To Our Customers:

The attached Safety Data Sheet (SDS) was prepared by the vendor of the product you purchased through one of our divisions. We used the manufacturer's electronic document directly or scanned a paper copy and generated a file for our automated SDS delivery system.

All statements, technical information, and recommendations contained therein are solely that of the manufacturer of the product. We at Zep Inc. did not verify the accuracy and completeness of the statements and do not warrantee or guarantee the information. We provide vendor SDSs to assist our customers in their compliance efforts. The attached document is in compliance with one of the respective country regulatory requirements noted below:

The OSHA Hazard Communication Standard (in the United States)
The Hazardous Products Regulations (in Canada)

We made every effort to deliver all of the information prepared by the manufacturer. We cannot anticipate all conditions under which this information will be used. If you have any questions about the statements on the SDS, please contact the company shown on the document.

Zep Inc. assumes no liability or responsibility for loss or damage resulting from the improper use or handling of this product, from incompatible product combinations, or from the failure to follow instructions, warnings, and advisories in the manufacturer's product label and Safety Data Sheet.

Sincerely,

Product Stewardship Team
Zep Inc.

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

1.1 Product identifier

Trade name/designation Mehrbereichsöl für Servolenkung, Schaltung, Kupplung, Hydraulik MB 345.0

Partno A 001 989 24 03 09

Hazard components for labelling
dec-1-ene, dimers, hydrogenated, Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based

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

Use
Hydraulic oil

1.3 Details of the supplier of the safety data sheet

Supplier
Mercedes-Benz USA, LLC.
One Mercedes-Benz Dr.
Sandy Springs, GA 30328-4312
+1 770 705 0600

Manufacturer
Mercedes-Benz AG

70546 Stuttgart
Germany

Telephone +49 (0)711 17-0

1.4 Emergency telephone number

+49 (0)711 17-0

gms.daimler.com

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]	Classification procedure
Asp. Tox. 1, H304	
Acute Tox. 4, H332	

hazard statements for health hazards
H304 May be fatal if swallowed and enters airways.
H332 Harmful if inhaled.

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard components for labelling
dec-1-ene, dimers, hydrogenated, Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based

Hazard pictograms


GHS07


GHS08

Signal word
Danger

Hazard statements
H304 May be fatal if swallowed and enters airways.
H332 Harmful if inhaled.

Precautionary statements
P102 Keep out of reach of children.
P261 Avoid breathing spray.
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor.
P331 Do NOT induce vomiting.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P501 Dispose of the content / the container in accordance with regional regulations.

2.3 Other hazards

Other adverse effects
Special danger of slipping by leaking/spilling product.

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

SECTION 3: Composition / information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

Description
Mixture of highly refined mineral oils and additives.

Hazardous ingredients

CAS No.	EC No.	Substance name	Concentration	Classification according to Regulation (EC) No 1272/2008 [CLP]
68649-11-6	500-228-5	dec-1-ene, dimers, hydrogenated	50 < 100 %	Acute Tox. 4 H332 Asp. Tox. 1 H304
72623-86-0	276-737-9	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based	20 < 50 %	Asp. Tox. 1 H304
1218787-32-6	620-540-6	2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol	0.1 < 0.25 %	Acute Tox. 4 H302 Skin Corr. 1C H314 Eye Dam. 1 H318 Aquatic Acute 1 H400 M=10 Aquatic Chronic 1 H410 M=1

REACH No.	Substance name
01-2119493069-28	dec-1-ene, dimers, hydrogenated
01-2119474878-16	Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based
01-2119510877-33	2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol

Remark
The highly refined mineral oil contains <3% (w/w) DMSO-extract, according to IP346.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information
Observe risk of aspiration if vomiting occurs.
Symptoms may develop several hours following exposure; medical observation therefore necessary for at least 48 hours.

Following inhalation
Provide fresh air.
In the event of symptoms refer for medical treatment.

Following skin contact
After contact with skin, wash immediately with plenty of water and soap.
In the event of symptoms, consult a doctor.

