



Industrial Technology

## Assali per trattori, trasmissioni per macchine da raccolta e trasmissioni finali

## Tabella dei lubrificanti TE-ML 21

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La tabella dei lubrificanti TE-ML 21, **edizione 01.07.2026** sostituisce tutte le edizioni precedenti. La rispettiva tabella dei lubrificanti aggiornata può essere richiesta ad ogni punto di appoggio e servizio assistenza ZF oppure consultata sul sito Internet [www.aftermarket.zf.com/lubricants](http://www.aftermarket.zf.com/lubricants).

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Disclaimer: I lubrificanti e i fornitori elencati nel presente documento sono indicati esclusivamente allo scopo di documentare i lubrificanti che sono stati testati per la compatibilità con i nostri prodotti. Questo elenco non costituisce alcuna approvazione, raccomandazione o preferenza per nessuno dei lubrificanti, produttori o fornitori menzionati. L'inclusione di qualsiasi lubrificante in questo elenco non implica che sia superiore ad altre opzioni disponibili, né indica che altri lubrificanti o fornitori non sono adatti per l'uso con i nostri prodotti. Potrebbero esistere ulteriori lubrificanti, produttori o fornitori — noti o meno alla nostra società — che siano pienamente compatibili o comunque idonei all'impiego. Resta esclusiva responsabilità di ciascun cliente verificare e rispettare tutte le leggi e i regolamenti sanzionatori applicabili prima di acquistare uno qualsiasi dei lubrificanti menzionati.

## 1. Classi di lubrificanti benestariati

Gruppi di prodotto	Classi di lubrificanti <sup>(1)</sup>	
	Primo riempimento <sup>(2)</sup>	Riempimento di servizio <sup>(3)</sup>
<b>Assali</b> APL-300, APL-700 AS-2000, AS-3000	<a href="#">ZF PowerFluid Gear LS</a> 21C / 21N	<a href="#">ZF PowerFluid Gear LS</a> <a href="#">ZF PowerFluid Plus</a> 21C / 21E / 21F / 21G / 21N
TerraSteerAxle (TSA), TerraDriveAxle (TDA)	<a href="#">ZF PowerFluid Gear LS</a> <a href="#">ZF PowerFluid Plus</a> 21C / 21E / 21F / 21G / 21N	<a href="#">ZF PowerFluid Gear LS</a> <a href="#">ZF PowerFluid Plus</a> 21C / 21E / 21F / 21G / 21N
<b>Trasmissioni per macchine da raccolta</b> 2MD40 3MD30, 3MD35, 3MD40	21A	21A
<b>Semiassi ZF</b> (riduttori epicicloidali finali) per trasmissioni per trattori Ecom, Terramatic, Terrapower, T-7000 e S-Matic	<a href="#">ZF PowerFluid Gear LS</a> <a href="#">ZF PowerFluid Plus</a> 21A / 21C / 21G / 21N	<a href="#">ZF PowerFluid Gear LS</a> <a href="#">ZF PowerFluid Plus</a> 21A / 21C / 21G / 21N
<b>Trasmissioni finali per macchine da raccolta</b> S-800, S-950, S-1050, S-1250	21A	21A

## 2. Intervalli di sostituzione dell'olio




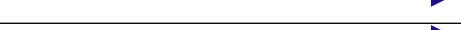



### 2.1 Intervallo di prima sostituzione dell'olio

Classe dei lubrificanti	21A	<a href="#">ZF PowerFluid Gear LS</a> 21C / 21F / 21N	<a href="#">ZF PowerFluid Plus</a> 21E / 21G
<b>Gruppi di prodotto</b>	<b>Intervallo di prima sostituzione dell'olio</b>		
<b>Assali APL, AS, TSA, TDA</b>	-	1500 h <sup>(4)</sup>	1500 h <sup>(4)</sup>
<b>Trasmissioni per macchine da raccolta</b>	500 h	-	-
<b>Semiassi ZF</b>	500 h	500 h <sup>(4)</sup>	500 h <sup>(4)</sup>
<b>Trasmissioni finali per macchine da raccolta</b>	500 h	-	-

### 2.2 Intervalli di sostituzione dell'olio seguenti

Classe dei lubrificanti	21A	<a href="#">ZF PowerFluid Gear LS</a> 21C / 21F / 21N	<a href="#">ZF PowerFluid Plus</a> 21E / 21G
<b>Gruppi di prodotto</b>	<b>Intervalli di sostituzione dell'olio seguenti</b>		
<b>Assali APL, AS, TSA, TDA</b>	-	1500 h	3000 h
<b>Trasmissioni per macchine da raccolta</b>	1000 h	-	-
<b>Semiassi ZF</b>	1000 h	1000 h	1000 h
<b>Trasmissioni finali per macchine da raccolta</b>	1000 h	-	-

### 3. Oli idraulici

Gruppi di prodotto	Lubrificanti ammessi per riempimento servizio <sup>(1)</sup>	Utilizzo con temperatura esterna a partire da
Impianto idraulico freno, blocco differenziale idraulico (DHL) e sterzo	21L	- 40°C 
	Lubrificanti secondo JDM J20D	- 40°C 
	21E / 21F (solo Lubrificanti secondo JDM J20C), 21G	- 30°C 
	21K	- 30°C 
	21M (ISO VG 32)	- 40°C  + 20°C
	21M (ISO VG 46)	- 10°C 
	21M (ISO VG 68)	- 5°C 

### 4. Zone di ingrassaggio

Gruppi di prodotto	Lubrificanti ammessi per riempimento servizio <sup>(1)</sup>
Tutti	21Q Intervalli di lubrificazione secondo rispettivi prescrizioni di lubrificazione e manutenzione

### 5. Spiegazione di note a piè di pagina ed osservazioni

#### Note a piè di pagina

- (1) **Per prodotti commerciali validati vedi seguenti pagine.**
- (2) Primo riempimento: Per il primo riempimento e per i riempimenti durante la fase di rodaggio del cambio (percorrenza inferiore a 1.000 h) è prescritto l'utilizzo dei lubrificanti delle classi di lubrificanti elencate.
- (3) Riempimento di servizio: I lubrificanti delle classi di lubrificanti elencate vanno utilizzati per le sostituzioni di servizio secondo gli intervalli di sostituzione dell'olio riportati nel par. 2.2.
- (4) Il riempimento originale di fabbrica ZF deve rimanere nell'assale almeno per le prime 500 ore di funzionamento; si sconsigliano cambi d'olio prematuri.

