

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

- **1.1 Product identifier**
- **Trade name:** FORMULA 2T
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture**  
Engine oil  
Only for proper handling.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MOTOREX AG  
Bern-Zürich-Strasse 31, Postfach  
CH-4901 Langenthal  
Tel. +41 (0)62 919 75 75  
www.motorex.com
- **Further information obtainable from:** msds@motorex.com
- **1.4 Emergency telephone number:**  
In case of a medical emergency following exposure to a chemical, the public should call NHS Direct in England or Wales 0845 46 47 or NHS 24 in Scotland 08454 24 24 24 (UK only).

## SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**  
The product is not classified, according to the GB CLP regulation.
- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

- **3.2 Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

- **Dangerous components:**

EC number: 926-141-6 Reg.nr.: 01-2119456620-43	Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cycloalkanes, <2% aromatics Asp. Tox. 1, H304, EUH066	10-25%
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- **Regulation (EC) No 648/2004 on detergents / Labelling for contents**

aliphatic hydrocarbons	≥15 - <30%
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- **Additional information:**

Note L: The classification as carcinogen does not apply because the mixture (or substance) contains less than 3% dimethyl sulfoxide extract (DMSO), measured according to IP 346.  
For the wording of the listed hazard phrases refer to section 16.

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## according to 1907/2006/EC, Article 31



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### SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:** No special measures required.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**  
Remove residues with soap and water.  
Remove contaminated clothing immediately.
- **After eye contact:**  
Rinse opened eye for several minutes under running water.  
Consult a physician if irritation develops.
- **After swallowing:**  
Do not induce vomiting. Do not take in resorption stimulating agents.  
Consult a physician who will decide on need and method of emptying the stomach.
- **4.2 Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
Carbon dioxide, dry chemical and foam protein.  
Use fire extinguishing methods suitable to surrounding conditions.
- **For safety reasons unsuitable extinguishing agents: DO NOT USE WATER JET**
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire carbon, sulphur and nitrogen oxides can be formed.
- **5.3 Advice for firefighters**
- **Protective equipment:** No special measures required.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures** Not required.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **6.4 Reference to other sections**  
No dangerous substances are released.  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Vapours of this product are heavier than air and will collect in low areas such as pits, storage tanks, and other confined areas.  
No special measures required.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.

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- **Further information about storage conditions:**  
Store containers closed and protect against rain, dust, heat and other atmospheric influences.  
The recommended storage temperature is (deg.C): ≤50°C  
Store in cool, dry well ventilated area away from sources of ignition and heat.
- **Storage class: 10**
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Wash hands before breaks and at the end of work.  
Do not inhale gases / fumes / aerosols.
- **Respiratory protection:**  
Not necessary if room is well-ventilated.  
Respiratory protection if formation of aerosol or mist: use mask with filter type A2, A2/P2 or ABEK.
- **Hand protection**  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves**  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye/face protection** Goggles recommended during refilling
- **Body protection:** Protective work clothing

## SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Fluid
- **Colour:** Green
- **Odour:** Characteristic
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** Undetermined.
- **Boiling point or initial boiling point and boiling range** Undetermined.
- **Flammability** Not applicable.
- **Lower and upper explosion limit**
- **Lower:** Not determined.
- **Upper:** Not determined.

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· <b>Flash point:</b>	109 °C
· <b>Decomposition temperature:</b>	Not determined.
· <b>pH</b>	Not determined.
· <b>Viscosity:</b>	
· <b>Kinematic viscosity</b>	57.7 mm <sup>2</sup> /s @ 40 °C
· <b>.</b>	9.1 mm <sup>2</sup> /s @ 100 °C
· <b>Consistency</b>	
· <b>Dynamic:</b>	Not determined.
· <b>Solubility</b>	
· <b>water:</b>	Not miscible or difficult to mix.
· <b>Partition coefficient n-octanol/water (log value)</b>	Not determined.
· <b>Heat Capacity</b>	
· <b>Vapour pressure:</b>	Not determined.
· <b>Density and/or relative density</b>	
· <b>Density at 20 °C:</b>	0.86 g/cm <sup>3</sup> (ASTM D 4052)
· <b>Relative density</b>	Not determined.
· <b>Vapour density</b>	Not determined.

