

Processing date: 18.01.2022 Version 1

Product name: **TCTEK 16 PROFESSIONAL GREASE**
Product type: **LUBRICANT FOR HIGH SPEED ELECTRIC MOTOR BEARINGS**
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SECTION 1: IDENTIFICATION OF THE CHEMICAL AND THE COMPANY

1.1. Chemical name of the substance / product name:

Product name: **TCTEK 16 PROFESSIONAL GREASE – LUBRICANT FOR HIGH SPEED ELECTRIC MOTOR BEARINGS**

CAS No: **1333-61-5, 68649-42-3, 4259-15-8, 90480-91-4, 12001-85-3**
EINECS No: **215-599-6, 272-028-3, 224-235-5, 291-829-9, 234-409-2**
Production classification code: **24.66.31, CPC 35431.1, HS/CN 3403, jk 1113**
(x² plastic lubricants and other lubricants)
Customs classification: tariff item **3811290090** (commodity code)
Product use: Grease containing formula for metal refining to molecular base
Product purpose: Designed for bearings operated in high speed pumps, fans, electric motors, pulleys in the temperature from – 30° C to + 150° C in continuous.

Waste numbering in fat: **12 01 12 A**

SECTION 2. HAZARDS IDENTIFICATION

Assigned to the group: **A**
It is included in the group of SAFE products. According to issued regulations, this product is not classified as dangerous!

SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

The preparation is made on the basic of hydrogenated olefin oligomers obtained by catalytic polymerization of linear alpha olefins (PAO) concentrated with oxoaluminum stearate. CAS: 13419-15-3, which **are not classified as dangerous according to current regulations.**

Hazardous ingredients: Classification according to Regulation (ES) 1272/2008 (CLP)

No.	Chemical name	CAS No.	EINECS No.	Concentration (% hm.)	Classification CLP according to (ES) No. 1272/
1	Lithium hydroxide stearate	1333-61-5	215-599-6	8.0 - 10.0	-
2	Zinc dialkyldithiophosphate	68649-42-3	272-028-3	1,0 - 1,5	<i>Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 2, H411</i>
3	Zinc 2-ethylhexyl dithiophosphate	8.5.4259	224-235-5	1,5 - 2.0	<i>Eye Dam. 2, H318 Aquatic Chronic 2, H411</i>
4	Calcium sulfonate	90480 -91-4	291- 829- 9	2,0 - 2,5	<i>Aquatic Chronic 4, H413</i>
5	Zinc naphthenic	12001-85-3	234-409-2	2.0 – 2.5	<i>Aquatic Chronic 2, H411</i>

6	TCTEK 16 PROFESSIONAL GRES YAĞI / classification:	Xi, N, R-38, R-41, R-51, R-53
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For full text of the classifications, including the meaning of the abbreviations and symbols used and H-phrases, see section 16.

SECTION 4. FIRST AID

Respiratory system: does not pose a risk, no cases of adverse reactions are known.
Skin contact: wash with soap and water, rinse thoroughly.
Ingestion: rinse mouth with water, drink as much water as possible, in case of any persistent problems seek medical advice. Do not induce vomiting.
Eyes: wash with plenty of water eye irritation should consult a doctor.

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SECTION 5. FIRE FIGHTING MEASURES

- The product does not pose a direct fire hazard
- There is no danger of explosion.
- In case of fire, use the following existing agents: foam fire extinguishers, powder fire extinguishers, carbon dioxide, sand
- **DO NOT USE WATER.**

SECTION 6. ACCIDENTAL RELEASE MEASURES

In the event of a leak when heating the lubricant to a high temperature and reaching a liquid form – catch the leak Collect liquid components using a liquid – binding material. Sweep the contaminated area thoroughly. Under normal situation, the lubricant has a greasy consistency and must be thoroughly collected from the contaminated area, sawdust or sand can be used and the contaminated area thoroughly swept. Do not allow to enter drains or watercourses. Dispose of in accordance with applicable regulations.

SECTION 7. SUBSTANCE HANDLING AND STORAGE

Product handling – in accordance with normal rules

Storage in unit sales packages or in metal or plastic barrels in closed containers. Store away from flames and other sources of ignition.

Store separately from food products.

Standard ventilation.

In case of direct skin contact, wash the affected area thoroughly with soap and rinse with water.

SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Personal protective equipment – not required under normal conditions of use.

Respiratory protection - not required under normal conditions of use.

Hygiene at work – wash your hands thoroughly after work and before eating.

Ventilation system – standard.

Avoid contact with the eye and prolonged direct skin contact.

