SAFETY DATA SHEET
GRAVIS M 68

According to Regulation (EC) No 1907/2006, Annex II, as amended by Regulation (EU) No 453/2010

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

1.1. Product identifier

Product name GRAVIS M 68

Product number 28151

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

Identified uses Industrial oil

Uses advised against Use only for intended applications.

1.3. Details of the supplier of the safety data sheet

Supplier PETROL OFİSİ A.Ş.
Ünalan Mahallesi, Libadiye Caddesi No: 82F Kat: 2-3-4, 34700 Üsküdar/ Istanbul
Tel: +90 850 339 1919
Fax: +90 216 275 3854
madeniyag@petrolofisi.com.tr

Contact person Customer Services: madeniyag@petrolofisi.com.tr

1.4. Emergency telephone number

Emergency telephone Madeni Yağ Customer Services: 0850 339 1919 (working hours)

National emergency telephone number Emergency Medical Services: 112 National Poison Consultance Center: 114

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Not Classified

Health hazards Skin Sens. 1 - H317

Environmental hazards Aquatic Chronic 3 - H412

Environmental The product is not expected to be hazardous to the environment.

2.2. Label elements

Hazard pictograms

Signal word Warning

Hazard statements H317 May cause an allergic skin reaction.
H412 Harmful to aquatic life with long lasting effects.

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Precautionary statements

P261 Avoid breathing vapour/ spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P321 Specific treatment (see medical advice on this label).
P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P501 Dispose of contents/ container in accordance with national regulations.

Contains Amines, C10-14-tert-alkyl

2.3. Other hazards

No other information known.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Distillates (petroleum), hydrotreated heavy paraffinic **95-100%**

CAS number: 64742-54-7 EC number: 265-157-1 REACH registration number: 01-2119484627-25-0033

Classification
Not Classified

Phosphoric acid, mono- and bis(branched and linear pentyl) esters **<1%**

CAS number: — EC number: 282-784-6

Classification
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Aquatic Chronic 3 - H412

Amines, C10-14-tert-alkyl **<1%**

CAS number: — EC number: 701-175-2

M factor (Acute) = 1 M factor (Chronic) = 1

Classification
Acute Tox. 4 - H302
Acute Tox. 3 - H311
Acute Tox. 2 - H330
Skin Corr. 1B - H314
Eye Dam. 1 - H318
Skin Sens. 1A - H317
STOT SE 3 - H335
Aquatic Acute 1 - H400
Aquatic Chronic 1 - H410

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1,3,4–Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-nonanethiol	**<1%**
CAS number: —	EC number: 293-927-7
Classification	
Aquatic Chronic 3 - H412	

C16-18-(even numbered, saturated and unsaturated)-alkylamines	**<1%**
CAS number: —	EC number: 627-034-4
M factor (Acute) = 10	M factor (Chronic) = 10
Classification	
Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1 - H318 STOT SE 3 - H335 STOT RE 2 - H373 Asp. Tox. 1 - H304 Aquatic Acute 1 - H400 Aquatic Chronic 1 - H410	

Fuelsi diesel	**<1%**
CAS number: 68334-30-5	EC number: 269-822-7
Classification	
Carc. 2 - H351	

The full text for all hazard statements is displayed in Section 16.

Composition comments Some substances are not classified by legistlation.They are self classified by the manufacturer. The DMSO extract by IP 346 of the oil is less than 3%

Ingredient notes See Section 8 for occupational exposure limits.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information If in doubt, get medical attention promptly.

Inhalation Move affected person to fresh air at once. Rinse nose and mouth with water. Get medical attention if any discomfort continues.

Ingestion Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse mouth thoroughly with water. Get medical attention if any discomfort continues.

Skin contact Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing.

Eye contact Remove affected person from source of contamination. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention.

Protection of first aiders First aid personnel should wear appropriate protective equipment during any rescue.

