

BB TECHNICAL SERVICE

Products and solutions for rolling stock maintenance yards and workshop

Prodotti e soluzioni per cantieri e officine manutenzione rotabili

Produits et solutions pour chantiers et ateliers pour la maintenance du matériel roulant



LUBRICANTS

LUBRIFICANTI

LUBRIFIANTS



CLEANERS

DETERGENTI

DÉTERGENTS



ADHESIVES AND SEALANTS

ADESIVI E SIGILLANTI

ADHÉSIFS ET PRODUITS D'ÉTANCHEITÉ



AUTOMATIC LUBRICATION SYSTEM

SISTEMI DI LUBRIFICAZIONE AUTOMATICA

SYSTÈME DE LUBRIFICATION AUTOMATIQUE



CHEMICALS FOR MAINTENANCE

PRODOTTI CHIMICI PER LA MANUTENZIONE

PRODUITS CHIMIQUES POUR OPÉRATIONS DE MAINTENANCE



CARBON DIOXIDE DRY CLEANING

SISTEMI DI PULIZIA TECNICA MEDIANTE SABBIAIATURA CRIOGENICA

SYSTÈME POUR NETTOYAGE CRYOGÉNIQUE



BB TECHNICAL SERVICE s.r.l

➤ Select and supply high quality products
Selezioniamo e forniamo prodotti di elevata qualità
Sélectionne et fournit des produits de haute qualité

➤ Fast and effective logistics
Offriamo una logistica rapida ed efficace
Logistique rapide et efficace

➤ Proper technical consulting and aftermarket support
Garantiamo ai nostri clienti un alto livello di consulenza tecnica e di assistenza after market
Excellent niveau de consultation technique et d'assistance après vente.



OUR RANGE OF PRODUCTS LE NOSTRE LINEE DI PRODOTTO NOTRE GAMME DE PRODUITS

1. SW: Consumables products approved by Faiveley Italia for application on pneumatic parts.

Prodotti consumabili per impieghi su organi pneumatici, approvati da Faiveley Transport Italia.

Produits de consommation pour applications sur composants pneumatiques approuvés par Faiveley Transport Italie

2. SP: Consumables products approved by SPII for application on electromechanic components.

Prodotti consumabili per impieghi su organi elettromeccanici, approvati da SPII S.p.a.

Produits de consommation pour applications sur composants électromécaniques approuvés par SPII s.p.a.

3. CP: Consumables products approved by Production Group.

Prodotti di consumo approvati dal gruppo Production.

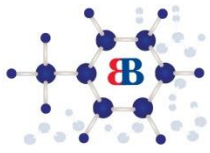
Produits de consommation approuvés par le Groupe Production.

4. TS: Multipurpose consumables products selected and tested by BB TECHNICAL SERVICE.

Prodotti consumabili per impieghi generici selezionati e testati da BB TECHNICAL SERVICE.

Produits de consommation sélectionnés et testés pour applications générales par BB TECHNICAL SERVICE.





BB TECHNICAL SERVICE is a proactive and multipurpose company. Jointly with the engineering of the major designers and producers of railway subsets, we develop high-quality chemical products for maintenance. After undergoing strict bench testing and thorough trials on duty, some of our products have been approved for use within basic and higher level maintenance steps.

Our focused aim is to supply products able to improve the reliability of rolling stocks and to save maintenance time and costs.



BB TECHNICAL SERVICE è una Società agile e versatile che, in collaborazione con l'ingegneria dei maggiori costruttori di sottoinsiemi ferroviari, sviluppa prodotti chimici di elevata qualità per lo svolgimento di attività manutentive.

Dopo esaustive prove svolte in laboratorio e sul campo, alcuni ns. prodotti vengono omologati e impiegati in attività di manutenzione di primo e secondo livello.

Il ns. obiettivo è fornire prodotti la cui efficacia contribuisca ad elevare l'affidabilità dei rotabili e ottimizzare i tempi e i costi del processo manutentivo.