Use rubber gloves if necessary.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

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No.	SPECIFIC CHARACTERISTIC, TEST CONDITIONS	UNIT	RESULT MEASUREMENT
1.	Colour		brown
2.	Structure		homogeneous
3.	Base oil		Ester oil
4.	Base oil viscosity DIN 51562	at 40°C at 100°C	70 mm²/s 10,7 mm²/s
5.	Consistency class DIN 51818	NLGI	2
6.	Dropping point DIN ISO 2137	°C	> 250°C
7.	Penetration after kneading DIN ISO 2137		265 - 295
8.	Temperature range of use in the short term	°C °C	from - 50°C to +150°C to + 180°C
9.	Corrosion protection (EMCOR) DIN 51802		0 - 0
10.	Oil separability DIN 51817 - at 40 ° C - at 100 ° C	%	0,53 % 5,01 %
11.	Noise class (MGG 11)		II/1
12.	Lubrication according to the test on the four-ball device T02 (PN-76 / C-04147) - load causing weld - Pz - wear limit - Goz - seizure load - Pt - load wear index - lh	daN daN/mm² daN (kg) daN (kg)	450 352 295 64

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No.	SPECIFIC CHARACTERISTIC, TEST CONDITIONS	UNIT	RESULT MEASUREMENT
13.	Maximum load without seizure (OK) - Timken test (according to ASTM D 2509-03)	daN (lbf)	24,4 (55)
14.	Oxidation resistance DIN 51808 99 ° C / 100 h		0,1 bar
15.	Starting / running torque ASTM D 1478 at - 30 ° C Starting / running torque ASTM D 1478 at - 40 ° C	305 mNm/37 mNm	305 mNm/37 mNm
16.	Speed coefficient (n x dm) FE 9-test DIN 51821 A/1,5/6000-180°C F ₁₀ FE 9-test DIN 51821 A/1,5/6000-180°C F ₅₀ FE 1-test B/1,2/12000-160°C		1 300 000 746,15 h 816,67 h > 450 h
17.	Water resistance DIN 51807		0 - 90

This product does not contain any explosion product

TCTEK 16 PROFESSIONAL GRES YAĞI is an exceptional product designed for use in industry, which contains in its structure, inter alia: a thickening complex of lithium soaps **a formula for metal refining on a molecular basis.**

The formula contained in the TCTEK 16 PROFESSIONAL GRES YAĞI binds to the metal molecularly, refines it and creates a super permanent network - **molecular bond** resistant to high temperatures and high mechanical stress (extreme friction).

Due to its high durability, the polyurethane lubricant is TCTEK 16 PROFESSIONAL GRES YAĞI can also be used in maintenance-free bearings without the need for additional "lubrication" during normal operation.

The lubricant is stable to chemical media. The lubricant is designed for operated bearings in high-speed pumps, fans, electric motors, pulleys and many other devices.

TCTEK 16 PROFESSIONAL GRES YAĞI is an exceptional professional lubricant designed specifically for industrial use. It is characterized by a smooth texture, high drop point, high water resistance and excellent lubricity properties.

TCTEK 16 PROFESSIONAL GREASE IS MOLECULAR METAL PROTECTION.

- TCTEK 16 PROFESSIONAL GRES YAĞI not only lubricates areas exposed to abrasion but it also associates with metal in places where friction occurs.
- Operating temperature range from -50 ° C to + 150 ° C.

TCTEK 16 PROFESSIONAL GRES YAĞI provides:

- very good corrosion protection,
- significant reduction of the coefficient of friction,
- reduction of wear of the system and protection against seizure,
- noise reduction of cooperating components,
- very good water resistance,
- better adhesion to the substrate (adhesion).

Due to the extremely high efficiency, TCTEK 16 PROFESSIONAL GRES YAĞI is used in plants with a large number of machines and equipment operated in extreme conditions: **high dust, water, high temperatures, dynamic and extreme friction.**

TCTEK 16 PROFESSIONAL GRES YAĞI is used as a filler in lubricators of all kinds, as well as by direct application to friction nodes.

SECTION 10. STABILITY AND REACTIVITY / Under normal conditions, the products is stable

10.1. Reactivity: There is no reactivity information.

10.2. Chemical stability: The product is stable under normal conditions of storage and use. The product may be unstable at high temperatures.

10.3. Possibility of dangerous reactions: No dangerous reactions known.

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10.4. Conditions to avoid: Very high temperatures, sources of fire.

10.5. Incompatible materials: Strong oxidants.

10.6. Hazardous decomposition products: They are not known.

10.7. Dangerous reactions: No dangerous reactions known.

SECTION 11. TOXICOLOGICAL INFORMATION:

11.1. Information on toxicological effects: The products is not classified as a dangerous mixture. The product does not affect the overall deterioration of health in recommended storage and use conditions.