After eye contact
In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and 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

Effects
Swallowing with subsequent vomiting may lead to risk of lung damage from aspiration and subsequent formation of toxic pulmonary oedema.

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor
Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media
alcohol resistant foam
Extinguishing powder
Carbon dioxide (CO2)
Water spray jet

Unsuitable extinguishing media
High power water jet

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products
Fire gas of organic material has to be classed invariably as respiratory poison.

5.3 Advice for firefighters

Special protective equipment for firefighters:
In case of fire: Wear self-contained breathing apparatus.
Use protective equipment.

Additional information

Do not allow run-off from fire-fighting to enter drains or water courses.
Dispose of contaminated extinguishant water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Special danger of slipping by leaking/spilling product.

For emergency responders

Special danger of slipping by leaking/spilling product.
Keep away unprotected persons

6.2 Environmental precautions

Prevent spread over a wide area (e.g. by containment or oil barriers).
Do not allow to enter into surface water or drains.
Do not allow to enter into soil/subsoil.
Inform respective authorities in case of seepage into water course or sewage system.

6.3 Methods and material for containment and cleaning up

For containment

Collect with spongy material (all-purpose gelation agent) and dispose of in compliance with the regulations.

6.4 Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Protective measures

Avoid:
generation/formation of aerosols
Provide for appropriate ventilation/aspiration at the work station
No special fire protection measures are necessary.
Adhere to general precaution rules when handling chemicals
Do not put any product-impregnated cleaning rags into your trouser pockets.

Advices on general occupational hygiene

When using do not eat, drink, smoke, sniff.
Keep away from food and drink.
Wash hands before breaks and after work.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep/Store only in original container.

Storage class

10 Combustible liquids that cannot be assigned to any of the above storage classes

Materials to avoid

Do not store together with:
Food and feedingstuffs

Further information on storage conditions

Keep container tightly closed in a cool, well-ventilated place.

7.3 Specific end use(s)

Recommendation

See section 1.2

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

No data available

8.2 Exposure controls

Appropriate engineering controls

Technical measures to prevent exposure
Sufficient ventilation and exhaustion.
Local exhaustion or technical room ventilation.

Personal protection equipment

Eye/face protection
Safety glasses recommended during transfer
DIN EN 166

Hand protection
Glove material specification [make/type, thickness, permeation time/life, wetting resistance]: Nitrile rubber, 0.4 mm coating thickness, for short-term contact/splash
For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.
The protective gloves to be used must comply with the specifications of EC directive 89/686/EEC and. the resultant standard EN374.

Body protection:
Protective clothing

Respiratory protection
Respiratory protection necessary at:
insufficient ventilation
Temporary filter unit, filter AX

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state
liquid

Colour
green

Odour
characteristic

Safety relevant basis data

	Value	Method	Source, Remark
Odour threshold:	not determined		
pH			not applicable nicht in Wasser löslich
Melting point/freezing point	not determined		
Initial boiling point and boiling range	not determined		
Flash point	156 °C		
Evaporation rate	not determined		
flammability	not determined		
Upper/lower flammability or explosive limits	not determined		
Vapour pressure	< 0.001 hPa (20°C)		

	Value	Method	Source, Remark
Vapour density	not determined		
Density	0.82 g/cm^3 (15°C)		
Solubility(ies)	Water solubility (g/L)		practically insoluble
Partition coefficient: n-octanol/water	not determined		
Auto-ignition temperature			The product is not self-igniting.
Decomposition temperature	not determined		
Viscosity	kinematic 18.7 mm^2/s (40°C)		
Explosive properties:			The product is not explosive
Oxidising properties	not determined		

9.2 Other information

Other safety information
none

SECTION 10: Stability and reactivity

10.1 Reactivity

No hazardous reactions with proper storage and handling.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4 Conditions to avoid

Heat
High temperatures
Avoid temperatures above flash point.

