according to Regulation (EC) No 1907/2006

ADDINOL 1	Turbine	Oil	TL 46
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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

ADDINOL Turbine Oil TL 46

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

Use of the substance/mixture

Lubricant and additive.

1.3. Details of the supplier of the safety data sheet

Manufacturer

Manufacturer		
Company name:	ADDINOL Lube Oil GmbH	
	Gebäude 4609	
Street:	Am Haupttor	
Place:	D-06237 Leuna	
Telephone:	+49 (0) 3461 845-0	Telefax: +49 (0) 3461 845-555
E-mail:	info@addinol.de	
Contact person:	Application Technology	
Internet:	www.addinol.de	
Responsible Department:	ADDINOL Application Technology	
Supplier		
Company name:	GEM OILS LIMITED	
Place:	IRL-H12K298 Regaskin Co. Cavan	
Telephone:	+353 49 4378116	Telefax: +353 49 4368329
E-mail:	sales@gemoils.ie	
Contact person:	GEM OILS LIMITED	Telephone: +353 49 4378116
E-mail:	sales@gemoils.ie	
Internet:	https://gemoils.ie/	
1.4. Emergency telephone	Healthcare Professionals: +353 (1) 809	2566 (24 hour service)
numbori		

number:

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

This mixture is not classified as hazardous in accordance with Regulation (EC) No 1272/2008.

2.2. Label elements

EUH210

Regulation (EC) No 1272/2008

Special labelling of certain mixtures

Safety data sheet available on request.

Additional advice on labelling

According to EC directives or the corresponding national regulations the product does not have to be labelled.

2.3. Other hazards

Prolonged/repetitive skin contact may cause skin defattening or dermatitis.

Process vapors can irritate airways, skin and eyes.

Do not allow uncontrolled leakage of product into the environment.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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Relevant ingredients

CAS No	Chemical name			
	EC No Index No REACH No			
	Classification (Regulation (EC) No 1272/2008)			
64742-54-7	Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil - unspecified			
	265-157-1 01-2119484627-25			
	Asp. Tox. 1; H304			

Full text of H and EUH statements: see section 16.

Specific Con	nc. Limits, M-fac	tors and ATE	
CAS No	EC No	Chemical name	Quantity
	Specific Conc.	Limits, M-factors and ATE	
64742-54-7	265-157-1	Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil - unspecified	80 - < 100 %
	dermal: LD50 :	= > 5000 mg/kg; oral: LD50 = > 5000 mg/kg	

Further Information

DMSO-Extract < 3 %; IP 346. Classification system: The classification corresponds to the current EC lists and is completed by information from specialist literature and company information.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Self-protection of the first aider. Change contaminated clothing. Do not put any product-impregnated cleaning rags into your trouser pockets.

After inhalation

Move victim to fresh air. Put victim at rest and keep warm. Seek medical attention if problems persist.

After contact with skin

Move victim to fresh air. Put victim at rest and keep warm. Seek medical attention if problems persist. Change contaminated clothing.

After contact with eyes

In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.

After ingestion

Do NOT induce vomiting.

Rinse mouth thoroughly with water. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

No information available.

<u>4.3. Indication of any immediate medical attention and special treatment needed</u> First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Foam. Extinguishing powder. Carbon dioxide (CO2).

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO2). Sulfur oxides. Phosphorus oxides.

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Nitrogen oxides (NOx). carbon black.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Co-ordinate fire-fighting measures to the fire surroundings. Use water spray jet to protect personnel and to cool endangered containers. In case of fire and/or explosion do not breathe fumes. Contaminated fire-fighting water must be collected separately.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

High slip hazard because of leaking or spilled product. Remove all sources of ignition. Wear breathing apparatus if exposed to vapours/dusts/aerosols. Avoid contact with skin, eyes and clothes.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. Prevent spread over a wide area (e.g. by containment or oil barriers).

6.3. Methods and material for containment and cleaning up

Other information

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal. Clean contaminated articles and floor according to the environmental legislation.

6.4. Reference to other sections

Safe handling: see section 7 Personal protection equipment: see section 8 Section 12: Ecological Information (non-mandatory) Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Work in well-ventilated zones or use proper respiratory protection. Avoid oil mist If handled uncovered, arrangements with local exhaust ventilation have to be used. Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.

Advice on general occupational hygiene

Wash hands before breaks and after work. Take off immediately all contaminated clothing. Wash contaminated clothing prior to re-use. Do not eat, drink, smoke or sneeze at the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep the packing dry and well sealed to prevent contamination and absorbtion of humidity. Keep container tightly closed in a cool place. Keep/Store only in original container.

Hints on joint storage

Keep away from food, drink and animal feedingstuffs. Keep away from: Oxidizing agents.

Further information on storage conditions

Recommended storage temperature: 5 - 40°C Protect against: heat. UV-radiation/sunlight. frost.

