Material Safety Data Sheet in accordance with Annex II to Regulation (EC) No 1907/2006 (REACH), as amended	
LO/17/19	
Date of issue: 05.09.2019 Updated: not applicable	Edition no. 1

Sekcja 1. IDENTIFICATION OF THE ~~SUBSTANCE~~/MIXTURE AND OF THE COMPANY

1.1. **Product identifier:**
LOTOS AURUM C3 SAE 5W-30

1.2. **Relevant identified uses of ~~the substance~~ or mixture and uses advised against:**

1.2.1. Identified applications: intended for use in gasoline and diesel engines in passenger cars and delivery vans.

1.2.2. Uses advised against: none.

None.

1.3. **Details of the supplier of the safety data sheet:**

LOTOS Oil Sp. z o. o., 80-718 Gdansk, 135 Elbląska
telephone number: +48 58 326 43 00, fax: +48 58 308 84 18
reach@lotosoil.pl
www.lotos.pl
BDO registry number: 000025638

1.4. **Emergency telephone number:**

LOTOS Fire Brigade and Company Emergency Centre: 058-308-81-99; 058-308-81-09 (all day)
LOTOS Czechowice Fire Brigade and Company Emergency Centre: 032-323-79-14 (all day); 32-3237-222, (all day)

Sekcja 2. HAZARD IDENTIFICATION

2.1. **Classification of the substance or mixture:**

Classification compliant with the Regulation (EC) No. 1272/2008 [CLP]:
The product is not classified as a hazardous mixture.

2.2. **Label elements:**

Labelling in accordance with the Regulation (EC) No. 1272/2008 [CLP]:
The product is not dangerous and does not require additional cautionary labelling.

2.3. **Other hazards:**

The mixture does not meet the criteria for PBT or vPvB. In the case of any failure of equipment working at high temperatures and pressures, it is possible for the product to penetrate through the skin into the subcutaneous tissues; When working with hot product there is a risk of thermal burns. The product may cause irritation of the respiratory system, where present in the form of oil mist or in the form of a vapour, or after ingestion. Research conducted for similar products have shown no harmful effects on the eyes or shown minimal irritation.

Sekcja 3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1. **Substances:**

not applicable

3.2. **Mixtures:**

Number			**Concentration [%m/m]**	**Substance name**	**Classification compliant with the Regulation (EC) No. 1272/2008**
registration:	**CAS:**	**EC:**			
01-2120742271-64-XXXX	68649-42-3	272-028-3	≤ 1,29	Esters of phosphorodithiacetic acid, O, O-di-C 1-14 alkyl, zinc salts	Eye Irrit. 2, H319 Aquatic Acute 1, H400 Aquatic Chronic 3, H412
-	122-39-4	204-539-4	< 0,08	diphenylamine	Acute Tox. 3,H301, H311, H331 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

The full text of H is provided in Section 16.

Sekcja 4. **FIRST AID MEASURES**

4.1. **Description of first aid measures:**

By inhalation:

While it is safe, move the injured to a quiet and well-ventilated place.

If the patient is unconscious and:

- The injured is not breathing - make sure there are no obstructions in breathing and provide artificial respiration performed by trained personnel. If necessary, make a heart massage and get medical attention.

If the injured is breathing - Place the injured in the recovery position. If it is needed, give oxygen.

If difficulty in breathing is persistent, ask your doctor.

In the case of contact with the skin:

Symptoms: dry skin, irritation in the case of repeated or prolonged exposure. Contact with the product at high temperature can cause burns.

Remove contaminated clothing and shoes and dispose of them in a safe manner. Wash contaminated body parts with soap and water.

In the event of the occurrence and persistence of the irritation, swelling or redness of the skin, ask your doctor.