#### Osservazioni

Additivi di qualsiasi tipo che vengono aggiunti all'olio **posteriormente** fanno modificare l'olio in un modo da non prevedere e per questo non sono ammissibili. ZF non assume alcuna responsabilità di tutti i danni derivanti dall'uso di tali additivi.

## Classe dei lubrificanti 21A

Classi di viscosità: SAE 75W-90 / 75W-110 / 75W-140 / 80W-90 / 80W-110 / 80W-140 / 85W-90 / 85W-110 / 85W-140 / 90

Produttore (21A)	Denominazione prodotto (21A)	Numero di approvazione ZF
ADDINOL LUBE OIL GMBH, LEUNA/DE	ADDINOL GETRIEBEÖL GH 85W-90	ZF000555
ADDINOL LUBE OIL GMBH, LEUNA/DE	ADDINOL GETRIEBEÖL GH 80W-90	ZF000671
ADDINOL LUBE OIL GMBH, LEUNA/DE	ADDINOL GETRIEBEÖL GX 80W-90 ML	ZF000672
ADDINOL LUBE OIL GMBH, LEUNA/DE	ADDINOL GETRIEBEÖL GH 75 W 90 SL	ZF002260
ADDINOL LUBE OIL GMBH, LEUNA/DE	ADDINOL GETRIEBEÖL GH 85 W 140	ZF003561
ADDINOL LUBE OIL GMBH, LEUNA/DE	ADDINOL GETRIEBEÖL GX 80 W 90	ZF003620
AVIA AG, MÜNCHEN/DE	AVIA POWERTRAIN AX 85W-90	ZF012196
AVIA AG, MÜNCHEN/DE	AVIA POWERTRAIN GAX 80W-90	ZF012197
AVIA AG, MÜNCHEN/DE	AVIA POWERTRAIN PREMIUM AX 80W-90	ZF012198
AVIA AG, MÜNCHEN/DE	AVIA POWERTRAIN SUPREME GAX 75W-90	ZF012039
AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE	AVISTA PEER EVO GL5 SAE 80W-90	ZF004777
AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE	AVISTA PEER EVO GL4/GL5 SAE 80W-90	ZF004780
AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE	AVISTA PEER EVO GL5 SAE 85W-90	ZF004793
AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE	AVISTA PEER EVO PRIME GL4/GL5 SAE 80W-90	ZF004797
BAPCO REFINING, AWALI/BH	SPAREX EP 85W-140 GL-5	ZF002318
BASF SE, LUDWIGSHAFEN/DE	EMGARD HP 75W-90	ZF001716
BAYWA AG MÜNCHEN, MÜNCHEN/DE	TECTROL MULTIGEAR HYP 90	ZF005977
BAYWA AG MÜNCHEN, MÜNCHEN/DE	TECTROL MULTIGEAR PLUS 8090	ZF012143
BAYWA AG MÜNCHEN, MÜNCHEN/DE	TECTROL SYNTOGear MM 7590	ZF012124
BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR	BELGIN LUBEX MITRAS AX SYN ULTRA 75W-90	ZF005978
BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR	BELGIN LUBEX MITRAS AX EP MD 80W-90	ZF006035
BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR	BELGIN LUBEX MITRAS AX EP PLUS 80W-90	ZF011935
BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR	BELGIN LUBEX MITRAS AX EP EXTRA 80W-90	ZF011981
BLASER SWISSLUBE AG, HASLE-RÜEGSAU/CH	EVOLCA SGP 75W90	ZF004734
BLASER SWISSLUBE AG, HASLE-RÜEGSAU/CH	EVOLCA BGP 80W90	ZF004735
CASTROL LTD, LONDON/GB	CASTROL AXLE EPX 85W-140	ZF000910
CASTROL LTD, LONDON/GB	CASTROL AXLE EPX 80W-90	ZF001320
CASTROL LTD, LONDON/GB	CASTROL AXLE EPX 80W-90	ZF001754
CASTROL LTD, LONDON/GB	CASTROL TRANSMAX AXLE LONG LIFE 75W-90	ZF002142
CASTROL LTD, LONDON/GB	CASTROL TRANSMAX UNIVERSAL LL 80W-90	ZF002143
CASTROL LTD, LONDON/GB	CASTROL TRANSMAX UNIVERSAL LL 75W-90	ZF002144
CASTROL LTD, LONDON/GB	CASTROL TRANSMAX AXLE EPX 80W-90	ZF002163
CASTROL LTD, LONDON/GB	CASTROL TRANSMAX AXLE EPX 85W-90	ZF003394
CASTROL LTD, LONDON/GB	CASTROL TRANSMAX AXLE LONG DRAIN 80W-90	ZF004885
CASTROL LTD, LONDON/GB	CASTROL SAF-XO 75W-90	ZF006097
CHAMPION CHEMICALS N.V., HEMIKSEM/BE	CHAMPION OEM SPECIFIC 75W90 GL 5	ZF003554
CHEVRON LUBRICANTS, SAN RAMON, CA/US	HYPOLID LD SAE 85W-90	ZF000788
CHEVRON LUBRICANTS, SAN RAMON, CA/US	MULTIGEAR PREMIUM EP SAE 85W-140	ZF001196
CHEVRON LUBRICANTS, SAN RAMON, CA/US	MULTIGEAR EP SAE 90	ZF001243
CHEVRON LUBRICANTS, SAN RAMON, CA/US	MULTIGEAR EP-5 SAE 80W-90	ZF002137
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO GEAR EP-5 SAE 85W-140	ZF002254
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO GEAR TDL 80W-90	ZF002273
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO SYN-GEAR XS 75W-140	ZF002274
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO GEAR EP-5 SAE 80W-90	ZF002270
CHEVRON LUBRICANTS, SAN RAMON, CA/US	GEARTEX EP-5 80W-90	ZF002279
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO SYN-TDL 75W-90	ZF003353
CHEVRON LUBRICANTS, SAN RAMON, CA/US	DELO GEAR CGA SAE 80W-90	ZF003513
CLASS KGAA MBH, HARSEWINKEL/DE	AGRISHIFT MT 80W-90	ZF008203
CLASS KGAA MBH, HARSEWINKEL/DE	AGRISHIFT MT 80W-90	ZF008233
CONDAT LUBRIFIANTS, CHASSE SUR RHONE/FR	GEAR TXS 75W90	ZF000829
CYCLON HELLAS SA, ATHENS/GR	GEAR EP GL-5 80W-90	ZF001604
DE OLIEBRON BV, ZWIJNDRECHT/NL	TOR SUPER GEAR OIL 80W90	ZF000963
DE OLIEBRON BV, ZWIJNDRECHT/NL	TOR UNI GEAR LD 75W90	ZF000964
DEUTSCHE ÖLWERKE LUBMIN, LUBMIN/DE	AVENO TDL ULTIMATE 75W-90	ZF010792
EKO ABEE, ATHENS/GR	EKO GEAROL-5 80W-90	ZF003351
ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUSEVAC/RS	MULTIHIPO 75W-90 SINT	ZF000653
ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUSEVAC/RS	MULTIHIPO PLUS 80W-90	ZF001086
ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUSEVAC/RS	MULTIHIPO 80W-90 F PLUS	ZF001456
ELLIS ENTERPRISES EAST D.O.O. KRUSEVAC, KRUSEVAC/RS	MULTIHIPO 80W-140 F PLUS	ZF001749
ENILIVE S.P.A., ROME/IT	ENI ROTRA MP 80W-90	ZF000855
ENILIVE S.P.A., ROME/IT	ENI ROTRA MP 85W-140	ZF000856
ENILIVE S.P.A., ROME/IT	ENI ROTRA LSX 75W-90	ZF000860
ENILIVE S.P.A., ROME/IT	ENI ROTRA MP 75W-90	ZF003364
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILUBE 1 SHC 75W-90	ZF000041
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILUBE HD-A PLUS 80W-90	ZF000042
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILUBE HD-A 85W-90	ZF000668
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBILUBE S 80W-90	ZF000776
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC 1 GEAR OIL 75W-90	ZF001681
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC 1 GEAR OIL 80W-140	ZF001682
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC ULTRA TOTAL DRIVELINE 75W-90	ZF003699
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN AXLE OIL 80W-90 V1	ZF008180
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN AXLE OIL 85W-140 V1	ZF008179
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN AXLE OIL 80W-90 V1	ZF008311
EXXONMOBIL CORPORATION, HOUSTON, TX/US	MOBIL DELVAC MODERN AXLE OIL 85W-140 V1	ZF00