BB TECHNICAL SERVICE est une société proactive et polyvalente qui, en collaboration avec l'ingénierie des plus importants producteurs de sous-ensembles ferroviaires, développe des produits chimiques de haute qualité pour les processus d'entretien. Après des tests exhaustifs effectués en laboratoire et sur les chantiers, certains de nos produits ont été approuvés et utilisés pour les interventions de maintenance ordinaire et extraordinaire. Notre objectif est de fournir des produits de qualité qui contribuent à améliorer la fiabilité du matériel roulant et à optimiser les coûts et les processus de maintenance

*Drive Control designed by SPII for the new
italian high speed train ETR 1000*



BB TECHNICAL SERVICE has its core business in
the railway industry. Our technical Partners:

FAIVELEY TRANSPORT ITALIA

SPII S.p.A.

PRODUCTION S.p.A.

*Detail of the
pantograph designed
for the Italian high
speed train
«Freccia Rossa»*



*Screw compressor by Faiveley Italia
under trial on the test bed*



	SW PRODUCTS	APPLICATION	PACKAGING	FT PART NUMBER
1	SW 355	SYNTHETIC OIL FOR SCREW COMPRESSOR – LOW TEMPERATURE	200 LITRES DRUM – 60 LITRES DRUM	FT 0028076-000
2	SW 356	SYNTHETIC OIL FOR SCREW COMPRESSOR	200 LITRES DRUM – 60 LITRES DRUM	3000 00 356
3	SW 402	SYNTHETIC OIL FOR VANE COMPRESSOR	200 LITRES DRUM – 25 LITRES PLASTIC TANKS	3000 00 402
4	SW 436	SYNTHETIC HYDRAULIC OIL FOR HPU	200 LITRES DRUM – 25 LITRES PLASTIC TANKS	3000 00 436
5	SW 427	SPECIFIC WASHING OIL FOR SCREW COMPRESSOR	5 LITRES PLASTIC TANK	FT 0044184-000
6	SW 319	SYNTHETIC ANTI-SIEZE UP CONDUCTIVE COPPER PASTE	1 kg CONTAINER	FT 0022319-000
7	SW 473	SYNTHETIC SPRAY GREASE FOR METAL-METAL SLIDINGS	400 ML SPRAY CAN – 12 pcs CARTON	3000 00 473
8	SW 551	SYNTHETIC SPRAY GREASE FOR RUBBER-METAL SLIDINGS	400 ML SPRAY CAN – 12 pcs CARTON	3000 00 551
9	SW 305	SURFACE CLEANER FOR ADHESION PRE-TREATMENT	400 ML SPRAY CAN – 12 pcs CARTON	FT 0044183-000
10	SW 486	UNLOCKING-LUBRICANT OIL	400 ML SPRAY CAN – 12 pcs CARTON	3000 00 486
11	SW 487	CLEANER-PROTECTIVE FOR CONTACTS	400 ML SPRAY CAN – 12 pcs CARTON	3000 00 487
12	SW 434	SPRAY CLEANER SPECIFIC FOR ELECTRONICS	400 ML SPRAY CAN – 12 pcs CARTON	3000 00 434
13	SW 354	OIL LEAKAGE DETECTOR	400 ML SPRAY CAN – 12 pcs CARTON	3000 00 354
14	SW 435	WATER BASED DETERGENT- DEGREASER	65 kg DRUM – 30 kg DRUM	3000 00 435
15	SW 418	SOLVENT BASED DETERGENT-DEGREASER (FAST EVAPORATION TIME)	65 LITRES DRUM – 30 LITRES DRUM	3000 00 418
16	SW 490	SOLVENT BASED DETERGENT-DEGREASER (MEDIUM EVAPORATION TIME)	65 LITRES DRUM – 30 LITRES DRUM	3000 00 490
17	SW 364	LIQUID GASKETING FOR FLANGED COUPLINGS	75 ml BELLOW BOTTLE – 10 pcs BOX	FT 0026440-000
18	SW 365	FITTINGS SEALANT	75 ml BELLOW BOTTLE – 10 pcs BOX	FT 0025539-000
19	SW 820	FITTINGS SEALANT	75 ml BELLOW BOTTLE – 10 pcs BOX	FT 0027708-000
20	SW 821	THREADLOCKER – WEAK EFFECT	50 ml BOTTLE – 10 pcs BOX	FT 0027707-000
21	SW 822	FITTINGS SEALANT	50 ml BOTTLE – 10 pcs BOX	FT 0027705-000
22	SW 823	SEALANT FOR FLAT JOINTS	300 ml CARTRIDGE – 10 pcs BOX	FT 0027704-000
23	SW 824	THREADLOCKER – PERMANENT EFFECT	50 ml BOTTLE – 10 pcs BOX	FT 0027709-000
24	SW 825	THREADLOCKER – MEDIUM EFFECT – OIL RESISTANT	50 ml BOTTLE – 10 pcs BOX	FT 0027706-000

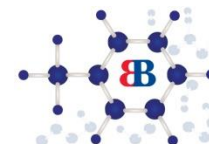


Faiveley Transport Italia S.p.A. - Società soggetta a direzione e coordinamento di Faiveley

Transport S.A.

