used as lubricating agent for food processing machines; mould releasing agent for food containers.
- As lubricant for food-cutter, meanwhile, preventing food adhere.

NSF	H1, 3H
Approval Number	No.144730



[Performance]

Lubricity	Kinetic Friction Coefficient	0.17
	Pressure Resistance	0.55Mpa (Four Ball Test: 200rpm)
Oxidation Stability	97.8±0.2℃	Over 300 hours
Temperature characteristics	Applicable temperature	-5℃~200℃
	Flash point	240℃

[Biochemical performance]

Taste	Taste less
Digestibility	Hydrolysis and absorption easily
Metabolizability	Easily Oxidized
Coliform Group	Negative

Item No	Product Name	Volumetric capacity・Packing
00127	Food Machinery Lubricant	420ml x 24pcs
00627	Food Machinery Lubricant	16L x 1can

Food Machinery Grease

NSF-H 1 grade machinery grease spray



PRTR
Not Applicable

Toxicity
Low

2 Ways

[Features]

- White grease spray used for food machines with excellent water proof, oxidation and mechanical stability.
- Applied to the places where may contact with foods.
- With excellent oxidation stability, keeps long term lubricating effect.

[Applications]

- As a lubricant for food machinery chains, rotating and vibrating places.
- Used for fish or meat processing machines; filling up equipment for sake brewing, and various drinking; food conveyor or packing apparatus, etc.

NSF	H1
Approval Number	No.144729



[Performance]

Test category	Test Measure	Test result	
Consistency	JIS K 2220	217℃	
Drop point	JIS K 2220	10.2wt%	
Oil Separation	JIS K 2220		
Low-temperature torque test	JIS K 2220	−20℃	Starting torque 6.7N・cm
			Running torque 4.3N・cm
		−20℃	Starting torque 20.2N・cm
			Running torque 11.8N・cm
Shell four-ball test	ASTM D 2596	Last Non-Seizure load 1236N	
		Welding load 3090N	
		Load wear index 578N	
Soda four ball test	JIS K 2519	Acceptable limit load 0.441MPa	
		Average friction coefficient 0.79mm	

[Safety]

	Test category	Test result
Material test	Lead	Under 1ppm
	Calcium	Under 1ppm
	Heavy metal	Under 1ppm(Pb)
Dissolution test	Potassium permanganate consumed	Under 0.5ppm

[About NSF]

NSF (National Sanitation Foundation) is a Third Party Nonprofit Organization of USA which after transferred the Certification Program from U.S. Department of Agriculture (USDA) assume the Safety Registration Service (H1 and 3H are one of the services) of chemical products used at food-processing field.

[NSF H1]

H1 is the standards for lubricant agent possible to be used at places that has a possibility to contact with foods accidentally. It should not contact with food directly, but it is safety in contacting case.


[NSF 3H]

3H is the standards for mould release agent possible to be used at hard surfaces for prevent adhesion of foods. It is used for contact directly to foods such mould of butter, ice-cream, grill, etc. It is utilized cooking oils that don't have problem if eat.




Stainless Cut / Stainless Cut L


Cutting lubricant with superior anti-weld and extreme high pressure performance



Strong power



PRTR
Not Applicable



Toxicity
Low

- [Features]
- As extreme pressure chlorine additive contained, superior in anti-deposition and most suitable for hard cutting materials.
 - With the effect of reducing abrasion of the drill bit, extend tools' life.
 - Quicken cutting speed and raise work efficiency.
 - Smoothly ejects cutting chips. Almost no burrs, curves and prevents plucking off and seizing.
 - Finishes with an excellent smooth surface & improves the dimensional accuracy.
- [Applications]
- Used as a lubricating agent in the process of tapping, thread cutting, twist drilling, reaming and broaching for hard cutting materials, such as stainless, aluminum, copper, titanium alloy, etc.
- [Performance]




Weld Load	4903N
Copper strip corrosion test	1a (100℃ x 1hr)
Viscosity(40℃)	36cSt
	—
Applicable temperature	Below 100℃


Item No	Product Name	Volumetric capacity・Packing
00111	Stainless Cut	330ml x 24pcs
00113	Stainless Cut 1L	1L x 12pcs

Super-Cutting Spray / Super Cutting Oil


Chlorine and activated ion free




Environment Friendly



2 Ways



PRTR
Not Applicable



Toxicity
Low

- [Features]
- Do not contain chorine, phosphorus, activated ion and heavy metal.
 - New Cutting Agent applicable to almost all materials from light cut to heavy cut.
 - No worry of generation of Dioxin, since it does not contain Chlorine. Saves time for separation of waste.
 - No worry of materials corrosion, because it bases mineral oil with none-reaction additives.
 - No unpleasant smell from ion additives.
- [Applications]
- Applies to all kinds of metals along with non-ferrous metals.
 - Used in the process of tapping, drilling, reaming, screw cutting and broaching works.
- [Performance]



Weld Load	2452N
Copper strip corrosion test	1a (100℃ x 1hr)
Viscosity(40℃)	44.7cSt
Inactive Sulfur	Below 0.5%
Applicable temperature	Below 100℃

Item No	Product Name	Volumetric capacity・Packing
00114	Super Cutting Spray	420ml x 24pcs
00614	Super Cutting Oil	1L x 12pcs

Tapping Spray(Chlorine-Free)

Cutting lubricant



Environment Friendly

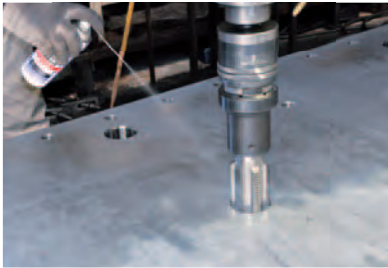


PRTR
Not Applicable



Toxicity
Low

- [Features]
- No worry of generation of Dioxin, since it does not contain Chlorine Paraffin. Saves time for separation of waste.
- [Applications]
- Applies to all kinds of metals along with non-ferrous metals.
 - Used in the process of tapping, drilling, reaming, screw cutting and broaching works.
- [Performance]




Weld Load	2120N
Copper strip corrosion test	1a (100℃ x 1hr)
Viscosity(40℃)	44.7cSt
Inactive Sulfur	Below 0.6%
Applicable temperature	Below 100℃

Item No	Product Name	Volumetric capacity・Packing
00189	Tapping Spray (Chlorine-Free)	420ml x 24pcs




Biodegradable Chemicals


Biodegradable products are suitable to be used at environment conservation areas (forests・farm ・river, etc)




Environment Friendly




2 Ways



Bottom-Up Spray OK

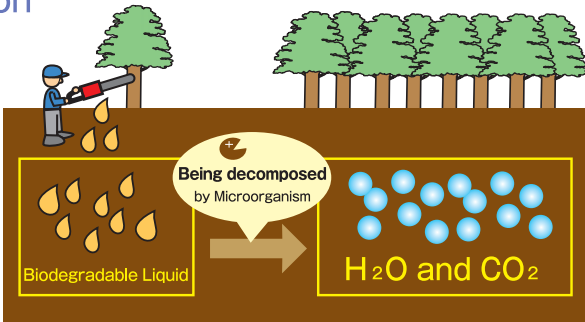


PRTR
Not Applicable



Toxicity
Low

Organic chemical substances contained in the solvent are decomposed into H₂O and CO₂ by Microorganism, return to the nature.



※Do not discharge large quantity of oil into nature rashly, please follow the reference law

Biodegradable Oil Spray-EX

Biodegradable anti-corrosive lubricating oil



- [Features]
- Green product and safe to use since its base oil is Biodegradable Synthetic Ester.
 - Biodegradable rate is more than 60% (OECD 301C/28 days).
 - Raw material of this product has passed Biodegradable Lubricating Oil Eco Mark Certification Criteria.
- [Applications]
- Loosens binding crews, nuts, etc. caused by rust or seizure.
 - Used as rust removing and preventing agent for blades.
 - Anti - rust and lubrication for door hinges or chains, etc.



Item No	Product Name	Volumetric capacity・Packing
00820	Biodegradable Oil Spray-EX	420ml x 24pcs

Biodegradable Grease Spray-EX

Biodegradable anti-corrosive lubricating grease



- [Features]
- Uses Biodegradable Grease, Environment - friendly product.
 - Biodegradable rate is more than 60% (OECD 301C/28 days).
 - Raw material of this product has passed Biodegradable Lubricating Oil Eco Mark Certification Criteria.
- [Applications]
- As a lubricating agent for rotating and vibrating places of various agriculture machines. (Tractor, Combine Harvester, Chain Saw, Bush Cutter).
 - Applied to door hinges, chains or shutter, etc.



Item No	Product Name	Volumetric capacity・Packing
00821	Biodegradable Grease Spray-EX	420ml x 24pcs

Biodegradable Chain Oil Spray-EX

Biodegradable chain oil



- [Features]
- Green product and safe to use since its base oil is Natural Vegetable Oil.
 - Biodegradable rate is more than 60% (OECD 301C/28 days).
 - Raw material of this product has passed Biodegradable Lubricating Oil Eco Mark Certification Criteria.
- [Applications]
- Applied to chain saw, forklift, bicycle chain or gear.
 - As a lubricating agent for rotating and vibrating places of various agriculture machines. (Tractor, Combine Harvester, Chain Saw, Bush Cutter).



Item No	Product Name	Volumetric capacity・Packing
00822	Biodegradable Chain Oil Spray-EX	420ml x 24pcs

Rust Jet

Water displacing anti-rust agent

PRTR
Not
Applicable

Toxicity
Low

[Features]

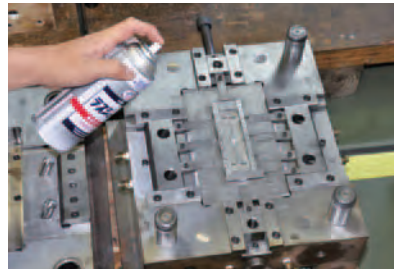
- Prevents rusting by displacing water. Able to apply to all kinds of metals. Doesn't corrode metal surface or change its color.
- No interference with electrical contacts: Suitable for the protection of electrical devices.
- Protects coated surface from salt adhesion or corrosion on sea: Prevents from corrosion caused by fingerprints.

[Applications]

- For rust prevention and lubrication of all kinds of metal products, precision instruments, tools and surface plates, etc.
- For rust and moisture prevention on complicated wiring of electrical devices, batteries, communication equipment, computers and motors.

[Performance]

Salt spray test	Over 120 hours
Indoor rust proof	Over 24 months
Outdoor rust proof	Not Available
Film thickness	2-3µm
Applicable temperature	-10℃~130℃



Item No	Product Name	Volumetric capacity·Packing
00107	Rust Jet	420ml x 24pcs
00160	Rust Jet 15L	15L x 1 can

Rustguard

Semi-dried anti-rust agent

PRTR
Applicable

[Features]

- Semi-dried, no stripping even scratched by hand.
- Super-strong rust-preventing property in adverse conditions caused by outdoors moisture, salinity and chemical or corrosive environment.
- Suitable used as long-term indoor and outdoor rust preventing agent.
- Can be used as lubricant and anti-corrosive agent for hinges of bonnet and boot.

[Applications]

- Rust proof for parts in processing, storage and transit.
- Indoor and outdoor storage for ferrous material and machinery.
- Corrosion-protection for machinery, like iron plate, ferrous material of garage, pump, house and factory near the sea.
- Weld surfaces under chassis and inside of fender, locker panel.