**Numero di  
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ZF012186  
ZF012252  
ZF012247  
ZF002249  
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ZF006009

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MOTOREX YORK UNIVERSAL SAE 80W90  
MOTOREX\_YORK UNIVERSAL CT SAE 80W/90  
MOTOREX YORK GEAR ZX TP SAE 80W/140  
MOTOREX YORK UNISYNT ZX SAE 75W90  
MOTUL GEAR SYNTH TDL 75W-90  
MIDLAND SENSOGEAR 75W-90  
OEST SYNTH GETRIEBEÖL SAE 75W-90  
OEST GETRIEBEÖL FE SAE 80W-90 GL4/5  
OEST MEHRZWECK-GETRIEBEÖL SPEZIAL SAE 85W-90  
OILFINO VARIUS G 500 80W-90  
PLATINUM GEAR GL-5 80W-90  
ORLEN OIL GEAR GL-5 80W-90  
ORLEN OIL GEAR LL 80W-90  
LOTOS TITANIS GL-5 80W-90  
TITANIS SUPER GL-5 80W-90  
LOTOS TITANIS GL-5 80W-90  
GLOBAL MULTIGEAR TS SAE 75W/90  
GLOBAL GEAR SA SAE 85W-140  
TRAXON 85W-140  
TRAXON XL SYNTHETIC BLEND 80W-140  
TRAXON 80W-90  
TRAXON 85W-140  
TRAXON 85W-140  
TRAXON 85W-140  
TRAXON XL SYNTHETIC BLEND 80W-140  
TRAXON SYNTHETIC 75W-90  
TRAXON 80W-90  
TRAXON SYNTHETIC 75W-90  
GALP TRANSOIL HP 80W90  
GALP TRANSOIL HP 85W140  
GALP TRANSVEX TDL 85W140  
GALP TRANSVEX TDL 75W90  
GALP TRANSOIL HP XT 80W90  
MAXIGEAR TECH EP-X 80W-90  
MAXIGEAR D 75W-90  
MAXIGEAR EP-X 80W-90  
ARBOR TRW 90 (SAE 80W-90)  
ARBOR TRW 140 (SAE 85W-140)  
AMBRA HYPOIDE 90 (SAE 80W-90)  
AKCELA GEAR 135H EP (SAE 80W-90)  
AKROS GEAR EP 90 (SAE 80W-90)  
AMBRA HYPOIDE 140 (SAE 85W-140)  
AKCELA GEAR 135H EP (SAE 85W-140)  
TUTELA TRANSMISSION W90/LA (SAE 80W-90)  
TUTELA TRANSMISSION W90/M-DA (SAE 80W-90)  
TUTELA TRANSMISSION W140/M-DA (SAE 85W-140)  
TUTELA TRANSMISSION X-ROAD (75W-140)  
TUTELA TRANSMISSION FE-AXLE (SAE 75W-90)  
ARBOR TRW 90 (SAE 80W-90)  
TUTELA TRANSMISSION STGEAR AX-ED (SAE 75W-90)  
TUTELA TRANSMISSION W140/M-DA (SAE 85W-140)  
AMBRA HYPOIDE 90 (SAE 80W-90)  
PETRONAS TUTELA AXLE 700 EHD 75W-90  
TUTELA TRANSMISSION W 90/LA (SAE 80W-90)  
ARBOR TRW 90 (SAE 80W-90)  
AKCELA GEAR 135H EP (SAE 80W-90)  
AMBRA HYPOIDE 140 (SAE 85W-140)  
AKCELA GEAR 135H EP (SAE 85W-140)  
ARBOR TRW 140 (SAE 85W-140)  
AKROS GEAR EP 90 (SAE 80W-90)  
TUTELA TRANSMISSION W 90/M-DA (SAE 80W-90)  
PETRONAS TUTELA AXLE 700 EHD 75W-140  
PETRONAS TUTELA AXLE 300 85W-140  
PETRONAS TUTELA AXLE 300 80W-90  
PETRONAS TUTELA AXLE 300 85W-140  
PETRONAS TUTELA AXLE 300 80W-90  
UNIGEAR GOLD 75W90  
UNIGEAR GOLD 75W90  
PRISTA EP 90  
PRISTA EP 80W-90  
RAVENOL HYPOID EPX GETR.-OEL 80W-90 GL5  
RAVENOL SLG SAE 80W-90  
RAVENOL GEAR SUPER SYNTH GSS SAE 75W-90  
RAVENOL GEAR TRANS SYNTH GTS SAE 75W-90  
RAVENOL TDG SAE 75W-110  
REPSOL CARTAGO EP SAE 90  
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REPSOL CARTAGO EP MULTIGRADO SAE 85W140  
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REPSOL NAVIGATOR FE LL 75W-90  
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REPSOL NAVIGATOR HQ GL-5 80W-90  
REPSOL NAVIGATOR HQ GL-5 85W-140  
REPSOL NAVIGATOR HQ GL-5 SAE 90  
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ROLF TRANSMISSION M5 A 80W-90  
TRANSMISSION 80W-90 GL5

