

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Trade name **Aniline**
 Stock number: A14443, L03790
 CAS Number: 62-53-3
 EC number: 200-539-3
 Index number: 612-008-00-7

1.2 Relevant identified uses of the substance

or mixture and uses advised against. No further relevant information available.
 Identified use: SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet


Manufacturer/Supplier: Alfa Aesar GmbH & Co.KG
 A Johnson Matthey Company
 Zeppelinstr. 7b
 76185 Karlsruhe / Germany
 Tel: +49 (0) 721 84007 280
 Fax: +49 (0) 721 84007 300
 Email: tech@alfa.com
 www.alfa.com
 Product safety Tel + +049 (0) 7275 988687-0
 Carechem 24: +44 (0) 1235 239 670 (Multi-language emergency number)
 Poison Information Center Mainz
 www.giftinfo.uni-mainz.de Telephone: +49(0)6131/19240

Informing department:


1.4 Emergency telephone number:

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture**


Classification according to Regulation (EC) No 1272/2008

 GHS06 skull and crossbones


Acute Tox. 3 H301 Toxic if swallowed.
 Acute Tox. 3 H311 Toxic in contact with skin.
 Acute Tox. 3 H331 Toxic if inhaled.

 GHS08 health hazard

Muta. 2 H341 Suspected of causing genetic defects.
 Carc. 2 H351 Suspected of causing cancer.
 STOT RE 1 H372 Causes damage to organs through prolonged or repeated exposure.

 GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.


 GHS09 environment


Aquatic Acute 1 H400 Very toxic to aquatic life.


 GHS07


Skin Sens. 1 H317 May cause an allergic skin reaction.


Classification according to Directive 67/548/EEC or Directive 1999/45/EC

 T; Toxic
 R23/24/25-48/23/24/25: Toxic by inhalation, in contact with skin and if swallowed. Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.

 Xn; Harmful
 R40-68: Limited evidence of a carcinogenic effect. Possible risk of irreversible effects.

 Xi; Irritant
 R41: Risk of serious damage to eyes.

 Xi; Sensitising
 R43: May cause sensitisation by skin contact.

 N; Dangerous for the environment
 R50: Very toxic to aquatic organisms.

Carc. Cat. 3, Muta. Cat. 3

Information concerning particular hazards

for human and environment: Not applicable

Other hazards that do not result in classification: No information known.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms

Signal word

Hazard statements

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

GHS05, GHS06, GHS08, GHS09

Danger

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H331 Toxic 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 through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

P260 Do not breathe the dust/fume/gas/mist/vapours/spray.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P361 Remove/Take off immediately all contaminated clothing.

P405 Store locked up.

Precautionary statements

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	P501	Dispose of contents/container in accordance with local/regional/national/international regulations.	(Contd. of page 1)
2.3 Other hazards			
Results of PBT and vPvB assessment			
PBT:	Not applicable.		
vPvB:	Not applicable.		

SECTION 3: Composition/information on ingredients

3.1 Substances	
CAS# Designation:	62-53-3 Aniline
Identification number(s):	
EC number:	200-539-3
Index number:	612-008-00-7