[Performance]

Salt spray test	Over 480 hours
Indoor rust proof	Over 5 years at film thickness 50µm
Outdoor rust proof	Over 2 years at film thickness 50µm
Film thickness	20µm~50µm
Applicable temperature	Below 100℃



Item No	Product Name	Volumetric capacity·Packing
00088	Rustguard Clear	500ml x 24pcs
00089	Rustguard Brown	500ml x 24pcs

Rustguard Green

Wax-based · mould anti-rust agent

Odorless

PRTR
Not
Applicable

Toxicity
Low

[Features]

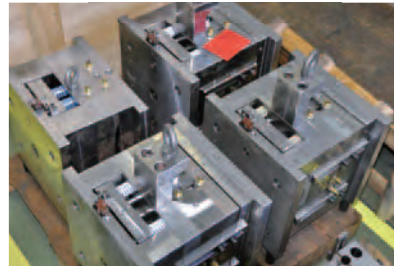
- An odorless anti-corrosive agent made from high-refined wax and little odor solvent.
- Wax-based, semi-dried film protects metal surface and keeps excellent rust proof effect.
- Not only used for mould, but also can be applied to machine parts and equipment.
- Film is easy to be checked because of the green color. Increase work efficiency
- Suitable for places where the agent is required to be removed in future.

[Applications]

- Corrosion prevention for mould, machine parts and equipments.

[Performance]

Salt spray test	Over 96 hours
Indoor rust proof	Over 1 and half a year
Semi-sealed condition	2 Years~3 Years
Film thickness	20µm~50µm
Applicable temperature	Below 50℃



Item No	Product Name	Volumetric capacity·Packing
00129	Rustguard Green	480ml x 24pcs

Mould Anti-Corrosion Agent-Volatile

Volatile anti-rust agent

PRTR
Not
Applicable

Toxicity
Low

[Features]

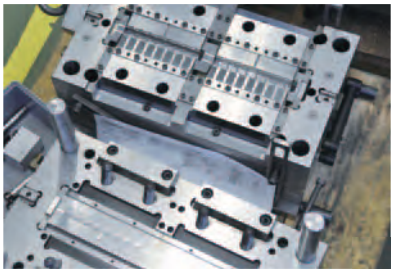
- Excellent rust - proof effect in any small & complicated places owing to volatility. (Including the places where can not be covered by spray)
- Different from anticorrosive oil or wax type, can be used without mould cleaning.
- Can be restarted the mould without cleaning. Only shoot out 2 to 3 times for trial run.
- Once it is applied, rust proof film is formed on the metal surface and meanwhile, volatilized rust prevention molecule reacts with water and changes to rust - proof water to prevent metals from corrosion.

[Applications]

- Rust prevention for injection mold.
- Rust proof for preserve or transport of metal parts, etc.

[Performance]

Salt spray test	—
Semi-sealed condition	6 Months~1 year
Completely sealed condition	1~2 years
Applicable temperature	Below 80℃



Item No	Product Name	Volumetric capacity·Packing
00125	Mould Anti-corrosion Agent-Volatile	420ml x 24pcs

Blacking Spray

High adhesion and quality finish

PRTR
Applicable

[Features]

- Clear black finish with thin film.
- Compounded of high concentration of graphite and high adhesion of resin.
- The coating film won't peel off even if the metals bump with each other.

[Applications]

- For blacking metals like iron, stainless, copper, aluminum, and POM(POLYACETAL) and ABS resin.

[Performance]

Drying time (to touch)	2~3 min
Drying time (to be hard)	about 20 min
Heat-resistant temperature	150℃
Application area	1.5m ²
Applicable temperature	Normal temperature



Item No	Product Name	Volumetric capacity·Packing
00179	Blackening Spray	420ml x 24pcs

Repair Pen Black

Black repair paint

PRTR
Applicable

[Features]

- Pen type black paint.
- Simply brush the peeling off parts with the pen, do not soil the hands.
- Clear black finish with the covered thin film.
- Contains special epoxy resin, which has excellent oil resistant property.
- High adhesion thin film won't peel off the surface even the metals bump with each other.

[Applications]

- Repairs metals, such as iron, stainless, copper, aluminum, etc. (*It is not available for rubber and plastic.)

[Performance]

Drying time (to touch)	2~3 min
Drying time (to be hard)	about 20 min
Heat-resistant temperature	150℃
Application area	1.5~2 m ²
Applicable temperature	Normal temperature



Item No	Product Name	Volumetric capacity·Packing
00590	Repair Pen Black	30ml x 6pcs

Heat Resistant Silver / Heat Resistant Black

Heat resistant paint

PRTR
Applicable



[Features]

- Heat Resistant Temperature: 600℃
- Even at 600℃ shocked by cold water, the coated film won't either peeling off or discolor.
- Protects from salt damage caused by snow melt agent, etc.
- When film gets dried, more adhesion hardened - film is formed by heating up.

[Applications]

- Exhaust Muffler of Automobile and Motorbike, Heating Stove, Chimney, Incinerator, Steam Piping etc.

[Performance]

Drying time (to touch)	15~20 min
Drying time (to be hard)	Differ to heating condition
Heat-resistant temperature	600℃
Application area	0.6~0.7㎡



Item No	Product Name	Volumetric capacity·Packing
00082	Heat Resistant Silver	420ml x 24pcs
00086	Heat Resistant Black	420ml x 24pcs

Sabes SP 500 / Sabes SP 4L

PRTR
Applicable

Toxicity
Low



[Features]

- Releases rust from corroded and fastened bolt by several minutes penetrating.
- Removing rust by dipping rusted metals into SABES for less than 10 minutes.

[Applications]

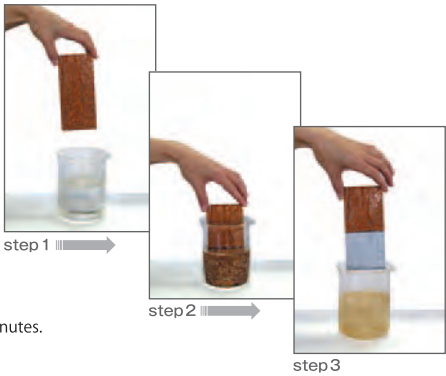
- Removes rust from metals, removal of oxidation film such as oxidation film of concrete on steel surface and lime calcium sediment etc.
- After removal of rust, cleans the surface by washing or wipe off by cloth. Afterwards, proceed anticorrosive treating.

[Performance]

Applicable temperature	Normal temperature
------------------------	--------------------

[Application method]

- 1 : Applies evenly on corroded surface, and leaves it for several minutes.
- 2 : Afterwards, wipe rust off with waste.
- 3 : If rust is not completely removed, repeats ① and ②.
- 4 : After removing rust, flush the surface with water.
- 5 : To prevent getting rusted again, use anti-corrosive agent for final anti-corrosive treatment.
 - ※ For severe rust, scrapes coarse rust with wire brush beforehand.
 - ※ After applying SABES, don't leave it for more than 10 minutes. It may cause corrosion on non-rusted parts.
 - ※ The same procedure with lime calcium sediment and concrete.



Item No	Product Name	Volumetric capacity·Packing
00694	Sabes SP 500	500ml x 12pcs
00695	Sabes SP 4L	4L x 4bottles

Safety Clean

Strong alkali water-based cleaner

[Features]

- Alkali cleaning agent, remove obstinate oily dirt stained on the metals, machines, such as rough oily dirt and backed oil on engine.
- Water-based agent, not flammable or explosive.

[Applications]

- Removal of oily dirt from machines, parts, tools, factory equipment and floor.
- Cleaning oily dirt stained on cars or ships.
- Cleaner for car engine, chassis, tire, lining in vehicle, the inside of hook hood and trunk.
- *Can be used by undiluted solution or water-diluted solution.
- *Hand spray bottle (Item No: 00196, 1 Lit) is available for Separate Sale.



00196
Hand Spray Bottle



Item No	Product Name	ph	Clean Power	Mist Odor	Features
00067	Safety Clean	13~14	★★	Low	Strong power cleaner. Water-diluted solution is available to be applied to all places.
00167	Safety Clean Cube	13~14	★★	Low	Backing box of 00067
00068	Safety Clean A	13~14	★★★	a little	Stronger than 00067, available to be applied to obstinate oily dirty of animal & plant.
00168	Safety Clean A Cube	13~14	★★★	a little	Backing box of 00068
00069	Safety Clean S	13~14	★★★★	strong	Very strong alkali cleaner. To remove the dirty which can not be cleansed by other cleaners or scorched oily dirty, etc.
00169	Safety Clean S Cube	13~14	★★★★	strong	Backing box of 00069 safety clean S
00170	Phosphorus-Free Safety Cleaner 20L	7~8	★	without pungent smell	Neutral cleaning agent, little effect on aluminum, rubber and plastic.
00304	Phosphorus-Free Safety Cleaner 1L	7~8	★	without pungent smell	1 L package of 00170

※ ★ indicates cleaning power, the more ★ the stronger the cleaning power is.

								
Item No	Product Name	Volumetric capacity・Packing	Item No	Product Name	Volumetric capacity・Packing	Item No	Product Name	Volumetric capacity・Packing
00067	Safety Clean	20L x 1can	00068	Safety Clean A	20L x 1can	00069	Safety Clean S	20L x 1can
00167	Safety Clean Cube	20L x 1box	00168	Safety Clean A Cube	20L x 1box	00169	Safety Clean S Cube	20L x 1box



Item No	Product Name	Volumetric capacity·Packing
00170	Phosphorus-Free Safety Cleaner	20L x 1box
00304	Phosphorus-Free Safety Cleaner 1L	1L x 12pcs

Item No	Product Name	Volumetric capacity·Packing
00196	Hand Spray Bottle	1L x 1pc

Dilution Ratio

Application	67/167	68/168	69/169	170
Cleans various engine, scorched oily dirty and oxidized dirty.	undiluted liquid~	undiluted liquid~	undiluted liquid~	undiluted liquid~
Removes oily dirty from Machines, Parts, and tools.	~5times	~5times	~10times	~2 times
Cleans factory and office floor.	~10times	~10times	~20times	~5times
Cleans process goods, removes process oil and anti-rust oil from every kind of parts, machines.	~20times	~20times	unavailable	~10times
Indoor cleaning for automobile, vessel, etc.	~30times	~30times	unavailable	~20times

※Because of strong alkali, some metal, such as aluminum, magnesium might be corroded.
※Undiluted liquid strong affects rubber, plastic and paint surface, please test on unnoticeable place before use.

Parts & Brake Cleaner Series

Toxicity
Low

[Features]

- A chemical cleaning agent with very low toxicity.
- Rapid dry type.
- Quick removes oily dirty from metal, mould and precision instrument.
- This agent, itself, doesn't corrode any metal.
- Little influence on resin and rubber products.
- We have a great variety of cleaning products to meet every kind of needs.

[Applications]

- Cleanse anti-corrosive oil and cutting oil from metal parts, mould and tools.
- Removal of oil stains along with iron powder from hydraulic instruments or cylinders.
- Removal of grease stains from gearboxes and bearings.
- Removal of oil stains from hydraulic machinery or cylinders.
- Cleaning of precision machinery.
- Cleaning of oily dirty surrounding automobile, forklift and brake.

Cautions : Because it is flammable, don't use it while electric switch on.
Do not spray excessively onto rubber, plastic and paint surface.