When using high pressure percutaneous injections may occur. In the case of injury caused by high pressure immediately seek medical attention. Do not wait for the symptoms to become worse.
Light burns should be cooled: Hold the burned body part under cold water for at least five minutes or until relieving pain. Be sure to prevent hypothermia.
Do not put ice on the burns. Carefully remove the non-sticking clothing. DO NOT attempt to remove portions of clothing stuck to the burned skin. Clothing around these places should be cut.
In any case of serious burns ask your doctor.

After eye contact:
Symptoms: slight irritation. Contact with the product at high temperature can cause burns.
Carefully rinse with water for several minutes. If it is possible and easy to do, remove contact lenses of the injured. Continue to rinse.
In the event of the occurrence and persistence of irritation, blurred vision, or swelling, please refer to the specialist.
In the case of eye splash with hot product, they must be cool immediately under cold, running water to dissipate the accumulated heat. Immediately consult your doctor on the assessment of the condition and subsequent treatment of the injured.

Ingestion / aspiration:
Symptoms: expected not many or no symptoms. Nausea and diarrhoea may possibly appear.
If swallowed, always assume that inhalation/aspiration has taken place. Ask for help from a specialist or refer the patient to the hospital. Do not wait for the symptoms to become worse.
Do not induce vomiting because there is a risk of aspiration.
Do not give anything by mouth to an unconscious person.
If vomiting occurs, the injured's head should be kept low to avoid penetration of vomit into the lungs (aspiration). After the cessation of vomiting, put the injured in the recovery position, with legs slightly raised.

4.2. **Most important, both acute and delayed symptoms and effects of exposure:**
A brief summary of information on acute and delayed symptoms and effects of exposure: Not determined.

4.3. **Indication of any immediate medical attention and special treatment needed:**
Information on clinical indications and medical monitoring for delayed effects: Not determined.
Treat symptomatically.

Sekcja 5. **FIREFIGHTING MEASURES**

5.1. **Extinguishing media:**
Suitable extinguishing media:
- Foam (trained personnel only)
- Water mist (trained personnel only)

- Dry chemical powder
- Carbon dioxide
- Other inert gases (according to the law)
- Sand or earth

Unsuitable extinguishing media:

Do not spray directly on the burning product; substances can cause splatter and spread of fire. One should prevent the simultaneous use of foam and water on the same surface as water destroys the foam.

5.2. **Special hazards arising from the substance or mixture:**

Products of combustion:

Incomplete burning often causes a complex mixture of solid and fluid particles floating in the air and gases, including carbon monoxide, CO2, nitrogen oxides, and unspecified organic and inorganic compounds.

5.3. **Advice for fire-fighters:**

In the case of a large fire or fires in confined or poorly ventilated areas one should also use full fire resistant protective clothing and a self contained breathing apparatus with full face mask operating on the principle of hypertension.

Sekcja 6. **ACCIDENTAL RELEASE MEASURES**

General Information:

Stop or control the leak at source if it is safe. Avoid direct contact with the spilled material. Stand against the wind. With the exception of minor leaks, if possible, the feasibility of any action in each case should be evaluated and assessed by z properly trained and competent person in charge of rescue operations. If it is safe, eliminate all sources of flash (e.g. electricity, sparks, fire, torches). If necessary, notify relevant authorities in accordance with applicable regulations.

6.1. **Personal precautions, protective equipment and emergency procedures:**

6.1.1. For non-emergency personnel:

Keep personnel not participating in the action away from the site of the leak. Alert emergency personnel.

6.1.2. For emergency responders:

Clothing and equipment:

Small spills: usually adequate standard anti-static clothing is appropriate. Significant spills: full suit of anti-static material resistant to chemical agents.

Work gloves provide effective protection against chemicals, especially aromatic hydrocarbons. Note: gloves made of polyvinyl chloride are not waterproof and therefore not suitable for use in an emergency. Hard hat. Anti-static, anti-skid safety shoes (long or short). Safety goggles or face shield, if splash or other eye contact with them is possible or expected. Respiratory protection will be necessary only in special cases (e.g. the formation of mists). Depending on the amount of spilled material and the estimated range of exposure one can be use half-mask

or full mask respirator with combined dust filters / filter vapours of organic substances or self contained breathing apparatus. If you can not fully assess the situation, or if there is a risk of oxygen deficiency, only self contained breathing apparatus should be used.

