

➤ **ANEXOS**

- CERTIFICADOS DE EXPERIENCIA
- FICHAS TECNICAS DE PRODUCTOS
- MSDS (MATERIAL SAFETY DATA SHEET DE PRODUCTOS)
- CERTIFICACIONES DE CALIDAD

mw



3R EQUIPMENTS & SERVICES

FRAC TANK RENTAL
API AND FAB WELDING
CONTRACT LABOR SUPPLIED
GEN SET RENTAL
HEAVY EQUIPMENT RENTAL
CENTRIFUGE + TRIPLEX PUMPS

Quito, 02 de junio del 2016

CERTIFICADO

A Quien interese:

Por medio de la presente certificamos que la empresa MACOI S.A. es nuestro proveedor de lubricantes ARAL, con el cual mantenemos relaciones comerciales desde el año 2004.

A continuación, el detalle de las compras anuales efectuadas:

Objeto del contrato (descripción de los bienes o servicios)	Monto del Contrato USD	Monto en litros	Años de duración
PROVISION DE ACEITES LUBRICANTES DE DIFERENCIAL	5773.63	808	En vigencia
PROVISION DE ACEITE DE MOTOR MINERALES Y SINTETICOS	48024.23	8020	En vigencia
PROVISION DE ACEITE HIDRAULICO	17960.65	2444	En vigencia
PROVISION DE ACEITE DE TRANSMISION MINERAL Y SINTEICO	3488.02	420	En vigencia
GRASAS, RODAMIENTOS Y MULTIPROPOSITO	6637.61	342 KG	En vigencia

81 284 14

El interesado puede hacer uso del presente certificado como a bien tuviere, siempre y cuando su uso signifique estricto apego a la Ley.

Atentamente,

Vania Almeida



RICARDO RAMIREZ
RIOFRÍO

RUC 170563689000

Ing. Vania Almeida
Departamento Compras
3R EQUIPMENTS & SERVICES

ACTA ENTREGA-RECEPCIÓN PARCIAL NRO.001- ADQ-0056
CONTRATO NRO. 0061; RE-EPMTPQ-017-2015
ADQUISICIÓN DE ACEITE SINTÉTICO DE TRANSMISIÓN 75W90 MARCA ARAL

1. COMPARECIENTES

En Quito a los 25 días del mes de noviembre del 2015, comparecen a la firma de la presente Acta de Entrega Recepción Parcial por la ADQUISICIÓN DE ACEITE SINTÉTICO DE TRANSMISIÓN 75W90 MARCA ARAL; por parte de la Empresa Pública Metropolitana de Transporte de Pasajeros de Quito, en su calidad de Contratante la Gerente General y representado para este acto por la Ing. Amalia Rodríguez, Administrador del Contrato; Tlgo. Juan Pérez como Técnico que no intervino en el proceso de ejecución del contrato; y, por otra parte la Sra. Andrea Recalde, representante legal de la empresa MACOI. S.A.

2. ANTECEDENTES

2.1. En fecha 13 de noviembre del 2015, se suscribe el Contrato No. *CONTRATO N°. 0061, RE-EPMTPQ-017-2015*, para LA ADQUISICIÓN DE ACEITE SINTÉTICO DE TRANSMISIÓN 75W90 MARCA ARAL; por un monto de USD. 39.826,00 no incluye IVA; para un plazo de 60 días calendario contados a partir de la fecha de la suscripción del contrato.

2.2. Mediante memorando ADQ-2015-1434 de fecha 17 de noviembre del 2015, se remite documentación relacionado con el proceso de Subasta Inversa *RE-EPMTPQ-017-2015*, en donde la máxima autoridad, me ha designado como Administrador del Contrato N°. 0061, para LA ADQUISICIÓN DE ACEITE SINTÉTICO DE TRANSMISIÓN 75W90 MARCA ARAL, según la Cláusula Décima DE LA ADMINISTRACIÓN DEL CONTRATO.

2.3. Con fecha 23 de noviembre del 2015 se designa al Técnico que conforma la Comisión de Recepción, al Tlgo. Juan Pérez, suscrito por la Dra. Alexandra Pérez, Gerente General de la EPMTMQ.

3. LIQUIDACIÓN TÉCNICA

A la suscripción de la presente Acta-Recepción Parcial, el Contratista entrega al Contratante los siguientes insumos:

DESCRIPCIÓN	CÓDIGO	CANTIDAD	UNIDAD
ACEITE TRANSMISION 75W90	ACE020N	660	GALONES

Los insumos detallados fueron entregados a la EPMTMQ tal cual fueron indicados en las bases técnicas, cumpliendo con las características y especificaciones técnicas requeridas por la EPMTMQ, y otorga al Contratante una garantía indicada en la cláusula sexta que se estipula en el contrato y la garantía técnica.

La primera entrega del ACE020N es de 660 galones, para el Corredor Trolebús.

El oferente deberá garantizar la calidad del producto de acuerdo a las especificaciones técnicas solicitadas y deberá respaldar la homologación del lubricante en caso de ser solicitada por el departamento técnico de la empresa.

El oferente deberá entregar el producto debidamente sellado (sello de seguridad) en perfecto estado sin golpes ni fisuras y en las cantidades especificadas. En caso de no cumplir deberá cambiar el producto por uno de similares características en caso de alguna anomalía durante la recepción del mismo.

4. LIQUIDACIÓN ECONÓMICA

Para efectos de la Entrega-Recepción Parcial N°01 de LA ADQUISICIÓN DE ACEITE SINTÉTICO DE TRANSMISIÓN 75W90 MARCA ARAL las partes aprueban la siguiente

QUITO
 Gerente General de la EPMTMQ
 Andrea Recalde
 MANTENIMIENTO
 CSO
 30-11-15
 12:35

liquidación económica:

a)

Valor del Contrato	USD. 39.826,00
Valor de Entregas Acumuladas	USD. 00
Saldo del Contrato	USD. 39.826,00

b)

Valor de la primera recepción	USD. 38.095,20
Anticipo Entregado	USD. 0,00
Multas por Retrasos	USD. 0,00
Valor a Cancelar por parte de la EPMPQ	USD. 38.095,20

c)

Saldo luego de la presente recepción	USD. 1.730,80
--------------------------------------	---------------

5. LIQUIDACIÓN DE PLAZOS

Firma del Contrato: 13 de noviembre del 2015
 Fecha primera entrega: 20 de noviembre de 2015
 Inicio de Contrato: 13 de noviembre del 2015
 Plazo establecido: 60 días calendario (contados a partir de la fecha de Firma del contrato)

En virtud de que el contrato establece en su cláusula quinta, que la forma de pago será el 100% por cada entrega recepción parcial, previa a la suscripción del acta de entrega correspondiente, a entera satisfacción de la contratante.

6. DEVOLUCIÓN DE GARANTÍAS

DETALLE

De acuerdo a la cláusula sexta del Contrato N°. 0061, corresponde a la firma del Acta Entrega Recepción Parcial, la devolución al Contratista de la GARANTÍA DE FIEL CUMPLIMIENTO DEL CONTRATO.

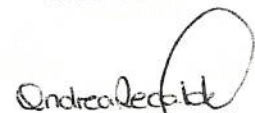
7. CONSTANCIA

Para constancia, las partes firman por triplicado la presente Acta a los 25 días del mes de noviembre del 2015.

Por el contratante

Ing. Amalia Rodríguez
ADMINISTRADOR DEL CONTRATO
Tlgo. Juan Pérez
TÉCNICO FUERA DEL PROCESO

El contratista


 Sra. Andrea Recalde
MACOI S.A.

Handwritten marks and initials in the bottom right corner.



Quito, 02 de junio del 2016

CERTIFICADO

A Quien interese:

Por medio de la presente certificamos: que la empresa MACOI S.A. es nuestro proveedor de lubricantes ARAL con el cual mantenemos relaciones comerciales desde del año 2011

A continuación, el detalle de las compras anuales efectuadas del año 2015 al 2016:

Objeto del contrato (descripción de los bienes o servicios)	Monto del Contrato USD	Monto en litros	Años de duración
PROVISION DE ACEITES LUBRICANTES SINTETICOS DE MOTOR	103,575.83	12138	En vigencia

El interesado puede hacer uso del presente certificado como a bien tuviere, siempre y cuando su uso signifique estricto apego a la Ley.

Atentamente,


Ing. Iván Cevallos
Gerente de repuestos
Germanmotors S.A.

GermanMotors S.A.
Av De los Granados E12-20 y Colimes
Quito Ecuador





Oficina en Quito
Calle de los Cerezos Oe1-212 y
Panamericana Norte Km. 5 1/4
Telfs. 2484-635 Fax 2470-386
Casilla N° 17-04-10374

Quito, 2 de junio del 2016

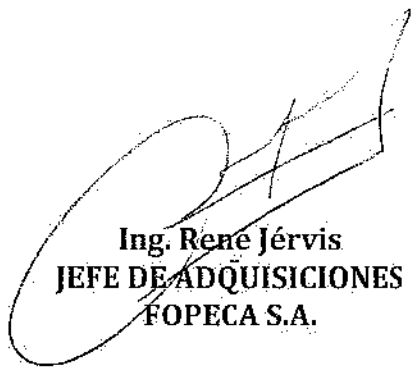
**REFERENCIA COMERCIAL
CERTIFICADO**

A quien interese:

Certifico que la empresa **MACOI S.A.** Con Registro Único de Contribuyentes No. **1791739167001** sostiene relaciones comerciales desde hace **8 años** con la compañía **FOPECA S.A.** con Registro Único de Contribuyentes No. **0190021831001**.