· <b>9.2 Other information</b>	
· <b>Appearance:</b>	
· <b>Form:</b>	Fluid
· <b>Important information on protection of health and environment, and on safety.</b>	
· <b>Explosive properties:</b>	Product does not present an explosion hazard.
· <b>Solvent separation test:</b>	
· <b>VOC (EC)</b>	19.79 %
· <b>Change in condition</b>	
· <b>Solidification point:</b>	
· <b>Pouring point</b>	-18.7 °C
· <b>Evaporation rate</b>	Not determined.

· <b>Information with regard to physical hazard classes</b>	
· <b>Explosives</b>	Void
· <b>Flammable gases</b>	Void
· <b>Aerosols</b>	Void
· <b>Oxidising gases</b>	Void
· <b>Gases under pressure</b>	Void
· <b>Flammable liquids</b>	Void
· <b>Flammable solids</b>	Void
· <b>Self-reactive substances and mixtures</b>	Void
· <b>Pyrophoric liquids</b>	Void
· <b>Pyrophoric solids</b>	Void
· <b>Self-heating substances and mixtures</b>	Void
· <b>Substances and mixtures, which emit flammable gases in contact with water</b>	Void
· <b>Oxidising liquids</b>	Void
· <b>Oxidising solids</b>	Void
· <b>Organic peroxides</b>	Void
· <b>Corrosive to metals</b>	Void
· <b>Desensitised explosives</b>	Void

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.

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- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** Other easily oxidised non-ferrous metals.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

### 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.

- **LD/LC50 values relevant for classification:**

#### Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cycloalkanes, <2% aromatics

Oral	LD50	5,000 mg/kg (rat)
	NOAEL	1,000-5,000 mg/kg/24h (rat)
Dermal	LD50	2,000 mg/kg (rabbit)
Inhalative	LC50 / 4h	5.28 mg/l (rat)
	NOAEL	200 ppm (rat)
	NOAEC	275-10,400 mg/m3 (rat)

- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation** Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **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.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**

- **Endocrine disrupting properties**

None of the ingredients is listed.

### SECTION 12: Ecological information

- **12.1 Toxicity**

- **Aquatic toxicity:**

#### Hydrocarbons, C11-C14, n-alkanes, isoalkanes, cycloalkanes, <2% aromatics

LL50	2-5 mg/l/96h (fish)
LL50	2-5 mg/l/48h (fish)
LL50	5-17 mg/l/24h (fish)
EL50	1.4 mg/l/48h (aquatic invertebrates)
EL50	4.6 mg/l/24h (aquatic invertebrates)
	1-3 mg/l/24h (algae / cyanobacteria)
EL50	1-3 mg/l/72h (algae / cyanobacteria)
EL50	0.81-0.89 mg/l/21d (aquatic invertebrates)
NOELR	1.22 mg/l/21d (aquatic invertebrates)
NOELR	1,000 mg/l/72h (algae / cyanobacteria)

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.

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- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**  
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **General notes:**  
Water hazard class 1 (according to Appendix 1 AwSV): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.  
Contact waste processors for recycling information.  
Return product and/or partially emptied container in original packaging to the point of sale or hand it over to a collection point for special waste.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