6.2. **Measures for environmental protection:**

Prevent product from entering sewers, rivers and other bodies of water or the underground (tunnels, basements, etc.).

6.3. **Methods and materials for containment and cleaning up:**

6.3.1. Recommendations for preventing the spread of the spill:

On the ground:

If necessary, surround the product with dry dike earth, sand or other non-combustible material. Significant spills may be carefully covered with foam (if available) to reduce the risk of fire. Do not use direct stream. Use with adequate ventilation inside buildings or in confined spaces.

On the surface of water:

For small spills into closed waters (i.e. port waters), protect the product with floating barriers or other equipment. Collect the spilled product using special floating absorbents. As far as possible, large spills in open waters should be controlled using floating barriers or other mechanical means. If this is not possible, it is necessary to control the spread of the spill and collect the product by skimming or other suitable mechanical means.

6.3.2. Recommendations for the elimination of leakage:

On the ground:

Absorb the spilled product with suitable, non-flammable materials. Collect the unbound product with available means. Transfer the collected product and other contaminated materials to appropriate tanks or containers for recovery or disposal in a safe manner. In the case of soil contamination, the contaminated layer should be removed and undergo treatment, in accordance with local regulations.

On the surface of water:

Collect the recovered product and other materials to the respective tanks or containers for recovery or disposal in a safe manner.

6.3.3. Information on improper methods of containment:

not specified

6.4. **Reference to other sections:**

Additional information on individual protection measures - see section 8.
Additional information on waste - see section 13.

Sekcja 7. HANDLING AND STORAGE OF ~~SUBSTANCES~~ AND MIXTURES

7.1. **Precautions for safe handling:**

7.1.1. Recommendations for safe use:

While working with the product, follow the general rules and regulations of health and safety and fire protection. Keep it away from heat / sparks / open flames / hot surfaces . Use and

store only outdoors or in a well-ventilated place. Avoid contact with the product. Avoid release to the environment.

7.1.2. Advice on general occupational hygiene:

Ensure the implementation of appropriate disciplinary action. Do not allow the accumulation of contaminated materials in the workplace or to keep them in pockets. Keep away from food and beverages. During use of the product one must not eat, drink or smoke. After working with the substance thoroughly wash your hands. When you have finished, remove contaminated clothing.

7.2. **Conditions for safe storage, including information about any incompatibilities:**

Protect against electrostatic charges. Avoid sudden pouring (with splash) of large quantities of hot product in liquid form. Avoid contact with the skin. Avoid inhalation of fumes / fog. Do not swallow. Avoid the risk of slipping. If necessary, use appropriate personal protective equipment. For more information on protection measures, see 8.2.

Plan of the storage site, the design of the tank and equipment and operating procedures must comply with the relevant European, national and local provisions. Installations for the storage of substances should be equipped with the right embankment to protect the land and water from contamination in the case of leaks or spills. Cleaning, inspection and maintenance of interior storage tanks may only be made by suitably equipped and qualified people in accordance with national, local or company provisons. Keep away from oxidising agents.

Recommended materials for the manufacture of tanks or layout: mild steel, including stainless steel. Unsuitable Materials: Some synthetic materials may be unsuitable for the production of containers and their layout depending on the specifications and the intended use of the material. Compliance should be agreed with the manufacturer.

If the product is provided in a container: Keep it only in the original packaging or in a container suitable for this type of product. Keep containers tightly closed and properly labelled. Empty containers may contain flammable product residues. Empty containers must not be welded, drilled, cut or burn, unless they have been properly cleaned.

7.3. **Specific end use (s):** none.

