Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 10.11.2020 *Version number 2.0* *Revision: 10.11.2020*

*

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

· **1.1 Product identifier**

· **Trade name: FORMULA 4T SAE 20W/50 HD JASO MA2**

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Private use of lubricants and greases in vehicles or machines
Industrial use of lubricants and greases in vehicles or machinery
Professional use of lubricants and greases in vehicles or machines
According to the generic exposure scenarios of the ATIEL / ATC on the use of lubricants (V1.0, 07.01.2013)
See details of exposure scenarios in Annex

· **Application of the substance / the mixture**
Only for proper handling.
Engine oil

· **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

· **Only representative in EU:**

MOTOREX GmbH, Industrie Schmiertechnik, Bismarckstrasse 28, D-69198 Schriesheim

· **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 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 Chemical characterisation: Mixtures**
· **Description:** Mixture of substances listed below with nonhazardous additions.

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 10.11.2020 Version number 2.0 Revision: 10.11.2020

Trade name: FORMULA 4T SAE 20W/50 HD JASO MA2

(Contd. of page 1)

· **Dangerous components:**		
	Mineral oils (mixture) Asp. Tox. 1, H304	≥5-≤7.5%
CAS: 147880-09-9 EC number: 604-611-9	Amines, Polyethylenepoly-, reaction products with 1,3-Dioxolan-2-one and Succinic anhydride monopolyisobutenyl derivs. Aquatic Chronic 4, H413	1-2.5%

· **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.

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:** Generally the product does not irritate the skin.
· **After eye contact:** Rinse opened eye for several minutes under running water.
· **After swallowing:** If symptoms persist consult doctor.
· **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:**
Use fire extinguishing methods suitable to surrounding conditions.
· **5.2 Special hazards arising from the substance or mixture**
No further relevant information available.
· **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**
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** No special measures required.

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 10.11.2020 *Version number 2.0* *Revision: 10.11.2020*

Trade name: FORMULA 4T SAE 20W/50 HD JASO MA2

(Contd. of page 2)

· ***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.*
· ***Further information about storage conditions:*** *None.*
· ***Storage class:*** *10*
· ***7.3 Specific end use(s)*** *No further relevant information available.*

*
SECTION 8: Exposure controls/personal protection

· ***Additional information about design of technical facilities:***
No further data; see section 7.

· ***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***
· ***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.
· ***Protection of hands:***
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 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***
· ***Appearance:***

Form:	*Fluid*
Colour:	*Yellow*

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 10.11.2020 Version number 2.0 Revision: 10.11.2020

Trade name: FORMULA 4T SAE 20W/50 HD JASO MA2

(Contd. of page 3)

· **Odour:**	Characteristic
· **Odour threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	Undetermined.
· **Flash point:**	>200 °C
· **Flammability (solid, gas):**	Not applicable.
· **Decomposition temperature:**	Not determined.
· **Auto-ignition temperature:**	Product is not selfigniting.
· **Explosive properties:**	Product does not present an explosion hazard.
· **Explosion limits:**	
Lower:	Not determined.
Upper:	Not determined.
· **Vapour pressure:**	Not determined.
· **Density at 20 °C:**	0.867 g/cm³ (ASTM D 4052)
· **Relative density**	Not determined.
· **Vapour density**	Not determined.
· **Evaporation rate**	Not determined.
· **Solubility in / Miscibility with water:**	Not miscible or difficult to mix.
· **Partition coefficient: n-octanol/water:**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	143.1 mm²/s @ 40 °C
VOC (EC)	0.00 %
· **9.2 Other information**	No further relevant information available.

SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.
· **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** No further relevant information available.
· **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 toxicological effects**
· **Acute toxicity** Based on available data, the classification criteria are not met.
· **Primary irritant effect:**
· **Skin corrosion/irritation** Based on available data, the classification criteria are not met.

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 10.11.2020 Version number 2.0 Revision: 10.11.2020

Trade name: FORMULA 4T SAE 20W/50 HD JASO MA2

(Contd. of page 4)

· **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.
· **CMR effects (carcinogenity, mutagenicity and toxicity 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.
· **Aspiration hazard** Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

· **12.1 Toxicity**
· **Aquatic toxicity:** No further relevant information available.
· **12.2 Persistence and degradability** No further relevant information available.
· **12.3 Bioaccumulative potential** No further relevant information available.
· **12.4 Mobility in soil** No further relevant information available.
· **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.
· **12.5 Results of PBT and vPvB assessment**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **12.6 Other adverse effects** No further relevant information available.

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.

· **European waste catalogue**	
13 02 05*	mineral-based non-chlorinated engine, gear and lubricating oils

· **Uncleaned packaging:**
· **Recommendation:** Disposal must be made according to official regulations.

SECTION 14: Transport information

· **14.1 UN-Number**	
· **ADR/RID/ADN, ADN, IMDG, IATA**	Void
· **14.2 UN proper shipping name**	
· **ADR/RID/ADN, ADN, IMDG, IATA**	Void

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 10.11.2020 Version number 2.0 Revision: 10.11.2020

Trade name: FORMULA 4T SAE 20W/50 HD JASO MA2

(Contd. of page 5)

· **14.3 Transport hazard class(es)**	
· **ADR/RID/ADN, ADN, IMDG, IATA** · **Class**	Void
· **14.4 Packing group** · **ADR/RID/ADN, IMDG, IATA**	Void
· **14.5 Environmental hazards:**	Not applicable.
· **14.6 Special precautions for user**	Not applicable.
· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**	Not applicable.
· **UN "Model Regulation":**	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.

· **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
None of the ingredients is listed.

· **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.

· **Relevant phrases**
H304 May be fatal if swallowed and enters airways.
H413 May cause long lasting harmful effects to aquatic life.

· **Department issuing SDS:** Abteilung Produktsicherheit
· **Abbreviations and acronyms:**
ADR: Accord européen sur le transport 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)
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 10.11.2020 *Version number 2.0* *Revision: 10.11.2020*

Trade name: FORMULA 4T SAE 20W/50 HD JASO MA2

(Contd. of page 6)

· **** Data compared to the previous version altered.***

Annex: Exposure scenario 1

· ***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*** *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.*

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

(Contd. of page 7)

· **Guidance for downstream users** No further relevant information available.

Annex: Exposure scenario 2

· **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** 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.

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 10.11.2020 Version number 2.0 Revision: 10.11.2020

Trade name: FORMULA 4T SAE 20W/50 HD JASO MA2

(Contd. of page 8)

· **Guidance for downstream users** No further relevant information available.

Annex: Exposure scenario 3

· **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
· **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** 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.