

Acid mixture AMG 2

Revision date: 01.03.2024

Product code: 34339

Page 1 of 12

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

1.1. Product identifier

Acid mixture AMG 2

```
UFI:
```

Y532-D3DT-W00T-PQRM

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

Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

Company name:	AnalytiChem GmbH	
	ACD	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone:	0203/5194-0	Telefax: 0203/5194-290
E-mail:	info@analytichem.de	
Contact person:	Abteilung Produktsicherheit	Telephone: 0203/5194-107/117
E-mail:	produktsicherheit@analytichem.de	
Internet:	www.analytichem.de	
Responsible Department:	Abteilung Produktsicherheit	
1.4. Emergency telephone	For Hazardous Materials [or Danger	ous Goods] Incidents Spill, Leak, Fire,
number:	•	REC Day or Night Within USA and Canada: Canada: +1 703-741-5970 (collect calls

Further Information

This product is a mixture. REACH Registration Number see section 3.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Met. Corr. 1; H290 Skin Corr. 1A; H314 Eye Dam. 1; H318

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling sulphuric acid Hydrochloric acid

Signal word:

Pictograms:





according to Regulation (EC) No 1907/2006

Acid mixture AMG 2

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

Revision date: 01.03.2024

Product code: 34339

Page 2 of 12

Hazard statements

H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
Precautionary statemer	nts
P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with

present and easy to do. Continue rinsing.

Immediately call a POISON CENTER/doctor.

water or shower.

P305+P351+P338

P310

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixtures in aqueous solution

Relevant ingredients

CAS No	Chemical name	Quantity				
	EC No	Index No	REACH No			
	Classification (Regulati	on (EC) No 1272/2008)				
7664-93-9	sulphuric acid	25 - < 30 %				
	231-639-5	016-020-00-8	01-2119458838-20			
	Met. Corr. 1, Skin Corr. 1A, Eye Dam. 1; H290 H314 H318					
7647-01-0	Hydrochloric acid	5 - < 10 %				
	231-595-7	017-002-01-X	01-2119484862-27			
	Skin Corr. 1B, STOT S					

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity	
	Specific Conc.	Limits, M-factors and ATE		
7664-93-9	231-639-5	sulphuric acid	25 - < 30 %	
	oral: LD50 = 2140 mg/kg Skin Corr. 1A; H314: >= 15 - 100 Skin Irrit. 2; H315: >= 5 - < 15 Eye Irrit. 2; H319: >= 5 - < 15			
7647-01-0	231-595-7	Hydrochloric acid	5 - < 10 %	
	,	H314: >= 25 - 100 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 3; H335: >= 10 - 100		

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection!

After inhalation

Provide fresh air.



Acid mixture AMG 2

Revision date: 01.03.2024

Product code: 34339

Page 3 of 12

Call a physician immediately.

After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

Call a physician immediately.

After contact with eyes

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.

Remove contact lenses, if present and easy to do. Continue rinsing. Protect uninjured eye.

After ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

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

Risk of serious damage to eyes. Causes burns. Irritant Cough Dyspnoea Vomiting Gastric perforation Nausea Abdominal pain

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible liquids Hazardous combustion products In case of fire may be liberated: Sulphur oxides Hydrogen chloride (HCI)

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus. Avoid contact with skin, eyes and clothes.

Additional information

Use water spray jet to protect personnel and to cool endangered containers.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice Corrosive to metals.

Do not breathe vapour.



Acid mixture AMG 2

Revision date: 01.03.2024

Product code: 34339

Page 4 of 12

For non-emergency personnel

Provide adequate ventilation. Use personal protection equipment. Avoid contact with skin, eyes and clothes. Remove persons to safety. Emergency procedures Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

Cover drains. Prevent spread over a wide area (e.g. by containment or oil barriers). Collect in closed and suitable containers for disposal.

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation. Do not breathe dust/fume/gas/mist/vapours/spray. Wear breathing apparatus if exposed to vapours/dusts/aerosols.

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

Advice on safe handling

Read label before use. Handle and open container with care. When using do not eat, drink, smoke, sniff. Use personal protection equipment. Use extractor hood (laboratory). Provide adequate ventilation. Avoid contact with skin, eyes and clothes.

Advice on protection against fire and explosion

No special fire protection measures are necessary.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs. Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. Avoid: aerosol or mist formation Do not breathe vapour/aerosol.

Further information on handling

Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed.

Unsuitable container/equipment material: Metal



according to Regulation (EC) No 1907/2006

Acid mixture AMG 2

Revision date: 01.03.2024

Product code: 34339

Page 5 of 12

Further information on storage conditions

Corrosive to metals.

