

Safety data sheet

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according to 1907/2006/EC, Article 31

Printing date: 09.10.2020

**Version number 8

Revision: 09.10.2020

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

1.1 Product identifier

Trade name: **AVILUB METACORIN 833**
 Application / Use: Corrosion inhibitor

Article number: 6833

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

Application of the substance / the preparation: Anticorrosion fluid
 Uses advised against: No further relevant information available.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: HERMANN BANTLEON GmbH
 Blaubeurer Strasse 32
 D - 89077 Ulm
 Tel: +49 (0) 731 / 3990-0
 Fax: +49 (0) 731 / 3990-10

Further information obtainable from: Department: Product safety
 Contact specialist: hse@bantleon.de

1.4 Emergency telephone number:

In case of emergency ONLY:
 During working hours (CET):
 +49 (0) 731 / 39 90 260 or +49 (0) 731 / 39 90 250
 Emergency response (24 hours) CHEMTREC:
 1-800-424-9300 / +1-703-741-5970
 +(44)-870-8200418 (United Kingdom)
 +(44)-203-8073798 (United Kingdom)
 +(31)-858880596 (Netherlands)
 +(61)-290372994 (Australia)
 0-800-983-611 (South Africa)
 +1 703-527-3887 (USA & Canada)

* SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.
 Aquatic Chronic 4 H413 May cause long lasting harmful effects to aquatic life.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

The product is classified and labelled according to the CLP regulation.



GHS08

Signal word

Danger

Hazard-determining components of labelling:

Hydrocarbons, C11-C12, < 2% aromatics
 Hydrocarbons, C11-C14, isoalkanes
 Hydrocarbons, C11-C13, isoalkanes

Hazard statements

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

Precautionary statements

P273 Avoid release to the environment.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 P331 Do NOT induce vomiting.

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Additional information:

P405 Store locked up.
 P501 Dispose of contents/container in accordance with local regulations.
 EUH066 Repeated exposure may cause skin dryness or cracking.
 EUH208 Contains Calcium sulfonate, SCL<10%. May produce an allergic reaction.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Mixture

Description: Mixture

Dangerous components:

EC number: 918-167-1 Reg.nr.: 01-2119472146-39	Hydrocarbons, C11-C12, < 2% aromatics Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 4, H413	50-100%
EC number: 927-285-2 Reg.nr.: 01-2119480162-45	Hydrocarbons, C11-C14, isoalkanes Asp. Tox. 1, H304	10-25%
EC number: 920-901-0 Reg.nr.: 01-2119456810-40	Hydrocarbons, C11-C13, isoalkanes Asp. Tox. 1, H304	10-25%
CAS: 112-34-5 EINECS: 203-961-6 Reg.nr.: 01-2119475104-44	2-(2-Butoxyethoxy)ethanol Eye Irrit. 2, H319	≤5%
EC number: 939-603-7 Reg.nr.: 01-2119978241-36	Calcium sulfonate, SCL<10% Skin Sens. 1B, H317	≥0.1-≤5%

Additional information:

The wording of the hazard symbols and H-phrases is specified in section 16 if dangerous ingredients are mentioned.
 Components with threshold limit values are mentioned at section 8.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information:

Take affected persons out into the fresh air.

Position and transport stably in side position.

After inhalation:

Supply fresh air; consult doctor in case of complaints.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

After swallowing:

Do not induce vomiting; call for medical help immediately.

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

Headache

Dizziness

Unconsciousness

Nausea

If swallowed or in case of vomiting, danger of entering the lungs.

Information for doctor:

Treat symptomatically.

Hazards

Danger of pulmonary oedema.

Danger of pneumonia.

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

Monitor circulation, possible shock treatment.

Later observation for pneumonia and pulmonary oedema.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents:

CO₂, sand, extinguishing powder.

Use fire extinguishing methods suitable to surrounding conditions.

For safety reasons unsuitable extinguishing agents:

Do not use water with full jet.