10.5 Incompatible materials

Acid, strong
Base, strong
Oxidising agent, strong

10.6 Hazardous decomposition products

Thermal decomposition of the product may produce carbon monoxide, carbon dioxide and unidentified organic compounds.

Additional information

No risk of production of decomposition products when appropriately handled and stored

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Animal data

	Effective dose	Method	Source, Remark
Acute oral toxicity	> 5000 mg/kg Rat	OECD 401	CAS No.72623-86-0 Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based

	Effective dose	Method	Source, Remark
Acute oral toxicity	> 5000 mg/kg Rat		CAS No.68649-11-6 dec-1-ene, dimers, hydrogenated
Acute oral toxicity	LD50: 1350 mg/kg Rat	OECD 401	CAS No.1218787-32-6 2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol
Acute dermal toxicity	LD50: > 3000 mg/kg Rabbit		CAS No.68649-11-6 dec-1-ene, dimers, hydrogenated
Acute dermal toxicity	LD50: > 2001 mg/kg Rabbit		CAS No.72623-86-0 Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based
Acute inhalation toxicity	Acute inhalation toxicity (gas) > 5.53 mg/L Rat Exposure time 4 h	OECD 403	CAS No.72623-86-0 Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based
Acute inhalation toxicity	Acute inhalation toxicity (dust/mist) LC50: 1.17 mg/L Rat Exposure time 4 h		CAS No.68649-11-6 dec-1-ene, dimers, hydrogenated
Acute inhalation toxicity	Acute inhalation toxicity (dust/mist) LC50: > 5.53 mg/L Rat Exposure time 4 h		CAS No.72623-86-0 Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based
Acute inhalation toxicity	Acute inhalation toxicity (dust/mist) ATEmix calculated: 3.51 mg/L		

Assessment/classification
Harmful if inhaled.

Skin corrosion/irritation

Practical experience/human evidence
Repeated or prolonged contact with the skin may cause skin irritation.

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

Eye damage/irritation

Practical experience/human evidence
Repeated or prolonged contact with the eyes may cause eye irritation.

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

Sensitisation to the respiratory tract

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

Skin sensitisation

Animal data

Result / evaluation	Dose / Concentration	Method	Source, Remark
not sensitising.	CAS No.1218787-32-6 2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol Guinea pig	OECD 406	

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

Overall Assessment on CMR properties

This product does not meet the criteria for classification in Categories 1A/1B.

STOT-single exposure

STOT SE 1 and 2

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

STOT SE 3

Irritation to respiratory tract

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

Narcotic effects

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

STOT-repeated exposure

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

Aspiration hazard

Experimental data

	Value	Method	Source, Remark
Viscosity	kinematic 18.7 mm^2/s (40°C)		

Assessment/classification
May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

	Effective dose	Method	Source, Remark
Acute (short-term) fish toxicity	LL50 > 100 mg/L Test durarion 96 h	OECD 203	CAS No.72623-86-0 Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based
Acute (short-term) fish toxicity	LC50: > 1000 mg/L Test durarion 96 h		CAS No.68649-11-6 dec-1-ene, dimers, hydrogenated