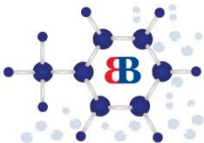
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GLOBAL OVERVIEW ON THE SW APPROVED PRODUCT RANGE

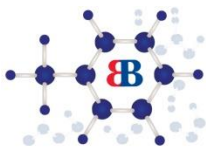
SW PRODUCTS		Italy			France		Germany	Nordic Countries		Spain	UK	India	China	Australia New Zealand		Russia	
		ETR 1000	NTRE	EXPO	EMU R2N	Regiolis	ICx	Emu X60	Emu X60 batch B	CIVIA III	CTRL HITACHI	Metro New Delhi	Metro Nanjing	Matangi 1	Matangi 2	Talgo rusia	Loco EP 20
SW 356	SYNTHETIC OIL FOR SCREW COMPRESSOR		◆	◆				◆		◆	◆	◆	◆	◆	◆		
SW 435	WATER BASED DETERGENT- DEGREASER	◆			◆			◆	◆		◆						
SW 820	FITTINGS SEALANT	◆		◆	◆	◆	◆	◆	◆					◆	◆	◆	◆
SW 821	THREADLOCKER – WEAK EFFECT							◆	◆								
SW 822	FITTINGS SEALANT							◆	◆		◆						
SW 823	SEALANT FOR FLAT JOINTS							◆	◆								
SW 824	THREADLOCKER – PERMANENT EFFECT	◆						◆	◆								
SW 825	THREADLOCKER – MEDIUM EFFECT – OIL RESISTANT	◆				◆		◆	◆		◆					◆	◆



Products approved by SPII S.p.A.