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

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General information	Treat symptomatically. See Section 11 for additional information on health hazards.
Inhalation	No specific symptoms known.
Ingestion	No specific symptoms known.
Skin contact	No specific symptoms known.
Eye contact	No specific symptoms known.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
Specific treatments	Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	The product is not flammable. Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Not known.
Hazardous combustion products	Carbon dioxide (CO2). Carbon monoxide (CO). Oxides of nitrogen. Sulphur oxides. Oxides of phosphorus. Unidentified organic or inorganic compounds.

5.3. Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet.
For non-emergency personnel	Necessary precautions should be taken to ensure that non-educated personnel do not intervene.
For emergency responders	Stop the leakage source if it can be done without risk.Limit spillage to prevent further contamination of soil, surface or ground water.Remove any spilled material as soon as possible by following the precautions in the section Exposure Controls / Personal Protection.Use suitable techniques such as non-flammable absorbent materials or pumping.When possible or appropriate, remove the contaminated soil from the area.Place contaminated products in disposable boxes and dispose of in accordance with regulations.If a heated material is spilled, allow it to cool before handling with disposal methods.

6.2. Environmental precautions

Environmental precautions	Avoid discharge into drains or watercourses or onto the ground.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Stop leak if possible without risk. Absorb in vermiculite, dry sand or earth and place into containers. Flush contaminated area with plenty of water. Avoid the spillage or runoff entering drains, sewers or watercourses.

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6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. For waste disposal, see Section 13. See Section 11 for additional information on health hazards. See Section 1 for emergency contact information. See Section 12 for additional information on ecological hazards.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Good ventilation should be provided in the working environment and inhalation of vapor generated during use should be avoided.
Skin contact should be avoided and hygienic rules should be followed.
Eye contact should be avoided. Wear goggles or a face mask to prevent eye contact.
Avoid eating, drinking and smoking while using. Use disposable clothing. Prevent soil contamination or spillage into sewage systems and water.

Advice on general occupational hygiene Do not eat, drink or smoke when using this product. Persons susceptible to allergic reactions should not handle this product. Provide shower facilities near the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place. Store in accordance with national regulations. Store in a demarcated bunded area to prevent release to drains and/or watercourses.

Storage class Not applicable.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

Usage description The product must be used as specified in the data sheet.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

Mineral oil: TWA: 5 mg/m3, 8 hours [EH-40 MEL, (Europe,2002)]

Distillates (petroleum), hydrotreated heavy paraffinic

Oil mist: TWA: 5 mg/m3 (ACGIH).In no case should this limit be exceeded or the local limit, if it is more restrictive.

Ingredient comments If this product contains a component with exclusion limits,to determine the effectiveness of ventilation and other control measures; and / or the necessity of the use of respiratory protective devices, the working environment or biological measurement and monitoring of employees may be required.The European Standard EN 689 and the relevant national guidelines should be taken as reference for the detection methods for assessing exposure to inhalation of chemicals of hazardous substances.

Biological limit values There is no available data.

DNEL There is no available data.

DMEL There is no available data.

PNEC There is no available data.

8.2. Exposure controls

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Protective equipment

Appropriate engineering controls	Provide adequate ventilation. Avoid inhalation of vapours. Observe any occupational exposure limits for the product or ingredients.
Personal protection	Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.
Eye/face protection	Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles or face shield.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible.
Other skin and body protection	Wear appropriate clothing to prevent any possibility of skin contact.
Hygiene measures	Do not smoke in work area. Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.
Respiratory protection	No specific recommendations. Respiratory protection may be required if excessive airborne contamination occurs.
Thermal hazards	If there is a risk of contact with hot product, all protective equipment worn should be suitable for use with high temperatures.
Environmental exposure controls	Residues and empty containers should be taken care of as hazardous waste according to local and national provisions. Keep container tightly sealed when not in use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid.
Colour	Brownish.
Odour	Characteristic.
Odour threshold	Inconclusive data.
pH	Scientifically unjustified.
Melting point	Inconclusive data.
Initial boiling point and range	Inconclusive data.
Flash point	>220°C OC (Open cup).
Evaporation rate	Inconclusive data.
Evaporation factor	Inconclusive data.
Flammability (solid, gas)	Inconclusive data.
Upper/lower flammability or explosive limits	Inconclusive data.
Other flammability	Inconclusive data.

