

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Anilin reinst

Revision date: 22.02.2023

Product code: 26010

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

1.1. Product identifier

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Substance name: aniline
REACH Registration Number: 01-2119451454-41-XXXX
CAS No: 62-53-3
Index No: 612-008-00-7
EC No: 200-539-3

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
Street: Stempelstraße 6
Place: D-47167 Duisburg
Telephone: 0203/5194-0
e-mail: info@analytichem.de
Contact person: Abteilung Produktsicherheit
e-mail: produktsicherheit@analytichem.de
Internet: www.analytichem.de
Responsible Department: Abteilung Produktsicherheit
Telefax: 0203/5194-290
Telephone: 0203/5194-107/117

1.4. Emergency telephone number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

No data available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Carc. 2; H351
Muta. 2; H341
Acute Tox. 3; H331
Acute Tox. 3; H311
Acute Tox. 3; H301
Eye Dam. 1; H318
Skin Sens. 1; H317
STOT RE 1; H372
Aquatic Acute 1; H400
Aquatic Chronic 1; H410

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

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Signal word: Danger

Pictograms:



Hazard statements

- H301+H311+H331 Toxic if swallowed, in contact with skin or if inhaled.
- H318 Causes serious eye damage.
- H317 May cause an allergic skin reaction.
- H341 Suspected of causing genetic defects.
- H351 Suspected of causing cancer.
- H372 Causes damage to organs (blood) through prolonged or repeated exposure.
- H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P391 Collect spillage.
- P405 Store locked up.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients

3.1. Substances

Sum formula: C6H7N
Molecular weight: 93,13 g/mol

Hazardous components

CAS No	Chemical name	Quantity
	EC No Index No REACH No	
	Classification (Regulation (EC) No 1272/2008)	
62-53-3	aniline	100 %
	200-539-3 612-008-00-7 01-2119451454-41-	
	Carc. 2, Muta. 2, Acute Tox. 3, Acute Tox. 3, Acute Tox. 3, Eye Dam. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1; H351 H341 H331 H311 H301 H318 H317 H372 H400 H410	

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	
62-53-3	200-539-3	aniline	100 %
		inhalation: ATE = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); dermal: LD50 = 1316 mg/kg; oral: LD50 = 442 mg/kg STOT RE 1; H372: >= 1 - 100 STOT RE 2; H373: >= 0,2 - < 1	

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).

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information

Call a physician immediately.

First aider: Pay attention to self-protection! Remove affected person from the danger area and lay down.

After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator. Call a physician immediately.

After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of 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.

After ingestion

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

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

Irritant, Allergic reactions

Vomiting, Gastrointestinal complaints

Methaemoglobinaemia, Circulatory collapse

Blood pressure drop, Dyspnoea

Spasms

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

Give sodium sulfate as laxative (1 tablespoon in 1 glass of water) with plenty of activated coal.

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

Combustible liquids

Hazardous combustion products

In case of fire may be liberated:

Carbon dioxide (CO₂), Carbon monoxide

Nitrogen oxides (NO_x)

In case of warming:

Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Heating causes rise in pressure with risk of bursting.

5.3. Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Do not breathe vapour/aerosol.

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. Keep container tightly closed.

Use personal protection equipment. Use extractor hood (laboratory).

Do not breathe vapour/aerosol. Provide adequate ventilation.

Use extractor hood (laboratory).

Advice on protection against fire and explosion

Take action to prevent static discharges. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Advice on general occupational hygiene

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.

Further information on handling

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

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Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. If handled uncovered, arrangements with local exhaust ventilation have to be used. Store in a place accessible by authorized persons only.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations.

Further information on storage conditions

Keep cool. Protect from sunlight.