The product develops hydrogen in an aqueous solution in contact with metals.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

CAS No	Substance	ppm	mg/m³	fib/cm³	Category	Origin
7647-01-0	Hydrogen chloride	5	8		TWA (8 h)	
		10	15		STEL (15 min)	
7664-93-9	Sulphuric acid	-	0.05		TWA (8 h)	

DNEL/DMEL values

CAS No	Substance		-	-
DNEL type		Exposure route	Effect	Value
7664-93-9	sulphuric acid			
Worker DNEL,	long-term	inhalation	local	0,05 mg/m³
Worker DNEL,	acute	inhalation	local	0,1 mg/m³
7647-01-0	Hydrochloric acid		-	-
Worker DNEL,	long-term	inhalation	local	8 mg/m³
Worker DNEL, acute		inhalation	local	15 mg/m³
Consumer DNEL, long-term		inhalation	local	8 mg/m³
Consumer DN	EL, acute	inhalation	local	15 mg/m³

PNEC values

CAS No	Substance	
Environmental compartment Value		
7664-93-9	sulphuric acid	
Freshwater 0,003 mg		0,003 mg/l
Marine water		0 mg/l
Freshwater sediment		0,002 mg/kg
Marine sediment		0,002 mg/kg
Micro-organisms in sewage treatment plants (STP) 8,8 mg/l		

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles Face protection shield



according to Regulation (EC) No 1907/2006

Acid mixture AMG 2

Revision date: 01.03.2024

Product code: 34339

Page 6 of 12

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. 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.

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact Trade name/designation: KCL 741 Dermatril® L Recommended material: NBR (Nitrile rubber) 0,11 mm Wearing time with permanent contact: > 480 min

By short-term hand contact Trade name/designation: KCL 741 Dermatril® L Recommended material: NBR (Nitrile rubber) 0,11 mm Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet<(>,<)> supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing. Wash hands before breaks and after work.

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Thermal hazards

No data available

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

No data available
No data available
No data available
No data available
No data available
Х
No data available
No data available
<1



Acid mixture AMG 2					
Revision date: 01.03.2024 Product code: 3	34339	Page 7 of 12			
Viscosity / kinematic:	No data available				
Water solubility:	very soluble				
Solubility in other solvents					
No data available					
Dissolution rate:	No data available				
Partition coefficient n-octanol/water:	No data available				
Dispersion stability:	No data available				
Vapour pressure:	No data available				
Vapour pressure:	No data available				
Density:	~1,2 g/cm³				
Relative density:	No data available				
Bulk density:	No data available				
Relative vapour density:	No data available				
Particle characteristics:	No data available				
9.2. Other information					
Information with regard to physical hazard classes					
Explosive properties					
No data available					
Sustaining combustion:	No data available				
Self-ignition temperature					
Solid:	No data available				
Gas:	No data available				
Oxidizing properties					
No data available					
Other safety characteristics					
Evaporation rate:	No data available				
Solvent separation test:	No data available				
Solvent content:	No data available				
Solid content:	No data available				
Sublimation point:	No data available				
Softening point:	No data available				
Pour point:	No data available				
No data available:					
Viscosity / dynamic:	No data available				
Flow time:	No data available				

Further Information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive to metals. Oxidising agent, strong

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

Metal

The product develops hydrogen in an aqueous solution in contact with metals. Cellulose



Acid mixture AMG 2

Revision date: 01.03.2024

Product code: 34339

Page 8 of 12

10.6. Hazardous decomposition products

In case of fire may be liberated:

SECTION 5: Firefighting measures

Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Toxicocinetics, metabolism and distribution

There are no data available on the mixture itself.

Acute toxicity

Based on available data, the classification criteria are not met. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects). Irritation to respiratory tract (Cough, Dyspnoea)

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Chemical name						
	Exposure route	Dose		Species	Source	Method	
7664-93-9	sulphuric acid						
		LD50 mg/kg	2140		1969 Sep-Oct; 30(5):	The study was performed as part of a ser	

Irritation and corrosivity

Causes severe skin burns and eye damage. Causes serious eye damage.

Sensitising effects

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

Carcinogenic/mutagenic/toxic effects for reproduction

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.

Information on likely routes of exposure

There are no data available on the mixture itself.

Specific effects in experiment on an animal

There are no data available on the mixture itself.

Additional information on tests

There are no data available on the mixture itself.

Practical experience

There are no data available on the mixture itself.

11.2. Information on other hazards

Endocrine disrupting properties

There are no data available on the mixture itself.