7.3. Specific end use(s)

Further information: see technical data sheet.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Biological limit values

CAS No	Substance	Parameter	Value	Test material	Sampling time
-	Polycyclic aromatic hydrocarbons	1-Hydroxypyrene	4 µmol/mol	Creatinine	Post shift

DNEL/DMEL values

CAS No	Substance						
DNEL type		Exposure route	Effect	Value			
64742-54-7	Distillates (petroleum), hydrotreated heavy paraffinic; Based	oil - unspecified					
Worker DNEL,	long-term	inhalation	systemic	2,73 mg/m³			
Worker DNEL,	long-term	inhalation	local	5,58 mg/m³			
Worker DNEL, long-term		dermal	systemic	0,97 mg/kg bw/day			
Consumer DNE	EL, long-term	inhalation	local	1,19 mg/m³			
Consumer DNEL, long-term		oral	systemic	0,74 mg/kg bw/day			
90-15-3	1-naphthol						
Worker DNEL, long-term inhalation systemic 4,58 mg/m³							
Worker DNEL,	long-term	dermal	systemic	2,6 mg/kg bw/day			

PNEC values

CAS No	Substance				
Environmenta	l compartment	Value			
64742-54-7	Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil - unspecified				
Secondary po	isoning	9,33 mg/kg			
90-15-3	1-naphthol				
Freshwater 0,00033 mg.					
Freshwater (intermittent releases) 0,0033 mg/l					
Marine water 0,000033 n					
Freshwater sediment		0,0166 mg/kg			
Marine sediment		0,00166 mg/kg			
Micro-organisms in sewage treatment plants (STP)		1,2 mg/l			
Soil		0,00311 mg/kg			

Additional advice on limit values

Recommended limit value for oil mist TWA: 5 mg/m³ STEL: 10 mg/m³

The product does not contain any relevant quantities of substances with legally established exposure limitation.

8.2. Exposure controls





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Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

Individual protection measures, such as personal protective equipment

Eye/face protection

Tightly sealed safety glasses. German Industry Norms (DIN) / European Norms (EN): EN 166

Hand protection

Tested protective gloves are to be worn: German Industry Norms (DIN) / European Norms (EN): EN ISO 374

Duration of wearing with permanent contact: 480 min Suitable material: NBR (Nitrile rubber). Thickness of glove material: 0.7 mm.

Wearing time with occasional contact (splashes): 30 min Suitable material: NBR (Nitrile rubber). Thickness of glove material: 0.4 mm

Protect skin by using skin protective cream.

Skin protection

Wear suitable protective clothing. Change contaminated clothing. Do not put any product-impregnated cleaning rags into your trouser pockets.

Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn. Cosaint riospráide le scagaire i gcoinne gás orgánach agus gaile cineál A - fiuchphointe> 65 ° C: A1: <1000 ppm; A2: <5000 ppm; A3: <10,000 ppm.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state: Colour: Odour: Odour: Odour threshold:	liquid light yellow - yellow characteristic not determined		
			Test method
Melting point/freezing point:		No data available	
Boiling point or initial boiling point and		No data available	
boiling range:			
Flammability:		No data available	
Lower explosion limits:		No data available	
Upper explosion limits:		No data available	
Flash point:		250 °C	DIN EN ISO 2592
Auto-ignition temperature:		No data available	
Decomposition temperature:		No data available	
pH-Value:		not applicable	
Viscosity / kinematic: (at 40 °C)		47,5 mm²/s	ASTM D 7042
Water solubility:		virtually insoluble	
Solubility in other solvents			
No data available			
Partition coefficient n-octanol/water:		No data available	
Vapour pressure:		No data available	
Density (at 15 °C):		0,860 g/cm³	DIN 51757
Relative vapour density:		No data available	

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Particle characteristics:	No data available				
9.2. Other information					
Information with regard to physical	hazard classes				
Explosive properties					
No data available					
Self-ignition temperature					
Solid:	No data available				
Gas:	No data available				
Oxidizing properties					
No data available					
Other safety characteristics					
Evaporation rate:	No data available				
Pour point:	-12 °C ASTM D 7	346			
Further Information					
No data available					

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable under storage at normal ambient temperatures.

10.2. Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No known hazardous reactions.

10.4. Conditions to avoid

Refer to chapter 7 No further action is necessary.

Do not overheat to avoid decomposition by heat.

10.5. Incompatible materials

Reacts with : Oxidizing agents, strong.