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ZF012095  
ZF001266



**Classe dei lubrificanti 21C**

Olio per cambi con additivi "limited slip"

Classi di viscosità: SAE 75W-90 / 75W-110 / 75W-140 / 80W-90 / 85W-90 / 90

**Produttore (21C)**

ADDINOL LUBE OIL GMBH, LEUNA/DE  
ADDINOL LUBE OIL GMBH, LEUNA/DE  
AGCO GMBH, MARKTOBERDORF/DE  
AGCO GMBH, MARKTOBERDORF/DE  
AVIA AG, MÜNCHEN/DE  
AVISTA OIL DEUTSCHLAND GMBH, UETZE/DE  
BAYWA AG MÜNCHEN, MÜNCHEN/DE  
BAYWA AG MÜNCHEN, MÜNCHEN/DE  
BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR  
BLASER SWISSLUBE AG, HASLE-RÜEGSAU/CH  
CASTROL LTD, LONDON/GB  
CASTROL LTD, LONDON/GB  
CHAMPION CHEMICALS N.V., HEMIKSEM/BE  
CHEVRON LUBRICANTS, SAN RAMON, CA/US  
CHEVRON LUBRICANTS, SAN RAMON, CA/US  
CHEVRON LUBRICANTS, SAN RAMON, CA/US  
EXXONMOBIL CORPORATION, HOUSTON, TX/US  
EXXONMOBIL CORPORATION, HOUSTON, TX/US  
EXXONMOBIL CORPORATION, HOUSTON, TX/US  
FINKE MINERALÖLWERK GMBH, 27374 VISSSELHÖVEDE/DE  
FUCHS PETROLUB SE, MANNHEIM/DE  
GS CALTEX CORPORATION, SEOUL/KR  
GS CALTEX CORPORATION, SEOUL/KR  
GULF OIL INTERNATIONAL, MUMBAI/IN  
HITACHI CONSTRUCTION MACHINERY EUROPE NV, AMSTERDAM/NL  
HUILES BERLIET S.A., SAINT-PIERST/FR  
INA MAZIVA LTD., ZAGREB/HR  
JOHN DEERE, MOLINE, ILLINOIS/US  
KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE  
LIEBHERR HYDRAULIKBAGGER GMBH, KIRCHDORF/DE  
LIQUI MOLY GMBH, ULM/DE  
LIQUI MOLY PRODUKTIONS GMBH & CO. KG, SAARLOUIS/DE  
LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT  
LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT  
LUKOIL LUBRICANTS EUROPE GMBH, VIENNA/AT  
MOEVE CLIENT SOLUTIONS, S.A.U., MADRID/ES  
MOL-LUB KFT, ALMASFUZITO/HU  
MOTOREX AG, LANGENTHAL/CH  
MOTOREX AG, LANGENTHAL/CH  
NILS SPA, BURGSTALL/IT  
NORTHLAND PRODUCTS COMPANY, WATERLOO, IOWA/US  
OEST LUBRICANTS GMBH & CO.KG, FREUDENSTADT/DE  
OILFINO MINERALÖL GMBH, PRISDORF/DE  
ORLEN OIL SP. Z O.O., KRAKOW/PL  
ORLEN OIL SP. Z O.O., KRAKOW/PL  
ORLEN OIL SP. Z O.O., KRAKOW/PL  
ORLEN OIL SP. Z O.O., KRAKOW/PL  
ORLEN S.A., GDANSK/PL  
PAKELO MOTOR OIL S.P.A. A S.U., SAN BONIFACIO (VR)/IT  
PETROGAL S.A., LISBOA/PT  
PETROL OFISI A.S., ISTANBUL/TR  
PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
PETRONAS LUBRICANTS INTERNATIONAL SDN BH, KUALA LUMPUR/MY  
PHI OIL GMBH, ST. GEORGEN/AT  
REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES  
REPSOL LUBRICANTES Y ESPECIALIDADES, S.A, MADRID/ES  
ROLF LUBRICANTS GMBH, LEVERKUSEN/DE  
SASOL ENERGY, JOHANNESBURG/ZA  
SAVITA OIL TECHNOLOGIES LIMITED, MUMBAI/IN  
SENNEBOGEN MASCHINENFABRIK GMBH, STEINACH/DE  
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
SHELL INTERNATIONAL PETROLEUM COMP. LTD, LONDON/GB  
SINOPEC LUBRICANT CO., LTD., BEIJING/CN  
SK ENMOVE CO.,LTD., SEOUL/KR  
SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
UNIL OPAL, SAUMUR/FR  
VALVOLINE EUROPE, DORDRECHT/NL  
WILHELM HOYER B.V. & CO. KG, VISSSELHÖVEDE/DE  
WOLF OIL CORPORATION N.V., HEMIKSEM/BE  
ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE

