

## Hydraulic/transmission oil

### GERAX TKD

GERAX TKD hydraulic/transmission oils are used for lubrication of hydraulic systems and mechanical transmissions.

GERAX TKD hydraulic/transmission oils are manufactured from deeply refined, deparaffinized and hydro-refined mineral oils obtained from processing of crude oil. The oils contain a carefully selected set of anti-corrosive, anti-oxidizing and wear-preventive additives.

GERAX TKD oil is intended for use in gearboxes, power transmission systems and hydraulic systems of tractors and loaders, and it cannot be used as an engine oil.

GERAX TKD oil meets the requirements of Komatsu Dresser HMS B21-0006 and Caterpillar TO-4 specifications, and holds the following acceptance certificates:

- Allison C-4 (Allison No. 22022495)
- Komatsu Dresser (Komatsu American) REA H-4542.

#### Characteristics:

The formulation of the oils' contents guarantees:

- optimal protection of surfaces of lubricated parts
- excellent anti-foaming properties
- good air emission
- very good demulsifying properties
- hydrolytic stability
- excellent filtering
- cleanliness of lubricating system
- good anti-wear protection and extended durability of lubricated systems' parts

The oils are intended for lubrication of:

- drive and steering hydraulic systems
- steering mechanisms
- gear pumps up to 25MPa
- piston pumps up to 35MPa
- mechanical transmissions that require oils of specific high lubricating properties.

№	Requirements	Test methods	Unit	Value	
				GERAX TKD 10W	GERAX TKD 30
1.	Kinematic viscosity at 40 <sup>0</sup> C	ASTM D-445	mm <sup>2</sup> /s	35	100
2.	Pour point	ASTM D-5950	<sup>0</sup> C	-40	-30
3.	Flash point	PN-EN ISO 2592	<sup>0</sup> C	225	250
4.	Viscosity index	ASTM D-2270		130	95
5.	Water content	ASTM D 95	% (V/V)	0.03	0.03
6.	Resistance to foaming/foam stability, foam volume, no water: - at 95 <sup>0</sup> C - at 135 <sup>0</sup> C - division time	ASTM D 892	cm <sup>3</sup> cm <sup>3</sup> s	0 10 23	0 10 23
7.	CCS structural viscosity at -20 <sup>0</sup> C	ASTM D 2602	mPa*s	3500	

The above data consists of values typical for a production batch, which are not included in technical specifications, and are subject to change due to continual product research and development.

#### Classifications and specifications:

- Allison C-4 (Allison No. 22022495)
- Komatsu Dresser (Komatsu American) REA H-4542
- Komatsu Dresser HMS B21-0006
- Caterpillar TO-4

#### Packaging:

180kg, in bulk

#### Storage:

All containers should be stored in roofed areas. If the barrels are kept in open-air areas, where they may be exposed to atmospheric factors such as rain, they should be placed in the horizontal position to prevent water access and labelling damage, preferably covered with a tarpaulin.

The product cannot be stored in temperatures lower than 0<sup>0</sup>C or higher than 60<sup>0</sup>C, nor can it be exposed to direct sunlight. If proper storage requirement are met, the period of minimum durability is 3 years.

**Health, Industrial Safety and the Environment:**

All safety information is included in the product's Material Safety Data Sheet, which contains detailed information concerning potential threats, safety precautions and first aid measures, as well as information concerning the product's impact on the environment and disposal considerations.

LOTOS Oil S.A. and the cooperating companies do not assume any responsibility for misuse of the product or for neglecting the given precautions. Should the product be used for purposes other than those enumerated above, seek advice at the local LOTOS Oil S.A. office beforehand.

*The information provided in this data sheet is not intended to constitute an offer within the meaning of the Act of 23<sup>rd</sup> April 1964 - Civil Code. LOTOS Oil S.A. bears no responsibility for whatever effects of use (particularly in trade and investment decision-making) of information contained herein. Any data contained in the MSDS are typical process tolerance values and they are subject to change due to continual product research and development. Information provided in this document may undergo changes. LOTOS Oil S.A. is not responsible for the product availability.*

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