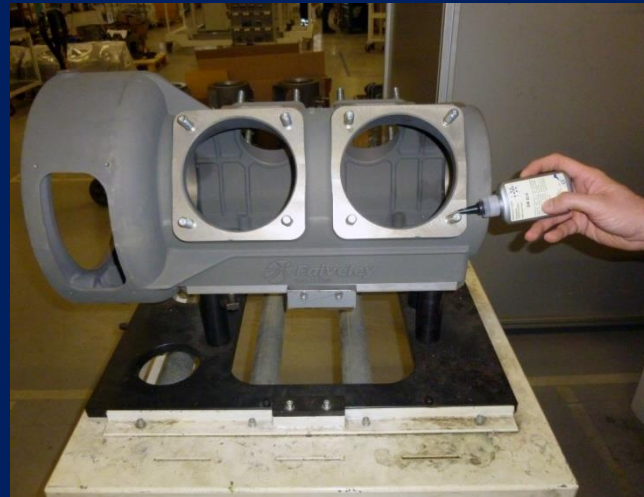
	PRODUCT SP	APPLICATION	PACKAGING
1	SP D 240	FLUORINATED GREASE FOR DRIVE CONTROLS AND PANTOGRAPH CIRCUIT BREAKERS CONTACTS	100g TUBE – 10 pcs BOX
2	SP 300	CLEANER FOR SILICONE INSULATORS	400ml SPRAY CAN – 12 pcs BOX
3	SP 303	CLEANER FOR MECHANICAL COMPONENTS	400ml SPRAY CAN – 12 pcs BOX
4	SP 322	SYNTHETIC GREASE FOR THE LUBRICATION OF CIRCUIT BREAKERS MECHANISM	400ml SPRAY CAN – 12 pcs BOX
5	SP 352	CLEANER FOR RAIL DRIVER CONSOLE	400ml SPRAY CAN – 12 pcs BOX
6	SP 668	ALKALINE DETERGENT FOR PRESSURE WASHER	5kg PLASTIC TANK
7	SP 800	PRIMER FOR DIFFICULT PLASTIC MATERIALS	20g BOTTLE – 6 pcs BOX
8	SP 801	SPRAY CLEANER FOR THE PRETREATMENT BEFORE ADHESION	400ml SPRAY CAN – 12 pcs BOX
9	SP 810	ANAEROBIC ADHESIVE FOR DIFFICULT COUPLINGS – HIGH STRENGTH	50ml BOTTLE – 10 pcs BOX
10	SP 811	ANAEROBIC ADHESIVE FOR DIFFICULT COUPLINGS – OIL RESISTANT	50ml BOTTLE – 10 pcs BOX
11	SP 812	LOCKING FORMULATION – HIGH CAPILLARITY	50ml BOTTLE – 10 pcs BOX
12	SP 813	MEDIUM EFFECT LOCKING FORMULATION – OIL RESISTANT	50ml BOTTLE – 10 pcs BOX
13	SP 815	FITTINGS SEALANT	75ml BELLOW BOTTLE – 10PCS BOX
14	SP 827	THREADLOCKER – PERMANENT EFFECT	50ml BOTTLE – 10 pcs BOX
15	SP 830	ADHESIVE FOR DIFFICULT PLASTIC MATERIALS	20g BOTTLE – 10 pcs BOX
16	SP 831	FLUID ADHESIVE FOR DIFFICULT MATERIALS	20g BOTTLE – 10 pcs BOX
17	SP 832	ETHIL-BASED ADHESIVE FOR HIGH TEMPERATURE APPLICATION	20g BOTTLE – 10 pcs BOX
18	SP 833	MULTIPURPOSE CYANOACRYLIC ADHESIVE	20g BOTTLE – 10 pcs BOX
19	SP 850	ONE-COMPONENT SEALANT – COLOUR GREY (MS Polymer)	290ml CARTRIDGE – 24 pcs BOX
20	SP 851	SILICONE BASED SEALANT RESISTANT TO HIGH TEMPERATURE	310ml CARTRIDGE – 24 pcs BOX



ANAEROBIC AND CYANOACRYLATE ADHESIVES



Anaerobic and cyanoacrylate products approved by SPII for application on their own subsets

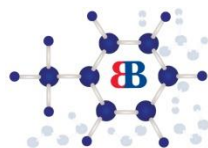


Threadlockers and fittings sealant approved by Faiveley Transport



Use of our Primer SP 800 on difficult plastic material





In 2010 we began to develop a range of anaerobic and cyanoacrylic products alternative to Loctite solutions. Several products of ours have already been approved by Faiveley Transport and SPII for the application on their own subsets.