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Vapour pressure	Inconclusive data.
Vapour density	Inconclusive data.
Relative density	Inconclusive data.
Bulk density	~ 0,889 g/ml @ 15°C
Solubility(ies)	Insoluble in water.
Partition coefficient	Inconclusive data.
Auto-ignition temperature	Inconclusive data.
Decomposition Temperature	Inconclusive data.
Viscosity	61,2-74,8 cSt @ 40°C
Explosive properties	Inconclusive data.
Explosive under the influence of a flame	Not considered to be explosive.
Oxidising properties	No data available.
Comments	Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.

9.2. Other information

Other information	No information required.
Refractive index	Inconclusive data.
Particle size	Inconclusive data.
Molecular weight	Inconclusive data.
Volatility	Inconclusive data.
Saturation concentration	Inconclusive data.
Critical temperature	Inconclusive data.
Volatile organic compound	Inconclusive data.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	This product is stable under normal conditions.

10.2. Chemical stability

Stability	Stable at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	No hazardous reaction under normal conditions of storage and use.

10.4. Conditions to avoid

Conditions to avoid	Avoid excessive heat for prolonged periods of time. Avoid contact with strong oxidising agents.

10.5. Incompatible materials

Materials to avoid	Strong oxidising agents.

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10.6. Hazardous decomposition products

Hazardous decomposition products	Carbon monoxide (CO). Carbon dioxide (CO2). Oxides of nitrogen. Sulfur oxides. Phosphor oxides. Thermal decomposition or combustion may generate smoke, carbon monoxide, carbon dioxide,irritating vapors and other products of incomplete combustion.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicological effects	Information given is based on product data, a knowledge of the components and the toxicology of similar products.
Other health effects	No relevant information available.

Acute toxicity - oral

Summary	Based on available data the classification criteria are not met.
Notes (oral LD_{50})	Based on available data the classification criteria are not met.

Acute toxicity - dermal

Summary	Based on available data the classification criteria are not met.
Notes (dermal LD_{50})	Based on available data the classification criteria are not met.
ATE dermal (mg/kg)	298,804.78

Acute toxicity - inhalation

Summary	Based on available data the classification criteria are not met.
Notes (inhalation LC_{50})	Based on available data the classification criteria are not met.
ATE inhalation (vapours mg/l)	498.01

Skin corrosion/irritation

Summary	Expected to be slightly irritant.
Skin corrosion/irritation	Based on available data the classification criteria are not met.
Animal data	Based on available data the classification criteria are not met.
Human skin model test	Based on available data the classification criteria are not met.
Extreme pH	Based on available data the classification criteria are not met.

Serious eye damage/irritation

Summary	Eye contact may cause irritation.
Serious eye damage/irritation	Based on available data the classification criteria are not met.

Respiratory sensitisation

Summary	Mist may cause slight irritation if inhaled.
Respiratory sensitisation	Based on available data the classification criteria are not met.

Skin sensitisation

Summary	Skin Sens. 1 - H317
Skin sensitisation	Sensitising.

Germ cell mutagenicity

Summary	It is not expected to cause genetic damage in the light of current data.
Genotoxicity - in vitro	Based on available data the classification criteria are not met.

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Genotoxicity - in vivo	Based on available data the classification criteria are not met.

Carcinogenicity

Summary	The base oils in the product content contain less than 3% DMSO according to IP 346.
Carcinogenicity	Based on available data the classification criteria are not met.
Target organ for carcinogenicity	No specific target organs known.
IARC carcinogenicity	Not listed.
NTP carcinogenicity	Not listed.

Reproductive toxicity

Summary	There is no test data indicating that this product has a toxic effect on the reproductive system.
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	Based on available data the classification criteria are not met.

Specific target organ toxicity - single exposure

Summary	There is no available data.
STOT - single exposure	Based on available data the classification criteria are not met.
Target organs	No specific target organs known.

