

**Brand name: Monotube shock absorber, alu**

Page 1 of 8

---

**1. Substance/preparation and company description**

Brand name/part number of product

SACHS  
318 816

Details of manufacturer/supplier:

Address of manufacturer/supplier:

ZF Friedrichshafen AG  
Ernst-Sachs-Straße 62  
97424 Schweinfurt  
☎ (0049)(0)9721/98-0

Information from:

☎ (0049)(0)9721/98-3454      Mr. Dr. Schreiner  
Dept. Environmental Protection

Emergency information / Emergency number:  
Closest poisoning treatment centre, info: Mineral oil contact

---

**2. Composition / info. on components**

Chemical characteristics (preparation)

% Wt.	% Vol.	Chemical desc.	Haz. sym.	R sets
		Various mineral oils	-----	
		Nitrogen	-----	
		Aluminum tube		

The following information refers to the damper oil.

---

**3. Possible hazards**

Description of hazards:  
Intensive, lengthy and repeated skin contact can lead to skin irritation.

Safety risks:  
Avoid formation of oil mist.

Environmental hazards:  
Do not allow to escape uncontrolled into the environment. Damper oil is not completely biologically degradable.

**Brand name: Monotube shock absorber, alu**

Page 2 of 8

**Brand name: Monotube shock absorber, alu**

Page 3 of 8

---

**4. First-aid measures**

General information:

Can cause loss of natural grease and irritation if in contact with the skin for some time.

After inhalation:

Fresh air. Call doctor if symptoms persist.

After skin contact:

Rinse well with soap and water. Intensive skin care required.

After eye contact:

Rinse immediately with lots of water (10 mins.)

After swallowing:

Do not induce vomiting, call doctor.

Information for the doctor:

Symptomatic treatment.

---

**5. Fire-fighting measures**

Suitable extinguishing materials:

Ensure that extinguishing material is suitable for background fires

Unsuitable extinguishing materials for safety reasons:

-

Special hazards due to the material or combustion products:

Container is under pressure. Cool it with water spray if affected by fire.

Special protective equipment required for fire-fighting:

Ensure that protective equipment is suitable for background fires

---

**6. Measures if unintentionally released**

Personal safety measures:

Avoid skin contact with damper oil.

Immediately change contaminated working clothes.

Environmental measures:

Protect sewers and surface water from damper oil.

**Brand name: Monotube shock absorber, alu**

Page 4 of 8

Procedures for cleaning:  
Use oil absorbing material and dispose contaminated material according to the regulations.

Supplementary advice:  
None

---

## 7. Handling and storage

Handling:  
Do not open containers, do not heat product, do not throw product or assemble/disassemble by force.  
Storage:  
Store in clean and dry areas.

---

## 8. Exposure limits and personal protection equipment

Supplementary advice for the configuration of technical plant:

Components with workplace-related limits which must be monitored:

Limits	Chem. desc.

Personal protection equipment

Breathing protection: *Only if oil mist escapes*  
Eye protection: *Wear safety goggles if risk of spraying*  
Skin protection: *Only in the case of lengthy skin contact*  
Other :

**Brand name: Monotube shock absorber, alu**

Page 5 of 8

**9. Physical and chemical characteristics**

Damper oil

Form: Liquid	Colour: various	Odour: Like mineral oil
<b>Change in physical state:</b> Melting point or range Boiling point or range	max. -45 °C °C	<b>Tested acc. to</b>
<b>Density:</b> Bulk density:	approx. 0.85 g/ccm	
<b>Vapour pressure:</b> For aerosols & gases: Values at 20 °C	< 0.1 mbar	
Viscosity:	11 – 60 mm <sup>2</sup> / s	
Solvent separation test:	<input type="checkbox"/> smaller <input type="checkbox"/> greater/same 3 %	
<b>Solids content:</b>	%	
<b>Solubility:</b>	Virtually insoluble	
<b>pH value:</b>	not applicable	
<b>Flashpoint:</b>	120 - 180 °C	
<b>Ignition temperature:</b>	°C	
<b>Explosion limits</b> in air:	Lower 0.6% Upper 6.5%	
<b>Thermal decomposition:</b>	above 360 °C	
<b>Decomposition products:</b> Prop. by weight %		
<b>Dangerous reactions (with):</b>	Possible reaction with strong oxidizers	
<b>Additional information:</b>		