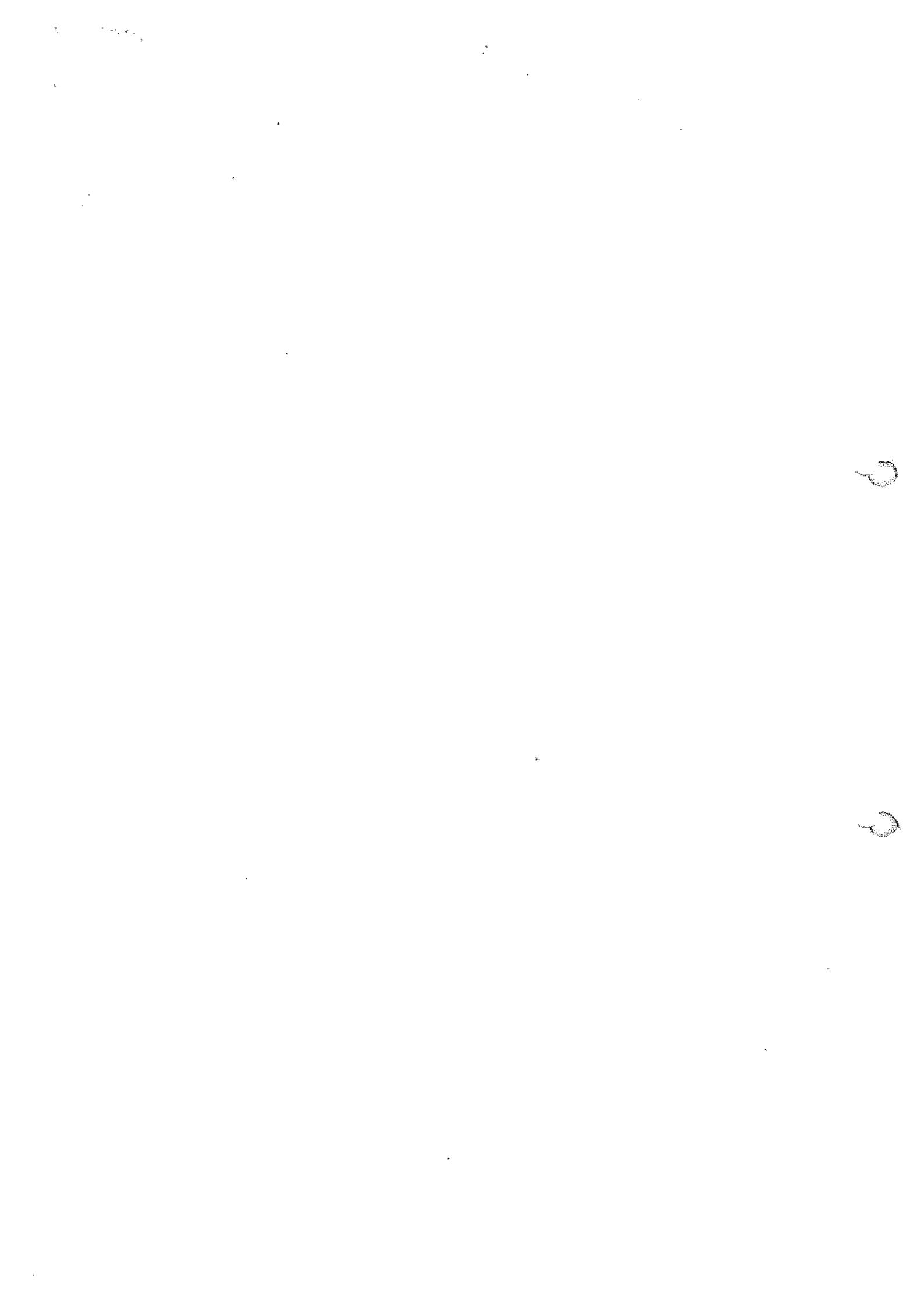
Dicha relación comercial está basada en la venta de **LUBRICANTES ARAL** por parte de la empresa **MACOI S.A.**, demostrando seriedad en las obligaciones contraídas con nuestra Entidad.

Atentamente,


Ing. René Jérvís
JEFE DE ADQUISICIONES
FOPECA S.A.

Teléfono: (593) 2 2484635







TITAN ATF 4000

Ultra High Performance ATF for use in automatic transmissions as well as other ATF applications. Licensed according to DEXRON III (H). Improved low-temperature shifting compared to DEXRON II.

Description

TITAN ATF 4000 is suitable for multi-purpose applications, reliable up to high loads and is recommended when Automatic Transmission Fluids DEXRON III are specified. In GM-Applications backward compatibility to older DEXRON-specifications is granted.

Application

TITAN ATF 4000 is miscible and compatible with conventional branded gear oils. However, mixing with other gear oils should be avoided in order to fully utilize the product's benefits. A complete oil change is recommended when converting to TITAN ATF 4000. For information on product safety and proper disposal, please refer to the latest Material Safety Data Sheet.

Advantages/Benefits

- Offers the chance for rationalisation of the wide ATF variety to one ATF type.
- Ensures reliable protection against wear, sludge accumulation, agglutination and corrosion
- Is extremely shear-stable
- Has an extraordinarily high load capacity
- Displays an excellent shifting behaviour even at very low temperatures

Specifications

- -

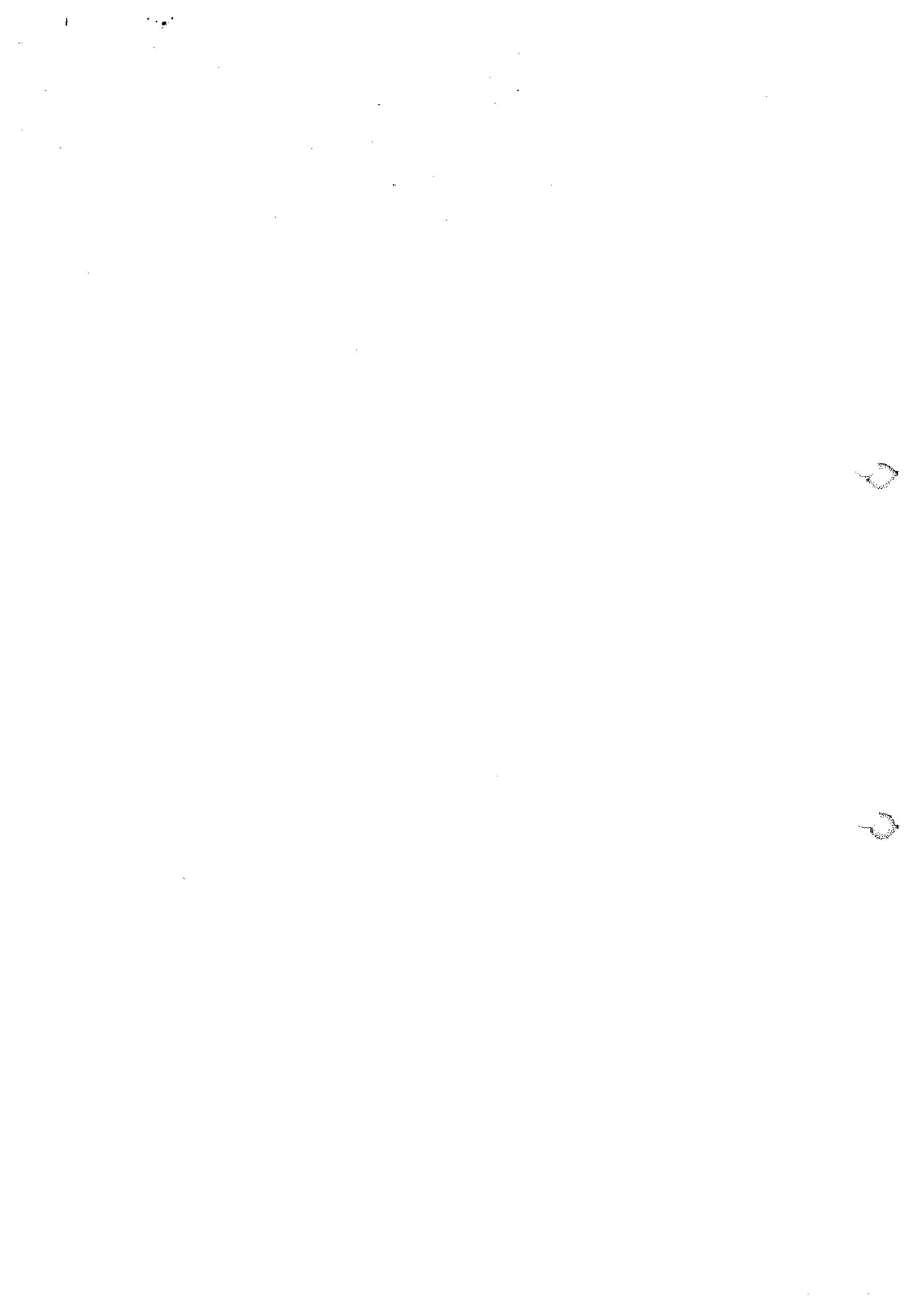
Approvals

- ALLISON C-4
- ALLISON TES 389
- DEXRON III (H)
- MAN 339 TYPE V1
- MAN 339 TYPE Z1
- MB-APPROVAL 236.1
- MB-APPROVAL 236.9
- VOITH H55.6335.xx
- VOLVO 97341
- ZF TE-ML 04D, 14A, 17C