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5.2 Special hazards arising from the substance or mixture:

In case of fire, the following can be released:

Nitrogen oxides (NO_x)
Carbon monoxide (CO)
Sulphur oxide (SO_x)

5.3 Advice for firefighters**Protective equipment:**

Wear self-contained respiratory protective device.
Do not inhale explosion gases or combustion gases.
Wear fully protective suit.

Additional information:

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

Particular danger of slipping on leaked/spilled product.
Wear protective clothing.

6.2 Environmental precautions:

Do not allow product to reach sewage system or any water course.
Prevent from spreading (e.g. by damming-in or oil barriers).

6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of the material collected according to regulations.

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**

Restrict the quantity stored at the work place.
Ensure good interior ventilation, especially at floor level (fumes are heavier than air).
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.

Handling:

When handling product in drums use safety footwear and suitable tools. At work please do not eat, drink or smoke.

Information about fire - and explosion protection:

Fire class EN 2: B
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

7.2 Conditions for safe storage, including any incompatibilities**Storage:****Requirements to be met by storerooms and receptacles:**

Store only in the original receptacle.
Provide floor trough without outlet.
Prevent any seepage into the ground.
Use only receptacles specifically permitted for this substance/product.

Information about storage in one common storage facility:

Store away from foodstuffs.
Store away from oxidising agents.
Store away from water.

Further information about storage conditions:

Recommended storage temperature 0 to 30 °C

Shelf life from date of dispatch:

Maximum 1 year.

Suitable material or coating:

Stainless Steel
Polyethylene
Polypropylene
Teflon

Not suitable material or coating:

EPDM
Polystyrene

7.3 Specific end use(s):

For more information see technical information.

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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:		
CAS: 112-34-5 2-(2-Butoxyethoxy)ethanol (≤5%)		
WEL (Great Britain)	Short-term value: 101.2 mg/m ³ , 15 ppm Long-term value: 67.5 mg/m ³ , 10 ppm	
IOELV (EU)	Short-term value: 101.2 mg/m ³ , 15 ppm Long-term value: 67.5 mg/m ³ , 10 ppm	
DNELs		
CAS: 112-34-5 2-(2-Butoxyethoxy)ethanol		
Dermal	DNEL worker (long term exposure)	83 mg/kg bw/day (human)
Inhalative	DNEL worker (long term exposure)	67.5 mg/m ³ (human)
Calcium sulfonate, SCL<10%		
Dermal	DNEL worker (long term exposure)	25 mg/kg bw/day (human)
Inhalative	DNEL worker (long term exposure)	35.26 mg/m ³ (human)
PNECs		
CAS: 112-34-5 2-(2-Butoxyethoxy)ethanol		
PNEC	1.1 mg/l (fresh water)	
PNEC	0.32 mg/kg (soil) 4.4 mg/kg (freshwater sediment)	
Calcium sulfonate, SCL<10%		
PNEC	1,000 mg/l (sewage plant) 0.1 mg/l (sea water) 0.1 mg/l (fresh water)	

Additional Occupational Exposure Limit Values for possible hazards during processing:

-

Additional information:

The lists valid during the making were used as basis.
If formation of steam, mist or aerosols take place the concentration in the air has to be kept at the lowest possible level.

8.2 Exposure controls**Personal protective equipment:****General protective and hygienic measures:**

The usual precautionary measures are to be adhered to when handling chemicals.
Keep away from foodstuffs, beverages and feed.
Wash hands before breaks and at the end of work.
Avoid close or long term contact with the skin.

Respiratory protection:

No respiratory protection is ordinarily required under normal conditions of use.
Select a filter suitable for combined particulate/ gases and organic vapours (boiling point > 65 ° C, AP2, EN 14387), if exposure limit is exceeded or when aerosol or mist is formed.

Protection of hands:

Safety gloves of nitrile rubber or viton.
Preventive skin protection by use of skin-protecting agents is recommended.