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/m ³	fib/cm ³	Category	Origin
62-53-3	Aniline	2	7.74		TWA (8 h)	
		5	19.35		STEL (15 min)	

Biological limit values

CAS No	Substance	Parameter	Value	Test material	Sampling time
62-53-3	Aniline	p-Aminophenol	0 mg/L	Urine	0-2hr after exposure/shift

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
62-53-3	aniline			
	Worker DNEL, long-term	inhalation	systemic	7,7 mg/m ³
	Worker DNEL, acute	inhalation	systemic	15,4 mg/m ³
	Worker DNEL, long-term	dermal	systemic	2 mg/kg bw/day
	Worker DNEL, acute	dermal	systemic	4 mg/kg bw/day

PNEC values

CAS No	Substance	Value
62-53-3	aniline	
	Freshwater	0,001 mg/l
	Marine water	0 mg/l
	Freshwater sediment	0,153 mg/kg
	Marine sediment	0,015 mg/kg
	Secondary poisoning	2300 mg/kg
	Micro-organisms in sewage treatment plants (STP)	2 mg/l
	Soil	0,033 mg/kg

8.2. Exposure controls

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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.

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 898 Butoject®

Suitable material: Butyl caoutchouc (butyl rubber) 0,7 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 720 Camapren®

Suitable material: CR (polychloroprene, chloroprene rubber) 0,65 mm

Wearing time with occasional contact (splashes): > 60 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

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

Wear fire resistant or flame retardant clothing.

Wash hands and face before breaks and after work and take a shower if necessary.

Draw up and observe skin protection programme.

Respiratory protection

Respiratory protection necessary at: aerosol or mist formation

Filtering device with filter or ventilator filtering device of type: A-P3

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

Physical state:	Liquid
Colour:	brown
Odour threshold:	No data available
Melting point/freezing point:	-6 °C

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Boiling point or initial boiling point and boiling range:	184 °C
Flammability:	No data available
Lower explosion limits:	1,2 vol. %
Upper explosion limits:	11 vol. %
Flash point:	76 °C
Auto-ignition temperature:	530 °C
Decomposition temperature:	No data available
pH-Value (at 20 °C):	8,8
Viscosity / kinematic:	No data available
Water solubility: (at 20 °C)	34 g/L
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: (at 20 °C)	0,5 hPa
Vapour pressure:	No data available
Density (at 20 °C):	1,02 g/cm ³
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

In case of warming:

Vapours are heavier than air, spread along floors and form explosive mixtures with air.

Sustaining combustion:

No data available

Self-ignition temperature

Solid:

not applicable

Gas:

not applicable

Oxidizing properties

Not oxidising.

Other safety characteristics

Evaporation rate:

No data available

Solvent separation test:

No data available

Solvent content:

No data available

Solid content:

0

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

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10.1. Reactivity

In case of warming:
Vapours are heavier than air, spread along floors and form explosive mixtures with air.

10.2. Chemical stability

Protect against: Light

10.3. Possibility of hazardous reactions

Explosionsgefahr mit:
Oxidationsmittel, Peroxiverbindungen, Perchlorate, Perchlorsäure, Salpetersäure, Sauerstoff, organische Nitroverbindungen, Benzol/Benzolderivate
Exotherme Reaktion mit:
Halbmetall-Halogenide, Essigsäureanhydrid, Säuren
Entzündungsgefahr bzw. Entstehung entzündlicher Gase oder Dämpfe mit: Fluor, Erdalkalimetalle, Alkalimetalle

10.4. Conditions to avoid

Radiant heat.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials

Metal

10.6. Hazardous decomposition products

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

Toxicokinetics, metabolism and distribution

No data available

Acute toxicity

Toxic if swallowed.
Toxic in contact with skin.
Toxic if inhaled.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
62-53-3	aniline				
	oral	LD50 442 mg/kg	Rat	Study report (1969)	5 doses, 5 male rats per dose, observati
	dermal	LD50 1316 mg/kg	guinea pig, rabbit	Toxicology and Applied Pharmacology 7, 5	other: 21 CFR 191.10
	inhalation vapour	ATE 3 mg/l			
	inhalation dust/mist	ATE 0,5 mg/l			

Irritation and corrosivity

Causes serious eye damage.
Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause an allergic skin reaction. (aniline)

Carcinogenic/mutagenic/toxic effects for reproduction

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Suspected of causing genetic defects. (aniline)
Suspected of causing cancer. (aniline)
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

Causes damage to organs through prolonged or repeated exposure. (aniline)