FUCHS Recommendations

- BMW 81 22 9 400 272/275
- BMW 81 22 9 407 738
- BMW 83 22 0 403 248
- BMW 83 22 9 407 765/807/858/859
- CAT TO-2
- FORD MERCON
- OPEL 19 40 707 / 19 40 767
- VW TL 521 62 (G 052 162)
- ZF TE-ML 09, 11B

PI60005e, PMA, 05.09.2013, Page 1



PRODUCT INFORMATION



TYPICAL CHARACTERISTICS

Density at 15 °C	DIN 51757	0.862 g/ml
Colour	Visual	red
Flash Point, CoC	DIN ISO 2592	190 °C
Pour Point	DIN ISO 3016	-50 °C
Foaming Tendency Seq. II	ASTM D 892	30/0 ml
Kinematic Viscosity at 40°C	DIN 51562-1	37.8 mm ² /s
Kinematic Viscosity at 100°C	DIN 51562-1	7.6 mm ² /s
Viscosity Index	DIN ISO 2909	174

PI60005e, PMA, 05.09.2013, Page 2

Handwritten signature and initials



PRODUCT INFORMATION



The information contained in this product information is based on the experience and know-how of FUCHS EUROPE SCHMIERSTOFFE GMBH in the development and manufacturing of lubricants and represents the current state-of-the-art. The performance of our products can be influenced by a series of factors, especially the specific use, the method of application, the operational environment, component pretreatment, possible external contamination, etc. For this reason, universally-valid statements about the function of our products are not possible. The information given in this product information represents general, non-binding guidelines. No warranty expressed or implied is given concerning the properties of the product or its suitability for any given application.

We therefore recommend that you consult a FUCHS EUROPE SCHMIERSTOFFE GMBH application engineer to discuss application conditions and the performance criteria of the products before the product is used. It is the responsibility of the user to test the functional suitability of the product and to use it with the corresponding care.

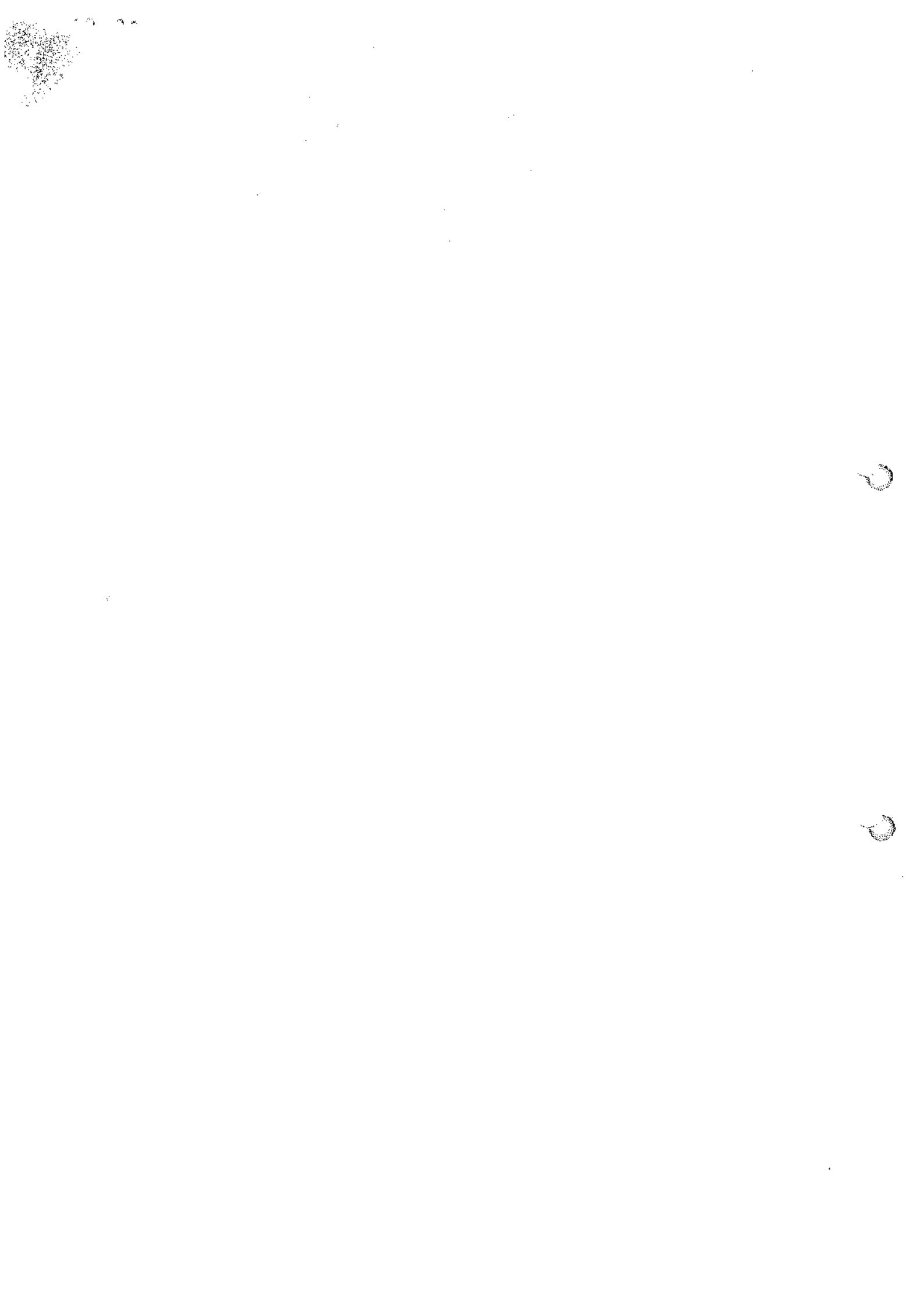
Our products undergo continuous improvement. We therefore retain the right to change our product program, the products, and their manufacturing processes as well as all details of our product information sheets at any time and without warning, unless otherwise provided in customer-specific agreements. With the publication of this product information, all previous editions cease to be valid.

Any form of reproduction requires express prior written permission from FUCHS EUROPE SCHMIERSTOFFE GMBH.

© FUCHS EUROPE SCHMIERSTOFFE GMBH. All rights reserved.

PI60005e, PMA, 05.09.2013, Page 3

A handwritten signature and a circular stamp or mark are located in the bottom right corner of the page.





TITAN TRUCK PLUS SAE 15W-40

High Performance oil for a variety of diesel and gasoline engines. Specially for highly loaded commercial vehicle diesel engines. Lower oil consumption.

Description

TITAN TRUCK PLUS SAE 15W-40 is a super-long term all-season engine oil of the SHPD category for diesel and gasoline engines with and without turbo-charging in passenger cars, trucks, buses and industrial equipment that have high requirements with respect to engine cleanliness and maintenance intervals. TITAN TRUCK PLUS SAE 15W-40 complies with and/or fulfills and exceeds the requirements of American and European engine manufacturers thanks to its special design, especially engines with fill specifications CUMMINS CES 20071/1-2/1-6/7/1-8 and VOLVO VDS-3. Because of its advanced design, TITAN TRUCK PLUS SAE 15W-40 ensures operation without problems under all climatic conditions.

Application

TITAN TRUCK PLUS SAE 15W-40 has a significantly more modern alloy than the usual HD engine oils of the same SAE class. Independently of the odometer reading, all commercial vehicle diesel engines can be changed over to TITAN TRUCK PLUS SAE 15W-40 without flushing. Used TITAN TRUCK PLUS SAE 15W-40 is safe to dispose of as old oil since it is assigned to "old oil category 1". Important for shipping companies that operate internationally, bus operations, construction companies, etc. is also that TITAN TRUCK PLUS SAE 15W-40 can be used even with higher sulfur content in the diesel fuel, while with the usual HD engine oils this can often lead to considerable problems. TITAN TRUCK PLUS SAE 15W-40 is best suitable for use in EURO 3 engines.