Item No	Product Name	Volumetric capacity•Packing	Clean Power	Drying speed	Influence on resin	Feature
①	00118 Parts & Brake Cleaner	420ml x 24pcs	★★	★★	★★	Little affect on resin and rubber

PRTR
Applicable

Item No	Product Name	Volumetric capacity•Packing	Clean Power	Drying speed	Influence on resin	Feature
②	00062 Parts & Brake Cleaner A	500ml x 24pcs	★★★	★★	★	Standard specification, almighty type

PRTR
Not Applicable

Item No	Product Name	Volumetric capacity•Packing	Clean Power	Drying speed	Influence on resin	Feature
③	00598 Parts & Brake Cleaner 840	840ml x 30pcs	★★	★★	★★★	Jumbo can, economy size

PRTR
Not Applicable

Item No	Product Name	Volumetric capacity•Packing	Clean Power	Drying speed	Influence on resin	Feature
④	00600 Strong Parts & Brake Cleaner SUPER MAX	840ml x 24pcs	★★★	★★	★	Strong cleaning power, 840ml Jumbo Can

PRTR
Not Applicable

Item No	Product Name	Volumetric capacity•Packing	Clean Power	Drying speed	Influence on resin	Feature
⑤	00601 Quick dry parts & Brake Cleaner SUPER MAX	840ml x 24pcs	★	★★★★	★★★	Dry quickly, 840ml Jumbo Can.

PRTR
Applicable

Item No	Product Name	Volumetric capacity•Packing	Clean Power	Drying speed	Influence on resin	Feature
⑥	00262 Parts & Brake Cleaner A 18L	18L x 1can	★★★	★★	★★	18L can of 00062 liquid type. Refill spray set (00930) is available

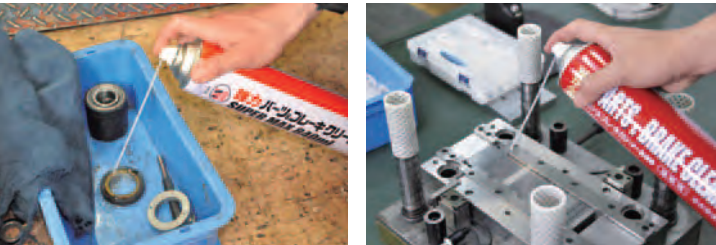
PRTR
Not Applicable

Item No	Product Name	Volumetric capacity•Packing	Clean Power	Drying speed	Influence on resin	Feature
⑦	00265 Parts & Brake Cleaner T 18L	18L x 1can	★★★	★★	★★	18L can of 00062 liquid type with screw cap. Refill spray set (00930) is available

PRTR
Not Applicable

[Performance]

Applicable temperature	Normal temperature
------------------------	--------------------



Regarding ★ mark

※The comparison of cleaning power, drying characteristics and resin impact are based on solvent cleaning data of our company. The number of ★ indicates the power of each product. The more ☆, the stronger the power is.
◆The more ★, the stronger the cleaning power is.
◆The more ★, the quicker the product gets dried.
◆The more ★, the less affect resin.
※The resin impact is different according to resin type, therefore, please test on unnoticeable place before use.



econo Refill Equipment

An easy refill equipment for Parts Cleaner

[Features]

- An economy and easy refilling system. Only available for refilling Parts Cleaner.
- Green product, jetting out liquid by compressed air.
- 00262 Parts & Brake Cleaner is not applicable to PRTR.
- Cleaner and air are refilled at the same time.
- Air can be filled up separately when only liquid is left in Spray Can.
- Special spray can set, which is made by light and pressure – resistant steel is able to be refilled repeatedly.

[How to use]

- ①Set up the special cleaner agent and air hose at refilling machine.
 - ②Put the changeover switch at [Agent + Air] side and the operation switch at [Filling up] side.
 - ③For start the filling up operation fix the special filling bottle at the clamp plate.
 - ④The indicator starts work and when it complete put the operation switch at [Detachment] side. Then you can detach the special filling bottle.
- ※Please read the machine attached instruction manual for more details.

Item No	Product Name	Volumetric capacity•Packing
00930	econo Refill Equipment	1set
00931	econo Spray Set	3pcs



No.00930
econo Refill Equipment



No.00931
econo Spray Set



No.00262
Parts & Brake Cleaner A 18L

Refill Spray Set

An easy refill equipment for parts cleaner

[Features]

- One can of Parts & Brake cleaner is enough for refilling 78 bottles.
- Green product, jetting out liquid by compressed air.
- Our cleaners (00265, 00257 and 00251) are not applicable to PRTR.
- Special spray can set, which is made by light and pressure – resistant steel is able to be refilled repeatedly.

[How to use]

- ①Set up the Quantitative Cock at 18L can.
 - ※It is not possible use at screw cap type 18L can.
 - ②Lay the 18L can as putting the transparent pipe to look down. Take off the cap of Spray Can and insert it at the transparent pipe.
 - ③Push the black button, when the solution stop to flow push again the black button and take off slowly from the pipe.
 - ④Close the Spray Can cap tightly.
 - ⑤Complete injecting air for 3 to 5 second from bottom of the Spray Can.
- ※Please read the machine attached instruction manual for more details.

Item No	Product Name	Packing
00940	Refill Spray Set	1set
00941	Refill Spray Can	1pc
00942	Air Fill Up Hose	1pc
00943	Quantitative Cock	1pc



No.00941
Refill Spray Can



No.00265
Parts & Brake Cleaner T 18L



No.00257
M-1Cleaner 18L

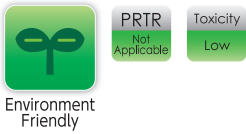


No.00251
2B Cleaner 18L



2B Cleaner

Class II petro-leums



[Features]

- Class II petroleum has a high flash point, and it is safety comparing with class I petroleum.
- Low toxicity chemical cleaning agent.
- Dry slowly, strong clean power and easy handling.
- Reduces empty can waste by using refill spray bottle. (see page 17)

[Applications]

- Cleans anti - corrosive or cutting oil from metal parts, mould and tool, etc.
- Removes grease from gearbox and bearings.
- Removal of oil stains from hydraulic machinery or cylinders.
- Removal of oil dirty from chain.
- Cleaning of precision machinery.
- Cleaning of oily dirty surrounding automobile, forklift and brake.

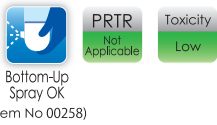
Applicable temperature	Normal temperature
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Item No	Product Name	Volumetric capacity•Packing
00251	2B Cleaner	18L x 1can

M-1 Cleaner

Strong power degreasing cleaner, dry at medium speed



[Features]

- A Strong power degreasing cleaner, get dried at medium speed.
- Actual capacity is 15% increase than normal 840 ml can (Compared to our company's products)
- Glycolic brake oil gets mixed with dirty oil without separation.
- Not applicable to PRTR.
- Bottom-up spray is available, stainless nozzle sprays to every narrow openings.

[Applications]

- Cleaning of oily dirty on machine, equipment and parts.
- Cleans anti - corrosive or cutting oil from metal parts, mould and tool, etc.
- Removes grease from gearbox and bearings.
- Removal of oil stains from hydraulic machinery or cylinders.
- Removal of oil dirty from chain.
- Cleaning of oily dirty surrounding automobile, forklift and brake.



Item No	Product Name	Volumetric capacity•Packing
00257	M-1 Cleaner 18L	18L x 1can
00258	M-1 Cleaner 840ml	840ml x 30pcs

Brake Clean

Strong power degreasing cleaner



[Features]

- The most powerful cleaner among aerosol cleaners.
- Because it is not a quick dry type, penetrates and clearly cleanses oily dirty even with a small amount of cleaner.
- Glycolic brake oil gets mixed with dirty oil without separation.
- Not applicable to resin, rubber and paint surface because of its strong cleaning power.
- Able to remove oily ink.

[Applications]

- Degreasing cleaner for metal parts.
- Removes oily dirty from pipe or motor, etc.
- Cleaning of oily dirty surrounding automobile, forklift and brake.
- Removal of marking paint and magic ink, etc.
- Removal of oil dirty from chain.

[Performance]

Clean Power	Drying speed	Influence on resin	Applicable temperature	Normal temperature
★★★★	★	not applicable		

Please see page 16 regarding ★ mark.



Item No	Product Name	Volumetric capacity•Packing
00258	Brake Clean	500ml x 24pcs

Mould Cleaner

Degreasing cleaner for mould



[Features]

- Product developed for clean mould.
- Simply removes cutting oil and powder generated during mould processing.
- Simply removes anti-rust or anti-corrosive wax
- Not applicable to PRTR.
- Superior cleaning power, rapid dry and high work efficiency.

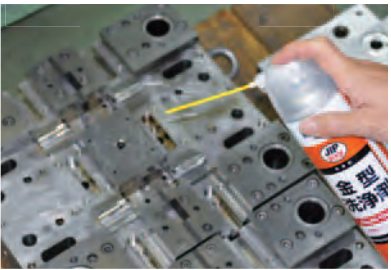
[Applications]

- Chemical Cleaner for removal of cutting oil and powder generated during mould processing.
- Removal of anti-corrosive agent and oily dirty for mould.
- Removes oil stains from machines, equipment and parts.

[Performance]

Clean Power	Drying speed	Influence on resin	Applicable temperature	Normal temperature
★★★★	★★	★★★		

Please see page 16 regarding ★ mark.



Item No	Product Name	Volumetric capacity•Packing
00119	Mould Cleaner	500ml x 24pcs
00619	Mould Cleaner 840ml	840ml x 24pcs

Deposit Cleaner for Injection Mould

Strong & cleaning agent for injection mould



[Features]

- Dissolving & removing gummy and thin stain film stuck on mould during plastic mould injecting. Helps reducing inferior goods.
- Most suitable for easily stained resins, such as POM.
- Applies based on stain situation during moulding intervals or after work.

*Not able to be used when mould is warm. Applies when the mould temperature drops to room temperature.
*For mould storage, rust proof is necessary.

[Applications]

- Used as gummy removing and deposit cleaning agent for injection mould.
- Degreasing cleaner for mould.

[Performance]

Clean Power	Drying speed	Influence on resin	Applicable temperature	Normal temperature
★★★★	—	not applicable		

Please see page 16 regarding ★ mark.



Item No	Product Name	Volumetric capacity•Packing
00126	Deposit Cleaner for Injection Mould	420ml x 24pcs

Packing Stripper

Strong release agent



[Features]

- A strong stripping agent compounded of met-hylene chloride and micro-molecular cellulose.
- Aerosol spray, easy applied to stripping surface.
- Stripping and removal of burnt oil, paint coat and adhesive agent, etc.
- After stripping, stains can be cleaned by water.

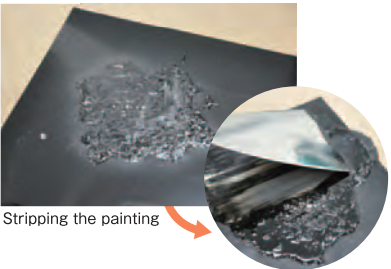
[Applications]

- Stripping and removal of burnt packing of engine. (Cylinder Packing Ring and Cylinder Head Gasket)
- Removal of stubborn oil stains, burnt carbon, sealing compound and adhesives.
- Removal of every kind of paint.

[Performance]

Clean Power	Drying speed	Influence on resin	Applicable temperature	Normal temperature
★★★★	—	not applicable		

Please see page 16 regarding ★ mark.



Item No	Product Name	Volumetric capacity•Packing
00066	Packing Stripper	300ml x 24pcs

Air Duster

Blow dust by dry air



[Features]

- Easily blows off dust, waste thread and trash just by spray.
- Simply removes the dust from every narrow opening.
- Global Warming Potential 140 (about 1/10 of HFC-134a)
- Contains special gas absorbent, bottom-up spray is available and liquid gas doesn't spout out.