**Brand name: Monotube shock absorber, alu**

Page 6 of 8

---

**10. Stability and reactivity**

Conditions to avoid:

Damper oil is stable if used as specified

Substances to avoid:

Avoid contact with strong oxidizers.

Hazardous decomposition products:

No hazardous decomposition products under normal conditions

Additional information:

In the case of frequent skin contact use personal protection equipment.  
(Gloves, protective and care creams, liquid soap)

---

**11. Toxicological information**

Toxicological testing:

LD50, oral - rats > 5000 mg/kg

LD50, dermal - rabbits > 3000 mg/kg

---

**12. Ecological information**

Elimination details (persistence and degradability):

Behaviour in environmental compartments:

Ecotoxic effect:

Further information on ecology: WGK2

---

**13. Disposal information**

Product:

Steel parts: 160117 steel scrap

Aluminum parts: 160118 aluminum scrap

Damper oil: 130113 other waste oil / hydraulic oil

Plastic and rubber parts: 160119 plastic and rubber waste

Uncleaned packages: not applicable

Brand name: Monotube shock absorber, alu

Page 7 of 8

#### 14. Transport regulations

##### **Land transport** (road/rail, national and international)

ADR/RID/GGVSEB: Class: 2 Classification Code: 6A  
Warning sign: - Hazard no.: - UN no.: UN 3164  
Proper Shipping Name: ARTICLES, PRESSURIZED, PNEUMATIC (containing non-flammable gas)

Remarks:

**The release conditions of 594 are fulfilled.**

##### **Transport by Inland waterways**

ADN/ADNR Class: 2 Classification Code: 6 A  
UN no.: UN 3164

Proper Shipping Name: ARTICLES, PRESSURIZED, PNEUMATIC (containing non-flammable gas)

Remarks:

**The release conditions of 594 are fulfilled.**

##### **Ocean-going ship transport**

IMDG/GGVSee Class: 2.2 UN no.: UN 3164  
EMS: F-C, S-V

Marine pollutant: No  
Proper Shipping Name: Articles , pressurized, pneumatic, containing non-flammable gas

Remarks: IMDG code, Section 3.4 can be used according to the gas volume.

**The release conditions of 283 are not fulfilled.**

The release conditions are not fulfilled for shock absorbers.

##### **Air transport**

ICAO/IATA Class: 2.2 UN no.: UN 3164

Proper Shipping Name: Articles , pressurized, containing non-flammable gas

Remarks: **The release conditions of A 114 are not fulfilled.**

Postal transport

-Not permitted for national general postal distribution

-Not permitted for airmail, national / international

**Brand name: Monotube shock absorber, alu**

Page 8 of 8

---

## **15. Regulations**

Certification acc. to EU guidelines:  
Hazardous substance regulations dated 26.10.1993 : Referring to damper oil

National regulations.

Classification acc. to Vbf	: No
Tech. instructions - AIR (TA-Luft):	Class 3
Water balance law	WGK 2, water-hazard
Employment restrictions	: None
Incident regulations:	-

---

## **16. Miscellaneous**

Further information:  
Tolerance values from the professional institute for health and safety at work:  
Aerosol concentration 5 mg/cbm  
Vapour and aerosol conc. 20 mg/cbm

The standard safety measures for handling mineral oil products must be followed.

There is no legal duty to provide the information in this data sheet (see Section 15).

The information is provided voluntarily and with the best of the knowledge available at the date of the revision.

It does not guarantee the retention of particular properties within the meaning of a legal obligation.