Advantages/Benefits

- Excellent wear protection even under high continuous stress
- Protection from corrosion even when used with diesel fuels with high sulfur content
- Sludge and adhesions are securely prevented by TITAN TRUCK PLUS SAE 15W-40 both with extraordinarily high thermal loads as well as in stop and-go driving

Specifications

- ACEA E7
- API CI-4
- GLOBAL DHD-1
- CAT ECF-1-a/ECF-2

Approvals

- CUMMINS CES 20076/7/8
- DEUTZ DQC III
- MAN M 3275-1
- MB-APPROVAL 228.3
- MTU DDC TYPE-2
- RENAULT RLD / RLD-2
- VOLVO VDS-3
- MACK EO-M PLUS

FUCHS Recommendations

- ALLISON C-4
- CAT TO-2
- CASE MS 1121
- IVECO 18-1804 CLASSE T2 E7
- DAF
- CUMMINS CES 20071/2
- STEYR A-201
- NH 330 H

Product Code 156 - 15/04/2011 Page 1

While the information and figures given here are typical of current production and confirm to specification, minor variations may occur. No warranty expressed or implied is given concerning the accuracy of the information or the suitability of the product

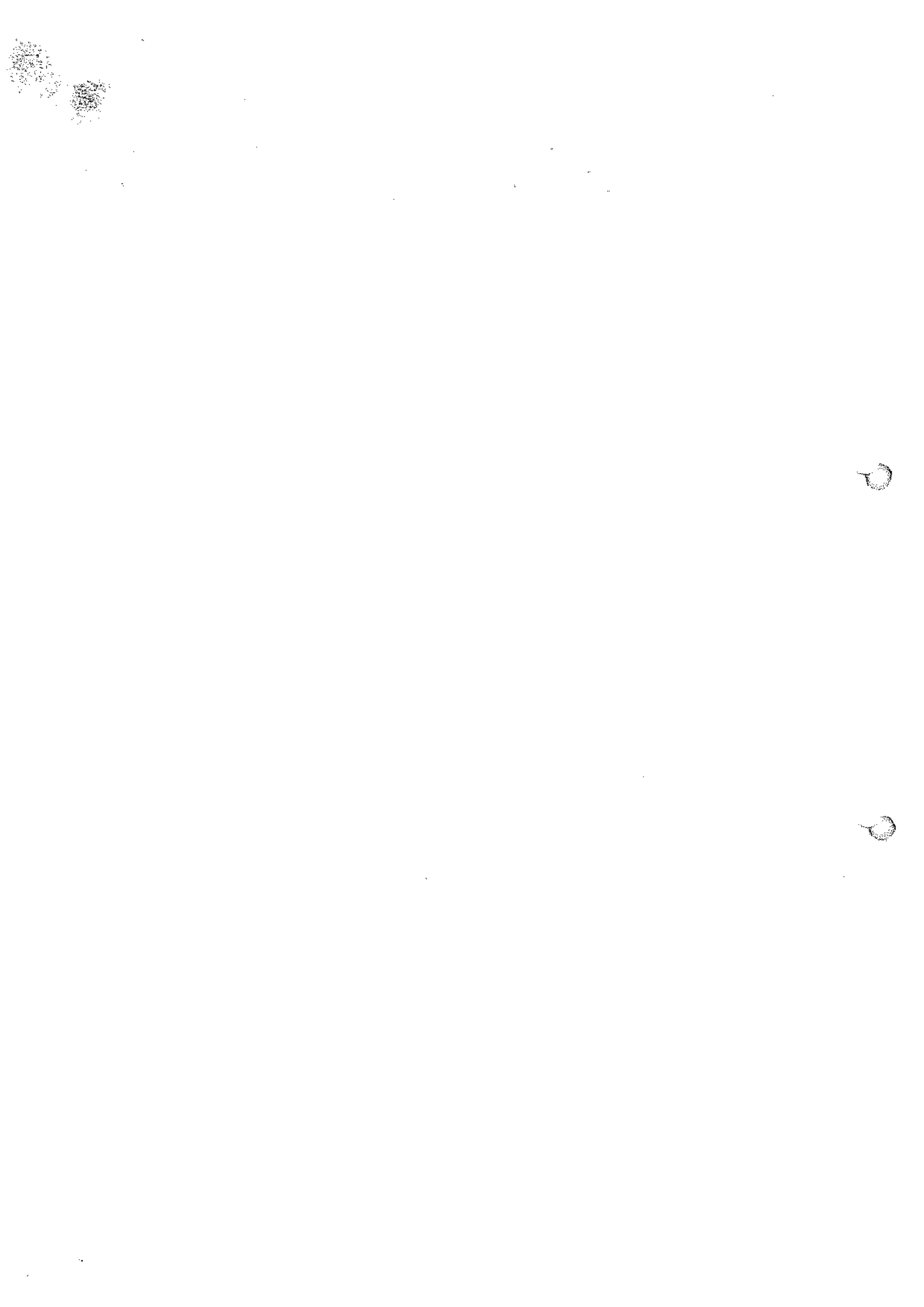
ALHAMRANI FUCHS PETROLEUM SAUDI ARABIA LIMITED

P. O. Box 7103, Jeddah 21462, Saudi Arabia

Telephone +966 2 6635 666 FAX +966 2 6634 094 www.fuchs.com.sa

ISO 9001:2008
ISO 14001:2004
OHSAS 18001:2007
CERTIFIED





PRODUCT INFORMATION



CHARACTERISTICS

Density @ 35 °C	0,888	g/ml	ASTM D 4052
Flash Point, CoC	226	°C	ASTM D 92
Pour Point	-30	°C	ASTM D 97
Kinematic Viscosity @ 40 °C	105	mm ² /s	ASTM D 445
Kinematic Viscosity @ 100 °C	14,1	mm ² /s	ASTM D 445
Viscosity Index	136	-	ASTM D 2270
Dynamic Viscosity @ - 20 °C	6560	cP	ASTM D 5293
TBN	10	mg KOH/g	ASTM D 2896

Product Code 156 - 15/04/2011 Page 2

While the information and figures given here are typical of current production and confirm to specification, minor variations may occur. No warranty expressed or implied is given concerning the accuracy of the information or the suitability of the product

ALHAMRANI FUCHS PETROLEUM SAUDI ARABIA LIMITED

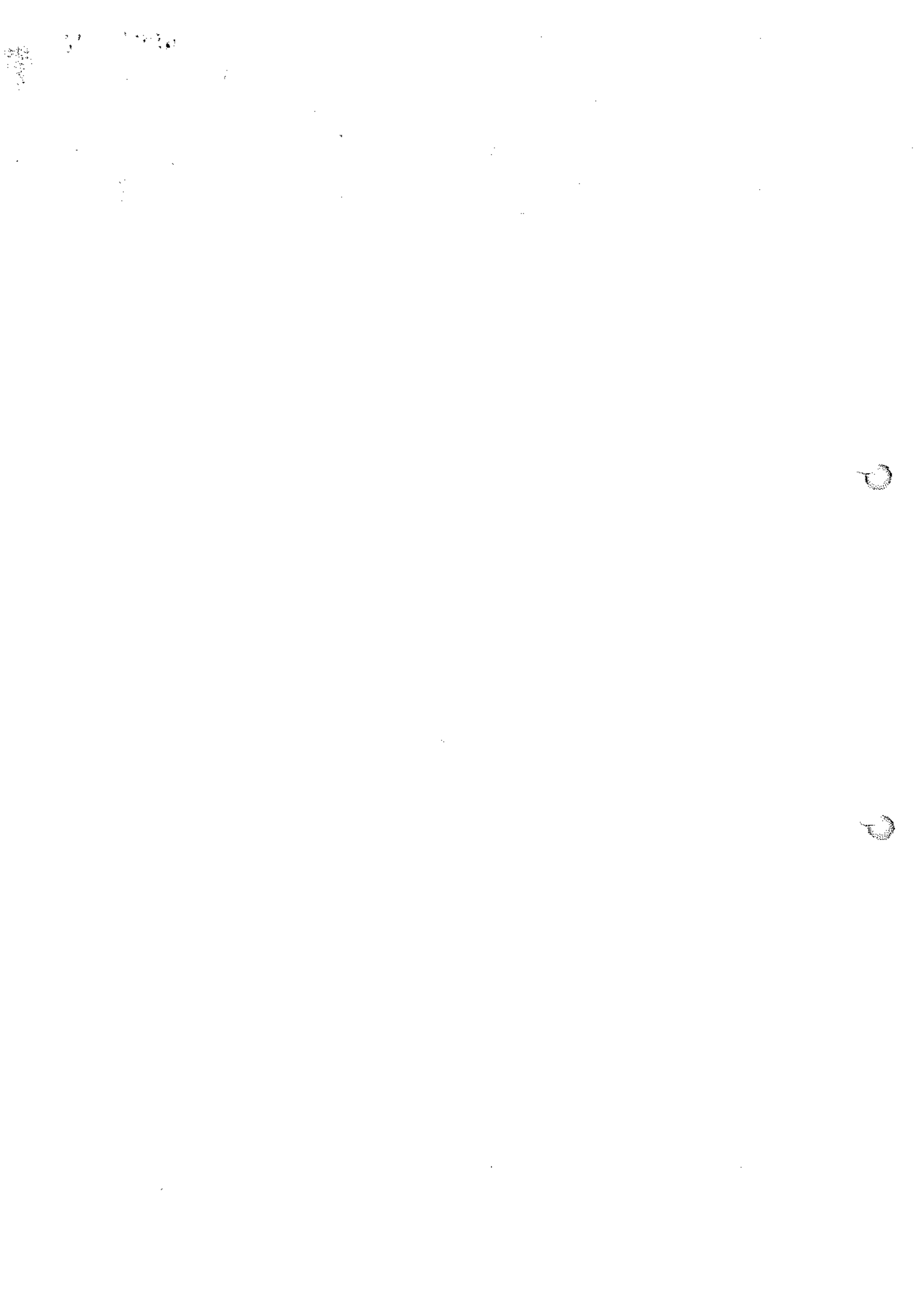
P. O. Box 7103, Jeddah 21462, Saudi Arabia

Telephone +966 2 6635 666 FAX +966 2 6634 094 www.fuchs.com.sa

ISO 9001:2008
ISO 14001:2004
OHSAS 18001:2007
CERTIFIED



Handwritten signature and initials



PRODUCT INFORMATION



TITAN SUPERGEAR SAE 80W-90, 85W-140

Universal multi-grade gear oil for manual transmissions and axle drives in commercial vehicles and passenger cars.

