

## Safety data sheet

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according to 1907/2006/EC, Article 31 and 2020/878/EC

Printing date: 15.05.2023

\*\*Version number 10 (replaces version 9)

Revision: 15.05.2023

### 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)-203-8073798 (United Kingdom)  
 +(31)-858880596 (Netherlands)  
 +(61)-290372994 (Australia)  
 0-800-983-611 (South Africa)  
 +1 703-527-3887 (USA & Canada)  
 000-800-100-7141 (India)  
 1-800-815-308 (Malaysia)

### 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.

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Trade name: **AVILUB METACORIN 833**

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P331 Do NOT induce vomiting.  
 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. May produce an allergic reaction.

**Additional information:****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

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, EUH066	50-100%
EC number: 927-285-2 Reg.nr.: 01-2119480162-45	Hydrocarbons, C11-C14, isoalkanes Asp. Tox. 1, H304, EUH066	10-25%
EC number: 920-901-0 Reg.nr.: 01-2119456810-40	Hydrocarbons, C11-C13, isoalkanes Asp. Tox. 1, H304, EUH066	10-25%
EC number: 939-603-7 Reg.nr.: 01-2119978241-36	Calcium sulfonate Skin Sens. 1B, H317 Specific concentration limit: Skin Sens. 1B; H317: C ≥ 10 %	≥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.

**Information for doctor:**

Treat symptomatically.

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

Breathing difficulty

Headache

Drowsiness

Dizziness

Unconsciousness

Nausea

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

**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:**CO<sub>2</sub>, 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 (NOx)  
 Carbon monoxide (CO)  
 Sulphur oxide (SOx)  
 Vapors are heavier than air and spread along ground.  
 Product floats on the firefighting water and can ignite again.

**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.  
 Collect contaminated fire fighting water separately. It must not enter the sewage system.

**SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Ensure adequate ventilation.  
 Particular danger of slipping on leaked/spilled product.  
 Keep away from ignition sources.  
 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).  
 Inform respective authorities in case of seepage into water course or sewage system.

**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**

Dispose of the material collected according to regulations.  
 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.  
 Do not inhale gases / fumes / aerosols.

**Information about fire - and explosion protection:**

Use explosion-proof apparatus / fittings and spark-proof tools.  
 Fire class EN 2: B  
 Keep ignition sources away - Do not smoke.  
 Protect against electrostatic charges.

**Handling:**

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

**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.

**Further information about storage conditions:**

Recommended storage temperature 0 to 30 °C

**Shelf life from date of dispatch:**

Maximum 2 years

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<b>Suitable material or coating:</b>	Stainless Steel Polyethylene Polypropylene Teflon
<b>Not suitable material or coating:</b>	EPDM Polystyrene Natural- and butyl rubber
<b>7.3 Specific end use(s):</b>	For more information see technical information.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Ingredients with limit values that require monitoring at the workplace:**

<b>DNELs</b>		
<b>Calcium sulfonate</b>		
Dermal	DNEL worker (long term exposure)	25 mg/kg bw/day (human)
Inhalative	DNEL worker (long term exposure)	35.26 mg/m <sup>3</sup> (human)
<b>PNECs</b>		
<b>Calcium sulfonate</b>		
PNEC	1,000 mg/l (sewage plant)	
	0.1 mg/l (sea water)	
	0.1 mg/l (fresh water)	

**Ingredients with biological limit values:****Additional Occupational Exposure Limit Values for possible hazards during processing:**

None

**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****Appropriate engineering controls**

No further data; see section 7.

**Individual protection measures, such as 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.

**Hand protection**

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/face protection**

Goggles recommended during refilling.

**Body protection:**

Solvent resistant protective clothing

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Physical state**

Fluid

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Colour:	Brown
Odour:	Mild
Melting point/freezing point:	Not determined.
Boiling point or initial boiling point and boiling range	Not determined.
Flammability	Not applicable.
Lower and upper explosion limit	
Lower:	0.5 Vol % (typ.)
Upper:	6.0 Vol % (typ.)
Flash point:	>61 °C (DIN EN ISO 2719)
Auto-ignition temperature:	Not determined.
Decomposition temperature:	Not determined.
pH	Not applicable.
Viscosity:	
Kinematic viscosity at 40 °C	<7 mm <sup>2</sup> /s (ASTM D7042)
Solubility	
water:	Not miscible or difficult to mix.
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not determined.
Density and/or relative density	
Density at 15 °C:	0.780 g/cm <sup>3</sup> (DIN 51 757)
Relative density	Not determined.
Vapour density	Not determined.
Relative gas density	Not determined.

**9.2 Other information****Appearance:**

Form: Fluid

**Important information on protection of health and environment, and on safety.**

**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).

**Change in condition**

Drip point: Not determined.

Evaporation rate: Not determined.

**Information with regard to physical hazard classes**

Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

**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.

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**10.4 Conditions to avoid**

Avoid high temperatures and direct sunlight.