SECTION 4: First aid measures

4.1 Description of first aid measures	
General information	Instantly remove any clothing soiled by the product. Remove breathing apparatus only after soiled clothing has been completely removed. In case of irregular breathing or respiratory arrest provide artificial respiration.
After inhalation	Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
After skin contact	Seek immediate medical advice. Instantly wash with water and soap and rinse thoroughly.
After eye contact	Seek immediate medical advice.
After swallowing	Rinse opened eye for several minutes under running water. Then consult doctor.
4.2 Most important symptoms and effects, both acute and delayed	Do not induce vomiting; instantly call for medical help.
4.3 Indication of any immediate medical attention and special treatment needed	No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media	
Suitable extinguishing agents	CO ₂ , extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
5.2 Special hazards arising from the substance or mixture	If this product is involved in a fire, the following can be released: Carbon monoxide and carbon dioxide Nitrogen oxides (NO _x) Possibly Hydrogen cyanide (HCN)
5.3 Advice for firefighters	
Protective equipment:	Wear self-contained breathing apparatus. Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures	Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation
6.2 Environmental precautions:	Do not allow material to be released to the environment without proper governmental permits. Do not allow product to reach sewage system or water bodies. Do not allow to enter the ground/soil.
6.3 Methods and material for containment and cleaning up:	Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose of contaminated material as waste according to item 13. Ensure adequate ventilation.
Prevention of secondary hazards:	Keep away from ignition sources.
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 information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling	Keep containers tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation/exhaustion at the workplace. Open and handle container with care.
Information about protection against explosions and fires:	Keep ignition sources away - Do not smoke.
7.2 Conditions for safe storage, including any incompatibilities	
Storage	
Requirements to be met by storerooms and containers:	No special requirements.
Information about storage in one common storage facility:	Store away from oxidizing agents.
Further information about storage conditions:	Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Store in a locked cabinet or with access restricted to technical experts or their assistants.
7.3 Specific end use(s)	No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems:	Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.
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8.1 Control parameters**Components with critical values that require monitoring at the workplace:**

62-53-3 Aniline (100,0%)	
AGW (Germany)	7,7 mg/m ³ , 2 ppm 2(II);DFG, H, Y
PEL (USA)	19 mg/m ³ , 5 ppm and Homologues; Skin
REL (USA)	And Homologues; See Pocket Guide App. A

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TLV (USA)	7,6 mg/m ³ , 2 ppm Skin; BEI	(Contd. of page 2)
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Ingredients with biological limit values:**62-53-3 Aniline (100,0%)**

BGW (Germany)	100 µg/l B b,c Anilin (aus Hämoglobin-Konjugat freigesetzt)
BEI (USA)	1 mg/l U b,c Anilin (ungebunden) 50 mg/L urine end of shift p-Aminophenol with hydrolysis (background, nonspecific, semi-quantitative) - urine end of shift Aniline with hydrolysis (nonquantitative) - blood end of shift Aniline released from hemoglobin (nonquantitative)

Additional information: No data

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

The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Store protective clothing separately.
Avoid contact with the eyes.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.

Breathing equipment:**Protection of hands:**

Use self-contained respiratory protective device in emergency situations.
Check protective gloves prior to each use for their proper condition.
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.

Material of gloves**Penetration time of glove material****Eye protection:****Body protection:**

Impervious gloves
Not determined
Tightly sealed safety glasses.
Protective work clothing.

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

Form:	Liquid
Colour:	Colourless
Smell:	Not determined
Odour threshold:	Not determined.

pH-value: Not determined.

Change in condition

Melting point/Melting range:	-6 °C
Boiling point/Boiling range:	184 °C
Sublimation temperature / start:	Not determined

Flash point:	76 °C
Inflammability (solid, gaseous)	Not applicable.
Ignition temperature:	530 °C
Decomposition temperature:	Not determined
Self-inflammability:	Not determined.

Danger of explosion: Product is not explosive.

Critical values for explosion:

Lower:	1,2 Vol %
Upper:	11 Vol %
Steam pressure at 20 °C:	0,4 hPa
Density at 20 °C	1,02 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not determined.

Solubility in / Miscibility with

Water at 20 °C: 34 g/l

Partition coefficient (n-octanol/water): Not determined.

Viscosity:

dynamic: Not determined.

kinematic: Not determined.

9.2 Other information No further relevant information available.

SECTION 10: Stability and reactivity**10.1 Reactivity**

No information known.

10.2 Chemical stability

Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:

No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions

No dangerous reactions known

10.5 Incompatible materials:

Oxidizing agents

10.6 Hazardous decomposition products:Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)(Contd. on page 4)
DE/E

Trade name **Aniline**

Possibly Hydrogen cyanide (HCN)

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

Danger by skin resorption.
Fatal if inhaled.
Toxic in contact with skin.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for components in this product.