10.6. Hazardous decomposition products

In case of fire may be liberated: Carbon monoxide Carbon dioxide (CO2). Sulfur oxides. Phosphorus oxides. Nitrogen oxides (NOx). carbon black.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Based on available data, the classification criteria are not met. Mixture not tested.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

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CAS No	Chemical name	Chemical name					
	Exposure route Dose Species Source Method						
64742-54-7	Distillates (petroleum), hy	Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil - unspecified					
	oral LD50 > 5000 Rat Study report (1982) OECD Gu						
	dermal	LD50 > 5000 mg/kg	Rabbit	Study report (1982)	OECD Guideline 402		

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met. Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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

STOT-single exposure

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

STOT-repeated exposure

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

Prolonged/repetitive skin contact may cause skin defattening or dermatitis.

Aspiration hazard

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

11.2. Information on other hazards

Endocrine disrupting properties

not applicable

SECTION 12: Ecological information

12.1. Toxicity

Based on available data, the classification criteria are not met. No data available

Mixture not tested.

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method
64742-54-7	7 Distillates (petroleum), hydrotreated heavy paraffinic; Baseoil - unspecified						
	Acute fish toxicity	LL50 mg/l	> 100	96 h	Pimephales promelas	Study report (1995)	OECD Guideline 203
	Acute algae toxicity	ErC50 mg/l	>100	72 h			
	Fish toxicity	NOEC mg/l	>= 1000	14 d	Oncorhynchus mykiss	CONCAWE, Brussels, Belgium (2010)	The aquatic toxicity was estimated by a

12.2. Persistence and degradability

Not easily bio-degradable (according to OECD-criteria). Do not allow to enter into surface water or drains.

12.3. Bioaccumulative potential

No data available

according to Regulation (EC) No 1907/2006

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12.4. Mobility in soil

Due to its low solubility in water the product is almost completely mechanically separated in biological waste water treatment plants.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria. not applicable

12.7. Other adverse effects

No data available

Further information

Do not allow uncontrolled leakage of product into the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Must not be disposed of with domestic refuse. Do not allow to enter into surface water or drains.

List of Wastes Code - residues/unused products

130205 OIL WASTES AND WASTES OF LIQUID FUELS (EXCEPT EDIBLE OILS, AND THOSE IN CHAPTERS 05, 12 AND 19); waste engine, gear and lubricating oils; mineral-based non-chlorinated engine, gear and lubricating oils; hazardous waste

Contaminated packaging

Contaminated packages must be completely emptied and can be re-used following proper cleaning. Dispose of waste according to applicable legislation. Packing which cannot be properly cleaned must be thrown away.

SECTION 14: Transport information

Land transport (ADR/RID)	
14.1. UN number or ID number:	-
14.2. UN proper shipping name:	-
14.3. Transport hazard class(es):	-
14.4. Packing group:	-
Inland waterways transport (ADN)	
14.1. UN number or ID number:	-
14.2. UN proper shipping name:	-
14.3. Transport hazard class(es):	-
14.4. Packing group:	-
Marine transport (IMDG)	
<u>14.1. UN number or ID number:</u>	-
14.2. UN proper shipping name:	-
14.3. Transport hazard class(es):	-
14.4. Packing group:	-
Air transport (ICAO-TI/IATA-DGR)	
14.1. UN number or ID number:	-
14.2. UN proper shipping name:	-
14.3. Transport hazard class(es):	-
14.4. Packing group:	-
14.5. Environmental hazards	
ENVIRONMENTALLY HAZARDOUS:	No

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14.6. Special precautions for user

Unless specified otherwise, general measures for safe transport must be followed.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

Other applicable information

No dangerous good in sense of these transport regulations.

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):

Entry 28, Entry 75

National regulatory information

Water hazard class (D):

1 - slightly hazardous to water

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,3,5,6,8,9,12.

Abbreviations and acronyms

Acute Tox: Acute toxicity Asp. Tox: Aspiration hazard Skin Irrit: Skin irritation Eye Dam: Eye damage STOT SE: Specific target organ toxicity - single exposure For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety assessment, chapter R.20 (Table of terms and abbreviations). ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; ADN -European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ASTM - American Society for the Testing of Materials; ATE - Acute Toxicity Estimates; bw - Body weight; CAO -Cargo Aircraft Only: CAS - Chemical Abstracts Service: CMR - Carcinogen, Mutagen or Reproductive Toxicant: DIN - Standard of the German Institute for Standardisation: DNEL - Derived No-Effect Level: DOT -Department of Transportation; DSL - Domestic Substances List (Canada); EG - European Union; EN -European standards; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISO - International Organisation for Standardization; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n;o;s; - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; OECD - Organization for Economic Co-operation and Development; PBT -Persistent, Bioaccumulative and Toxic substance; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulation concerning the International Carriage of Dangerous Goods by Rail; RQ -Reportable Quantity; SADT - Self- Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TSCA - Toxic Substances Control Act (United States); UN -United Nations; vPvB - Very Persistent and Very Bioaccumulative

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Relevant H and EUH statements (number and full text)

H304	May be fatal if swallowed and enters airways.
EUH210	Safety data sheet available on request.

Further Information

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)