[Applications]

- Used for computer, OA equipment, phototypesetter, camera, lens, scanner, FD, CD, Bills & coins processing machine, pinball machine, sewing machine, knitting machine, optical fiber connector, Television, VTR, etc.

[Performance]

Applicable temperature	Normal temperature
------------------------	--------------------



Blowing off dust of amusement machine

Item No	Product Name	Volumetric capacity•Packing
00227	Air Duster	350ml x 24pcs

Electronic Parts Cleaner

Degreaser for electronic parts



[Features]

- Cleaning of circuit board, joint points and terminals.
- Removal of carbon of electronic contacts, greasy oil, etc.
- Not applicable to PRTR. A chemical cleaning agent with very low toxicity.
- Quick dry, low influence on resin and rubber.

[Applications]

- Cleaning electric and electronic equipment, precision machines, general machines and parts, etc.
- Cleanses relay contact of various electronics, recovery of contact function.
- Cleaning of pin jack, volume, and connector, etc.
- Used as degreasing cleaner for metal parts, etc.

[Performance]

Applicable temperature	Normal temperature
------------------------	--------------------

Attention: This product is flammable. Turn off electric power when spray at machines. Don't spray a lot amount at rubbers, plastics and coated surfaces.



Item No	Product Name	Volumetric capacity•Packing
00117	Electronic Parts Cleaner	420ml x 24pcs

Multi-Cleaner N / Display Cleaner

Anti-static agent compounded, multi-degreasing cleaner



[Features]

- Removes fingerprint, dirt from display panel and glass.
- Quick dry, no white slag or uneven wiping trace left on the surface.
- Preventing static electricity because of static agent compounded.
- Don't get frozen even in winter or cold district.
- Able to clean Oily Magic Mark.

[Applications]

- Clearly cleans various screens, for example, the screen of TV, computer, car - navigation system and touch panel, etc.
- Cleans glass, window and mirror, etc.
- Cleaning of duplicator, OA equipment, exterior of electric appliances, milky - white plastic and glass.
- Cleaning maintenance for amusement equipment, magnetic head, cassette and IC card, etc.

[Performance]

Applicable temperature	Normal temperature
------------------------	--------------------



Maintenance cleaning of amusement machine

Item No	Product Name	Volumetric capacity•Packing
00268	Multi-Cleaner N	500ml x 6pcs
00269	Display Cleaner	4L x 1bottle

Bubbleless Clean

Non-bubbling, ion alkaline cleaner



[Features]

- It is ion alkaline cleaner that contains no surfactant.
- Non-bubbling as it doesn't contain surfactant.
- Water-based cleaner so it is not sticky afterwards.
- Besides mineral oil, removal of animal and vegetable oil, protein stains, etc.
- Most suitable to be used as ultrasonic system cleaner.

[Applications]

- Removal of oily dirt from machines, parts, tools and factory equipment, etc.
- Used as cleaner of ultrasonic cleaning system or high pressure cleaning machine.
- Cleaner for Food Factory and Kitchen.
- Cleaner for approach floor of bowling alley.
- * Available to be applied by undiluted solution or water-diluted solution as needed.

[Performance]

pH	13.alkalinity
Cleaning Power	★★
Odorless	colorless, transparent liquid
Applicable temperature	Normal temperature



Cleaning Approach Floor of Bowling Alley.

Item No	Product Name	Volumetric capacity•Packing
00451	Bubbleless Clean	20L x 1box

Sericiene Hand Soap

Scrub compound, cosmetic grade soap for washing hands



Sericiene Hand Soap 2.0 kgs



Sericiene Hand Soap 16 kgs

[Features]

- Quickly washes off paint, ink and oily dirt stains on hands. (Liquid Hand Soap)
- Scrub particles and solvent help to clean obstinate dirt strongly. Gently care hands with pure sericin, aloe and natural herb.
- Leaves your hands soft and smooth after washing.
- Different from other soap powder, it is a neutral liquid soap which doesn't cause the blockage in the drainpipe.

[Applications]

- Cleans obstinate dirt stains (paint, ink, oil, etc) on hands.



Item No	Product Name	Volumetric capacity•Packing
00507	Sericiene Hand Soap 2.5 kgs	2.5kgs x 6bottles
00508	Sericiene Hand Soap 2.0 kgs	2.0kgs x 6bags
00509	Sericiene Hand Soap 16 kgs	16kgs x 1box

Bio-Soap

Biodegradable scrub compound, cosmetic grade hand soap



Bio-soap 2.0 kgs



Bio-soap 16 kgs

[Features]

- Cosmetic grade liquid soap for washing your hands with scrub compounded.
- Contains biodegradable scrub particles.
- Biodegradable scrub particles deeply penetrate into obstinate dirt to wash the hands clearly.
- Moisturizing ingredients, such as hyaluronic acid, collagen, royal jelly extract gently care your hands.
- Different from other soap powder, it is a neutral liquid soap which doesn't cause the blockage in the drainpipe.

[Applications]

- Cleans obstinate dirt stains on hands.



Item No	Product Name	Volumetric capacity•Packing
00521	Bio-soap 2.5 kgs	2.5kgs x 6bottles
00522	Bio-soap 2.0 kgs	2.0kgs x 6bags
00523	Bio-soap 16 kgs	16kgs x 1box

Blue Varnish Spray / Aotack 50 / Aotack 500

Paint for line-drawing / Blue

PRTR
Not
Applicable

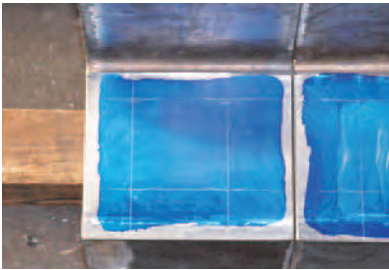
- [Features]
- Easy application spray with high adhesion.
 - Coating film is 0.005mm thick. Suitable for clear and precise scribbling.
 - Suitable to be applied to metal and glass surface.
 - Rapid dry (within 1 minute), shortens waiting time.
 - Aerosol type (Blue varnish spray) and brushing type (Aotack 50) are available.
 - *Replenishes Aotack 50 with Aotack 500.

[Applications]

- For scribbling on machines, electric instruments, devices, parts and metal surface with grinds.

[Performance]

Applicable temperature	Normal temperature
------------------------	--------------------



Item No	Product Name	Volumetric capacity•Packing
00102	Aotack 50	50ml x 48pcs
00110	Aotack 500	500ml x 24pcs

Item No	Product Name	Volumetric capacity•Packing
00101	Blue Varnish Spray	300ml x 24pcs

White-Pen Spray

Paint for line-drawing / White

PRTR
Applicable

- [Features]
- It is a white scribbling spray, easy & simple operation.
 - Coating film thickness: 0.01mm. Covers uneven surface, finish up with clear and precise scribbling.
 - Excellent adhesiveness, applicable to all kinds of metal surfaces and cast iron.
 - Rapid dry (within 3 minutes); shortens waiting time.

[Applications]

- For scribbling onto machines, casting, devices and metal surface with dark color.

[Performance]

Applicable temperature	Normal temperature
------------------------	--------------------



Item No	Product Name	Volumetric capacity•Packing
00103	White - Pen Spray	420ml x 24pcs

Blue Layout Ink Remover

Removal of varnish Paint / Powerful degreasing spray

PRTR
Applicable

- [Features]
- Rapid dry and easy removal of scribbling paint.
 - Spray type, easy access to any location.
 - Washing agent for cleaning oils from metal parts and metal working products.

[Applications]

- For removal of BLUE VARNISH, AOTACK and WHITE PEN SPRAY.
- Washing agent for cleaning oils from metal parts, mould and tools.
- Cleaning of anti-corrosive agent applied on metals.

[Performance]

Applicable temperature	Normal temperature
------------------------	--------------------



Item No	Product Name	Volumetric capacity•Packing
00104	Blue Layout Ink Remover	420ml x 24pcs
00604	Blue Layout Ink Remover 15L	15L x 1can

Blue Varnish Spray S

Not applicable to PRTR•Spray for line-drawing/blue

PRTR
Not
Applicable

Toxicity
Low

Environment
Friendly

[Features]

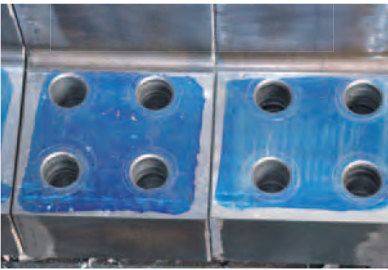
- With dark blue color, gentle on eyes. Spray type, easy and simple operation.
- Safe to use. Harmless to the environment and human body.
- Film thickness is 0.005mm. Suitable for precise scribbling.
- High adhesion, Suitable for metal and glass surface.
- Rapid dry (within 1 minute); cuts time down on drying.

[Applications]

- For scribbling on machines, electric instruments, devices and metal surface with grinds.

[Performance]

Applicable temperature	Normal temperature
------------------------	--------------------



Item No	Product Name	Volumetric capacity•Packing
00151	Blue Varnish Spray S	420ml x 24pcs

White-Pen Spray S

Not applicable to PRTR•Spray for line-drawing /white

PRTR
Not
Applicable

Toxicity
Low

Environment
Friendly

[Features]

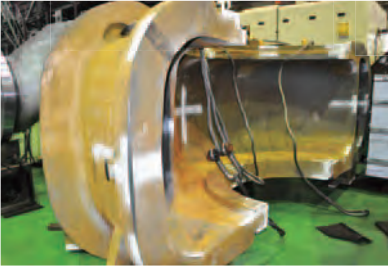
- It is a white scribbling spray, easy & simple operation.
- Safe to use. Harmless to the environment and human body.
- Excellent adhesiveness, applicable to all kinds of metal surfaces and cast iron.
- Film thickness: 0.01mm. Covers uneven surface, finish up with clear and precise scribbling.
- Rapid dry (within 3 minutes); shortens waiting time.

[Applications]

- For scribbling onto machines, casting, devices and metal surface with dark color.

[Performance]

Applicable temperature	Normal temperature
------------------------	--------------------



Item No	Product Name	Volumetric capacity•Packing
00153	White-Pen Spray S	420ml x 24pcs

Blue Layout Ink Remover S

Not applicable to PRTR•Remover for varnish paint

PRTR
Not
Applicable

Toxicity
Low

Environment
Friendly

[Features]

- Rapid dry and easy removal of scribbling paint.
- Safe to use. Harmless to the environment and human body.
- Powerful degreasing spray, easy access to any location.

[Applications]

- For removal of Blue Varnish Spray S, White-Pen Spray S
- Washing agent for cleaning oils from metal parts, mould, etc.

[Performance]

Applicable temperature	Normal temperature
------------------------	--------------------



Item No	Product Name	Volumetric capacity•Packing
00154	Blue Layout Ink Remover S	420ml x 24pcs
00632	Blue Layout Ink Remover S 18L	18L x 1can

Mould Releasing Agent

Used for plastic mould release

- Available for mould release of various thermoplastic resin, thermosetting resin, phenol resin and PET.
- Aerosol Spray, / Uniform Application, / Long Lasting.
- 00124 and 00637 with different application are available for Secondary Process.



Mould Release Agent High Viscosity Silicone Type

PRTR Not Applicable Toxicity Low



[Features]

- Contains high viscosity silicone, excellent durability.
- Available for both thermoplastic resin and thermosetting resin.
- Used for rubber mould releasing.
- Excellent in thermal stability (Heat resistance: 200~250℃)

[Applications]

- Used for thermoplastic resin, such as, PE, PP, PS, ABS, A S, PMMA, PC, nylon, polyacetal.
- Applies to thermosetting resin, such as, phenol, urea, melamine, epoxy, unsaturated polyester, etc.