Sekcja 8. **EXPOSURE CONTROLS / PERSONAL PROTECTION**

8.1. **Control parameters:**

8.1.1. Exposure limit values NDS for the substance:

	NDS (mg/ m^3)	NDSCh (mg/ m^3)	NDSP	Notes
Mineral oils (highly refined mineral oils with the exception of cutting fluids - inhalable fraction	5	-	-	-

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Diphenylamine (inhalable fraction, can be absorbed through the skin)	5	10		

8.1.2. Information on currently recommended monitoring procedures:
Follow the regulations on monitoring air quality and the following Polish standards: PN-Z-04008-7:2002 "Principles of air sampling in the work environment and the interpretation of results"

8.1.3. DNEL and PNEC values:
For substance, CAS No.:125643-61-0:
Mixture of C7-9-alkyl-3- (3,5-di-trans-butyl-4-hydroxyphenyl) propionate isomers
DNEL: 2.33 mg/m^3

8.2. **Exposure control:**

8.2.1. Appropriate engineering controls:
Use general ventilation of rooms and local exhaust ventilation removing vapour from emission places. General ventilation exhaust should be in the upper part of the room and at the floor, and local ventilation at the working level or below. Local ventilation is essential for the formation of mists and vapours.

8.2.2. Individual protection measures, such as personal protective equipment:
a) eye or face protection: Special protection is not required, although it is good practice to use goggles in the case of splashing hazard - full protection of the head, face and neck.
b) skin protection: In order to minimize the possible risk, it is recommended to use protective clothing and oil-resistant gloves according to DIN EN 374 (e.g. nitrile, polyvinyl chloride or chloropropene rubber) and work shoes also adapted for contact with hot objects.
Thickness of glove material:> = 0.4 mm
Breakthrough time (maximum wearing time) 480 min

c) respiratory protection: No protection is required, however, do not inhale vapours. If there is a risk of exposure to the risk of concentrated vapours or mist generation, use a protective mask with a filter.
d) thermal hazards: Gloves should be heat-resistant and thermally insulated, if they are possible or expected to contact the product being hot.

8.2.3. Environmental exposure controls:
No data

Sekcja 9. **PHYSICAL AND CHEMICAL PROPERTIES**

9.1. **Information on basic physical and chemical properties:**

Appearance:	A liquid from light yellow to amber
Odour:	oil type
Odour threshold:	no data

pH	no data
Melting/freezing temperature [°C]	not applicable
Initial boiling point and boiling range [^{O}C]:	not applicable
Ignition temperature [^{0}C]:	>224 (open cup)
Evaporation rate:	no data
Flammability (solid, gas):	not applicable
Upper / lower flammability or upper / lower explosion limit:	not applicable
Vapour pressure [hPa]:	no data
Vapour density:	no data
Relative density at 15 ^{O}C [g/cm^{3}]:	Does not normalize (given in certificates)
Solubility:	
- ultrasound in water:	does not dissolve
- emulsifies in organic	Soluble in most organic solvents
Partition coefficient of n-octanol/water (log KO/W):	not specified
Auto-flash temperature	no data
Decomposition temperature	no data
Kinematic viscosity at 40°C[mm^{2}/s]:	<20.5 mm^{2}/s (approx. 73 mm^{2}/s)
Explosive properties	No data
Oxidising properties	No data

9.2. **Other information:**
No data

Sekcja 10. **STABILITY AND REACTIVITY**

10.1. **Reactivity:**
In conditions of use does not show an increased reactivity.

10.2. **Chemical stability:**
In normal conditions the product is stable.

10.3. **Possibility of hazardous reactions:**
In conditions of use does not cause dangerous reactions.

10.4. **Conditions to avoid:**
Avoid ignition sources and heat when in explosive atmosphere.