### SECTION 14: Transport information

- |   |                 |
|---|-----------------|
| · <b>14.1 UN number or ID number</b>                                  | Void            |
| · <b>ADR/RID/ADN, ADN, IMDG, IATA</b>                                 | Void            |
| · <b>14.2 UN proper shipping name</b>                                 | Void            |
| · <b>ADR/RID/ADN, ADN, IMDG, IATA</b>                                 | Void            |
| · <b>14.3 Transport hazard class(es)</b>                              | Void            |
| · <b>ADR/RID/ADN, ADN, IMDG, IATA</b>                                 | Void            |
| · <b>Class</b>  | Void            |
| · <b>14.4 Packing group</b>   | Void            |
| · <b>ADR/RID/ADN, IMDG, IATA</b>                                      | Void            |
| · <b>14.5 Environmental hazards:</b>                                  | No              |
| · <b>Marine pollutant:</b>  | No              |
| · <b>14.6 Special precautions for user</b>                            | Not applicable. |
| · <b>14.7 Maritime transport in bulk according to IMO instruments</b> | Not applicable. |
| · <b>UN "Model Regulation":</b>                                       | Void            |

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.

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- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship. The classification of the mixture was carried out by calculation in accordance with the rules laid down in Annex I of Regulation (EC) No 1272/2008.

No special training instructions to ensure protection of human health and environment are required.

- **purity requirement**

- **Relevant phrases**

H304 May be fatal if swallowed and enters airways.

EUH066 Repeated exposure may cause skin dryness or cracking.

- **Department issuing SDS:** Abteilung Produktsicherheit

- **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Asp. Tox. 1: Aspiration hazard – Category 1

- **\* Data compared to the previous version altered.**

## Annex: Exposure scenario 1

- **Description of the activities / processes covered in the Exposure Scenario**

See section 1 of the annex to the Safety Data Sheet.

- **Conditions of use**

· **Duration and frequency** 5 workdays/week.

- **Physical parameters**

· **Physical state** Fluid

· **Concentration of the substance in the mixture** The substance is main component.

- **Other operational conditions**

· **Other operational conditions affecting environmental exposure** No special measures required.

· **Other operational conditions affecting consumer exposure** Not required.

· **Other operational conditions affecting consumer exposure during the use of the product** Not applicable.

- **Risk management measures**

- **Worker protection**

· **Organisational protective measures** No special measures required.

· **Technical protective measures** No special measures required.

· **Personal protective measures** No special measures required.

· **Measures for consumer protection** No special measures required.

- **Environmental protection measures**

· **Air** No special measures required.

· **Water** No special measures required.

· **Disposal measures** Ensure that waste is collected and contained.

· **Disposal procedures** Dispose of product residues with household waste.

· **Waste type** Partially emptied and uncleaned packaging

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- **Exposure estimation**
- **Consumer** Not relevant for this Exposure Scenario.
- **Guidance for downstream users** No further relevant information available.

## Annex: Exposure scenario 2

- **Short title of the exposure scenario**  
*Industrial use of lubricants and greases in vehicles or machinery*
- **Sector of Use**  
*SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites*
- **Product category**  
*PC16 Heat transfer fluids*  
*PC17 Hydraulic fluids*  
*PC24 Lubricants, greases, release products*
- **Process category**  
*PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.*  
*PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions*  
*PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities*  
*PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)*
- **Environmental release category**  
*ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article)*  
*ERC7 Use of functional fluid at industrial site*
- **Description of the activities / processes covered in the Exposure Scenario**  
*See section 1 of the annex to the Safety Data Sheet.*
- **Conditions of use**
- **Duration and frequency** *5 workdays/week.*
- **Physical parameters**
- **Physical state** *Fluid*
- **Concentration of the substance in the mixture** *The substance is main component.*
- **Other operational conditions**
- **Other operational conditions affecting environmental exposure** *No special measures required.*
- **Other operational conditions affecting consumer exposure** *Not required.*
- **Other operational conditions affecting consumer exposure during the use of the product**  
*Not applicable.*
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures** *No special measures required.*
- **Technical protective measures** *No special measures required.*
- **Personal protective measures** *No special measures required.*
- **Measures for consumer protection** *No special measures required.*
- **Environmental protection measures**
- **Air** *No special measures required.*
- **Water** *No special measures required.*
- **Disposal measures**  
*Disposal must be made according to official regulations.*  
*Ensure that waste is collected and contained.*
- **Disposal procedures** *Dispose of product residues with household waste.*
- **Waste type** *Partially emptied and uncleaned packaging*
- **Exposure estimation**
- **Consumer** *Not relevant for this Exposure Scenario.*
- **Guidance for downstream users** *No further relevant information available.*