Description

TITAN SUPERGEAR is mineral universal gear oil for use in manual transmissions and axle gearboxes in both passenger cars and commercial vehicles.

Application

TITAN SUPERGEAR is miscible and compatible with conventional gear oils. In order to utilize the full advantages of TITAN SUPERGEAR a full drain and exchange of the fluid is recommended.

Advantages/Benefits

- TITAN SUPERGEAR provides good cold flow properties. This supports easy cold starting and easy shifting in the warm-up period. Improved lubrication and excellent protection against wear even during short-distance winter operation.
- TITAN SUPERGEAR creates stable lubricant film capable of withstanding severe loads.
- Due to the significant shear stability of TITAN SUPERGEAR, the oil remains within the viscosity range even after very long periods of use.
- The good corrosion protection provided by TITAN SUPERGEAR protects against rust and attacking of non-ferrous metals.

Specifications/Approvals

- API GL-4 / GL-5
- MAN 342 Type M2 (SAE 80W-90)
- ZF TE-ML 05A / 12E / 16B / 17B / 19B (SAE 80W-90)
- ZF TE-ML 05A / 12E / 16D (SAE 85W-140)

Product Code 324 - 15/03/2010 Page 1

While the information and figures given here are typical of current production and confirm to specification, minor variations may occur. No warranty expressed or implied is given concerning the accuracy of the information or the suitability of the product.

ALHAMRANI FUCHS PETROLEUM SAUDI ARABIA LIMITED

P. O. Box 7103, Jeddah 21462, Saudi Arabia

Telephone +966 2 6635 666 FAX +966 2 6634 094 www.fuchs.com.sa

ISO 9001:2008
ISO 14001:2004
CERTIFIED



Handwritten signature

11



PRODUCT INFORMATION



CHARACTERISTICS

TITAN SUPERGEAR 80W-90

Density @ 35 °C	0,886	g/ml	ASTM D 4052
Flash Point, CoC	236	°C	ASTM D 92
Pour Point	-33	°C	ASTM D 97
Kinematic Viscosity @ 40 °C	142	mm ² /s	ASTM D 445
Kinematic Viscosity @ 100 °C	14,9	mm ² /s	ASTM D 445
Viscosity Index	105	-	ASTM D 2270
Brookfield @ - 26 °C	110000	cP	ASTM D 2983

TITAN SUPERGEAR 85W-140

Density @ 35 °C	0.898	g/ml	ASTM D 4052
Flash Point, CoC	248	°C	ASTM D 92
Pour Point	-21	°C	ASTM D 97
Kinematic Viscosity @ 40 °C	428	mm ² /s	ASTM D 445
Kinematic Viscosity @ 100 °C	29.4	mm ² /s	ASTM D 445
Viscosity Index	97	-	ASTM D 2270
Brookfield @ - 12°C	145000	cP	ASTM D 2983

Product Code 324 - 15/03/2010 Page 2

While the information and figures given here are typical of current production and confirm to specification, minor variations may occur. No warranty expressed or implied is given concerning the accuracy of the information or the suitability of the product.

ALHAMRANI FUCHS PETROLEUM SAUDI ARABIA LIMITED

P. O. Box 7103, Jeddah 21462, Saudi Arabia

Telephone +966 2 6635 666 FAX +966 2 6634 094 www.fuchs.com.sa

ISO 9001:2008
ISO 14001:2004
CERTIFIED



Handwritten signature and initials

100

100

100

TITAN TRUCK PLUS SAE 15W-40

Aceite de alto rendimiento para una variedad de motores diésel y gasolina. Especialmente para motores diésel de vehículos comerciales e industriales.

Descripción

TITAN TRUCK PLUS SAE 15W-40 es un lubricante que cumple con los requerimientos necesarios para motores SHDP categoría para motores diésel y gasolina con y sin turbo-carga en vehículos de pasajeros, camiones, autobuses y equipo industrial que requieren alto poder de limpieza del motor y los intervalos amplios de mantenimiento.

TITAN TRUCK PLUS SAE 15W-40 cumple y excede con los requerimientos de los fabricantes de motores americanos y Europeos gracias a su diseño especial en relación a especificaciones Cummins CES 20071 / -2 / -6 / -7 / -8 y Volvo VDS-3. Debido a su avanzado diseño, TITAN TRUCK PLUS SAE 15W-40 asegura un funcionamiento sin problemas bajo todas condiciones climáticas.

TITAN TRUCK PLUS SAE 15W-40 es superior con respecto a la aleación de lo habitual. HD aceites de motor de la misma clase SAE. Independientemente de la lectura del odómetro, todos los vehículos comerciales motores diésel pueden ser cambiados a TITAN TRUCK PLUS SAE 15W-40 sin temor.

TITAN TRUCK PLUS SAE 15 W 40

Se puede utilizar incluso con diésel de mayor contenido de azufre, mientras que con los aceites de motor habituales HD esto a menudo puede conducir a problemas considerables.

TITAN TRUCK PLUS SAE 15W-40 es la más apropiado para su uso en motores EURO 3.

Beneficios

Excelente protección contra el desgaste incluso en baja y alta la tensión continua.

Protección frente a la corrosión incluso cuando se utiliza con combustibles diésel con alto contenido de azufre.

Los lodos y las adherencias se impiden de forma segura con altas cargas térmicas.

ESPECIFICACION

ACEA E7

API CI-4

DHD-1 Global

CAT ECF-1-a / ECF-2

APROBACIONES

CUMMINS CES 20076/7/8

DEUTZ DQC III

MAN M 3275-1

MB-aprobación 228.3

MTU DDC TIPO-2

RENAULT RLD / RLD-2

VOLVO VDS-3

MACK EO-M PLUS

Recomendaciones FUCHS

ALLISON C-4

CAT A-2

CASO MS 1121

IVECO 18-1804 CLASSE T2 E7

DAF

CUMMINS CES 20071/2

STEYR A-201

NH 330 H

Handwritten signature and a circled '3'



CARACTERÍSTICAS

Densidad @ 35 ° C	g / ml	ASTM D 4052	0888
Punto de inflamación, CdC	° C	ASTM D 92	226
Punto de fluidez	° C	ASTM D 97	-30
La viscosidad cinemática a 40 ° C	mm ² / s	ASTM D 445	105
La viscosidad cinemática a 100 ° C	mm ² / s	ASTM D 445	14,1
Índice de viscosidad	-	ASTM D 2270	136
Viscosidad dinámica @ - 20 ° C	cP	ASTM D 5293	6560
TBN	mg KOH / g	ASTM D 2896	10

CERTIFICADOS**ISO 9001: 2008****ISO 14001: 2004****Norma OHSAS 18001: 2007**

7 20

9

9



Aral Langzeitfett H

Mehrzweckfett

Beschreibung

Lithiumverseiftes Mehrzweckfett mit EP-Zusatz.

- besonders fadenzünftig und stark haftend mit Zulassung der Kfz-Industrie
- hochwirksame Additive schützen vor Korrosion und Alterung

Typische Kennwerte

	Prüfmethoden	Einheit	Aral Langzeitfett H
Basisöl Viskosität bei 40 °C	DIN 51562	mm ² /s	100
Walkpenetration Änderung 60 / 100 000 DH	DIN ISO 2137	0,1 mm	<30
Tropfpunkt	DIN ISO 2176	°C	> 190
FAG FE 9 A/1500/6000 F50	DIN 51821-2	°C / h	130

Spezifikationen

DIN - 51502 KP2K-20

Lagerung

Gebinde jeglicher Art sind möglichst überdacht aufzubewahren. Bei einer ungeschützten Lagerung im Freien ohne Überdachung sind die Öldrums liegend zu lagern, um ein Eindringen von Wasser zu vermeiden und die Lesbarkeit der Beschriftungen zu erhalten. Die Produkte sollten nicht bei Temperaturen über 60 °C gelagert werden. Sie sind vor direkter Sonnenbestrahlung bzw. Frost zu schützen.

Aral Langzeitfett H

07 Dec 2012

Aral, the Aral logo and related marks are trademarks of Aral Aktiengesellschaft, used under licence.