Specific target organ toxicity - repeated exposure

Summary	There is no available data.
STOT - repeated exposure	Based on available data the classification criteria are not met.
Target organs	No specific target organs known.

Aspiration hazard

Summary	Slight irritation of the respiratory tract may occur, if mists are inhaled.
Aspiration hazard	Based on available data the classification criteria are not met.

Toxicokinetics	No information is required.
General information	No other information known.
Inhalation	Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.
Ingestion	May cause discomfort if swallowed.
Skin contact	Liquid may irritate skin.
Eye contact	May cause temporary eye irritation.
Acute and chronic health hazards	There is not enough data.
Route of exposure	There is no available data.
Target organs	No specific target organs known.
Medical symptoms	No specific tes data are available.
Medical considerations	No specific tes data are available.

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Toxicological information on ingredients.

Distillates (petroleum), hydrotreated heavy paraffinic

Acute toxicity - oral

Notes (oral LD_{50})	LD_{50} >2000 mg/kg, Oral,

Acute toxicity - dermal

Notes (dermal LD_{50})	LD_{50} >2000 mg/kg, Dermal,

Carcinogenicity

Summary	The base oils in the product content contain less than 3% DMSO according to IP 346.

Distillates (petroleum), hydrotreated heavy naphthenic

Acute toxicity - oral

Notes (oral LD_{50})	LD_{50} >5000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD_{50})	LD_{50} >5000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Species	Rat
Notes (inhalation LC_{50})	LC50 >5.53 mg/l, Inhalation, Rat
ATE inhalation (dusts/mists mg/l)	5.53

Skin corrosion/irritation

Summary	Not irritating. Supplier's information.

Serious eye damage/irritation

Summary	Not irritating. Supplier's information.

Skin sensitisation

Summary	Not sensitising. Supplier's information.

Germ cell mutagenicity

Genotoxicity - in vitro	Bacterial reverse mutation test: Negative. Chromosome aberration: Negative. Gene mutation: Negative. Supplier's information.
Genotoxicity - in vivo	Micronucleus Test: Negative. Supplier's information.

Carcinogenicity

Summary	Based on available data the classification criteria are not met. Supplier's information.

Reproductive toxicity

Reproductive toxicity - fertility	Based on available data the classification criteria are not met. Supplier's information.
Reproductive toxicity - development	Based on available data the classification criteria are not met. Supplier's information.

Phosphoric acid, mono- and bis(branched and linear pentyl) esters

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Acute toxicity - oral

Notes (oral LD_{50}) LD_{50} >2000 mg/kg, Oral, Rat

Germ cell mutagenicity

Genotoxicity - in vitro Bacterial reverse mutation test: Negative. Gene mutation: Negative. Micronucleus Test: Negative.

Reproductive toxicity

Reproductive toxicity - fertility Negative. Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test - NOAEL 300 mg/kg, Oral, Rat

Reproductive toxicity - development Negative. Combined Repeated Dose Toxicity Study with the Reproduction/ Developmental Toxicity Screening Test - NOAEL: 300 mg/kg, Oral, Rat

Exchangeable neutral oils

Acute toxicity - oral

Notes (oral LD_{50}) LD_{50} >2000 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD_{50}) LD_{50} >2000 mg/kg, Dermal, Rabbit

Amines, C10-14-tert-alkyl

Acute toxicity - oral

Notes (oral LD_{50}) LD_{50} 612 mg/kg, Oral, Rat

ATE oral (mg/kg) 500.0

Acute toxicity - dermal

Notes (dermal LD_{50}) LD_{50} 251 mg/kg, Dermal, Rat Repeated Dose: NOAEL 20 mg/kg, Dermal, Rat

ATE dermal (mg/kg) 300.0

Acute toxicity - inhalation

Notes (inhalation LC_{50}) LC50 1,19 mg/l, Inhalation, Rat Repeated Dose: NOAEL 19 mg/m³, Inhalation, Rat

ATE inhalation (vapours mg/l) 0.5

Skin corrosion/irritation

Skin corrosion/irritation Rabbit: Skin-Visible necrosis.