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### Annex: Exposure scenario 3

- **Short title of the exposure scenario**  
*Professional use of lubricants and greases in vehicles or machines*
- **Sector of Use**  
*SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)*
- **Product category**  
*PC16 Heat transfer fluids*  
*PC17 Hydraulic fluids*  
*PC24 Lubricants, greases, release products*
- **Process category**  
*PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.*  
*PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions*  
*PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities*  
*PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities*  
*PROC20 Use of functional fluids in small devices*
- **Environmental release category**  
*ERC9a Widespread use of functional fluid (indoor)*  
*ERC9b Widespread use of functional fluid (outdoor)*
- **Description of the activities / processes covered in the Exposure Scenario**  
*See section 1 of the annex to the Safety Data Sheet.*
- **Conditions of use**
- **Duration and frequency** *5 workdays/week.*
- **Physical parameters**
- **Physical state** *Fluid*
- **Concentration of the substance in the mixture** *The substance is main component.*
- **Other operational conditions**
- **Other operational conditions affecting environmental exposure** *No special measures required.*
- **Other operational conditions affecting consumer exposure** *Not required.*
- **Other operational conditions affecting consumer exposure during the use of the product**  
*Not applicable.*
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures** *No special measures required.*
- **Technical protective measures** *No special measures required.*
- **Personal protective measures** *No special measures required.*
- **Measures for consumer protection** *No special measures required.*
- **Environmental protection measures**
- **Air** *No special measures required.*
- **Water** *No special measures required.*
- **Disposal measures**  
*Disposal must be made according to official regulations.*  
*Ensure that waste is collected and contained.*
- **Disposal procedures** *Dispose of product residues with household waste.*
- **Waste type** *Partially emptied and uncleaned packaging*
- **Exposure estimation**
- **Consumer** *Not relevant for this Exposure Scenario.*
- **Guidance for downstream users** *No further relevant information available.*

### Annex: Exposure scenario 4

- **Short title of the exposure scenario** *Private use of lubricants and greases in vehicles or machines*
- **Sector of Use** *SU21 Consumer uses: Private households / general public / consumers*

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- **Product category** PC24 Lubricants, greases, release products
- **Environmental release category**  
ERC9a Widespread use of functional fluid (indoor)  
ERC9b Widespread use of functional fluid (outdoor)
- **Description of the activities / processes covered in the Exposure Scenario**  
See section 1 of the annex to the Safety Data Sheet.
- **Conditions of use**
- **Duration and frequency** 5 workdays/week.
- **Physical parameters**
- **Physical state** Fluid
- **Concentration of the substance in the mixture** The substance is main component.
- **Other operational conditions**
- **Other operational conditions affecting environmental exposure** No special measures required.
- **Other operational conditions affecting consumer exposure** Not required.
- **Other operational conditions affecting consumer exposure during the use of the product**  
Not applicable.
- **Risk management measures**
- **Worker protection**
- **Organisational protective measures** No special measures required.
- **Technical protective measures** No special measures required.
- **Personal protective measures** No special measures required.
- **Measures for consumer protection** No special measures required.
- **Environmental protection measures**
- **Air** No special measures required.
- **Water** No special measures required.
- **Disposal measures**  
Disposal must be made according to official regulations.  
Ensure that waste is collected and contained.
- **Disposal procedures** Dispose of product residues with household waste.
- **Waste type** Partially emptied and uncleaned packaging
- **Exposure estimation**
- **Consumer** Not relevant for this Exposure Scenario.
- **Guidance for downstream users** No further relevant information available.

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