**10.5 Incompatible materials:**

Strong oxidizing agents.

**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**

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	LC50/4h	>5.6 mg/l (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)
Inhalative	LC50/4h	>5 mg/l (rat) (OECD 403)

**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	>5.6 mg/l (rat) (OECD 403)

**Calcium sulfonate**

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

**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. Vapor, spray or fumes can cause eye irritation (burning, redness and lachrymatory).

**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 available data, the classification criteria are not met. There are no indications for a sensitising potential of the product. Contains substances with sensitising potential in low concentration.

**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.

**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.

**11.2 Information on other hazards****Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

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**SECTION 12: Ecological information**

<b>12.1 Toxicity</b>	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 Based of labelling toxic effects are to be expected on aquatic organisms.
<b>Aquatic toxicity:</b>	
<b>Hydrocarbons, C11-C12, &lt; 2% aromatics</b>	
NOELR/21d	>1 mg/l (Daphnia magna)
<b>Hydrocarbons, C11-C14, isoalkanes</b>	
NOEC/21d	1 mg/l (Daphnia magna)
<b>Hydrocarbons, C11-C13, isoalkanes</b>	
EC50/48h	>1,000 mg/l (Daphnia magna) (OECD 202)
LC50/96h	>1,000 mg/l (Oncorhynchus mykiss) (OECD 203)
<b>Calcium sulfonate</b>	
EC50/48h	>100 mg/l (Daphnia magna) (OECD 202)
EC50/72h	>100 mg/l (Pseudokirchneriella subcapitata)
LL50/96h	>100 mg/l (Oncorhynchus mykiss)
<b>12.2 Persistence and degradability</b>	No further relevant information available.
<b>12.3 Bioaccumulative potential</b>	No further relevant information available.
<b>12.4 Mobility in soil</b>	The product is not soluble in water. If it enters soil, it will adsorb to soil particles and will not be mobile.
<b>12.5 Results of PBT and vPvB assessment</b>	
<b>PBT:</b>	Not applicable.
<b>vPvB:</b>	Not applicable.
<b>12.6 Endocrine disrupting properties</b>	The product does not contain substances with endocrine disrupting properties.
<b>12.7 Other adverse effects:</b>	
<b>Remark:</b>	Harmful to aquatic organisms.
<b>Additional ecological information:</b>	
<b>General notes:</b>	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.

**SECTION 13: Disposal considerations**

<b>13.1 Waste treatment methods</b>	
<b>Recommendation</b>	Must not be disposed together with household garbage. Do not allow product to reach sewage system.
<b>European waste catalogue</b>	The recommended waste code refers to the product as delivered. The assignment of the waste code number according to the application is to be conducted in individual cases by the waste producer based on the European Waste Code Catalogue in coordination with the regional disposal company and with aspects specific to the sector and process in mind.
07 06 04*	other organic solvents, washing liquids and mother liquors
HP5	Specific Target Organ Toxicity (STOT)/Aspiration Toxicity
HP14	Ecotoxic

<b>Uncleaned packaging:</b>	Empty packing completely. Handover to authorized disposal company.
<b>Recommendation:</b>	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**

<b>14.1 UN number or ID number</b>	
<b>ADR, IMDG, IATA</b>	Void
<b>14.2 UN proper shipping name</b>	
<b>ADR, IMDG, IATA</b>	Void

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

Class Void

**14.4 Packing group**

ADR, IMDG, IATA Void

**14.5 Environmental hazards:** Not applicable.**14.6 Special precautions for user** Not applicable.**14.7 Maritime transport in bulk according to IMO instruments** 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**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.

**REGULATION (EU) 2019/1148****Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**

None of the ingredients is listed.

**Annex II - REPORTABLE EXPLOSIVES PRECURSORS**

None of the ingredients is listed.

**Regulation (EC) No 273/2004 on drug precursors**

None of the ingredients is listed.

**Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**

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

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

~88.0 %

**Ordinance on the Incentive Tax on Volatile Organic Compounds, Switzerland, VOC content:**

~87.0 %

**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.

This Safety Data Sheets is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

**Relevant phrases**

H226 Flammable liquid and vapour.  
 H304 May be fatal if swallowed and enters airways.  
 H317 May cause an allergic skin reaction.  
 H413 May cause long lasting harmful effects to aquatic life.  
 EUH066 Repeated exposure may cause skin dryness or cracking.

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Classification according to Regulation (EC) No 1272/2008	
Aspiration hazard	Expert judgement
Hazardous to the aquatic environment - long-term (chronic) aquatic hazard	The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

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 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)  
 DNEL: Derived No-Effect Level (REACH)  
 PNEC: Predicted No-Effect Concentration (REACH)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 vPvB: very Persistent and very Bioaccumulative  
 Flam. Liq. 3: Flammable liquids – Category 3  
 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.