Material of gloves

Fluorocarbon rubber (Viton)
Nitrile rubber, NBR
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 trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Value for the permeation: Level = 6 (480 min)

Eye protection:

Goggles recommended during refilling.

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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:	light brown
Odour:	Mild
Odour threshold:	Not determined.

pH-value: Not determined.

Change in condition

Melting point/freezing point:	Not determined.
Initial boiling point and boiling range:	Not determined.
Drip point:	Not determined.

Flash point: > 61 °C (DIN ISO 2719)

Flammability (solid, gas): Not applicable.

Ignition temperature: > 200 °C

Decomposition temperature: Not determined.

Auto-ignition temperature: Product is not selfigniting.

Explosive properties: The product shows no danger of explosion, but it may build explosive mixtures with air (by vaporisation, oil mist formation, heating above the flash point).

Explosion limits:

Lower:	0.5 Vol % (typ.)
Upper:	7.0 Vol % (typ.)

Vapour pressure at 20 °C: ca. 1 hPa (-)

Density at 15 °C: 0.786 g/cm³ (DIN 51 757)

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:Kinematic at 40 °C: < 7 mm²/s (ASTM D7042)

9.2 Other information: No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity: See 10.2 to 10.6

10.2 Chemical stability: Stable at normal conditions.

Thermal decomposition / conditions to be avoided: Avoid contact with heat, sparks, flames and all other sources of ignition.

10.3 Possibility of hazardous reactions: Reacts with strong oxidising agents.

10.4 Conditions to avoid: No specific data available.

10.5 Incompatible materials: Strong oxidizing agents.

10.6 Hazardous decomposition products: No dangerous decomposition products known.

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Additional information:

Product is not classified as inflammable but can burn.

*** SECTION 11: Toxicological information****11.1 Information on toxicological effects**

These statements are based on data for components of the material or for similar materials.

Acute toxicity

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

LD/LC50 values relevant for classification:**Hydrocarbons, C11-C12, < 2% aromatics**

Oral	LD50	>5,000 mg/kg (rat) (OECD 401)
Dermal	LD50	>5,000 mg/kg (rabbit) (OECD 402)
Inhalative	LC50/8h	>5,000 mg/m ³ (rat) (OECD 403)

Hydrocarbons, C11-C14, isoalkanes

Oral	LD50	>5,000 mg/kg (rat) (OECD 401)
Dermal	LD50	>5,000 mg/kg (rabbit) (OECD 402)

Hydrocarbons, C11-C13, isoalkanes

Oral	LD50	>5,000 mg/kg (rat) (OECD 401)
Dermal	LD50	>5,000 mg/kg (rabbit) (OECD 402)
Inhalative	LC50/4h	>5,000 mg/l (rat) (OECD 403)

CAS: 112-34-5 2-(2-Butoxyethoxy)ethanol

Oral	LD50	5,660 mg/kg (rat)
Dermal	LD50	2,764 mg/kg (rabbit)

Calcium sulfonate, SCL<10%

Oral	LD50	>5,000 mg/kg (rat)
Dermal	LD50	>5,000 mg/kg (rabbit)

Primary irritant effect:**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.

by inhalation:

Inhalation of vapors above the workplace should be avoided to limit monitoring. High vapor/aerosol concentrations cause anesthetic. There can be disturbances of the central nervous system.

Respiratory or skin sensitisation

Based on experimental data no skin sensitizing effects caused by potentially sensitizing components are expected.

Other information (about experimental toxicology):

After swallowing: Swallow and particularly subsequent vomiting can lead to lung damage - pneumonia - pulmonary edema.

Subacute to chronic toxicity:

Prolonged and/or repeated contact may cause defatting of the skin which can lead to dermatitis and may make the skin more susceptible to irritation and penetration by other materials.