Diese Veröffentlichung und die darin enthaltenen Informationen sind als zum Zeitpunkt der Drucklegung zutreffend anzusehen. Für Richtigkeit und Vollständigkeit der in dieser Veröffentlichung enthaltenen Daten und Informationen wird keine ausdrückliche oder stillschweigende Gewähr oder Zusicherung übernommen. Die bereitgestellten Daten basieren auf standardisierten Prüfverfahren unter Laborbedingungen und dienen nur als Richtwerte. Der Anwender sollte sicherstellen, daß er die aktuelle Version dieses Datenblatts verwendet. Dem Anwender obliegt es, die Produkte mit der gebotenen Vorsicht zu bewerten und zu benutzen, sie bezüglich der Eignung für die vorgesehene Anwendung zu beurteilen sowie alle geltenden Gesetze und Verordnungen zu beachten. Zur Information über Gesundheits-, Sicherheits- und Umweltaspekte kann ein Sicherheitsdatenblatt angefordert werden. Darin sind Einzelheiten zur Lagerung, sicheren Handhabung und Entsorgung der Produkte aufgeführt. Die BP Gruppe ist nicht verantwortlich für Schäden oder Verletzungen, die auf einem Gebrauch des Produkts, mit dem üblicherweise nicht gerechnet werden kann, mangelnder Beachtung von Empfehlungen oder mit der Natur des Produkts verbundenen Gefahren beruhen. Für sämtliche Lieferungen gelten unsere Allgemeinen Lieferbedingungen, insbesondere die darin enthaltene Haftungsregelung. Weitere Produkt-Informationen sind bei der Anwendungstechnik der BP Europa SE zu erfragen.

Aral Aktiengesellschaft Geschäftsbereich Schmierstoffe Max-Born-Str. 2, D-22761 Hamburg
01801-11 55 11
www.aral-lubricants.de

Handwritten signature and initials

1000

2

2



Aral Langzeitfett H

Grasa multipropósito

DESCRIPCION

Aral Langzeitfett H es una grasa multipropósito de litio-saponificada con aditivos EP de alta calidad para el uso universal. Los aceites mineral seleccionados son la base para Aral Langzeitfett H.

Su fórmula garantiza buena flexibilidad, resistencia, contra-envejecimiento. Evita la corrosión y el desgaste, utilizada en climas húmedos dando así una excelente protección. Tiene características EP- para los puntos que trabajan bajo extrema tensión del impacto. Un aditivo especial mejora la distribución adhesiva de la grasa.

Aral Langzeitfett H se puede utilizar en los vehículos (livianos comerciales equipo caminero y agrícola.

La grasa se puede utilizar para lubricar muchos tipos de cojinetes, bujes, anillos, resortes,

Acoplamientos o bisagras – utilizada también centrales de lubricación

Aral Langzeitfett H no contiene plomo.

ESPECIFICACION

DIN-5102 K 2 K -20

FICHA TECNICA

	Unidad	Método de Prueba	Aral Langzeitfett H
Viscosidad de aceite base a 40°C	mm ² /s	DIN 51562	100
Penetración 60/100 000 DH	0,1 mm	DIN ISO 2137	<30
Punto de Goteo	°C	DIN ISO 2176	>190
FAG FE 9A/1500/6000 F50	°C/h	DIN 51821-2	130

APLICACION /PRESENTACION

Vehículos ligeros / comerciales /maquinaria en general.

Disponible en/ cartuchos de 400g (24 X 400 g). /balde de 18 Kg /tambor de 180 Kg.

100 100



Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 21.07.2010

Revision: 21.07.2010

1 Identification of the substance/preparation and of the company/undertaking

- **Product details**
- **Trade name:** TITAN TRUCK PLUS 15W-40
- **Article number:** 600534974
- **Application of the substance / the preparation** Lubricant
- **Manufacturer/Supplier:**
FUCHS LUBRICANTS (UK) PLC.
New Century Street
Hanley
Stoke-on-Trent, Staffordshire, ST1 5HU
UK
Emergency telephone: (UK) 08701 200400
e-mail: product.safety@fuchs-oil.com
- **Further information obtainable from:** Product safety department.
- **Information in case of emergency:** Emergency telephone: (UK) 08701 200400

2 Hazards identification

- **Hazard description:** Not applicable.
- **Information concerning particular hazards for human and environment:**
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

3 Composition/information on ingredients

- **Chemical characterization**
- **Description:** A blend of highly refined mineral oils with multifunctional additives.

- **Dangerous components:**

Zinc alkyldithiophosphate	☒ Xi, ☒ N; R 38-41-51/53	≤ 2.5%
---------------------------	--------------------------	--------

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Check for and remove any contact lenses.
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Wash mouth out with water
Do not induce vomiting; call for medical help immediately.
- **Information for doctor:**

(Contd. on page 2)

GB

MA
30

Handwritten marks at the top left corner.

Handwritten mark on the right edge.

Handwritten mark on the right edge.

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 21.07.2010

Revision: 21.07.2010

Trade name: TITAN TRUCK PLUS 15W-40

(Contd. of page 1)

High pressure injection injuries through the skin require prompt surgical intervention and possibly steroid therapy, to minimise tissue damage and loss of function. Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary. Local anaesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischaemia. Prompt surgical decompression, debridement and evacuation of foreign material should be performed under general anaesthetics, and wide exploration is essential.

5 Fire-fighting measures

- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

- **Person-related safety precautions:** Particular danger of slipping on leaked/spilled product.
- **Measures for environmental protection:**
Do not allow to penetrate the ground/soil.
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Send for recovery or disposal in suitable receptacles.
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling:**
- **Information for safe handling:**
Prevent formation of aerosols.
Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Prevent any seepage into the ground.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
Select PPE appropriate for the operations taking place taking into account the product properties.
- **General protective and hygienic measures:**
Do not carry product impregnated cleaning cloths in trouser pockets.
Wash hands before breaks and at the end of work.
Avoid close or long term contact with the skin.
Do not eat, drink, smoke or sniff while working.

(Contd. on page 3)

GB

100

2

2

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 21.07.2010

Revision: 21.07.2010

Trade name: TITAN TRUCK PLUS 15W-40

(Contd. of page 2)

- Avoid contact with the eyes.
Do not inhale gases / fumes / aerosols.
- **Respiratory protection:** Not required.
 - **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
 - **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
 - **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
 - **Eye protection:**
Safety glasses
Goggles recommended during refilling
 - **Body protection:** Oil resistant protective clothing

9 Physical and chemical properties

• General Information

Form:	Fluid
Colour:	Brown
Odour:	Mineral-oil-like

• Change in condition

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.

• **Flash point:** > 100°C

• **Ignition temperature:** >250°C

• **Self-igniting:** Product is not selfigniting.

• **Danger of explosion:** Product does not present an explosion hazard.

• **Density at 20°C:** 0.89 g/cm³

• **Solubility in / Miscibility with water:** Not miscible or difficult to mix.

• **Viscosity:**
Kinematic at 40°C: 14 cSt

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Materials to be avoided:** Strong oxidising agents.
- **Dangerous reactions:** No dangerous reactions known.
- **Dangerous decomposition products:** Carbon monoxide and carbon dioxide

(Contd. on page 4)

GB

Handwritten signature
41

1000
1000
1000

2

2

Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 21.07.2010

Revision: 21.07.2010

Trade name: TITAN TRUCK PLUS 15W-40

(Contd. of page 3)

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
 Prolonged and repeated contact with USED engine oils may cause serious skin disorders, including dermatitis and cancer. Engine oils are known to accumulate polycyclic aromatic hydrocarbons in use and there is evidence that used crankcase oils from petrol engines are carcinogenic to animals. Used engine oils fall within the definition of 'carcinogen' contained in reg2(1) of COSHH and thus the Carcinogens ACOP applies. Precautions advised by the Enforcing Authorities include controlling exposure by systems of work, personal protection and personal hygiene.
 The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
 When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

12 Ecological information

- **Information about elimination (persistence and degradability):** Inherently biodegradable
- **Behaviour in environmental systems:**
- **Mobility and bioaccumulation potential:** Product is not expected to bioaccumulate.
- **Additional ecological information:**
- **General notes:**
 Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
 Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

- **Product:**
- **Recommendation**
 Contact waste processors for recycling information.
 Must not be disposed together with household garbage. Do not allow product to reach sewage system.
 Delivery of waste oil to officially authorized collectors only.
 Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.
- **European waste catalogue**
 13.02.05 (if product has been used exclusively as a mineral based non-chlorinated engine or gear lubricating oil, or as a mineral based non-chlorinated lubricating grease)
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -
- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No

(Contd. on page 5)

GB



Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 21.07.2010

Revision: 21.07.2010

Trade name: TITAN TRUCK PLUS 15W-40

(Contd. of page 4)

- Air transport ICAO-TI and IATA-DGR:
- ICAO/IATA Class: -

- Transport/Additional information: Not classified as hazardous for transport by any mode.

15 Regulatory information

- Labelling according to EU guidelines:
Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant R-phrases

- The risk phrases shown below are for those component substances which are listed in section 3 and not for the actual finished formulation.
- Hazards are concentration dependent. Therefore for the actual hazard classification and risk/safety phrases appropriate for the actual finished formulated product refer to section 15.