Serious eye damage/irritation

Serious eye damage/irritation Rabbit: Eyes- Visible necrosis.

Skin sensitisation

Skin sensitisation Guinea pig Skin Sens. = Skin sensitisation

Germ cell mutagenicity

Genotoxicity - in vitro Bacterial reverse mutation test: Negative. Gene mutation: Negative.

Reproductive toxicity

Reproductive toxicity - fertility One-generation study, Fertility - Negative , Oral, Rat

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Reproductive toxicity - development	One-generation study, Fertility - : Negative , Oral, Rat One-generation study, Maternal toxicity: - : Positive , Oral, Rat

1,3,4–Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-nonanethiol

Acute toxicity - oral	
Notes (oral LD_{50})	LD_{50} >10000 mg/kg, Oral, Rat
Acute toxicity - dermal	
Notes (dermal LD_{50})	LD_{50} >2000 mg/kg, Dermal, Rabbit
Acute toxicity - inhalation	
Notes (inhalation LC_{50})	LC50 >2,75 mg/l, Inhalation, Rat
Skin corrosion/irritation	
Skin corrosion/irritation	Moderately irritating. Rabbit Supplier's information.
Skin sensitisation	
Summary	Not sensitising. Supplier's information.
Germ cell mutagenicity	
Genotoxicity - in vitro	Bacterial reverse mutation test: Negative. Chromosome aberration: Negative. Supplier's information.

C16-18-(even numbered, saturated and unsaturated)- alkylamines

Acute toxicity - oral	
Notes (oral LD_{50})	LD_{50} 1689 mg/kg, Oral, Rat
ATE oral (mg/kg)	500.0
Skin corrosion/irritation	
Summary	Rabbit: Skin-Visible necrosis.
Germ cell mutagenicity	
Genotoxicity - in vitro	: Negative.
Reproductive toxicity	
Reproductive toxicity - fertility	- Negative , Oral, Rat
Reproductive toxicity - development	Maternal toxicity: - : Positive , Oral, Rat Developmental toxicity: - : Negative , Oral, Rat
Aspiration hazard	
Summary	Aspiration Hazard

Fuelsi diesel

Carcinogenicity	
Carcinogenicity	Known or suspected carcinogen for humans.

SECTION 12: Ecological information

Ecotoxicity Aquatic Chronic 3 - H412

Ecological information on ingredients.

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Distillates (petroleum), hydrotreated heavy paraffinic

Ecotoxicity	May be harmful to aquatic organisms. Spills form film layer on water surface and prevent oxygen transfer

12.1. Toxicity

Toxicity	Harmful to aquatic life with long lasting effects.

Acute aquatic toxicity

Summary	No other information known.
Acute toxicity - fish	No other information known.
Acute toxicity - aquatic invertebrates	No other information known.
Acute toxicity - aquatic plants	No other information known.
Acute toxicity - microorganisms	No other information known.
Acute toxicity - terrestrial	No other information known.

Chronic aquatic toxicity

Summary	No other information known.
Chronic toxicity - fish early life stage	No other information known.
Short term toxicity - embryo and sac fry stages	No other information known.
Chronic toxicity - aquatic invertebrates	No other information known.
Toxicity to soil	No other information known.
Toxicity to terrestrial plants	No other information known.

Ecological information on ingredients.