Additional toxicological information:

The product shows the following dangers according to the calculation method of Regulation (EC) No 1272/2008 as issued in the latest version:

Asp. Tox. 1

Can lead to skin sensitisation in case of sensitive individuals. These statements are based on data for components of the material or for similar materials.

CMR effects (carcinogenicity, 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

May be fatal if swallowed and enters airways.

*** SECTION 12: Ecological information****12.1 Toxicity**

The product shows the following dangers according to the calculation method of Regulation (EC) No 1272/2008 as issued in the latest version:

Aquatic Chronic 4

Aquatic toxicity:

Based on labelling toxic effects are to be expected on aquatic organisms.

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Hydrocarbons, C11-C12, < 2% aromatics	
NOELr	1,000 mg/l (Pseudokirchneriella subcapitata) (72 h)
NOELR/21d	>1 mg/l (Daphnia magna)
Hydrocarbons, C11-C14, isoalkanes	
EL50/48h	>1,000 mg/l (Daphnia magna)
LL50/96h	>1,000 mg/l (Oncorhynchus mykiss)
Hydrocarbons, C11-C13, isoalkanes	
NOELr	1 mg/l (Daphnia magna) (21d) 1,000 mg/l (Pseudokirchneriella subcapitata) (72h)
CAS: 112-34-5 2-(2-Butoxyethoxy)ethanol	
EC50/24h	2,850 mg/l (Daphnia magna)
LC50/96h	1,300 mg/l (fish)
Calcium sulfonate, SCL<10%	
EC50/48h	>100 mg/l (Daphnia magna) (OECD 202)
EC50/96h	>100 mg/l (Oncorhynchus mykiss)

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

The product is not soluble in water. If it enters soil, it will adsorb to soil particles and will not be mobile.

Ecotoxic effects:**Remark:**

Harmful to aquatic organisms.

Additional ecological information:**General notes:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Do not allow product 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.

European waste catalogue	
12 01 99	wastes not otherwise specified
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP14	Ecotoxic

Uncleaned packaging:

Empty packing completely. Handover to authorized disposal company.

Recommendation:

Disposal must be made according to official regulations.

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

SECTION 14: Transport information**14.1 UN-Number****ADR, IMDG, IATA**

Void

14.2 UN proper shipping name**ADR, IMDG, IATA**

Void

14.3 Transport hazard class(es)**ADR, IMDG, IATA****Class**

Void

14.4 Packing group**ADR, IMDG, IATA**

Void

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14.5 Environmental hazards:**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** Not applicable.**UN "Model Regulation":** Void**SECTION 15: Regulatory information****15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 55**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.

National regulations:**Information about limitation of use:**Employment restrictions concerning juveniles must be observed.
Employment restrictions concerning pregnant and lactating women must be observed.**Waterhazard class:**

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

Other regulations, limitations and prohibitive regulations

The Product is subject to the VOC-regulation (31. BImSchV Germany).

Directive 2010/75/EC on the limitation of emissions of volatile organic compounds, VOC (EC):

~86.0 %

Ordinance on the Incentive Tax on Volatile Organic Compounds (Switzerland)**OVOC (CH)**

~86.0 %

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not 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.

Recommendation of the manufacturer:

Absorb spilled liquid media with AVILUB SUPER-SORB and dispose in accordance with local regulations. For skin protection when handling water-mixable and not-water-mixable media we recommend application of COVER SKIN.

Relevant phrasesH226 Flammable liquid and vapour.
H304 May be fatal if swallowed and enters airways.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H413 May cause long lasting harmful effects to aquatic life.**Department issuing SDS:**

Department: Product safety

Contact:

hse@bantleon.de

Abbreviations and acronyms:RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)
PBT: Persistent, Bioaccumulative and Toxic
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)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids – Category 3

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1B: Skin sensitisation – Category 1B

Asp. Tox. 1: Aspiration hazard – Category 1

Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4

* Data compared to the previous version altered.

**Information about the version number:

Replaces all previous versions.