11.2. Acute toxicity: Toxicity – no negative effects.

11.3. Skin corrosion / irritation: The product may cause inflammation after prolonged contact with the skin.

11.4. Serious eye damage / eye irritation: Inter or may cause mild eye irritation.

11.5. Respiratory or skin sensitization: Based on available data, the classification criteria are not met.

11.6. Germ cell mutagenicity: Based on available data, the classification criteria are not met.

11.7. carcinogenicity: Based on available data, the classification criteria are not met.

11.8. Reproductive toxicity: Based on available data, the classification criteria are not met.

11.9. Specific target organ toxicity – single exposure: Based on available data, the classification criteria are not met.

11.10. Specific target organ toxicity – repeated exposure: Based on available data, the classification criteria are not met.

11.11. Aspiration hazard: Based on available data, the classification criteria are not met.

11.12. Information on likely routes of exposure: Respiratory system, ingestion, skin contact, eye contact.

11.13. Manifestations related to physical, chemical and toxicological properties: The lubricant is inert due to its low volatility at ambient temperature. However, at high temperatures, when it occurs in the form of vapours, it can cause irritation of the respiratory tract, mucous membranes, and digestive system.

11.14. Delayed, immediate and chronic consequences of short and long term exposure: Prolonged skin contact may cause dermatological manifestations such as redness, swelling or inflammation.

11.15. consequences of interaction: There are not available.

11.16. No specific health risks were observed:

1. Does not irritate the respiratory tract (under normal conditions of use).
2. Allergenic effects were not observed.
3. Contact of the product with the eyes may cause eye irritation.
4. The products are practically non - toxic.

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SECTION 12. ECOLOGICAL INFORMATION

12.1. Toxicity: The product does not present a risk of acute toxicity to terrestrial and aquatic organism.

12.2. Persistence and degradability: Limited degradability, depending on the conditions in which the lubricant is decomposed.

12.3. Biodegradability: Product data is missing. Similar products show a low level of bioaccumulation.

12.4. Mobility in soil: Due to the low solubility of the lubricant in water and its specific gravity lower than the specific gravity of the water, the probability of spreading the lubricant is negligible.

12.5. Result of the assessment PBT and vPvB : The product does not meet the criteria PBT or vPvB according to annex XIII ordinance (ES) no. 1907/2006.

12.6. Other adverse effects: Missing available data. Prevent from entering drains, surface and ground water.

12.7. Prevent product from entering soil, groundwater, surface water or drains: The product is non – volatile, insoluble in water and accumulates in the soil.

SECTION 13. DISPOSAL CONSIDERATIONS

13.1. waste management methods: Recycle, if possible, in accordance with local and national regulations.

13.2. Product:

1. Collect in lockable containers (collect in closable containers).
2. Recycle if possible.
3. If disposal is necessary, a company licensed to dispose of and manage hazardous waste must be contacted.
4. Proceed in accordance with local and national regulations.
5. The product is not classified as ,“hazardous waste“ in the case of waste disposal.

13.3. Packaging:

1. Dispose of in accordance with applicable local / national regulations.
2. Empty and uncontaminated packaging can be recycled.

SECTION 14. TRANSPORT INFORMATION

14.1. UN/ONZ number:

ADR/RID/IMO/IMDG/ICAO/IATA Not dangerous goods / not specified

14.2. Official name of transport:

ADR/RID/IMO/IMDG/ICAO/IATA Not dangerous goods / not specified

14.3. Transport hazard class (es):

ADR/RID/IMO/IMDG/ICAO/IATA Not dangerous goods / not specified

14.4. Envelope group:

ADR/RID/IMO/IMDG/ICAO/IATA Not dangerous goods / not specified

14.5. Environmental hazards:

ADR/RID/IMO/IMDG/ICAO/IATA Not specified

14.6. Special precautions for user:

1. In terms of regulations ADR/RID, IMO/IMDG, ICAO/IATA the product is not classified as dangerous goods, it is not a cause of danger during transport.

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14.6. Special precautions for user:

2. It is not subject to any special restrictions that would result from these regulations.
3. The maximum transport temperature should not exceed 40 ° C.
4. Does not require special treatment. It can be transported by any means of transport.

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:

Not subject to regulations.

14.8. Product TCTEK 3 PROFESSIONAL GRES YAĞI - LITHIUM PLASTIC LUBRICANT is not a dangerous material according to valid regulations RID/ADR, IMTG (IMCO), UN and IATA.