Distillates (petroleum), hydrotreated heavy naphthenic

Acute aquatic toxicity

Acute toxicity - fish	LL_{50}, 96 hour: >100 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EL50, 48 hour: >1000 mg/l, Daphnia magna

Chronic aquatic toxicity

Chronic toxicity - fish early life stage	NOEL, 14 day: 1000 mg/l, Oncorhynchus mykiss (Rainbow trout)
Chronic toxicity - aquatic invertebrates	NOEL, 72 hour: >100 mg/l, Alg NOEL, 21 day: 10 mg/l, Daphnia magna

Phosphoric acid, mono- and bis(branched and linear pentyl) esters

Acute aquatic toxicity

Acute toxicity - fish	LL_{50}, 96 hour: >100 mg/l, Oncorhynchus mykiss (Rainbow trout)

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Acute toxicity - aquatic invertebrates	EC_{50}, 48 hour: 56 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EL50, 72 hour: >100 mg/l, Pseudokirchneriella subcapitata
Acute toxicity - microorganisms	EC_{50}, 3 hour: >1000 mg/l, Micro-organisms

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates	EL10, 72 hour: 24 mg/l, Alg

Amines, C10-14-tert-alkyl

Acute aquatic toxicity

LE(C)$_{50}$	0.1 < L(E)C50 ≤ 1
M factor (Acute)	1
Acute toxicity - fish	LL_{50}, 96 hours: 63,5 mg/l, Oncorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EL50, 48 hour: 2,5 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EL50, 72 hour: 0,44 mg/l, Pseudokirchneriella subcapitata
Acute toxicity - microorganisms	EL50, 30 minutes: 63,5 mg/l, Micro-organisms

Chronic aquatic toxicity

M factor (Chronic)	1
Chronic toxicity - fish early life stage	NOEC, 96 day: 0,078 mg/l, Oncorhynchus mykiss (Rainbow trout)
Chronic toxicity - aquatic invertebrates	NOEL, 72 hours: 0,05 mg/l, Alg

1,3,4–Thiadiazolidine-2,5-dithione, reaction products with hydrogen peroxide and tert-nonanethiol

Acute aquatic toxicity

Acute toxicity - aquatic invertebrates	EC_{50}, 48 hour: 41 mg/l, Daphnia magna

C16-18-(even numbered, saturated and unsaturated)- alkylamines

Acute aquatic toxicity

LE(C)$_{50}$	0.01 < L(E)C50 ≤ 0.1
M factor (Acute)	10
Acute toxicity - fish	LL_{50}, 96 hour: 0,06 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EL50, 48 hour: 0,011 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EL50, 96 hour: 0,04 mg/l, Algae

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Acute toxicity - microorganisms	EL50, 3 hour: 222,5 mg/l, Micro-organisms

Chronic aquatic toxicity

M factor (Chronic)	10
Chronic toxicity - aquatic invertebrates	NOEL, 21 day: 0,013 mg/l, Daphnia magna NOEL, 96 hour: 0,01 mg/l, Alg

12.2. Persistence and degradability

Persistence and degradability	There are not enough test data.It is not expected that the product may be readily biodegradable based on the ingredients of this product.
Phototransformation	Inconclusive data.
Stability (hydrolysis)	Inconclusive data.
Biodegradation	Not readily biodegradable.
Biological oxygen demand	Inconclusive data.
Chemical oxygen demand	Inconclusive data.

Ecological information on ingredients.

Distillates (petroleum), hydrotreated heavy paraffinic

Biodegradation	Not expected to be readily biodegradable.

Distillates (petroleum), hydrotreated heavy naphthenic

Biodegradation	Manometric Respirometry Test - Degradation 31 %: 28 day, OECD TG 301 F

Phosphoric acid, mono- and bis(branched and linear pentyl) esters

Biodegradation	Carbon dioxide formation - 45 %: 28 day, OECD TG 301B

Amines, C10-14-tert-alkyl

Biodegradation	Closed Bottle Test - Degradation 21,8%: 28 day, OECD TG 301 D

C16-18-(even numbered, saturated and unsaturated)- alkylamines

Biodegradation	Carbon dioxide formation - Degradation 66 %: 28 day, OECD TG 301B

12.3. Bioaccumulative potential

Bioaccumulative potential	Potentially bioaccumulating.
Partition coefficient	Inconclusive data.

Ecological information on ingredients.

Distillates (petroleum), hydrotreated heavy paraffinic

Bioaccumulative potential	Potentially bioaccumulating.