Prodotti adesivi SW, SP , CP e TS / Corrispondenze Loctite						
	PRODUCT	USE	SIZE	FAIVELEY PART NUMBER	TRENITALIA PART NUMBER	LOCTITE CROSS REF.
1	SW 820	SEALANT PASTE FOR PNEUMATIC FITTINGS – MEDIUM STRENGTH	75 ml BELLOW BOTTLE – 10 pcs BOX	FT 0027708-000	006 251	577
2	SW 824	THREADLOCKER – HIGH STRENGTH	50 ml BOTTLE – 10 pcs BOX	FT 0027709-000	006 252	270
3	SW 825	THREADLOCKER – MEDIUM STRENGTH	50 ml BOTTLE – 10 pcs BOX	FT 0027706-000	006 256	242 - 243
4	SW 364	LIQUID GASKETING FOR FLANGED COUPLINGS	75 ml BELLOW BOTTLE – 10 pcs BOX	FT 0026440-000		518
5	SW 365	SEALANT PASTE FOR PNEUMATIC FITTINGS	75 ml BELLOW BOTTLE – 10 pcs BOX	FT 0025539-000		511
6	SW 821	THREADLOCKER – WEAK STRENGTH	50 ml BOTTLE – 10 pcs BOX	FT 0027707-000		222
7	SW 822	FLUID SEALANT FOR FITTINGS	50 ml BOTTLE – 10 pcs BOX	FT 0027705-000		542
8	SW 823	SEALANT FOR FLAT JOINTS	300 ml CARTRIDGE – 10 pcs BOX	FT 0027704-000		
9	SP 801	SPRAY CLEANER FOR THE PRE-TREATMENT BEFORE ADHESION	400ml SPRAY CAN – 12 pcs BOX	APPROVED BY SPII	006 253	7063
10	SP 831	FLUID ADHESIVE FOR DIFFICULT MATERIALS	20g BOTTLE – 10 pcs BOX	APPROVED BY SPII	006 254	4062
11	SP 834	INSTANT ADHESIVE	10g BOTTLE – 25 pcs BOX	APPROVED BY SPII	006 255	495
12	SP 800	PRIMER FOR DIFFICULT PLASTIC MATERIALS	20g BOTTLE – 6 pcs BOX	APPROVED BY SPII		770
13	SP 810	ANAEROBIC ADHESIVE FOR DIFFICULT COUPLINGS – HIGH STRENGTH	50 ml BOTTLE – 10 pcs BOX	APPROVED BY SPII		638
14	SP 811	ANAEROBIC ADHESIVE FOR DIFFICULT COUPLINGS – OIL RESISTANT	50 ml BOTTLE – 10 pcs BOX	APPROVED BY SPII		603
10	SP 812	LOCKING FORMULATION – HIGH CAPILLARITY	50 ml BOTTLE – 10 pcs BOX	APPROVED BY SPII		290
11	SP 813	MEDIUM EFFECT LOCKING FORMULATION – OIL RESISTANT	50 ml BOTTLE – 10 pcs BOX	APPROVED BY SPII		
12	SP 815	FITTINGS SEALANT	75 ml BELLOW BOTTLE – 10 pcs BOX	APPROVED BY SPII		
13	SP 827	THREADLOCKER – PERMANENT EFFECT	50 ml BOTTLE – 10 pcs BOX	APPROVED BY SPII		
14	SP 830	ADHESIVE FOR DIFFICULT PLASTIC MATERIALS	20g BOTTLE – 10 pcs BOX	APPROVED BY SPII		496
14	SP 832	ETHIL-BASED ADHESIVE FOR HIGH TEMPERATURE APPLICATION	20g BOTTLE – 10 pcs BOX	APPROVED BY SPII		407
14	SP 833	MULTIPURPOSE CYANOACRYLIC ADHESIVE	20g BOTTLE – 10 pcs BOX	APPROVED BY SPII		414
15	SP 850	ONE-COMPONENT SEALANT – COLOUR GREY (MS Polymer)	290ml CARTRIDGE – 24 pcs BOX	APPROVED BY SPII		
16	SP 851	SILICONE BASED SEALANT RESISTANT TO HIGH TEMPERATURE	310ml CARTRIDGE – 24 pcs BOX	APPROVED BY SPII		
17	CP 809	SPRAY CLEANER – ADHESION PRE-TREATMENT	400ml SPRAY CAN – 12 pcs BOX	TESTED BY PRODUCTION GR.		
18	CP 817	FITTINGS SEALANT – SLOW CURING	75 ml BELLOW BOTTLE – 10 pcs BOX	TESTED BY PRODUCTION GR.		572
19	CP 840	SEALANT PASTE FOR PNEUMATIC FITTINGS – MEDIUM STRENGTH	75 ml BELLOW BOTTLE – 10 pcs BOX	TESTED BY PRODUCTION GR.		
20	CP 841	FITTINGS SEALANT	50 ml BOTTLE – 10 pcs BOX	TESTED BY PRODUCTION GR.		
21	CP 842	THREADLOCKER – HIGH STRENGTH	50 ml BOTTLE – 10 pcs BOX	TESTED BY PRODUCTION GR.		
22	CP 843	THREADLOCKER – MEDIUM STRENGTH	50 ml BOTTLE – 10 pcs BOX	TESTED BY PRODUCTION GR.		
23	TS 814	LOCKING FORMULATION FOR CYLINDRIC COUPLINGS	50 ml BOTTLE – 10 pcs BOX			641
24	TS 816	LIQUID GASKETING FOR FLAT JOINTS – HIGH TEMPERATURE RESISTANT	75 ml BELLOW BOTTLE – 10 pcs BOX			510
25	TS 826	FAST LOCKING FORMULATION – HIGH STRENGTH	50 ml BOTTLE – 10 pcs BOX			648 - 649