10.5. **Incompatible materials:**
Strong oxidizing agents, Acids, strong reducing agents

10.6. **Hazardous decomposition products:**
At high temperatures, thermal decomposition may product. Characteristics of the resulting product will depend on the decomposition conditions. Gases and vapours can be emitted: oxides of carbon, sulphur, nitrogen NOx, hydrogen sulphide and hydrocarbons.

Sekcja 11. **TOXICOLOGICAL INFORMATION**

11.1. **Information on toxicological effects:**

CAS number	Substance name	Toxicological information
68649-42-3	Esters of phosphorodithiacetic acid, O, O-di-C 1-14 alkyl, zinc salts	**Oral LD50:** 3,100 mg/kg (rat) **LD50 skin:** 5,000 mg/kg (rat)
122-39-4	diphenylamine	**Oral LD50:** 1.120 mg/kg

a) Acute toxicity
Based on available data, the classification criteria are not met.
b) Skin corrosion/irritation
Based on available data, the classification criteria are not met.
c) Serious damage to eyes / eye irritation
Based on available data, the classification criteria are not met.
d) Sensitization effect to the respiratory tract or skin
Based on available data, the classification criteria are not met.
e) Germ cell mutagenicity
Based on available data, the classification criteria are not met.
f) Carcinogenic effects
Based on available data, the classification criteria are not met.
g) Reproductive toxicity
Based on available data, the classification criteria are not met.
h) Toxic effects on target organs - single exposure
Based on available data, the classification criteria are not met.
i) Toxic effects on target organs - repeated exposure
Based on available data, the classification criteria are not met.
i) Aspiration hazard
Based on available data, the classification criteria are not met.

Sekcja 12. **ECOLOGICAL INFORMATION**

12.1.Toxicity:
Based on available data, the classification criteria are not met.
12.2. Persistence and degradability:
There is no data on the ecotoxicity of the mixture.
12.3. Bioaccumulative potential:
No specific data for the mixture. Bioconcentration factor (BCF) is not determined.

CAS number	Substance name	Log K_{OC}	Bioconcentration factor (BCF)
122-39-4	diphenylamine	3.4	-

12.4. Mobility in soil:

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The product accumulates on the surface of the water and if it is in large amounts, oxygen transfer into the water is decreased.

12.5. Results of PBT and vPvB assessment:

No data available for the entire mixture. Property assessment for ingredients:

CAS number	Substance name	Results of PBT and vPvB:
68649-42-3	Esters of phosphorodithiacetic acid, O, O-di-C 1-14 alkyl, zinc salts	The substance in the mixture **does not meet** the PBT / vPvB criterion according to REACH, Annex XIII.
122-39-4	diphenylamine	The substance in the mixture **does not meet** the PBT / vPvB criterion according to REACH, Annex XIII.

12.6. Other adverse effects:

The product does not contain substances hazardous to the ozone layer.

Section 13. **DISPOSAL CONSIDERATIONS**

Note: Empty containers may contain flammable product residues. Empty containers must not be welded, drilled, cut or burn, unless they have been properly cleaned.

13.1. Waste treatment methods:

Do not empty into drains, prevent pollution of surface and groundwater and soil. Use waste containers resistant to hydrocarbons, sealed and labelled.

The product that is not suitable for use or used, it should be directed to the nearest collection point of waste.

External recovery and recycling of waste should comply with applicable local and / or national regulations. Disposable containers are disposed of in accordance with the current regulations concerning the management of packaging waste. In contrast, reusable packaging can be reused after cleaning. Dispose of waste in accordance with the legal provisions.

Section 14. TRANSPORT INFORMATION

Transport type: Land transport (ADR/RID):

UN number: not applicable

Proper UN shipping name: not applicable

Class (es) of transport hazard: not applicable

Packing group: not applicable

Environmental hazards: not applicable

Special precautions for users: Handle the product as it has been recommended in section 7 of the Sheet.

Transport in bulk according to Appendix II of MARPOL and the IBC Code: not applicable

The product is not dangerous according to ADR.