Item No	Product Name	Volumetric capacity•Packing
00122	Mould Release Agent High Viscosity	420ml x 24pcs

Mould Release Agent Low Viscosity Silicone Type

PRTR Not Applicable Toxicity Low



[Features]

- Contains low viscosity silicone, penetrates to any complicated places.
- Available for both thermoplastic resin and thermosetting resin.
- Hardly any weld line occur.
- Excellent in thermal stability (Heat resistance: 200~250℃)

[Applications]

- Used for thermoplastic resin, such as, PE, PP, PS, ABS, A S, PMMA, PC, nylon, polyacetal.
- Applies to thermosetting resin, such as, phenol, urea, melamine, epoxy, unsaturated polyester, etc.

Item No	Product Name	Volumetric capacity•Packing
00121	Mould Release Agent Low Viscosity	420ml x 24pcs

Mould Release Agent Lecithin Oil Type

PRTR Not Applicable Toxicity Low



[Features]

- A paintable mould release agent, vegetable lecithin as the major ingredient.
- No silicone oil contained.
- After releasing the mold, gluing, painting and printing can be processed with little effect on the original paint.
- Excellent in thermal stability. (Molding temperature: 330℃, Metal Mold temperature: 120℃)

[Applications]

- Mould release for thermoplastic resin like polyacetal, PE, PP, PS, ABS, AS, PMMA, PC, nylon, etc.
- Mould releasing agent applies to high temperature mould, such as Polysulfone, etc.

Item No	Product Name	Volumetric capacity•Packing
00124	Mould Release Agent Lecithin Oil Type	420ml x 24pcs

Mould Release Agent Fluorine Type R

PRTR Not Applicable Toxicity Low



[Features]

- No negative influences on electric contact point, suitable for electric parts molding.
- Good at release of rubber resin, silicone resin and fluororesin mould.
- Gluing, painting and printing are available when only small amount of this agent is needed.
- Excellent in thermal stability. (Heat-resistant: 200~250℃)

[Applications]

- Mould Release for plastic and various rubber.
- Applicable to thermoplastic resins, phenol resin, PET, FRP, SMC.
- Used for releasing of silicone mould when producing of prototypes.

Item No	Product Name	Volumetric capacity•Packing
00637	Mould Release Agent Fluorine Type R	420ml x 24pcs

Shuttle Protector FS

PRTR Not Applicable Toxicity Low



[Features]

- Because it contains both Fluorine and Silicone, able to prevent mould from sticking, excellent mould releasing effect.
- Available for both thermoplastic resin and thermosetting resin.

[Applications]

- Mould release for thermoplastic resin, such as PE, PP, PS, ABS, AS, PMMA, PC, nylon and polyacetal etc.
- Mould releasing agent applies to high temperature mould, such as Polysulfone, etc.

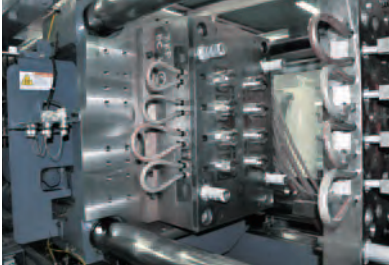
Item No	Product Name	Volumetric capacity•Packing
00638	Shuttle Protector FS	420ml x 24pcs



Mould releasing of plastic prototypes at silicone mould



Silicone mould



[Mould Release Agent Choice Sheet]

Mould Release Agent High Viscosity Silicone Type

Major Ingredient	Heat - Resistant	Secondary Process	Mould Release Ability			
			Thermoplastic Property	Thermosetting Property	Rubber	Silicone, Fluorine
Silicone	200~250℃	Unavailable	◎	◎	○	×

Mould Release Agent Low Viscosity Silicone Type

Major Ingredient	Heat - Resistant	Secondary Process	Mould Release Ability			
			Thermoplastic Property	Thermosetting Property	Rubber	Silicone, Fluorine
Silicone	200~250℃	Unavailable	◎	◎	△	×

Mould Release Agent Lecithin Oil Type

Major Ingredient	Heat - Resistant	Secondary Process	Mould Release Ability			
			Thermoplastic Property	Thermosetting Property	Rubber	Silicone, Fluorine
Vegetable Phospholipid	300℃	Painting & Plating is available	◎	△	△	×

Mould Release Agent Fluorine Type R

Major Ingredient	Heat - Resistant	Secondary Process	Mould Release Ability			
			Thermoplastic Property	Thermosetting Property	Rubber	Silicone, Fluorine
Special Fluorine Compound	200~250℃	Painting & Plating is available	◎	◎	◎	○

Shuttle Protector FS

Major Ingredient	Heat - Resistant	Secondary Process	Mould Release Ability			
			Thermoplastic Property	Thermosetting Property	Rubber	Silicone, Fluorine
Silicone Fluorine Compound	250℃	Unavailable	◎	◎	○	○

Rust Proof for mould.

Oil base, Wax base and volatile liquid type are available. See page 12.

Gummy removing and deposit cleaning.

Strong Clean Power. See page 19.

Removes anti-corrosion agent clearly.

Mould releasing agent, and other cleaning agent are available. See page 19.

AD ACE

Adhesive of synthetic rubber



[Features]

- Aerosol spray with strong adhesion, quick dry.
- Do not penetrate into paper and cloth, so its adhesive force performs well.
- Excellent adhesive force with a little spray.
- Applicable to styrene foam.

[Applications]

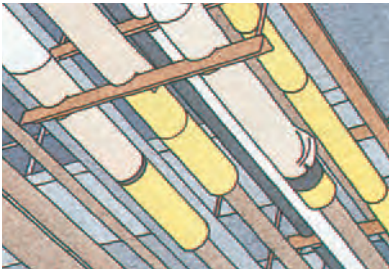
- For pictures and posters.
- For all kinds of sewing paper patterns, such as appliqué and felt.
- For adhesion of all kinds of heat-insulating material, sound absorbing material of wool glass, styrene foam and urethane foam.
- Temporary adhesion for car lining.

[Performance]

Applicable temperature	Below 60℃
------------------------	-----------

PRTR

Applicable



Item No	Product Name	Volumetric capacity•Packing
00131	AD ACE	420ml x 24pcs

Spray AD

One touch transparent adhesive



[Features]

- Vinyl adhesive applied to cloth and paper.
- Aerosol spray with strong adhesion, quick dry.
- Used for temporary adhesion because it can be stuck on and off freely.

[Applications]

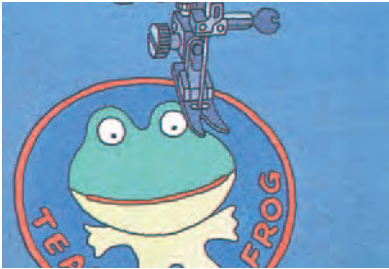
- Temporary adhesion for dressmaking and paper pattern. (Fixation of paper patter and cloth)
- Temporary adhesion for all kinds of sewing paper patterns, such as appliqué and felt.
- Paper adhesive for arts, print, layout and design work, etc.
- Fixation of photosensitive resin, rubber sheeting, plastic sheet and plate.
- For heat insulating material. (heat/cool preservation)

[Performance]

Applicable temperature	Below 50℃
------------------------	-----------

PRTR

Applicable



Item No	Product Name	Volumetric capacity•Packing
00432	Spray AD	420ml x 24pcs

NK Steel 816

Metal adhesive material



[Features]

- Metal adhesive putty, cutting off moderate amount by cut-knife.
- 30 Minutes after application, grinding by the way of drilling, tapping and sanding.
- Repairs screw with stripped head and broken metal parts. Moreover, because top coating is available, it can also be used for repair of aero-parts. (Various usages)
- Bonding the places between metal and woodwork, metal and resin; repairing the places between metal and broken resin parts.
- Top coating is available after reparation.

[Applications]

- Bonding or reinforcement of metal parts.
- Repairs metal parts, screws, or plastic parts except PP and PE.
- Repairing screws with stripped head.

[Performance]

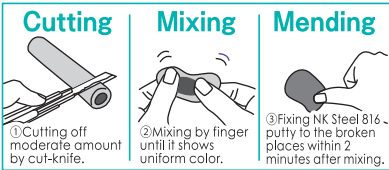
Applicable time	3 ~ 5 min
Durometer Hardness(D) (25℃)	85
Compression Strength(25℃)	70 N/mm ²
Shearing Strength(25℃)	7N/mm ²
Applicable temperature	-40℃~150℃

PRTR

Applicable

Toxicity

Low



Item No	Product Name	Volumetric capacity•Packing
00816	NK Steel 816	114g x 24pcs

RTV Gasket

Silicone solventless sealing agent



[Features]

- De-oxime single-fluid RTV rubber.
- Reacts with vapor in the air and hardens into a rubber-like elastic substance at normal temperature.
- Excellent at heat and cold resistance (-40℃~+240℃), oil/water resistance and electrical insulating.

[Applications]

- For sealing of electrical and electronics equipments (terminal of cables and motors, heat insulation of heaters and joints of refrigerator.)
- For sealing of window glass, sash, concrete and mortar, etc.
- As sealing agent for dust collecting equipment, ventilation equipment, heating /cooling duct.
- For connecting flanges' surface
- Used as liquid packing for engine, etc.

[Performance]

Applicable temperature	-40℃~240℃
------------------------	-----------

PRTR

Not Applicable

Toxicity

Low

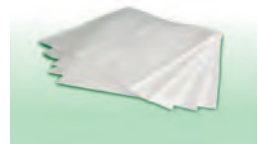


NX77 RTV Gasket White	NX78 RTV Gasket Black	NX79 RTV Gasket Red
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Item No	Product Name	Volumetric capacity•Packing
00077	RTV Gasket White	100g x 24pcs
00078	RTV Gasket Black	100g x 24pcs
00079	RTV Gasket Red	137g x 24pcs

Oil Hunter

High efficiency oil adsorbent, natural fiber (cotton)



[Features]

- The material of Oil Hunter is natural fiber (cotton).
- High power adsorption, compared to polypropylene (PP).
- Effecting on high viscosity and high temperature oil no matter it is mineral oil or animal and vegetable oil.
- Calorific Value generated during incinerating is about half of PP fiber.
- One piece of Oil Hunter can absorb around 2L of oil.

[Applications]

- Used as oil and water separator, flowing oil adsorption of drainage canal in factory, kitchen, and gasoline station.
- A absorbing agent when oils flow in an emergency.
- Oil subdivision, absorbing oil spilled when changing brake parts, etc.

[Performance]

One sheet weight (Item No: 00985)	about 100g
Oiling quantity /g	18.23g



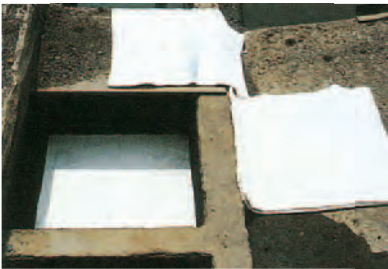
Environment
Friendly

PRTR

Not Applicable

Toxicity

Low



Item No	Product Name	Volumetric capacity•Packing
00985	Oil Hunter	100sheets (50cm x 50cm)
00987	Oil Hunter Roller	2rolls (50cm x 33m)

One-Liquid Rich Zinc Primer

Zinc powder anti-corrosion primer

[Features]

- One-liquid aerosol type, zinc rich epoxy paint.
- While ultramicro zinc powder with super anti-rust property reacts on the iron surface electrochemically, its coated zinc surface is stabilized and transformed to insoluble film to strengthen anti-corrosion performance furthermore.
- F seriee does not contain toluene and xylene. Environment Friendly product.
- Almost all lacquer can be painted on the zinc-coated surface. (Not applicable to phthalic anhydrous paint for it may cause peeling between layers).