**Denominazione prodotto (21C)**

ADDINOL GETRIEBEÖL GH 85W-90 LS  
ADDINOL GETRIEBEÖL GH 80W-90 LS  
VALTRA AXLE LS 85W-90  
FENDT SUPER TRANS LS 85W-90  
AVIA POWERTRAIN AX-LS 85W-90  
AVISTA PEER EVO GL5 LS SAE 90  
TECTROL MULTIGEAR LS 90  
TECTROL MULTIGEAR LS 90  
BELGEAR LS 85W90  
EVOLCA BGX 85W90  
CASTROL TRANSMAX LIMITED SLIP LL 75W-140  
CASTROL TRANSMAX LIMITED SLIP Z 85W-90  
CHAMPION OEM SPECIFIC 80W90 LS GL 5  
GEAR OIL ZF SAE 80W-90  
GEARTEX LS 80W-90  
GEARTEX LS 85W-90  
MOBILUBE LS 85W-90  
MOBILUBE LS 85W-90  
MOBIL DELVAC MODERN AXLE OIL 85W-90 LIMITED SLIP  
AVIATICON HYPOID LS 90  
FUCHS TITAN GEAR LS SAE 90  
DOOSAN LS GEAR OIL 80W90  
DEVELON LS GEAR OIL 80W90  
GULF GEAR LS 90  
HITACHI GENUINE AXLE OIL ZX-W LS 80W-90  
EP 90 GL  
INA HIPENOL GTL LS 90  
JOHN DEERE GL-5 GEAR LUBRICANT W/LS ADD 80W-90  
Q8 T 45 LS SAE 90  
LIEBHERR GEAR BASIC 90 LS  
LIQUI MOLY HYPOID-GETRIEBEÖL PLUS GL 5 LS 85W-90  
MEGOL HYPOID-GETRIEBEOEL AXLE LS SAE 85W-90  
LUKOIL GEAR GL-5 LS 85W-90  
LUKOIL TRANSMISSION LS 80W-90  
LUKOIL TRANSMISSION LS 85W-90  
CEPSA AURIGA LS PLUS 80W-90  
MOL HYKOMOL LS 85W90  
MOTOREX YORK LS UNIVERSAL SAE 90  
YORK 699 LS SAE 90  
ALGOL HYPOID LS 90  
POSI-GRIP JDZF 80W90  
OEST GETRIEBEÖL HYPOID LS 90  
OILFINO VARIUS G 400LS 85W-90  
PLATINUM GEAR LS 80W-90  
PLATINUM AGRO LS 80W-90  
ORLEN OIL GEAR LS 80W-90  
ORLEN OIL AGRO LS 80W-90  
LOTOS TITANIS LS GL-5 80W-90  
UNIVERSAL GEAR EP LS SAE 85W/90  
GALP TRANSOIL HP LS 90  
MAXIGEAR EP-X 85W-90LS  
AMBRA AXF 80W-90 (SAE 80W-90)  
AKCELA AXLEPOWER (SAE 80W-90)  
TUTELA TRANSMISSION W90/LS (SAE 80W-90)  
ARBOR TTF (SAE 80W-90)  
PETRONAS AXLE 300 LS 80W-90  
SUPERGEAR BRONZE 85W90 LS  
REPSOL CARTAGO EP AUTOBLOCANTE SAE 80W90  
REPSOL NAVIGATOR LSD 80W-90  
ROLF TRANSMISSION M5 A-LS 80W-90  
SASOL DIFFERENTIAL OIL LIMITED SLIP 80W-90  
SAVSOL AUTOGEAR 90 LIMITED SLIP GL-5  
SENLUBE GEAR HYPOID LS  
SHELL SPIRAX S3 ALS 80W-90  
SHELL SPIRAX S3 ALS 85W- 90  
SINOPEC GREATWALL ZLS GL-5 85W/90  
SK ZIC G-5 LSD 80W-90  
SRS WIOLIN RSH  
ELF TRACTELF BLS 80W-90  
DYNATRANS DA 80W-90  
DYNATRANS LS 80W-90  
CLASS AGRISHIFT BLS 80W-90  
GEAR AB-EP 85W90  
VALVOLINE HEAVY DUTY AXLE OIL PRO 80W-90 LS  
HOYER GEAR M-LS 90  
WOLF OFFICIALTECH 80W90 LS GL 5  
ZF POWERFLUID GEAR LS