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Section 15. REGULATORY INFORMATION

15.1. Laws concerning the safety, health and environmental protection specific for the substance or mixture:

15.1.1. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency (Journal of Laws EU L 396 of 30 December 2006 and amendments, Journal of Laws EU series L 136 of 29 May 2007, as amended)

15.1.2. Commission Regulation (EU) No 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (Journal of Laws UE series L no. 132 of 29 May 2015)

15.1.3. Act of 25 February 2011 on chemical substances and mixtures (unified text, Journal of Laws of 2013, item 143 as amended)

15.1.4. Regulation of the European Parliament and the Council Regulation (EC) No. 1272/2008 of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No. 1907/2006 (Journal of Laws EU L 353 of 31 December 2008, as amended).

15.1.5. Act of 14 December 2012 on waste (unified text Journal of Laws of 2018, item 21, as amended).

15.1.6. Regulation of the Minister of Economy dated 5 October 2015 on the detailed method of dealing with waste oils (Journal of of Laws of 2015, item 1694, as amended)

15.1.7. Regulation of the Minister of Labour, Family and Social Policy of 12 June 2018 on the maximum permissible concentrations and intensities of harmful factors in the work environment (Journal of Laws of of 2018, item 1286, as amended)

15.1.8. Regulation (EC) No 1005/2009 of the European Parliament and of the Council of 16 September 2009 on substances that deplete the ozone layer (Journal of Laws WE series L 286 of 31 October 2008, as amended).

15.1.9. European Agreement concerning the International Carriage of Dangerous Goods by Road (ADR).

15.2. Chemical safety assessment: none for the mixture.

Section 16. OTHER INFORMATION

Revisions' scope: not applicable

Mixture classification:

In terms of health and environmental hazards, the product was classified on the basis of its components' data.

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Sources of key data on which the safety data sheet is based and the possibility of obtaining further information:
This safety data sheet has been prepared according to the principles set out in the REACH Regulation, using the information provided in the registration technical documentation on the basis of the available messages and written by specially appointed international organizations, and to the best of our knowledge. Analysis of physical and chemical properties is performed on a regular basis at LOTOS SA Group.

Literature:
[1] Legislation applicable in Poland concerning chemical substances and mixtures.
[2] Technical conditions.
[3] Safety Data Sheets of Hazardous Substances / Mixtures and those unclassified as hazardous.

Abbreviations:
PBT – Persistent Bioaccumulable Toxic; vPvB - Very Persistent, Very Bioaccumulative; DNEL - Derived No Effect Level; PNEC - Predicted No Effect Concentration; NDS - the highest permissible concentration; STEL - the maximum instantaneous concentration; NDSP - the maximum permissible ceiling concentration; Eye Irrit. 2, H319- Causes serious eye irritation; Aquatic Acute 1-hazardous to the aquatic environment, acute hazard, category 1, H400- Very toxic to aquatic life, Aquatic Chronic 3- hazardous to the aquatic environment - chronic hazard, category 3, H412-Harmful to aquatic life with long lasting effects; Aquatic Chronic 1- hazardous to the aquatic environment - chronic hazard, category 1, H410- Very toxic to aquatic life with long lasting effects; Acute Tox. 3- Acute toxicity, category 3, H301- Toxic if swallowed.

DECLARATION

The information presented in this Data Sheet reflects our best knowledge at the date of the Sheet. We notify further users and distributors that we do not assume responsibility for the improper use of our product in a manner other than recommended by us. Measures relating to health and safety, and advice in matters of environmental protection enshrined in the Sheet may not be suitable for all individuals or situations. Users should assess the suitability of the product in a safe manner and in accordance with all applicable laws and regulations. The provisions set out in the Sheet shall in no way relieve the user from the regulations governing his activity.

This document was developed in the LOTOS SA Group
THE DATA SHEET SHOULD BE IMMEDIATELY SEND DOWN THE SUPPLY CHAIN