Aspiration hazard

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

Information on likely routes of exposure

No data available

Specific effects in experiment on an animal

No data available

Additional information on tests

No data available

Practical experience

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information

No data available

Further information

No data available

SECTION 12: Ecological information

12.1. Toxicity

Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
62-53-3	aniline					
	Acute fish toxicity	LC50 mg/l	36,2	96 h	Oncorhynchus mykiss	Environ Toxicol Chem 3: 243-254. (1984) Continuous flow within 96 h
	Acute algae toxicity	ErC50	175 mg/l	72 h	Chlorella pyrenoidosa	Aquat Toxicol 46(1): 1-10 (1999) OECD Guideline 201
	Acute crustacea toxicity	EC50 mg/l	0,16	48 h	Daphnia magna	Study report (1998) other: EPA Daphnia acute toxicity test.
	Fish toxicity	NOEC mg/l	0,39	32 d	Pimephales promelas	Study report (1991) Early life stage test, no further inform
	Crustacea toxicity	NOEC mg/l	0,016	21 d	Daphnia magna	Study report (1989) other: 21-day Reproduction Test acc. to
	Acute bacteria toxicity	(EC50 mg/l)	65,93	0,5 h	Photobacterium phosphoreum	REACH Registration Dossier Method: other: Microtox Test

12.2. Persistence and degradability

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No data available

12.3. Bioaccumulative potential

No data available

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
62-53-3	aniline	0,91

BCF

CAS No	Chemical name	BCF	Species	Source
62-53-3	aniline	2,6	Danio rerio	Sci Total Environ 10

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

Do not allow to enter into surface water or drains.

Further information

Avoid release to the environment.

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.
Do not empty into 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)

14.1. UN number or ID number:	UN 1547
14.2. UN proper shipping name:	ANILINE
14.3. Transport hazard class(es):	6.1
14.4. Packing group:	II
Hazard label:	6.1
Classification code:	T1
Special Provisions:	279
Limited quantity:	100 mL
Excepted quantity:	E4
Transport category:	2
Hazard No:	60
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number or ID number:	UN 1547
14.2. UN proper shipping name:	ANILINE

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14.3. Transport hazard class(es): 6.1
14.4. Packing group: II
 Hazard label: 6.1
 Classification code: T1
 Special Provisions: 279 802
 Limited quantity: 100 mL
 Excepted quantity: E4

Marine transport (IMDG)

14.1. UN number or ID number: UN 1547
14.2. UN proper shipping name: ANILINE
14.3. Transport hazard class(es): 6.1
14.4. Packing group: II
 Hazard label: 6.1
 Marine pollutant: P
 Special Provisions: 279
 Limited quantity: 100 mL
 Excepted quantity: E4
 EmS: F-A, S-A

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 1547
14.2. UN proper shipping name: ANILINE
14.3. Transport hazard class(es): 6.1
14.4. Packing group: II
 Hazard label: 6.1
 Special Provisions: A113
 Limited quantity Passenger: 1 L
 Passenger LQ: Y641
 Excepted quantity: E4
 IATA-packing instructions - Passenger: 654
 IATA-max. quantity - Passenger: 5 L
 IATA-packing instructions - Cargo: 662
 IATA-max. quantity - Cargo: 60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: Yes
 Danger releasing substance: aniline

14.6. Special precautions for user

Warning: Toxic.

14.7. Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EU regulatory information

Restrictions on use (REACH, annex XVII):
 Entry 3, Entry 75
 Information according to 2012/18/EU (SEVESO III): H2 ACUTE TOXIC
 Additional information: E1

National regulatory information

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Employment restrictions:	Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe employment restrictions for women of child-bearing age.
Water hazard class (D):	2 - obviously hazardous to water
Skin resorption/Sensitization:	Permeates easily through outer skin and causes poisoning. Causes allergic hypersensitivity reactions.

15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 2,6,8,9,11,12,15.

Abbreviations and acronyms

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%

Relevant H and EUH statements (number and full text)

H301	Toxic if swallowed.
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled.
H311	Toxic in contact with skin.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H331	Toxic if inhaled.
H341	Suspected of causing genetic defects.
H351	Suspected of causing cancer.
H372	Causes damage to organs (blood) through prolonged or repeated exposure.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

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.