SPECIAL GREASES

- Specially formulated for the lubrication under severe duty requirements of mechanical, electrical and pneumatic devices
- Solution for the lubrication under extreme condition
- Our range of grease includes mineral and synthetic products (fluorinated, polyalphaolefinic, ester and silicone)



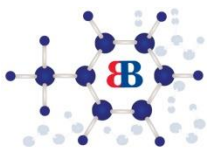
Our fluorinated grease SP 240 has been approved by SPII S.p.A. to be applied on the pantograph circuit breakers and on the drive controls. Approved for use on the high speed train ETR1000 (Italy)



By request of the Company CONTACT we have formulated two different greases specific for the lubrication of the pantograph's pins and joints. Both our solution offer high resistance to mechanical load, good corrosion protection and outstanding antiwear properties.

- CP 230 Synthetic PAO based grease suitable for application up to -50°C
- CP 241 Fluorinated grease suitable for application up to -70°C .

SP 240 allows widest lubrication intervals



BBTS Approved Greases Line – List and Use

CP 230	PAO SYNTHETIC GREASE FOR PANTOGRAPH JOINTS (BETWEEN -50°C AND +200°C)
CP 241	PFPE SYNTHETIC GREASE FOR PANTOGRAPH JOINTS (BETWEEN -75°C AND +220°C)
SP 240	PFPE SYNTHETIC GREASE FOR DRIVE CONTROLS AND CIRCUIT BREAKERS (UP TO -60°C)
TS 12 G	LUBRICATION OF SPECIAL DEVICES IN THE HIGH SPEED TRAIN BOGIES
TS 18 G	BIODEGRADABLE GREASE FOR RAIL SIDE LUBRICATION
DB 202	MINERAL GREASE FOR BRAKE CALIPERS
TS 205	GREASE FOR LUBRICATION IN RAIL-ROAD LOADERS, BALLAST TAMPERS AND RAIL GRINDER
TS 254	SILICONE GREASE FOR O-RING MOUNTING

SPECIAL GREASES



Since many years, we supply the special mineral-based grease DB 202 to GTT, the Italian company managing service and maintenance of the public transport vehicles in Turin (Italy). Our product DB 202 is regularly used by GTT for the brake calipers lubrication on the trams named “6000 Series”.



Cylindrical actuator of ETR 470 (tilting system component)

Best results have also been obtained with our product TS 12 G in lubrication of special devices included in the bogies of the Italian high speed train ETR 500 known as “Freccia Rossa” (specific application: device mounted on the traction bogies axles for the curve-alignment control, anti-rotation device, stabilizers).

SPRAY PRODUCTS



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DETERGENTE SELETTIVO PER ELETTRONICA
DETERGENT POUR COMPOSANTS ELECTRONIQUES
ELECTRONIC CLEANER

CAT FS 911 355

SW 434

SW 434 Prodotto ideale per la pulizia profonda di componenti elettronici, circuiti stampati, contatti elettrici ed apparecchiature elettromeccaniche. Prodotto omologato da Faiveley Transport per la manutenzione dei propri addebiatori. Prescritto per impiego su ETR1000. Tagliare tensione prima di applicare SW434 su componenti elettrici ed elettronici.

SW 434 Produit idéal pour le nettoyage en profondeur des composants électroniques, des circuits imprimés et des appareils électromécaniques. Produit approuvé par Faiveley Transport pour la maintenance de ses sous-ensembles. Prescrit pour application sur ETR1000. Débrancher l'appareil avant d'appliquer SW434 sur les composants électriques et électroniques.

SW 434 Specific product for deep cleaning of electronic parts, printed circuit boards, electric contacts and electromechanical devices. Product approved by Faiveley Transport for maintenance of its own subsets. Prescribed for application on ETR1000. Disconnect the equipment before applying SW434 on electric and electronic components.

Avvertenze
Recipiente sotto pressione. Proteggere dai raggi solari e non esporre ad una temperatura superiore a 50 °C. Non perforare non bruciare, neppure dopo l'uso. Non vaporizzare su fiamme o corpi incandescenti. Conservare fuori dalla portata dei bambini. Non inalare direttamente i vapori. Non spruzzare negli occhi. Non fumare, conservare all'ipotesi di qualunque fonte di combustione.

ACC

520 e 3
Netto 400 ml

Prodotto per uso tecnico professionale. Si declina ogni responsabilità per danni provocati da uso improprio.