SECTION 15. REGULATORY INFORMATION

15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture:

Directive 98/24/ES (Risks related to chemicals in the workplace)
Directive 2000/39/ES (Occupational exposure limits)
Regulation (ES) no. 1907/2006 (REACH)
Regulation (ES) no. 1272/2008 (CLP)
Regulation (ES) no. 790/2009 (ATP I CLP) and (EU) no. 758/2013
Regulation (ES) no. 453/2010 (Annex II)
Regulation (ES) no. 286/2011 (ATP 2 CLP)

15.1. Safety, health and environmental regulations / legislation specific for the substance or mixture:

Regulation (ES) no. 618/2012 (ATP 3 CLP)
Regulation (ES) no. 487/2013 (ATP 4 CLP)
Regulation (ES) no. 944/2013 (ATP 5 CLP)
Regulation (ES) no. 605/2014 (ATP 6 CLP)

15.2. Restrictions on the substances contained:

- According to Annex XVII	does not contain substances
- REACH candidate list	does not contain substances
- REACH appendix XIV	does not contain substances

15.3. Regulations relating to Directive 82/501/ES (Seveso). 96/82/ES (Seveso II): Is not a subject

15.2. Chemical safety assessment: not performed for mixtures

15.3. Symbol R: does not apply

15.4. Symbol S: does not apply

15.5. More information: The product is not classified as dangerous for human health and the environment according to valid Czech laws and regulations and directives of the European Union.

SECTION 16. MORE INFORMATION

16.1. Indication of changes:

Version 2: Section 1-16: Adaptation of the form of the sheet to the requirements contained in Annex II of the REACH Regulation – amendment published on 28. May 2015 in Commission Regulation (EU) 2015/830.

16.2. Legend to abbreviations and acronyms used in the safety data sheet:

CAS	The number assigned to the chemical by the US Chemical Abstracts Service (CAS), which allows the substance to be identified.
ES	The ES number is the numerical identifier of the substances on the ES list of the European List of Tradeable Chemicals, otherwise EINECS.

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16.2. Legend to abbreviations and acronyms used in the safety data sheet:

NPK	Maximum allowable concentration, weighted average concentration, the effect of which on the employee during the 8 – hour working hours should not cause negative effects on his health and the health of his future generations.
STEL	Short exposure time limit, weighted average concentration that should not cause negative changes in the employee's health if it occurs in the work environment for period not exceeding 15 minutes and maximum of 2 times during the work shift, with a minimum time delay of 1 hour.
PBT	Persistent, bio accumulative and toxic.
PNEC	Estimation of the concentration at which no adverse effects occur.
DNEL	Derived no – effect level.
vPvB	Highly persistent and highly bio accumulative.
LC50	The lethal concentration of a substance at which 50% of the population can be expected to die.
LD50	A lethal dose of a substance that can be expected to cause death in 50% of the population.
EC50	Concentration of the substance at which 50% of the population is affected.
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road.
RID	Agreement concerning the Carriage of Dangerous Goods by Rail.
UN	The four – digit identification number of the substance or article taken from the Model Regulations OSN.
VOC	Volatile organic compounds.
TLV	Threshold limit.
TWATLV	Limit value in relation to a reference period of 8 hours / day (ACGIH Standard).
WGK	German water hazard class.

16.3. Information on the data sources used in compiling the safety data sheet. Regulation ES 1907 2006 (REACH) as amended.

16.4. Indication of which information evaluation methods have been used to classify the compounds: Calculation method.

16.5. List of standard hazard statements used in the safety data sheet:

Skin Irrit. 2	Skin irritation, hazard category 2.
Eye Dam. 1	Serious eye damage, hazard category 1.
Acute Tox 4	Acute toxicity, hazard category 4.
Aquatic Chronic 2	Hazardous to the aquatic environment, hazard category 2.
Aquatic Chronic 4	Hazardous to the aquatic environment, hazard category 4.
H315	Irritating to skin.
H318	Causes serious eye damage.
H332	Harmful by inhalation.
H411	Toxic for aquatic organism., with long lasting effects.
H413	May cause long – term adverse effects in the aquatic environment

16.6. Training instructions:

The user of the product can start using it after completing the necessary training in the scope of safety, health at work and fire protection. The employer is obliged to inform all employees who have contact with the product about the hazards and personal protective equipment described in this safety data sheet.

16.7. More information:

The information provided cannot be applied to mixtures of the product with other substances. The use of this information, as well as the use of the product, is not controlled by the manufacturer, so it is the user's responsibility to create appropriate conditions for handling the product.

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The stated data correspond to the current state of knowledge and experience and describe the product for occupational health, safety and environmental protection. They cannot be considered a guarantee of the suitability and applicability of the product for a specific application.

This product safety data sheet invalidates and replaces any existing one.