Amines, C10-14-tert-alkyl

Bioaccumulative potential	log Pow: 2,9,

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12.4. Mobility in soil

Mobility The product is immiscible with water and will spread on the water surface.

Adsorption/desorption coefficient Inconclusive data.

Henry's law constant Inconclusive data.

Surface tension Inconclusive data.

Ecological information on ingredients.

Distillates (petroleum), hydrotreated heavy paraffinic

Mobility Liquid under most environmental conditions. Floats on water. If spread into ground the groundwater may be polluted.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment Not applicable.

Ecological information on ingredients.

Fuelsi diesel

Results of PBT and vPvB assessment This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

Other adverse effects Films formed on water may affect oxygen transfer and damage organisms.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible.

Disposal methods Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Reuse or recycle products wherever possible. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents.

Waste class The waste code classification is to be carried out according to the European Waste Catalogue (EWC).

SECTION 14: Transport information

General The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

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Not applicable.

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

SECTION 15: Regulatory information

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

National regulations	T. C. Regulation on the Classification, Labeling and Packaging of Substances and Mixtures No. 28848, dated 11 December 2013, by the Ministry of Environment and Urbanization. T. C. Ministry of Environment and Urbanization Regulation on Safety Data Sheets on Hazardous Substances and Mixtures
EU legislation	https://echa.europa.eu Commission Regulation (EU) No 453/2010 of 20 May 2010.
Guidance	Safety Data Sheets for Substances and Preparations.
Health and environmental listings	Hazardous ingredients are listed.

15.2. Chemical safety assessment

SECTION 16: Other information

Abbreviations and acronyms used in the safety data sheet	E.U. : European union DMSO: Dimethyl sulfoxide KKE: Personal protective aquipment T.C. : Republic of Turkey UZEM: National Poison Information Center CAS: Chemical Abstracts Service. GHS: Globally Harmonized System. IATA: International Air Transport Association. ICAO: Technical Instructions for the Safe Transport of Dangerous Goods by Air. IMDG: International Maritime Dangerous Goods. PBT: Persistent, Bioaccumulative and Toxic substance. REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006. vPvB: Very Persistent and Very Bioaccumulative.
Classification abbreviations and acronyms	STOT RE = Specific target organ toxicity-repeated exposure Skin Corr. = Skin corrosion Eye Dam. = Serious eye damage Acute Tox. = Acute toxicity Skin Sens. = Skin sensitisation Aquatic Acute = Hazardous to the aquatic environment (acute) Aquatic Chronic = Hazardous to the aquatic environment (chronic)

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General information	This document contains important information to ensure the safe storage, handling and use of this product. The information in this document should be brought to the attention of the person in your organisation responsible for advising on safety matters. Uses and Restrictions : This product must not be used in applications other than those recommended in Section 1, without first seeking the advice of the supplier. This product is not to be used as a solvent or cleaning agent; for lighting or brightening fires; as a skin cleanser. MSDS Distribution : The information in this document should be made available to all who may handle the product. Disclaimer : This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
Key literature references and sources for data	This SDS is prepared based on the information received from raw material suppliers.
Classification procedures according to Regulation (EC) 1272/2008	Skin Sens. 1 - H317: Calculation method., Supplier information Aquatic Chronic 3 - H412: Calculation method., Supplier information
Training advice	Untrained personnel should not use.
Revision comments	Revised classification.
Issued by	Emrah Parmak Sevda ŞAHAN Certified Safety Data Sheet Preparer (Certificate Id:GBF01.23.08;Dates: 03.11.2018-03.11.2021)
Revision date	20/04/2020
Revision	4
Supersedes date	17/06/2011
SDS number	10035
SDS status	Approved.
Hazard statements in full	H302 Harmful if swallowed. H304 May be fatal if swallowed and enters airways. H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H330 Fatal if inhaled. H335 May cause respiratory irritation. H351 Suspected of causing cancer if swallowed. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects. H412 Harmful to aquatic life with long lasting effects. H373 May cause damage to organs through prolonged or repeated exposure if swallowed or if inhaled.