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GRASSO SINTETICO ANTISURSA SPRAY
SYNETIC SPECIAL SPRAY GREASE
GRAS SYNTHETIQUE SPRAY

CAT FS 579 055

SW 473

SW 473 è il prodotto ideale per le operazioni di piccola lubrificazione a bordo di modelli ferroviari. Consigliato da Faiveley Transport S.p.A. per la lubrificazione di guide a sfere, parti di giunzione e snodi, braccio telescopico porte, parti porte, guide porte in genere.

SW 473 is a fully synthetic grease with high anti-wear and EP performance, suggested by Faiveley Transport SpA, suitable for all on board train little lubrications. Recommended for balls guides (roll-on type), coupling pivots and articulated parts, door slide bars, door slide guides generally.


SW 473 est un produit, suggéré par Faiveley Transport SpA, très adapté pour toutes les petites lubrifications, comme: guide à sphère, articulations diverses, rail de guidage portes, charnières. Il est en gras synthétique au spray avec propriétés optimales d'anti-usure et caractéristique EP.

SW 473 is a fully synthetic grease with high anti-wear and EP performance, suggested by Faiveley Transport SpA, suitable for all on board train little lubrications. Recommended for balls guides (roll-on type), coupling pivots and articulated parts, door slide bars, door slide guides generally.

ACC

520 e 3
Netto 400 ml

Prodotto per uso tecnico professionale. Si declina ogni responsabilità per danni provocati da uso improprio.



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LUBRIFICANTE CON POTERE SBLOCCANTE E PROTETTIVO
UNBLOCKING AND PROTECTIVE LUBRICANT
LUBRIFIANT POUR DEVERROUILLAGE ET PROTECTION

TS 351

TS 351 è un fluido in grado di sostituire molti aerosol sbloccanti, antiruggine, antiossidanti, abbinando una ricca azione sbloccante con elevata potere lubrificante ed adeguata protezione contro le ossidazioni. Grazie alla ricchezza petrolifera di penetrazione profonda, TS 351 può essere impiegato agevolmente anche per applicazioni in verticale.

TS 351 is a fluid suitable to replace many others unlocking and oxidation-preventive aerosols, combining its fast unlocking effect with an excellent lubricating action and reliable protection against oxidation. Thanks to its marked capillary penetration features, TS 351 can be employed also in vertical use.

TS 351 est un fluide approprié pour remplacer un grand nombre de aérosols - antirouille, antioxydants, permettant un rapide déblocage avec une excellente lubrification et une protection adéquate contre les oxydations. La forte pénétration capillaire permet l'utilisation de TS 351 également dans la position verticale.

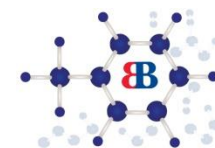
TS 351 is recommended for lubrication of mechanical guides, hinges, liners and chains.

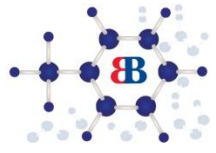
ACC

520 e 3
Netto 400 ml

Prodotto per uso tecnico professionale. Si declina ogni responsabilità per danni provocati da uso improprio.

PRODUCT	USE	APPROVAL
SW 434	SPRAY CLEANER SPECIFIC FOR ELECTRONICS	APPROVED FOR THE USE ON THE NEW HIGH SPEED TRAIN ETR 1000 (ITALY)
SP 303	SPRAY CLEANER FOR MECHANICAL COMPONENTS	APPROVED FOR THE USE ON THE NEW HIGH SPEED TRAIN ETR 1000 (ITALY)
SP 352	SPRAY CLEANER AND HYGIENIZER FOR DRIVE DESKS	APPROVED FOR THE USE ON THE NEW HIGH SPEED TRAIN ETR 1000 (ITALY)
SW 473	SYNTHETIC SPRAY GREASE FOR METAL COMPONENTS	APPROVED BY FAIVELEY TRANSPORT PART- NUMBER - 3000 00 473
SW 551	SYNTHETIC SPRAY GREASE FOR METAL-RUBBER SLIDINGS	APPROVED BY FAIVELEY TRANSPORT PART- NUMBER - 3000 00 551
SW 486	UNBLOCKING AND LUBRICANT SPRAY OIL	APPROVED BY FAIVELEY TRANSPORT PART- NUMBER - 3000 00 486
SW 487	SPRAY CLEANER AND PROTECTIVE FOR ELECTRIC CONTACTS	APPROVED BY FAIVELEY TRANSPORT PART- NUMBER - 3000 00 487
SW 354	OIL LEAKAGE DETECTOR	APPROVED BY FAIVELEY TRANSPORT PART- NUMBER - 3000 00 354
SP 801	SPRAY CLEANER FOR THE PRE-TREATMENT BEFORE ADHESION	APPROVED BY SPII
CP 809	SURFACE SPRAY CLEANER	APPROVED BY CONTACT
TS 321	SPRAY SILICONE GREASE	
TS 351	UNBLOCKING SPRAY	