**Numero di approvazione ZF**

ZF000629  
ZF000703  
ZF003466  
ZF003467  
ZF012107  
ZF004776  
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ZF000526  
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ZF011994  
ZF003552  
ZF008414

**Classe dei lubrificanti 21E**  
Olio universale per assali e cambi

Produttore (21E)	Denominazione prodotto (21E)	Numero di approvazione ZF
CNH INDUSTRIAL AMERICA LLC, RACINE, WI/US	PREMIUM TRANSAXLE OIL 80W-140	ZF005941
VIBRA ENERGIA S.A., DUQUE DE CAXIAS/BR	LUBRAX UNITRACTOR 10W-30	ZF010660
WOLF OIL CORPORATION N.V., HEMIKSEM/BE	WOLF TRACTOFLUID 80W-140	ZF012017

**Classe dei lubrificanti 21F**  
Olio universale per assali e cambi

**Produttore (21F)**

ADDINOL LUBE OIL GMBH, LEUNA/DE  
ADDINOL LUBE OIL GMBH, LEUNA/DE  
AGCO GMBH, MARKTOBERDORF/DE  
ARGO TRACTORS S.P.A., FABBRICO RE/IT  
ARGO TRACTORS S.P.A., FABBRICO RE/IT  
ARGO TRACTORS S.P.A., FABBRICO RE/IT  
AVIA AG, MÜNCHEN/DE  
AVIA AG, MÜNCHEN/DE  
AVIA AG, MÜNCHEN/DE  
BAYWA AG MÜNCHEN, MÜNCHEN/DE  
BAYWA AG MÜNCHEN, MÜNCHEN/DE  
BAYWA AG MÜNCHEN, MÜNCHEN/DE  
BAYWA AG MÜNCHEN, MÜNCHEN/DE  
BELGIN MADENI YAGLAR TIC. VE SAN. A.S., KOCAELI/TR  
BELL EQUIPMENT GROUP SERVICES (PTY) LTD, RICHARDS BAY/ZA  
BLASER SWISSLUBE AG, HASLE-RÜEGSAU/CH  
BP PLC., LONDON/GB  
CASTROL LTD, LONDON/GB  
CASTROL LTD, LONDON/GB  
CATERPILLAR, INC., MOSSVILLE/US  
CHAMPION CHEMICALS N.V., HEMIKSEM/BE  
CHEVRON LUBRICANTS, SAN RAMON, CA/US  
CHEVRON LUBRICANTS, SAN RAMON, CA/US  
CHEVRON LUBRICANTS, SAN RAMON, CA/US  
CHEVRON LUBRICANTS, SAN RAMON, CA/US  
CHEVRON LUBRICANTS, SAN RAMON, CA/US  
CHEVRON LUBRICANTS, SAN RAMON, CA/US  
CLASS KGAA MBH, HARSEWINKEL/DE  
CNH INDUSTRIAL AMERICA LLC, RACINE, WI/US  
CNH INDUSTRIAL AMERICA LLC, RACINE, WI/US  
DEUTSCHE ÖLWERKE LUBMIN, LUBMIN/DE  
ENGEN PETROLEUM (PTY) LIMITED, CAPE TOWN/ZA  
EUROL B.V., NJIVERDAL/NL  
EXXONMOBIL CORPORATION, HOUSTON, TX/US  
EXXONMOBIL CORPORATION, HOUSTON, TX/US  
EXXONMOBIL CORPORATION, HOUSTON, TX/US  
EXXONMOBIL CORPORATION, HOUSTON, TX/US  
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EXXONMOBIL CORPORATION, HOUSTON, TX/US  
EXXONMOBIL CORPORATION, HOUSTON, TX/US  
EXXONMOBIL CORPORATION, HOUSTON, TX/US  
FINKE MINERALÖLWERK GMBH, 27374 VISSELHÖVEDE/DE  
FUCHS PETROLUB SE, MANNHEIM/DE  
FUCHS PETROLUB SE, MANNHEIM/DE  
FUCHS PETROLUB SE, MANNHEIM/DE  
FUCHS PETROLUB SE, MANNHEIM/DE  
FUCHS PETROLUB SE, MANNHEIM/DE  
GB LUBRICANTS, GATESHEAD/GB  
GS CALTEX CORPORATION, SEOUL/KR  
GULF OIL INTERNATIONAL, MUMBAI/IN  
GULF OIL INTERNATIONAL, MUMBAI/IN  
HD HYUNDAI OILBANK, LTD, GYEONGGI-DO/KR  
HD HYUNDAI OILBANK, LTD, GYEONGGI-DO/KR  
HD HYUNDAI OILBANK, LTD, GYEONGGI-DO/KR  
INA MAZIVA LTD., ZAGREB/HR  
INA MAZIVA LTD., ZAGREB/HR  
INA MAZIVA LTD., ZAGREB/HR  
JOHN DEERE, MOLINE, ILLINOIS/US  
JOHN DEERE, MOLINE, ILLINOIS/US  
KROON-OIL B.V., ALMELO/NL  
KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE  
KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE  
KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE  
KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE  
KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE  
KUWAIT PETROLEUM (BELGIUM) N.V., ANTWERP/BE  
LAEMMLE CHEMICALS AG, MADETSWIL/CH  
LIEBHERR HYDRAULIKBAGGER GMBH, KIRCHDORF/DE  
LIEBHERR HYDRAULIKBAGGER GMBH, KIRCHDORF/DE  
LIEBHERR HYDRAULIKBAGGER GMBH, KIRCHDORF/DE  
LIEBHERR HYDRAULIKBAGGER GMBH, KIRCHDORF/DE  
LIQUI MOLY GMBH, ULM/DE  
LIQUI MOLY GMBH, ULM/DE  
LIQUI MOLY PRODUKTIONS GMBH & CO. KG, SAARLOUIS/DE  
LIQUI MOLY PRODUKTIONS GMBH & CO. KG, SAARLOUIS/DE  
MOEVE CLIENT SOLUTIONS, S.A.U., MADRID/ES  
MOTOREX AG, LANGENTHAL/CH  
MOTOREX AG, LANGENTHAL/CH  
MOTOREX AG, LANGENTHAL/CH  
PAKELO MOTOR OIL S.P.A. A S.U., SAN BONIFACIO (VR)/IT