	Effective dose	Method	Source, Remark
Acute (short-term) fish toxicity	LC50: 0.1 mg/L Test durarion 96 h	OECD 203	CAS No.1218787-32-6 2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol
Chronic (long-term) fish toxicity	not determined		
Acute (short-term) toxicity to crustacea	EL50 > 10000 mg/L Test durarion 48 h	OECD 202	CAS No.72623-86-0 Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based
Acute (short-term) toxicity to crustacea	EC50 > 1000 mg/L Daphnia pulex (water flea) Test durarion 48 h		CAS No.68649-11-6 dec-1-ene, dimers, hydrogenated
Acute (short-term) toxicity to crustacea	NOEC 10 mg/L Daphnia pulex (water flea) Test durarion 21 d	OECD 211	CAS No.68649-11-6 dec-1-ene, dimers, hydrogenated
Acute (short-term) toxicity to crustacea	EC50 0.043 mg/L Daphnia pulex (water flea) Test durarion 48 h	OECD 202	CAS No.1218787-32-6 2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol
Chronic (long-term) toxicity to crustacea	EC10 0.279 mg/L Test durarion 21 d	OECD 211	CAS No.1218787-32-6 2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol
Chronic (long-term) toxicity to crustacea	EC10 0.0107 mg/L Test durarion 21 d	OECD 211	CAS No.1218787-32-6 2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol
Acute (short-term) toxicity to aquatic algae and cyanobacteria	EC50 > 1000 mg/L Pseudokirchneriella subcapitata (green alga) Test durarion 72 h		CAS No.68649-11-6 dec-1-ene, dimers, hydrogenated
Acute (short-term) toxicity to aquatic algae and cyanobacteria	NOEC > 100 mg/L Pseudokirchneriella subcapitata (green alga) Test durarion 72 h	OECD 201	CAS No.72623-86-0 Lubricating oils (petroleum), C15-30, hydrotreated neutral oil-based
Acute (short-term) toxicity to aquatic algae and cyanobacteria	NOEC 0.0156 mg/L Test durarion 72 h		CAS No.1218787-32-6 2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol
Acute (short-term) toxicity to aquatic algae and cyanobacteria	EC50 0.0538 mg/L Test durarion 72 h	OECD 201	CAS No.1218787-32-6 2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol
Toxicity to other aquatic plants/organisms	not determined		
Toxicity to microorganisms	not determined		

Assessment/classification

The substance/mixture does not fullfill the criteria of the acute aquatic toxicity according to Regulation (EC) No 1272/2008 [CLP], Annex I.

12.2 Persistence and degradability

	Value	Method	Source, Remark
Biodegradation	Degradation rate (%): 63	OECD 301D/ EEC 92/69/V, C.4-E	CAS No.1218787-32-6 2,2'-(C16-18 (evennumbered, C18 unsaturated) alkyl imino) diethanol 28 d Easily biodegradable

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

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 Other adverse effects

Additional ecotoxicological information

Additional information

Do not allow uncontrolled discharge of product into the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste codes/waste designations according to EWC/AVV

Waste code product	Waste name
130111 *	synthetic hydraulic oils

Appropriate disposal / Product

Dispose of waste according to applicable legislation.

Appropriate disposal / Package

Dispose of waste according to applicable legislation.

Remark

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

	Land transport (ADR/RID)	Sea transport (IMDG)	Air transport (ICAO-TI / IATA-DGR)
14.1 UN number	-	-	-
14.2 UN proper shipping name	-	-	-
14.3 Transport hazard class(es)	-	-	-
14.4 Packing group	-	-	-
14.5 Environmental hazards	No	No	No

14.6 Special precautions for user

No data available

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

All transport carriers

No dangerous goods as defined by the transport regulations - ADR/RID, IMDG, ICAO/IATA-DGR.

SECTION 15: Regulatory information

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

National regulations

Information according to 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline).
not applicable

Water hazard class (WGK)
slightly hazardous to water (WGK 1)
according to the Ordinance on Facilities for Handling Substances that are Hazardous to Water (AwSV)

Restrictions of occupation
Observe national legislation regarding professional restrictions.

15.2 Chemical Safety Assessment

Substance safety analysis was not performed for this mixture.

SECTION 16: Other information

Indication of changes
* Data changed compared with the previous version
Current safety data sheets are available at:
http://gms.aftersales.daimler.com

Abbreviations and acronyms
See overview table at www.euphrac.eu

Key literature references and sources for data
Safety data sheets of suppliers

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]
The mixture is classified according to the available hazard data for the constituents as defined in the classification criteria for mixtures for each hazard class in Appendix I of Regulation (EC) No 1272/2008.

Additional information
Adhere to existing national and local rules referring to chemicals.
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.

Relevant H- and EUH-phrases (Number and full text)

H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.