SW 356

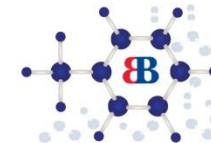
**Fully Synthetic Oil
for
On board
Air generation &
Treatment
Systems
in
High Speed Trains**

29th March, 2002 - after successful results from testing on trains ETR 500, ETR 450-460-470-480 Faiveley Italy specified our **SW 356**.

The oil was tested by the University of Milan laboratory 'Testing of lubricants'.

The tests found that the internal components of the compressors, had much less wear levels than mineral oil lubricated counterpart.

It was also noted that where the standard mineral oil was used, the wear on components was dangerously close to the permitted limits.



TECHNICAL DATA

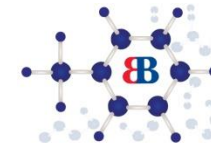
Typical properties	Method	Typical value
Thermal range, °C		-40 ÷ 205
Viscosity grade ISO VG	ASTM D-2422	46+
Viscosity at 100 °C, cSt	ASTM D-445	8.1
Viscosity at 40 °C, cSt	ASTM D-445	55
Viscosity at -25 °C, cSt	ASTM D-445	3670
Viscosity index	ASTM D-2270	116
Specific gravity at 15 °C, Kg/m ³	DIN 51 757	865
Pour Point, °C	ASTM D-97	< -66
Flash Point C.O.C., °C	ASTM D-92	> 260
Total Acid Number, mgKOH/g	ASTM D-664	0.05
Copper strip corrosion, 3 hours at 100 °C	ASTM D-130	1 a
Demulsibility at 54 °C - ml of oil/water/emulsion (minutes),	ASTM D-1401	40/38/2 (10)
Evaporation, 22 hours at 99 °C,%	ASTM D-972	< 1
Water content, ppm	ASTM D-1744	max. 0.05
Four ball wear, 1200 rpm, 40 Kg, 1 hr. at 75 °C, mm	ASTM D-4172	0.6
Foaming sequence I, II, III,	ASTM D 892	Nil

Traditional lubricant choice for subsets and screw compressors is a mineral oil with viscosity ISO 32. This means 32 cSt at 40 °C.

At high temperatures such as 100°C the actual mineral oil viscosity is 5 cSt which is insufficient value. Furthermore the low viscosity reduces the oil's lubricating capability resulting in problems for the screw compressor.

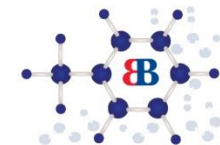
A thicker mineral oil can not be used as at low temperatures the oil would not have good lubricating properties.

SW 356 has its pour point at -66°C and with a standard viscosity index value of 119, it works well at low temperatures. At the typical working temperature its viscosity is not lower than 8 cSt.



*Example of our technical approach to develop a new product.
October 2007 – May 2008: aboard test on locomotive E464.*

SW 551 Specific grease for pneumatic valves lubrication	
<p>A</p>	<p>B</p>
<p>The spool chamber treated with ordinary lubricant shows deposits due to a mixture including grease and compressor mineral oil (yellow arrows). Using common lubricants the springs and the o-rings look covered by a thin layer of hardened grease. The spool shows an high wear level and it's darkened by carbon deposits (image A).</p>	<p>Spool lubricated with SW 551 is in good conditions and has a smooth movement in its chamber. The required elasticity of the o-rings have been preserved and no damages or undue deposits can be detected (image B). The gaskets and the spool surfaces are correctly covered by a thin film of lubricant (white arrow).</p>



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