**Denominazione prodotto (21F)**

ADDINOL UTTO SAE 10W-30  
ADDINOL UTTO EXTRA (SAE 20W-40)  
VALTRA TRANSMISSION XT60  
VELA C+ AGROLUBE  
VELA C+ LANDINI  
VELA C+ MCCORMICK  
AVIA HYDROFLUID DLZ  
AVIA HYDROFLUID TD  
AVIA POWERTRAIN UTTO-DLZ  
TECTROL UTTO-ZF  
TECTROL UTTO-HF  
TECTROL UTTO-HF  
TECTROL UTTO-HF  
TECTROL UTTO-ZF  
BELGIN LUBEX AGROS UTTO PLUS  
BELL UTTO ULTRA  
EVOLCA UTTO 8068  
BP TRACTRAN TF-10  
CASTROL TRANSMAX AGRI TRANS PLUS 80W  
CASTROL TRANSMAX AGRI TRANS PLUS 80W  
CAT MULTIPURPOSE TRACTOR OIL  
CHAMPION U.T.T. OIL 170 BM  
1000 THF  
1000 THF  
1000 THF  
1000 THF  
1000 THF  
1000 THF  
1000 THF  
CLAAS AGRISHIFT GA 12  
PREMIUM TRANSAXLE OIL 20W-40  
PREMIUM TRANSAXLE OIL 20W-40  
AVENO UTTO  
ENGEN AGRIFLUID  
EUROL HYKROL JD 68  
MOBILFLUID 424  
MOBILFLUID 424  
MOBIL HYDRAUL 56  
MOBILFLUID 424  
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MOBILFLUID 428 V2  
AVIATICON AGRA PREMIUM UTTO  
FUCHS TITAN UTTO ZF (SAE 20W-40)  
FUCHS TITAN AGRIFARM UTTO MP  
FUCHS TITAN AGRIFARM UTTO MP  
TITAN UTTO WB  
FUCHS AGRIFARM UTTO MP  
GB UNITRANS(R) ZF  
DEVELON AXLE OIL STANDARD  
GULF MPTF 10W-30  
GULF MPTF 10W-30  
XTEER THF 75W-80  
DEVELON AXLE GL-4 75W-80  
HYUNDAI AXLE GL-4 75W-80  
INA TRANSHIDROL JD 50  
INA TRANSHIDROL ZF 20W-40  
INA TRANSHIDROL JD 50  
JOHN DEERE HY-GARD  
JOHN DEERE HY-GARD FLEX  
AGRIFLUID HT-PLUS  
Q8 T 2000  
JCB HP GEAR OIL PLUS  
JCB HP GEAR OIL PLUS  
JCB HP GEAR OIL PLUS  
Q8 T 2200  
Q8 TERRA 2200 UTTO  
ROXOR CONSTAR UTTO 803  
LIEBHERR GEAR MF 80W  
LIEBHERR GEAR PLUS 20W-40  
LIEBHERR GEAR PLUS 20W-40  
LIEBHERR GEAR MF 80W  
LIQUI MOLY SPECIAL UTTO  
LIQUI MOLY TRAKTORÖL UTTO  
MEGOL TRAKTORENOEL UTTO PREMIUM SAE 10W-30  
MEGOL TRAKTORENOEL UTTO  
CEPSA AURIGA TE 55 10W-30  
MOTOREX YORK FARMER POLY 304  
MOTOREX YORK UTTO CF SAE 10W30  
MOTOREX YORK FARMER POLY 604  
UTTO FLUID 4 D SAE 10W-30

**Numero di  
approvazione ZF**

ZF000509  
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**Numero di  
approvazione ZF**

ZF000849  
ZF001351  
ZF000544  
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ZF005951  
ZF011927

**Classe dei lubrificanti 21G**  
Olio universale premium per assali e cambi

Produttore (21G)	Denominazione prodotto (21G)	Numero di approvazione ZF
SINOPEC LUBRICANT CO., LTD., BEIJING/CN	SINOPEC GREATWALL HD DRIVE AXLE OIL	ZF002162
ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE	ZF POWERFLUID C-PLUS (GOLD 1)	ZF002087
ZF FRIEDRICHSHAFEN AG, FRIEDRICHSHAFEN/DE	ZF POWERFLUID PLUS	ZF005995

**Classe dei lubrificanti 21K**

Olio motore

Classe di viscosità: SAE 10W, 10W-30, 10W-40

secondo specifica API CD/CE/CF-4/CF/CG-4/CH-4/CI-4/CI-4 Plus/CJ-4

o SF/SG/SH/SJ/SL/SM

o ACEA, categorie A, B, E

**Avvertenza:**

Sono ammessi tutti i prodotti commerciali che soddisfano le specifiche citate. Nessun elenco di prodotti disponibile.

**Classe dei lubrificanti 21L**

Automatic Transmission Fluids (ATF) olio base a base di olio minerale secondo la precedente specifica Dexron IID, IIIF, IIIG o IIIH di General Motors.

**Avvertenza:**

Sono ammessi tutti i prodotti commerciali che soddisfano le specifiche citate. Nessun elenco di prodotti disponibile.

**Classe dei lubrificanti 21M**

Olio idraulico a base di olio minerale HLP a norma DIN 51524-2 o olio idraulico a base di olio minerale HVLP a norma DIN 51524-3.