38 Irritating to skin.

41 Risk of serious damage to eyes.

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

- Department issuing MSDS: Product safety department.
- Contact: GORDON SHARP

GB



Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 04.08.2011

Revision: 04.08.2011

1 Identification of the substance/mixture and of the company/undertaking

- **Product identifier**
- **Trade name:** TITAN GEAR HYP SAE 85W-140
- **Article number:** 600247010
- **Relevant identified uses of the substance or mixture and uses advised against**
- **Application of the substance / the preparation** Lubricant
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
FUCHS LUBRICANTS (UK) PLC.
New Century Street
Hanley
Stoke-on-Trent, Staffordshire, ST1 5HU
UK
e-mail: product.safety@fuchs-oil.com
- **Further information obtainable from:** Product safety department.
- **Emergency telephone number:** Emergency telephone: (UK) 01782 203700

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC** Not applicable.
- **Information concerning particular hazards for human and environment:**
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.
- **Label elements**
- **Labelling according to EU guidelines:**
Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).
- **Special labelling of certain preparations:**
Contains Alkenylamine. May produce an allergic reaction.
Safety data sheet available for professional user on request.
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** A blend of highly refined mineral oils with multifunctional additives.

- **Dangerous components:**

Phosphoric acid esters, amine salt ☒ N R51/53	≤ 2.5%
Alkenylamine ☒ C R34; ☒ Xn R22; ☒ Xi R43; ☒ N R50	≤ 2.5%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

GB

(Contd. on page 2)

11/11/11

2

3

Trade name: TITAN GEAR HYP SAE 85W-140

(Contd. of page 1)

4 First aid measures

- **Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:** If skin irritation continues, consult a doctor.
- **After eye contact:** Check for and remove any contact lenses.
- **After swallowing:** Wash mouth out with water.
- **Information for doctor:**
High pressure injection injuries through the skin require prompt surgical intervention and possibly steroid therapy, to minimise tissue damage and loss of function. Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary. Local anaesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischaemia. Prompt surgical decompression, debridement and evacuation of foreign material should be performed under general anaesthetics, and wide exploration is essential.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.
- **Special hazards arising from the substance or mixture** No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Particular danger of slipping on leaked/spilled product.
- **Environmental precautions:**
Do not allow to penetrate the ground/soil.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Send for recovery or disposal in suitable receptacles.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Reference to other sections**
No dangerous substances are released.
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling** No special measures required.
- **Information about fire - and explosion protection:** No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Prevent any seepage into the ground.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:** None.

(Contd. on page 3)

GB

4:

0.000000

0.000000

0.000000

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 04.08.2011

Revision: 04.08.2011

Trade name: TITAN GEAR HYP SAE 85W-140

(Contd. of page 2)

· Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
Select PPE appropriate for the operations taking place taking into account the product properties.
- **General protective and hygienic measures:**
Do not carry product impregnated cleaning cloths in trouser pockets.
Avoid close or long term contact with the skin.
Do not eat, drink, smoke or sniff while working.
- **Respiratory protection:** Not required.
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Goggles recommended during refilling
- **Body protection:** Oil resistant protective clothing

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information**
- **Appearance:**

Form:	Fluid
Colour:	Brown
Odour:	Mineral-oil-like
Odour threshold:	Not determined.
- **pH-value:** Not determined.
- **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
- **Flash point:** > 100°C
- **Flammability (solid, gaseous):** Not applicable.
- **Ignition temperature:** >250°C
- **Decomposition temperature:** Not determined.

(Contd. on page 4)

GB

41

1000

2

2

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 04.08.2011

Revision: 04.08.2011

Trade name: TITAN GEAR HYP SAE 85W-140

(Contd. of page 3)

· Self-igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
· Vapour pressure:	Not determined.
· Density at 20°C:	0.906 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Not miscible or difficult to mix.
· Segregation coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic at 40°C:	383.7 cSt
· Solvent content:	
Organic solvents:	0.0 %
VOC (EC)	0.00 %
Solids content:	7.5 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** Strong oxidising agents.
- **Hazardous decomposition products:** Carbon monoxide and carbon dioxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.
When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

(Contd. on page 5)

Handwritten signature

Handwritten circled number 4



Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 04.08.2011

Revision: 04.08.2011

Trade name: TITAN GEAR HYP SAE 85W-140

(Contd. of page 4)

12 Ecological information

- **Toxicity**
- **Acquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** Inherently biodegradable
- **Behaviour in environmental systems:**
- **Bioaccumulative potential:** Product is not expected to bioaccumulate.
- **Mobility in soil:** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects:** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation**
Contact waste processors for recycling information.
Delivery of waste oil to officially authorized collectors only.
Smaller quantities can be disposed of with household waste.
Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.
- **European waste catalogue**
Waste key numbers in accordance with the European Waste catalogue (EWC) are origin-referred defined. Since this product is used in several industries, no waste key can be provided by the supplier. The waste key number should be determined in arrangement with your waste disposal partner or the responsible authority.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|--|-----------------|
| · UN-Number
· ADR, ADN, IMDG, IATA | Void |
| · UN proper shipping name
· ADR, ADN | Void |
| · Transport hazard class(es)
· ADR, ADN, IMDG, IATA
· Class | Void |
| · Packing group
· ADR, IMDG, IATA | Void |
| · Environmental hazards:
· Marine pollutant: | No |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code | Not applicable. |

(Contd. on page 6)

GB



Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 04.08.2011

Revision: 04.08.2011

Trade name: TITAN GEAR HYP SAE 85W-140

(Contd. of page 5)

Transport/Additional information: Not dangerous according to the above specifications.

15 Regulatory information

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

- R22 Harmful if swallowed.
- R34 Causes burns.
- R43 May cause sensitisation by skin contact.
- R50 Very toxic to aquatic organisms.
- R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Department issuing MSDS: Product safety department.

Contact: STEVEN PRITCHARD

GB

Handwritten signature and scribble

10
11
12



Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 21.07.2010

Revision: 21.07.2010

1 Identification of the substance/preparation and of the company/undertaking

- **Product details**
- **Trade name:** TITAN ATF 4000
- **Article number:** 600061784
- **Application of the substance / the preparation** Transmission fluid
- **Manufacturer/Supplier:**
FUCHS LUBRICANTS (UK) PLC.
New Century Street
Hanley
Stoke-on-Trent, Staffordshire, ST1 5HU
UK
Emergency telephone: (UK) 08701 200400
e-mail: product.safety@fuchs-oil.com
- **Further information obtainable from:** Product safety department.
- **Information in case of emergency:** Emergency telephone: (UK) 08701 200400

2 Hazards identification

- **Hazard description:** Not applicable.
- **Information concerning particular hazards for human and environment:**
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system:**
The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

3 Composition/information on ingredients

- **Chemical characterization**
- **Description:** A blend of highly refined mineral oils with multifunctional additives.

- **Dangerous components:**

Methacrylate copolymer	Xi; R 36	2.5-10%
------------------------	----------	---------

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Check for and remove any contact lenses.
Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:**
Wash mouth out with water
Do not induce vomiting; call for medical help immediately.
- **Information for doctor:**

(Contd. on page 2)

GB



Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 21.07.2010

Revision: 21.07.2010

Trade name: TITAN ATF 4000

(Contd. of page 1)

High pressure injection injuries through the skin require prompt surgical intervention and possibly steroid therapy, to minimise tissue damage and loss of function. Because entry wounds are small and do not reflect the seriousness of the underlying damage, surgical exploration to determine the extent of involvement may be necessary. Local anaesthetics or hot soaks should be avoided because they can contribute to swelling, vasospasm and ischaemia. Prompt surgical decompression, debridement and evacuation of foreign material should be performed under general anaesthetics, and wide exploration is essential.

5 Fire-fighting measures

- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Protective equipment:**
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

- **Person-related safety precautions:** Particular danger of slipping on leaked/spilled product.
- **Measures for environmental protection:**
Do not allow product to reach sewage system or any water course.
Do not allow to penetrate the ground/soil.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Send for recovery or disposal in suitable receptacles.
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling:**
- **Information for safe handling:** Prevent formation of aerosols.
- **Information about fire - and explosion protection:** No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Prevent any seepage into the ground.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:** Store in cool, dry conditions in well sealed receptacles.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Wash hands before breaks and at the end of work.
Do not carry product impregnated cleaning cloths in trouser pockets.
Avoid close or long term contact with the skin.
Do not eat, drink, smoke or sniff while working.
Avoid contact with the eyes.
Do not inhale gases / fumes / aerosols.
- **Respiratory protection:** Not required.

(Contd. on page 3)

GB

S:



Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 21.07.2010

Revision: 21.07.2010

Trade name: TITAN ATF 4000

(Contd. of page 2)

- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:**
Safety glasses
Goggles recommended during refilling
- **Body protection:** Oil resistant protective clothing

9 Physical and chemical properties

• **General Information**

Form:	Fluid
Colour:	Brown
Odour:	Mineral-oil-like

• **Change in condition**
Melting point/Melting range: Undetermined.
Boiling point/Boiling range: Undetermined.

• **Flash point:** > 100°C

• **Ignition temperature:** >250°C

• **Self-igniting:** Product is not selfigniting.

• **Danger of explosion:** Product does not present an explosion hazard.