[Applications]

- Applicable to ships, storage spaces, tanks, bridges and harbor installations.
- Rust proof for railway equipment, electric generation and transmission facility, building construction, vehicles, etc.
- Repairs scratch on galvanized surface, burned stain or dirty spot, etc.
- Anti- rusting or repairs cutting plane, welding surface or scratches caused during installation operation.
- Used as anticorrosive & repair paint applied to galvanized areas around constructive scaffold.

Type 1: High-Concentration of Zinc

Zinc powder contained in dry paint film is over 84%. Almost all lacquer can be painted on the zinc-coated surface. Anti-corrosion is a major purpose of zinc base coat (gray color).

Mainly used in shipyard, harbor installations, etc. or as a rust inhibitive primer of base coat.

Type 2: Shiny silver color

A repair paint with shiny silver color which similar to hot dip galvanizing. Repair of damaged hot - dip galvanized coatings, or provide it with a shiny final coating on construction sites. Use after applying type 1 (high-concentration of zinc) to the base coat, will finish a rust proof and clear shiny coat.

The major usage of type 2 is to regain the clear coating, repair and color reproduction of the dull color like gray or black/gray occurred during hot – dip galvanizing to match the surrounding galvanized coat. Repairs cutting plane, welding surface in construction sites after application of type 1 (high–concentration of zinc)

Type 3: Environmentally conscious F series

One liquid zinc rich Primer, not applicable to PRTR. TX (toluene and xylene) free, ecological products, anti-corrosion and dry time are almost the same with the existing products.



Salt Spray Corrosion Test

Test Product 00095 Super Zinc Coat95

Film thickness left:30μm middle:60μm right:90μm

After 26 hours

After 504 hours

After 1080 hours

Paint coat peels off after SST1080 hours



[Specification table]

Products Name	Super Zinc Coat 95	Zinc Coat	Klin-Zinc	Zinc Coat SA	Klin-Zinc L	Zinc Coat F	Klin-Zinc F	Klin-Zinc LF
Item No	00095	00130	70977	00137	72351	00139	00453	00438



Image of coating color ※Note1								
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Zinc powder in dry paint film	over 95%	over 84%	over 77.5%	over 73%	over 10.9%	over 84.8%	over 77.6%	—
Specific gravity of liquids	2.37	1.75	1.25	1.58	0.93	1.65	1.60	0.88
Salt Spray Test	Over 1000hours	Over 500hours	Over 200hours	Over 400hours	—	Over 500hours	Over 200hours	—
Outdoor Exposure	Over 2years	Over 2years	—	Over 2years	—	Over 2years	—	—
Film thickness ※Note2	15~25μm	15~25μm	5~15μm	15~25μm	5~15μm	15~25μm	15~25μm	5~10μm
Cross cut adhesion test	100/100	100/100	100/100	100/100	100/100	100/100	100/100	100/100
For last coating ※Note3	○	○	×	×	×	○	×	×
Tacky dry / 20℃(standard)	About 5minutes	About 5minutes	About 5minutes	About 10minutes	About 15minutes	About 5minutes	About 5minutes	About 5minutes
Hard dry	8hours	7hours	7hours	8hours	24hours	8hours	7hours	12hours
Coated area ※Note4	0.3~0.5㎡	0.4~0.6㎡	0.2~0.3㎡	0.4~0.6㎡	0.8~1.2㎡	0.4~0.6㎡	0.4~0.6㎡	1.4~1.8㎡
Heat Resistance (short period)	180℃	180℃	180℃	180℃	180℃	100℃	100℃	100℃
Heat Resistance (long period)	Below 150℃	Below 150℃	Below 150℃	Below 150℃	Below 150℃	Below 80℃	Below 80℃	Below 80℃

Inner Capacity	300ml	450g	420ml	420ml	420ml	420ml	420ml	420ml
Packing	24pcs/ctn	24pcs/ctn	24pcs/ctn	24pcs/ctn	24pcs/ctn	24pcs/ctn	24pcs/ctn	24pcs/ctn

- ※Note1 Print color may slightly differ from actual color.
- ※Note2 Standard of single coat. May slightly differ based on spray speed and distance.
- ※Note3 Not applicable to phthalic anhydrous paint for it may cause peeling between layers.
- ※Note4 Coated area is calculated based on the film thickness from 30 to 40um. Big difference may occur by difference of application method.



Anti-rust repair for scaffolding of construction



Glossy silver repair for hotdip galvaning

Super Stainbrite

Electrolytic device for cleaning of stainless steel

Up to now, we use Nitric Fluorine Acid, Hydrochloric Acid and Sand paper to remove oxidized scale and temper color arose from welding, but these cleaning methods have some problems as follows: 1. Aggravation of the work environment by wasted acid and fine particles. 2. Beauty of stainless steel surface is spoiled by fusion and grinding. 3. Waist a lot of time and cost. On the contrary, Stainbrite and Stainlight series can not only solve these problems but also lightweight and easy to be handled.



Super Stainbrite FST-1021K

[Features]

- Electrochemically removes burnt deposit.
- A small, lightweight, portable and high grade equipment.
- High power, quickly removing stains on stainless steel by neutral electrolyte solution.
- Polishing by acid electrolyte solution is available.
- Removal of titanium welding spot.
- Forms passivation film.
- Able to be used from hot stainless steel to polished stainless steel.

[Functions]

- Adopt special multiple output current waveforms.
- Semiconductor rectifier output stepless variable.
- 4 switching circuit models.* refer to each model function.
- Over-current protection circuit.

[Specification]

Item No	26084	Model	FST-1021K
Specification	Input	Input Voltage AC100V 50/60Hz	
		Capacity 840VA	
	Output	AC Maximum 22Arms	
		DC Maximum 23A	

[The function of each mode]

Mode	Waveform・Application
H- Burn marks removal	Alternating Waveforms
★Removal of acid scale,★Primary treatment for titanium burnt mark.	
E- Burn marks removal	Pulse Waveforms
★Removal of acid scale,★Removing rust from stainless steel.	
H- Polish	Direct Waveforms
★Removal of acid scale,★Passivation treatment.	
Special	Positive and negative terminal are in opposite.
★Secondary treatment for titanium burnt mark.	

■Details of Standard set

- ①Electrolytic device FST-1021 1unit

Cables

②Power cord 3mx1

③Grip cable 5mx1

④Earth clip 5mx1

Mop・others

⑤Cap - shape mop (S) 50pcs

⑥Technola mop (S) 10pcs

⑦Technola mop (L) 10pcs

⑧Glass fiber cloth 10pcs

⑨Electric holder 1pc
- ⑩Elastic tip 1pc

⑪Sharp tip 1pc

⑫Plate tip(S) 1pc

⑬Plate tip(L) 1pc

⑭Liquid separator 1pc

⑮An instruction manual, A Certificate of Registration, A Chart

Electrolyte Solution

⑯Stainbrite FB-1 500ml

⑰Stainbrite EH-700 500ml

⑱Stainlite H-800 500ml

⑲Stainlite Neutralizer 500ml

Super Stainbrite / Parts・Accessories

Item No	Parts ・ Accessories	Size	Packing	Application
70986	Power cord 3mx1	3m	1pc	Power cord for Super Stainbrite.
68605	Grip cable 5mx1	5m	1pc	Grip cable for Super Stainbrite.
68604	Earth clip 5mx1	5m	1pc	Earth clip used for Super Stainbrite.
70729	Cap-shape mop (S)	(Fingertip size of cotton gloves)	200pcs	Neutral electrolyte solution, Burning Removal Mode, Covering Sharp Tip.
71118	Technola mop (S)	40mm×50mm	40pcs	Acid electrolyte solution, Burning Removal and Polishing Mode, For covering Plate Tip(S).
71135	Technola mop (L)	65mm×65mm	30pcs	Acid electrolyte solution, Burning Removal and Polishing Mode, For covering Plate Tip(L).
70302	Glass fiber cloth (L)	50mm×30m	1pc	Neutral and Acid Electrolyte Solution, Burning Removal Mode, For covering Plate Tip.
70703	Electrode holder	—	1pc	Fixed to the plate tip.
—	Elastic tip	—	1pc	Used for Super Stainbrite.
70702	Sharp tip	—	1pc	Used for Super Stainbrite.
72323	Plate tip (S)	—	1pc	Used for Super Stainbrite.
65085	Plate tip (L)	—	1pc	Used for Super Stainbrite.

Stainbrite/Neutral Electrochemical Liquid to remove burn marks from stainless steel

Item No	Product Name	Packing	General Properties		Features	Mode	
			pH	Color		H	E
26133	STAINBRITE EH-400 4L	1bottle	Neutrality pH6.5	Purple	●Dustless. ●Secondary burn difficult to happen. ●Available for semi-conductor and workpieces difficult to be washed by water.	Burning Removal	Burning Removal
26132	STAINBRITE EH-400 20L	1bottle				H Polish	Special
26138	STAINBRITE EH-700 4L	1bottle	Neutrality pH7.0	Purple	●Strong type of EH-400. ●Available for semi-conductor and workpieces difficult to be washed by water.	Burning Removal	Burning Removal
26137	STAINBRITE EH-700 20L	1bottle				H Polish	Special
26149	STAINBRITE FB-1 4L	1bottle	Neutrality pH7.0	Light Green	●Strongest Cleaning power among neutral cleaning agent, suitable for stubborn burn mark.	Burning Removal	Burning Removal
26150	STAINBRITE FB-1 20L	1bottle				H Polish	Special
26017	STAINBRITE F-200D 4kgs	1bottle	Neutrality pH7.0	Colorless	●Available for Passivation Treatment.	H Burning Removal	E Burning Removal
						H Polish	Special

PRTR
Not Applicable

Toxicity
Low



STAINBRITE EH-700



STAINBRITE FB-1



STAINLITE H-800



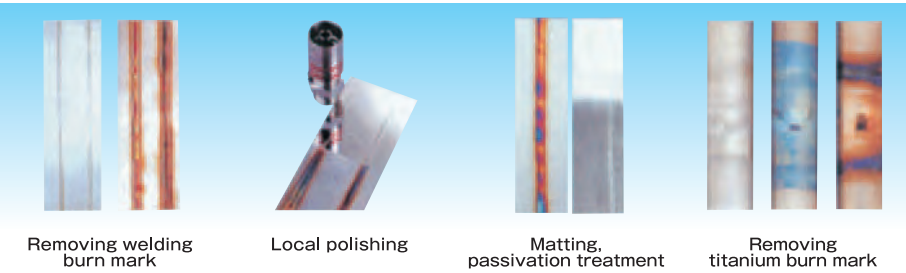
STAINLITE C-100



STAINLITE NEUTRALIZING CLEANER

Stainlite/Acid Electrochemical Liquid to remove burn marks from stainless steel・Immersion chemical

Item No	Product Name	Packing	General Properties		Features	Mode	
			pH	Color		H	E
25876	STAINLITE H-800 5kgs	1bottle	Acidity pH2.0	Blue	●Strong power removal type. ●Available for polishing treatment. ●Removal of titanium burnt mark. (Special Mode)	Burning Removal	Burning Removal
25866	STAINLITE H-800 20kgs	1bottle				H Polish	Special
26153	STAINLITE H-900 5kgs	1bottle	Acidity pH2.0	Light Blue	●Stronger than H-800. ●Available for polishing treatment.	Burning Removal	Burning Removal
26154	STAINLITE H-900 30kgs	1bottle				H Polish	Special
25873	STAINLITE C-100 4kgs	1bottle	Acidity pH1.7	White (Paste)	●Removes rust from stainless steel. ●No drop because of paste viscosity. ●Not applicable to Poisonous & Deleterious Substance Control Law.	Don't use Super Stainbrite.	
25872	STAINLITE C-100 20kgs	1bottle					
26021	STAINLITE NEUTRALIZING CLEANER 4kgs	1bottle	Alkalinity pH12.0	Yellow	●For neutralizing acid cleaner ●Available for metal cleaning	Don't use Super Stainbrite.	
25862	STAINLITE NEUTRALIZING CLEANER 20kgs	1bottle					



Klin Spatter

Anti-spatter agents

- Klin Spatter is used to prevent adhesion of unwanted spatter, generated in welding processes. These anti-spatter agents are helpful in reducing the unnecessary labor costs involved removal of spatter and improving the finish of the welded article. It is pollution-free, safe, easy – operation, economy, efficiency and rust-proof.
- A massive range of product items, including big drum and aerosolized products, all of which have excellent spatter release effect.
- Klin Spatter series prevent rust within short period.