Acid mixture AMG 2

Revision date: 01.03.2024

Product code: 34339

Page 9 of 12

Other information

There are no data available on the mixture itself.

Further information

Risk of serious damage to eyes. Causes burns. Irritant Cough Dyspnoea Vomiting Gastric perforation Nausea Abdominal pain

SECTION 12: Ecological information

12.1. Toxicity

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

CAS No	Chemical name								
	Aquatic toxicity	Dose		[h] [d]	Species	Source	Method		
7664-93-9	sulphuric acid				-				
	Acute algae toxicity	ErC50 mg/l	> 100		Desmodesmus subspicatus	Study report (2009)	OECD Guideline 201		
	Acute crustacea toxicity	EC50 mg/l	> 100	48 h	Daphnia magna	Study report (2009)	OECD Guideline 202		
	Fish toxicity	NOEC mg/l	0,025	65 d	Jordanella floridae	Water Research Vol. 11, 612 - 626, 1977	Groups of sexually mature flagfish		
7647-01-0	Hydrochloric acid								
	Acute fish toxicity	LC50	862 mg/l	96 h	Leuciscus idus				

12.2. Persistence and degradability

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

12.4. Mobility in soil

There are no data available on the mixture itself.

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. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

12.7. Other adverse effects

Avoid release to the environment.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste. Send to a physico-chemical treatment facility under observation of official regulations.



according to Regulation (EC) No 1907/2006

Acid mixture AMG 2

Revision date: 01.03.2024

Product code: 34339

Page 10 of 12

Do not allow to enter into surface water or drains.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself. 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)	
<u>14.1. UN number or ID number:</u>	UN 3264
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (sulphuric acid, Hydrochloric acid)
14.3. Transport hazard class(es):	8
14.4. Packing group:	
Hazard label:	8
Classification code:	C1
Special Provisions:	274
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	80
Tunnel restriction code:	E
Inland waterways transport (ADN)	
14.1. UN number or ID number:	UN 3264
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (sulphuric acid,
	Hydrochloric acid)
14.3. Transport hazard class(es):	8
14.4. Packing group:	ll
Hazard label:	8
Classification code:	C1
Special Provisions:	274
Limited quantity:	1L
Excepted quantity:	E2
Marine transport (IMDG)	
14.1. UN number or ID number:	UN 3264
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (sulphuric acid, Hydrochloric acid)
14.3. Transport hazard class(es):	8
14.4. Packing group:	II
Hazard label:	8
Special Provisions:	274
Limited quantity:	1L
Excepted quantity:	E2
EmS:	F-A, S-B
Segregation group:	1 - acids
Air transport (ICAO-TI/IATA-DGR)	
14.1. UN number or ID number:	UN 3264
14.2. UN proper shipping name:	CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (sulphuric acid, Hydrochloric acid)
14.3. Transport hazard class(es):	8
<u>14.4. Packing group:</u> Hazard label:	8
Special Provisions:	o A3 A803
Limited quantity Passenger:	0.5 L
Passenger LQ:	V840
1 assenger LQ.	עדט ו



Acid mixture AMG 2			
Revision date: 01.03.2024	Product code: 34339	Page 11 of 12	
Excepted quantity: IATA-packing instructions - Passenger: IATA-max. quantity - Passenger: IATA-packing instructions - Cargo: IATA-max. quantity - Cargo:	E2 851 1 L 855 30 L		
<u>14.5. Environmental hazards</u>	30 L		
ENVIRONMENTALLY HAZARDOUS:	No		
 <u>14.6. Special precautions for user</u> Warning: strongly corrosive. <u>14.7. Maritime transport in bulk according to</u> not applicable 	o IMO instruments		
SECTION 15: Regulatory information			
15.1. Safety, health and environmental regu	lations/legislation specific for the substance or mixture		
National regulatory information			
Employment restrictions: Water hazard class (D):	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). 1 - slightly hazardous to water		
SECTION 16: Other information			
Changes This data sheet contains changes from	the previous version in section(s): 1.		

Abbreviations and acronyms

Met. Corr: Substance or mixture corrosive to metals Skin Corr: Skin corrosion Eye Dam: Eye damage STOT SE: Specific target organ toxicity - single exposure 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 Harmonized 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 LC50: Lethal concentration, 50% LD50: Lethal dose, 50%

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

Classification	Classification procedure
Met. Corr. 1; H290	On basis of test data
Skin Corr. 1A; H314	Calculation method
Eye Dam. 1; H318	Calculation method



Acid mixture AMG 2

Revision date: 01.03.2024

Product code: 34339

Page 12 of 12

Relevant H and EUH statements (number and full text)

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

Further Information

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. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)