• **Density at 20°C:** 0.86 g/cm³

• **Solubility in / Miscibility with water:** Not miscible or difficult to mix.

• **Viscosity:**
Kinematic at 40°C: 39 cSt

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
- **Materials to be avoided:** Strong oxidising agents.
- **Dangerous reactions** No dangerous reactions known.
- **Dangerous decomposition products:** Carbon monoxide and carbon dioxide

11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
on the skin: No irritant effect.
on the eye: No irritating effect.
- **Sensitization:** No sensitizing effects known.

(Contd. on page 4)

GB

Handwritten marks: A signature and a circled 'Q' with '52' written below it.

100
100

100

100

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 21.07.2010

Revision: 21.07.2010

Trade name: TITAN ATF 4000

(Contd. of page 3)

Additional toxicological information:

The product is not subject to classification according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

When used and handled according to specifications, the product does not have any harmful effects to our experience and the information provided to us.

12 Ecological information

- **Information about elimination (persistence and degradability):** Inherently biodegradable
- **Behaviour in environmental systems:**
- **Mobility and bioaccumulation potential:** Product is not expected to bioaccumulate.
- **Additional ecological information:**
- **General notes:** Generally not hazardous for water

13 Disposal considerations

- **Product:**
- **Recommendation**
Contact waste processors for recycling information.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
Delivery of waste oil to officially authorized collectors only.
Used, degraded or contaminated product may be classified as hazardous waste. Anyone classifying hazardous waste and determining its fate must be qualified in accordance with state and international legislation.
- **European waste catalogue 13.01.10** (if used exclusively as a mineral based non-chlorinated hydraulic oil)
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** -

- **Maritime transport IMDG:**
- **IMDG Class:** -
- **Marine pollutant:** No

- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** -

- **Transport/Additional information:** Not dangerous according to the above specifications.

15 Regulatory information

- **Labelling according to EU guidelines:**
Observe the general safety regulations when handling chemicals.
The product is not subject to identification regulations under EU Directives and the Ordinance on Hazardous Materials (German GefStoffV).
- **Special labelling of certain preparations:**
Contains Alkoxylated long-chain-alkyl amine. May produce an allergic reaction.
Safety data sheet available for professional user on request.

(Contd. on page 5)



Safety Data Sheet
according to 1907/2006/EC, Article 31

Printing date 21.07.2010

Revision: 21.07.2010

Trade name: TITAN ATF 4000

(Contd. of page 4)

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant R-phrases

- The risk phrases shown below are for those component substances which are listed in section 3 and not for the actual finished formulation.
- Hazards are concentration dependent. Therefore for the actual hazard classification and risk/safety phrases appropriate for the actual finished formulated product refer to section 15.
36 Irritating to eyes.
- **Department issuing MSDS:** Product safety department.
- **Contact:** GORDON SHARP

GB

Handwritten signature
51

07/11/2011

2

2

SAFETY DATA SHEET



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name Aral Langzeitfett H
 Product code 456147-DE04
 SDS no. 456147
 Product type Liquid.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture Grease for industrial applications
 For specific application advice see appropriate Technical Data Sheet or consult our company representative.

1.3 Details of the supplier of the safety data sheet

Supplier Aral AG
 Geschäftsbereich Schmierstoffe
 Max-Born-Str. 2
 D-22761 Hamburg

Customer Service Center / Environmental Protection / Product Safety: +49 (0)40 3594-05

E-mail address MSDSadvice@bp.com

1.4 Emergency telephone number

EMERGENCY CARECHEM: +44 (0) 1235 239 670 (24 hours)
 TELEPHONE NUMBER

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition Mixture

Classification according to Directive 1999/45/EC [DPD]

The product is not classified as dangerous according to Directive 1999/45/EC and its amendments.

See sections 11 and 12 for more detailed information on health effects and symptoms and environmental hazards.

2.2 Label elements

Risk phrases This product is not classified according to EU legislation.
 Safety phrases Not applicable.
 Supplemental label elements Safety data sheet available for professional user on request.

Special packaging requirements

Containers to be fitted with child-resistant fastenings Not applicable.
 Tactile warning of danger Not applicable.

2.3 Other hazards

Other hazards which do not result in classification Defatting to the skin.
 Note: High Pressure Applications:
 Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency.
 See 'Notes to physician' under First-Aid Measures, Section 4 of this Safety Data Sheet.

Product name Aral Langzeitfett H	Product code 456147-DE04	Page: 1/9
Version 1.01	Date of issue 3 November 2011	Format Germany (Germany)
		Language ENGLISH

100-1000

2

2

Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II - Germany

SECTION 3: Composition/information on ingredients

Substance/mixture Mixture
 Highly refined base oil (IP 346 DMSO extract < 3%). Soap. Proprietary performance additives.

Classification

Product/ingredient name	Identifiers	%	67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	Type
carbamodithioic acid, dibutyl-, methylene ester	EC: 233-593-1 CAS: 10254-57-6	2.5-25	R52/53	Aquatic Chronic 3, H412.	[1]

See Section 16 for the full text of the R-phrases declared above.

See Section 16 for the full text of the H statements declared above.

Type

- [1] Substance classified with a health or environmental hazard
 - [2] Substance with a workplace exposure limit
 - [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
 - [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.
Skin contact	Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention if irritation develops.
Inhalation	If inhaled, remove to fresh air. Get medical attention if symptoms appear. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.
Protection of first-aiders	No action shall be taken involving any personal risk or without suitable training.

4.2 Most important symptoms and effects, both acute and delayed

See Section 11 for more detailed information on health effects and symptoms.

4.3 Indication of any immediate medical attention and special treatment needed

Notes to physician	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Treatment should in general be symptomatic and directed to relieving any effects. Note: High Pressure Applications Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discoloured and extremely painful with extensive subcutaneous necrosis. Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimise tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable distances along tissue planes.
--------------------	--

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media	In case of fire, use water fog, alcohol resistant foam, dry chemical or carbon dioxide extinguisher or spray.
Unsuitable extinguishing media	Do not use water jet.

5.2 Special hazards arising from the substance or mixture

Hazards from the substance or mixture	In a fire or if heated, a pressure increase will occur and the container may burst.
---------------------------------------	---

Product name Aral Langzeitfett H	Product code 456147-DE04	Page: 2/9
Version 1.01 Date of issue 3 November 2011	Format Germany (Germany)	Language ENGLISH

2000-01-01

2

3

SECTION 5: Firefighting measures

Hazardous combustion products Combustion products may include the following:
 carbon oxides (CO, CO₂) (carbon monoxide, carbon dioxide)
 nitrogen oxides (NO, NO₂ etc.)
 sulphur oxides (SO₂, SO₃, etc.)

5.3 Advice for firefighters

Special precautions for fire-fighters No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.

Special protective equipment for fire-fighters Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Floors may be slippery; use care to avoid falling. Put on appropriate personal protective equipment.

For emergency responders If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

6.3 Methods and materials for containment and cleaning up

Small spill Stop leak if without risk. Move containers from spill area. Dispose of via a licensed waste disposal contractor. Use a tool to scoop up solid or absorbed material and place into appropriate labelled waste container.

Large spill Immediately contact emergency personnel. Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. If emergency personnel are unavailable, contain spilt material. Suction or scoop the spill into appropriate disposal or recycling vessels; then cover spill area with oil absorbent. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections

See Section 1 for emergency contact information.
 See Section 5 for firefighting measures.
 See Section 8 for information on appropriate personal protective equipment.
 See Section 12 for environmental precautions.
 See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures Put on appropriate personal protective equipment.

Advice on general occupational hygiene Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store and use only in equipment/containers designed for use with this product. Keep away from heat and direct sunlight. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10).

Not suitable Prolonged exposure to elevated temperature.

7.3 Specific end use(s)

Recommendations See section 1.2 and Exposure scenarios in annex, if applicable.

Product name	Aral Langzeitfett H	Product code	456147-DE04	Page:	3/9
Version	1.01	Date of issue	3 November 2011	Format	Germany (Germany)
				Language	ENGLISH

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits

ACGIH TLVs

Base oil - unspecified

ACGIH (United States).

TWA: 5 mg/m³ 8 hour(s). Form: Mineral oil, mist

For information and guidance, the ACGIH values are included. For further information on these please consult your supplier.

Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

Recommended monitoring procedures

If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Derived No Effect Level

No DELs available.

Predicted No Effect Concentration

No PNEC available.

8.2 Exposure controls

Appropriate engineering controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits.

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.

Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards. The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

Individual protection measures

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection

Respiratory protective equipment is not normally required where there is adequate natural or local exhaust ventilation to control exposure.

In case of insufficient ventilation, wear suitable respiratory equipment.

The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Eyeface protection

Safety glasses with side shields.

Skin protection

Hand protection

Wear protective gloves if prolonged or repeated contact is likely.

Wear chemical resistant gloves.

Recommended: Nitrile gloves.

The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Skin and body

Use of protective clothing is good industrial practice.

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

Product name Aral Langzeitfett H

Product code 456147-DE04

Page: 4/9

Version 1.01 Date of issue 3 November 2011

Format Germany (Germany)

Language ENGLISH