Klin Spatter Overcoat Available Type

ES-55/E-32/Z

[Features]

- Available to be overcoated by paint because a hardened film forms on the welding surface. It is not necessary remove Klin Spatter film before painting.
- Generally used as anti-spatter agent for SS(Iron).
- *Not able to be applied to stainless steel conducted with electrodeposition or plating.
- *Please pretest when special paint is to be applied.



Item No	Product Name	Volumetric capacity•Packing
20558	Klin Spatter ES-55	420ml x 12pcs
20557	Klin Spatter ES-55 18kgs	18kgs x 1 can
20556	Klin Spatter ES-55 60kgs	60kgs x 1 can
20555	Klin Spatter ES-55 198kgs	198kgs x 1 drum

Item No	Product Name	Volumetric capacity•Packing
20533	Klin Spatter E-32 3kgs	3kgs x 4pcs
20532	Klin Spatter E-32 18kgs	18kgs x 1 can
20530	Klin Spatter E-32 198kgs	198kgs x 1 drum
20752	Klin Spatter Z 18kgs	18kgs x 1 can

Klin Spatter Overcoat & Removal OK Type

300/W-2000/W-1000

[Features]

- After welding, either overcoat or removing is available.
- Can be used to both SUS and SS.
- *Electrodepositing or plating can be conducted after removing the coating film.
- *Please pretest when special paint is to be applied.



Item No	Product Name	Volumetric capacity•Packing
20613	Klin Spatter 300 3kgs	3kgs x 4pcs
20612	Klin Spatter 300 18kgs	18kgs x 1 can
20611	Klin Spatter 300 198kgs	198kgs x 1 drum
20636	Klin Spatter 500 18kgs	18kgs x 1 can
20687	Klin Spatter W-2000 18kgs	18kgs x 1 can
20685	Klin Spatter W-2000 198kgs	198kgs x 1 drum
20691	Klin Spatter W-1000 18kgs	18kgs x 1 can
20690	Klin Spatter W-1000 198kgs	198kgs x 1 drum

Klin Spatter Removable Type

AW/AX/AX-2/M/S

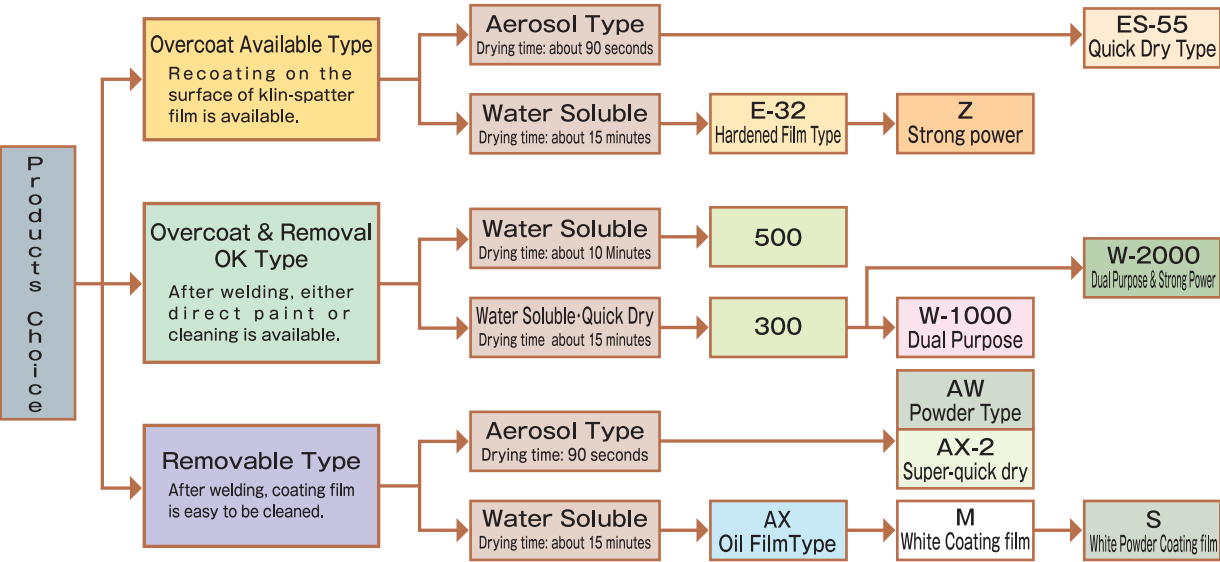
[Features]

- After welding, coating film is easy to be removed.
- Generally used as anti-spatter agent for SUS (Stainless).
- *Paint will come off if the coating film is not removed.
- *Pointing is available after removing coating film.



Item No	Product Name	Volumetric capacity•Packing
20489	Klin Spatter AW	420ml x 12pcs
20485	Klin Spatter AX-2	420ml x 12pcs

Item No	Product Name	Volumetric capacity•Packing
20465	Klin Spatter AX 3kgs	3kgs x 4pcs
20462	Klin Spatter AX 18kgs	18kgs x 1 can
20460	Klin Spatter AX 198kgs	198kgs x 1 drum
20792	Klin Spatter M 18kgs	18kgs x 1 can
20790	Klin Spatter M 198kgs	198kgs x 1 drum
20623	Klin Spatter S 5kgs	5kgs x 2pcs
20622	Klin Spatter S 20kgs	20kgs x 1 can



Application	Product No.	Item No.	Capacity (kg/ml)	Packaging (kg/ml)	Type	Coating film		Drying time		Anti-spatter effect		Removing Film Method		Features		PRTR Law	
						Color	Thickness	Minutes	Seconds	Water washing	Alkaline cleaning	Water washing	Alkaline cleaning			Water washing	Alkaline cleaning
Overcoat Available Type	ES-55	20558	420ml × 12	●	Clear	90 Seconds	○	◎	○	×	×	×	×	●Quick Dry, Raise Work Efficiency. ●Heat - Resistance.		PRTR Applicable	
		20557	18kg × 1														
		20556	60kg × 1														
		20555	198kg × 1														
	E-32	20533	3kg × 4	●	Clear	15 Minutes	○	◎	△	×	×	×	×	●Water-Soluble. ●Hardened film formed, high adhesion with paint.		PRTR Not Applicable	Toxicity Low
		20532	18kg × 1														
		20530	198kg × 1														
	Z	20752	18kg × 1	●	Clear	15 Minutes	○	◎	○	×	×	×	×	●Water soluble. ●Strongly preventing adhesion of unwanted spatter. ●Most suitable for recoating.		PRTR Not Applicable	Toxicity Low

Torch Klin

Anti-spatter agent for torch

- Solve the weak point for all automatic, semi-automatic welding machine and new era welding robot.
- A new anti-spatter agent used for torch, guarantees high efficient and high precise processing.
- Solid type, oil-base, water-base, ceramics compounding Torch Klin are available.



Torch Klin



- [Features]
- Greasy type.
 - Melting Point: Over 50℃
 - Applies when nozzle is hot.

[Performance]

Category	Solid
Outward Appearance	Green paste
Specific Gravity	0.90

Item No	Product Name	Volumetric capacity•Packing
27913	Torch Klin 300g	300g x 10pcs
27912	Torch Klin 15kgs	15kgs x 1can

PRTR
Not Applicable

Toxicity
Low

Torch Klin Super



- [Features]
- Oil - base agent.
 - Used for robot
 - Special oil which has heat resistant and removing properties prevents spatter from attaching to inside nozzle.
 - Nozzle tip doesn't get clogged.
 - Also available to positioners and tool.

[Performance]

Category	Oil base
Outward Appearance	Light brown transparent liquid
Specific Gravity	0.91

Item No	Product Name	Volumetric capacity•Packing
27939	Torch Klin Super	220ml x 12pcs
27943	Torch Klin Super 4L	4L x 1pc
27942	Torch Klin Super 18L	18L x 1can

PRTR
Not Applicable

Toxicity
Low

Torch Klin KS



- [Features]
- Water soluble agent.
 - Powerful type.
 - Available for a cold nozzle.

[Performance]

Category	Water Soluble
Outward Appearance	Light brown transparent liquid
Specific Gravity	1.01

Item No	Product Name	Volumetric capacity•Packing
27922	Torch Klin KS	18kgs x 1can

PRTR
Not Applicable

Toxicity
Low

Torch Klin 21



- [Features]
- Suitable for high temperature and high current service torch.
 - Excellent adhesion.
 - The most suitable for continuous service of robot welder.

[Performance]

Category	Ceramics compounding
Outward Appearance	Light brown transparent liquid
Specific Gravity	1.29

Item No	Product Name	Volumetric capacity•Packing
27973	Torch Klin 21	220ml x 24pcs

PRTR
Applicable

Torch Klin RS-L



- [Features]
- Long - term effect because of special ceramics compounded.
 - Because its film is removable, no clogging occurs.
 - Able to be applied to a cold nozzle.

[Performance]

Category	Ceramics compounding
Outward Appearance	Grayish white powder
Specific Gravity	1.30

Item No	Product Name	Volumetric capacity•Packing
27937	Torch Klin RS-L	420ml x 12pcs

PRTR
Applicable

Liner Klin S

Conduit tube cleaner



[Features]

- Don't contain Fluorocarbon and Chlorine solvents.
- Strong cleaning power.
- Aerosol spray.

[Applications]

- Used for cleaning Conduit Tube.
- Cleanse outlet guide.
- Cleanse feed roller.
- Cleanse machine parts and tools.
- Cleanse printing press.

[Performance]

Outward Appearance	Colorless transparent liquid
Specific Gravity	0.74
Inflammability	Below -20℃



Item No	Product Name	Volumetric capacity•Packing
25226	Liner Klin S	420ml x 12pcs

PRTR
Applicable

Taiboron D-100 / Taiboron SD-1

Dross adhesion inhibitor for laser cut / Antireflection agent for laser



[Features]

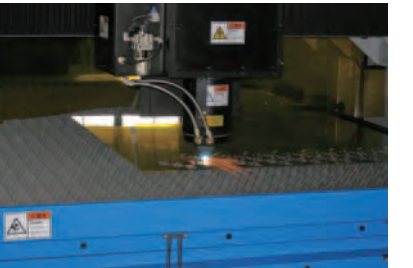
- Dross adhesion inhibitor for carbon dioxide laser cut whose major ingredient is graphite.
- Water soluble, even application without any repelling.
- Do not erode aluminum, stainless, etc.
- Can be easily washed by water after use.
- Clean working environment for no bad odor and smoke.