Classi di viscosità: ISO VG 32 / 46 / 68

**Avvertenza:**

Sono ammessi tutti i prodotti commerciali che soddisfano le specifiche sopra citate. Nessun elenco di prodotti disponibile.

**Inoltre**, possono essere utilizzati i seguenti prodotti commerciali:

**Produttore (21M)**

PANOLIN DISTRIBUTION AG, STEINHAUSEN/CH  
PANOLIN DISTRIBUTION AG, STEINHAUSEN/CH  
PANOLIN DISTRIBUTION AG, STEINHAUSEN/CH

**Denominazione prodotto (21M)**

SHELL PANOLIN S4 HLP SYNTH 32  
SHELL PANOLIN S4 HLP SYNTH 46  
SHELL PANOLIN S4 HLP SYNTH 68

**Numero di  
approvazione ZF**

ZF012032  
ZF012033  
ZF012034

**Classe dei lubrificanti 21N**

Olio per cambi con additivi "limited slip"

Classi di viscosità: SAE 75W-90 / 75W-110 / 75W-140 / 80W-90 / 85W-90 / 90

**Produttore (21N)**

AVIA AG, MÜNCHEN/DE  
 BAYWA AG MÜNCHEN, MÜNCHEN/DE  
 CHAMPION CHEMICALS N.V., HEMIKSEM/BE  
 CHAMPION CHEMICALS N.V., HEMIKSEM/BE  
 EXXONMOBIL CORPORATION, HOUSTON, TX/US  
 EXXONMOBIL CORPORATION, HOUSTON, TX/US  
 EXXONMOBIL CORPORATION, HOUSTON, TX/US  
 FINKE MINERALÖLWERK GMBH, 27374 VISSELHÖVEDE/DE  
 FUCHS PETROLUB SE, MANNHEIM/DE  
 KROON-OIL B.V., ALMELO/NL  
 MORRIS LUBRICANTS, SHREWSBURY/GB  
 MOTOREX AG, LANGENTHAL/CH  
 PAKELO MOTOR OIL S.P.A. A S.U., SAN BONIFACIO (VR)/IT  
 PHI OIL GMBH, ST. GEORGEN/AT  
 ROCK OIL, WARRINGTON/GB  
 SRS SCHMIERSTOFF VERTRIEB GMBH, SALZBERGEN/DE  
 TONGYI PETROLEUM CHEMICAL CO., LTD., BEIJING/CN  
 TOTALENERGIES LUBRIFIANTS, NANTERRE/FR  
 WILHELM HOYER B.V. & CO. KG, VISSELHÖVEDE/DE  
 WOLF OIL CORPORATION N.V., HEMIKSEM/BE  
 WOLF OIL CORPORATION N.V., HEMIKSEM/BE  
 ZELLER+GMELIN GMBH&CO.KG, EISLINGEN/DE

**Denominazione prodotto (21N)**

AVIA POWERTRAIN PLUS AX-LS 80W-90  
 TECTROL MULTIGEAR LS 90 LV  
 CHAMPION OEM SPECIFIC 80W-90 LS GL 5 ZF-N  
 CHAMPION OEM SPECIFIC 85W-90 LS GL 5 ZF-N  
 MOBIL DELVAC MODERN AXLE OIL 80W-90 LIMITED SLIP  
 MOBIL DELVAC MODERN AXLE OIL 80W-90 LIMITED SLIP  
 MOBIL DELVAC MODERN AXLE OIL 80W-90 LIMITED SLIP  
 AVIATICON HYPOID LS PLUS 80W-90  
 TITAN SUPERGEAR LS SAE 80W-90  
 GEARLUBE LS 80W-90  
 TERRAIN LS 80W-90  
 MOTOREX YORK LS UNIVERSAL SAE 80W/90  
 UNIVERSAL GEAR EP LS SAE 80W-90  
 SUPERGEAR BRONZE 80W90 LS  
 SD LS 80W-90  
 SRS WIOLIN RSH PLUS 80W-90  
 TONGYI 80W-90  
 DYNATRANS DAX 80W-90  
 HOYER GEAR M-LS+ 80W-90  
 WOLF OFFICIALTECH 80W-90 LS GL 5 ZF-N  
 WOLF OFFICIALTECH 85W-90 LS GL 5 ZF-N  
 DIVINOL MULTI-AXLE LS 80W90

**Numero di approvazione ZF**

ZF012202  
 ZF009443  
 ZF011947  
 ZF012199  
 ZF009436  
 ZF010924  
 ZF011990  
 ZF011976  
 ZF008289  
 ZF009458  
 ZF010985  
 ZF011905  
 ZF010992  
 ZF012016  
 ZF010297  
 ZF009472  
 ZF012020  
 ZF009422  
 ZF011995  
 ZF011930  
 ZF012185  
 ZF010462

**Classe dei lubrificanti 21Q**

Grasso universale secondo alla specifica / esigenza:

- DIN 51825 Classificazione KP2K-30 e/o  
ISO 6743-9 Classificazione ISO-L-XCCEB2 o  
ISO 6743-9 Classificazione ISO-L-XCCHB2
- Olio di base: idrocarburi minerali o sintetici (nessun estere)
- Tipo di spessore: Ca, Li (sapone semplice, misto, complesso)
- Classe di consistenza: NLGI 2
- Additivi EP
- Limiti di temperatura d'impiego min. -30°C fino a +120°C

**Avvertenza:**

Tutti i prodotti commerciali che soddisfano le specifiche / esigenze sopra indicate possono essere utilizzati.  
Nessun elenco di prodotti disponibile.

Con temperature esterne superiori a -20 ° C si possono utilizzare anche grassi con la seguente classificazione:

DIN 51825 Classificazione KP2K-20 e/o  
ISO 6743-9 Classificazione ISO-L-XBCEB2 o  
ISO 6743-9 Classificazione ISO-L-XBCHB2