[Applications]

- It is used to prevent adhesion of dross by applying to the reverse side of laser cut.
- It is used to prevent light reflecting by applying to the surface side of laser cut.
- Prevents readhesion of spatter.

[Performance]

	D-100	SD-1
Outward Appearance	Black Liquid	Black Liquid
Specific Gravity	1.12±0.02	0.94±0.02
Inflammability	None	16℃



Item No	Product Name	Volumetric capacity•Packing
27533	Taiboron D-100	5kgs x 1can
27539	Taiboron SD-1	420ml x 12pcs

PRTR
Not Applicable

Toxicity
Low

Klin Bead CB

TIG welding accelerator



[Features]

- Prevents blowhole.
- Improves melting and helps deep penetrating into weld zone.
- Able to obtain a satisfactory welding effect even if black scale or rust exists.
- Pretty penetration bead is obtainable even high current welding.
- Quick dry (about 1 minute), welding is able to be done soon after Klin Bead CB is applied.
- Coated layer can be simply removed by water, solvent, acid cleaning or air blower.

[Applications]

- Prevents blowhole generating during TIG welding process, such as welding of mild steel, bonderizing plate or stainless steel, etc.
- Promotes deep penetrating into weld zone.
- *Please pretests when TIG welding for titanium steel or aluminum.

[Performance]

Outward Appearance	Grayish white
Specific Gravity	1.21
Inflammability	None



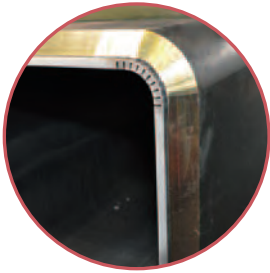
Item No	Product Name	Volumetric capacity•Packing
20813	Klin Bead CB	400ml x 12pcs

PRTR
Applicable

Klin Weld

Corrosion inhibitor for groove weld

- Rust on the groove weld may cause a lot of problems, such as weld defect, low steel commercial value, etc.
- Klin Weld prevents groove surface from corrosion during the period of edge preparation to welding processes.
- Generally anti-corrosion agent applied to a groove weld have to be removed before welding, but Klin Weld YE and Klin Weld SE are able to used during welding process, therefore, able to save time.
- Klin Weld H is a long term anti – rust agent, able to be used for thick and repeat coating.



Klin Weld YE

Corrosion inhibitor for groove weld／Clear color

PRTR
Applicable



[Features]

- Welding is available without removal of coating layer.
- Painting and re- coating are available.
- Beveling area is visible after applying.

[Performance]

Outward Appearance	Clear coat	Outdoor exposure test	1~2 months
Dry to touch	about 20 minutes	Viscosity 20℃	11±1Second (F.C No.4)
Film thickness	5~7μm	Coated area	15~25ml/L



Item No	Product Name	Volumetric capacity・Packing
20435	Klin Weld YE/420ml	420ml x 12pcs
20436	Klin Weld YE/4L	4L x 1pc
20437	Klin Weld YE/18L	18L x 1can

Klin Weld SE

Corrosion inhibitor for groove weld／Silver

PRTR
Applicable



[Features]

- Welding is available without removal of coating layer.
- Superior corrosion resistant formula.

[Performance]

Outward Appearance	Silver	Outdoor exposure test	3~6 months
Dry to touch	about 10 minutes	Viscosity 20℃	12±1Second (F.C No.4)
Film thickness	5~7μm	Coated area	20~30ml/L



Item No	Product Name	Volumetric capacity・Packing
20375	Klin Weld SE/420ml	420ml x 12pcs
20373	Klin Weld SE/4L	4L x 1pc
20372	Klin Weld SE/18L	18L x 1can

Klin Weld H

Corrosion inhibitor for groove weld／Long term rust proof

PRTR
Applicable



[Features]

- Removes coated layer by burner before welding.
- Long term rust proof is available by repeat coating.

[Performance]

Outward Appearance	Clear coat	Outdoor exposure test	over 6 months
Dry to touch	about 20 minutes	Viscosity 20℃	15±1Second (F.C No.4)
Film thickness	15~20μm	Coated area	10~15ml/L

Item No	Product Name	Volumetric capacity・Packing
20363	Klin Weld H/4L	4L x 1pc
20362	Klin Weld H/18L	18L x 1can



HITROCK B

Rust occurrence agent for bolt joints

PRTR
Not
Applicable

Toxicity
Low

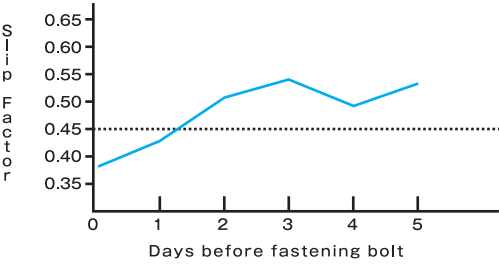
HITROCK B is applied onto high strength bolt joints for construction, promoting the occurrence and stabilization of rust.

Concerning coefficients for high strength bolts, according to Standard Specifications of Construction Work(JASS-6) and Technical Guides for Steel - Frame Work, mill scale should be removed from bolt joint to check rust occurrence. Generally, this kind of rust is to be generated from a steel frame which is left outside for a long time after removal of mill scale. Rust occurrence depends on a geographical or weather condition, which may cause civil engineering or construction work delay.

Therefore, there are a lot of rust promotion agents adopted, but among them, some problems occurred such as insufficient or excessive rust occurrence, otherwise rust still develops even after re-connecting joints. HITROCK B dose not have the above problems! After HITROCK B is applied onto joint surface, rust occurs over a few hours. Rust generated by HITROCK B has stability, does not develop excessively.

Slip Factor Test

Days Neglected	0	1st day	2nd day	3rd day	4th day	5th day
Slip Factor	0.362	0.437	0.513	0.535	0.501	0.530
Temperature ℃	—	6	5	8	5	5
Humidity	—	24	39	25	35	51



[Features]

- Only need to apply, no worry of noise or dust.
- Slip Coefficient is above 0.45.
- First applies HITROCK B onto the joint surface and keeps rusting for 48 hours, then Fastening the bolt is available.
- Corrosion doesn't expand because of its stability.

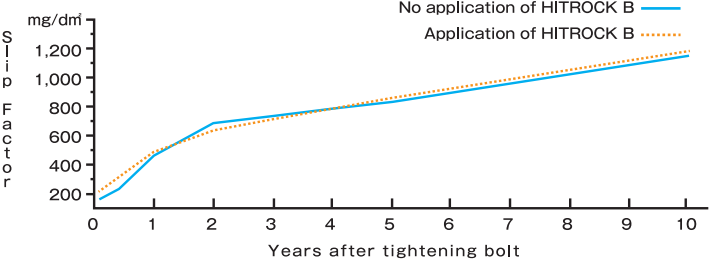
[Performance]

Outward Appearance	Yellowish brown transparent liquid
Specific Gravity	1.0
Inflammability	None
P H	2 ~ 3
Dry to touch	20minutes (20℃)
Standard Application Quantity	50~100g/m ²

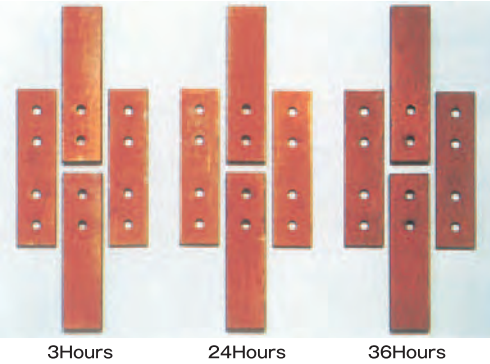
*At the temperature below 5 ℃, humidity over 80%, Slip coefficient may not be guaranteed sometimes.

Amount of rust (Jointed condition)

	1Month	6Months	1Year	2Years	5Years	10Years
No coating (mg/dm ²)	14	115	340	533	756	1018
HITROCK B coating (mg/dm ²)	141	263	370	505	7611041	—



*The amount of rust generated is the same after 1 year.
Not affected by HITROCK B any more.



Friction Up Zn

A treatment agent for friction joint surface of high strength bolts

PRTR
Applicable

Toxicity
Low

Friction Up Zn is a treatment agent used on high strength bolt friction joint surface in the field of hot dip galvanizing construction.



Friction Up Zn is a treatment agent used on high strength bolt friction joint surface in the field of hot dip galvanizing construction. JASS-6 published by Architectural Inst of Japan approves Blasting Treatment, but in order to raise work efficiency and improve stabilization of slip strength we developed Friction Up Zn. Hot dip galvanizing that has a lot of advantages, such as resisting corrosion, maintenance free, etc. is adopted by many construction structures, but Slip Strength of High Strength Zigzag Bolted Friction Joints is not enough. Friction Up Zn only need to be simply applied to Bolt Joint Surface, then enough Slip Strength can be secured, unlike Blasting treatment, no need of special skill, no worry of noisy and without moving products, saving masking time.



Item No	Product Name	Volumetric capacity	Item No	Product Name	Volumetric capacity
14454	Friction Up Zn 4kg	4kg	14453	Friction Up Zn 20kg	20kg

[Features]

- High working efficiency can be secured because no need of blasting equipment, moving product is not necessary.
- Applies only, no worry of noisy and dust.
- No influences on corrosion resistance of plating.
- Slip Coefficient is above 0.4.
- No need to measure surface roughness.

[Performance]

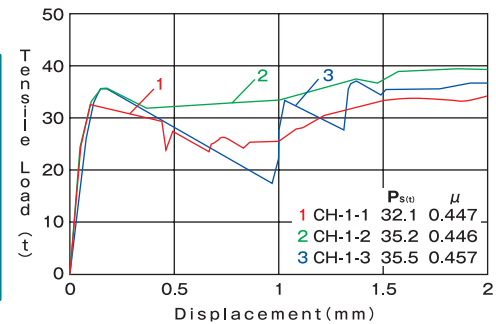
Outward Appearance	Transparent and colorless liquid
Specific Gravity	1.47
Inflammability	None
P H	1.78
Dry to touch	10minutes (20℃)
Standard Application Quantity	100g/m ²

Slip Factor Test

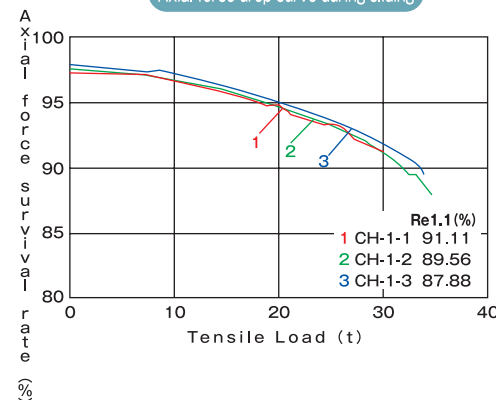
High Strength Bolt F8T M20×80							
Mark		Exposure Time	N ₁₀	P _{s10}	Slip Factor		Sliding Noise
					Test Results	Average	
CH-1	1	48 Hours	35.8	32.1	0.447	0.450	Have
	2		37.8	35.2	0.446		None
	3		38.8	35.5	0.457		Have
CH-2	1	48 Hours	38.8	35.6	0.459	0.429	Have
	2		37.9	32.1	0.423		Have
	3		38.3	31.1	0.406		Have

N₁ : Adding up of Initial bolt installation. P_s : Slip Load.

Load-Deformation Curve



Axial force drop curve during sliding



MEMO