LD/LC50 values that are relevant for classification:

Oral	LD50	250 mg/kg (rat)
Dermal	LD50	837 mg/kg (rabbit)

Skin irritation or corrosion:

May cause irritation
Causes serious eye damage.

Eye irritation or corrosion:

May cause an allergic skin reaction.

Sensitization:

Suspected of causing genetic defects.

Germ cell mutagenicity:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for components in this product.

Carcinogenicity:

Suspected of causing cancer.
EPA-B2: Probable human carcinogen, sufficient evidence from animal studies; inadequate evidence or no data from epidemiologic studies.
ACGIH A3: Animal carcinogen: Agent is carcinogenic in experimental animals at a relatively high dose, by route(s) of administration, at site(s), of histologic type(s), or by mechanism(s) not considered relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence suggests that the agent is not likely to cause cancer in humans except under uncommon or unlikely routes or levels of exposure.
IARC-3: Not classifiable as to carcinogenicity to humans.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this product.
The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for components in this product.

Reproductive toxicity:

Causes damage to organs through prolonged or repeated exposure.

Specific target organ system toxicity - repeated exposure:**Specific target organ system toxicity - single exposure:**

No effects known.

Aspiration hazard:

No effects known.

Experience with humans:

The Registry of Toxic Effects of Chemical Substances (RTECS) contains multiple dose toxicity data for components in this product.

Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
Toxic in contact with skin.

SECTION 12: Ecological information**12.1 Toxicity**

No further relevant information available.

Aquatic toxicity:

No further relevant information available.

12.2 Persistence and degradability

No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Ecotoxicological effects:

Very toxic for fish

Remark:**Additional ecological information:****General notes:**

Do not allow product to reach ground water, water bodies or sewage system.
Do not allow material to be released to the environment without proper governmental permits.
Water hazard class 2 (Assessment by list): hazardous for water.
Danger to drinking water if even small quantities leak into soil.
Also poisonous for fish and plankton in water bodies.
Avoid transfer into the environment.
Very toxic for aquatic organisms

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**

Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.
Consult state, local or national regulations for proper disposal.

Uncleaned packagings:**Recommendation:**

Disposal must be made according to official regulations.

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

UN1547

14.2 UN proper shipping name**ADR****IMDG, IATA**1547 ANILINE
ANILINE**14.3 Transport hazard class(es)****ADR****Class****Label****IMDG, IATA**6.1 (T1) Toxic substances.
6.1**Class****Label**6.1 Toxic substances.
6.1

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Packing group
ADR, IMDG, IATA

II

14.5 Environmental hazards:

Environmentally hazardous substance, liquid

14.6 Special precautions for user

Warning: Toxic substances.

Kemler Number:

60

EMS Number:

F-A,S-A

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

Transport/Additional information:

ADR
Excepted quantities (EQ): E4
Limited quantities (LQ) LQ17
Transport category 2
Tunnel restriction code D/E
UN "Model Regulation": UN1547, ANILINE, 6.1, II

SECTION 15: Regulatory information

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

Australian Inventory of Chemical Substances

Substance is listed.

Standard for the Uniform Scheduling of Drugs and Poisons

62-53-3 Aniline

S6

National regulations

Information about limitation of use:

Employment restrictions concerning young persons must be observed.
For use only by technically qualified individuals.

Classification according to VbF:

A III

Technical instructions (air):

Class	Share in %
I	100,0

Water hazard class:

Water hazard class 2 (Assessment by list): hazardous for water.

Other regulations, limitations and prohibitive regulations
ELINCS (European List of Notified Chemical Substances)

Substance is not listed.

Substances of very high concern (SVHC)

Substance is not listed.

according to REACH, Article 57

Substance is listed.

REACH - Pre-registered substances

A Chemical Safety Assessment has not been carried out.

15.2 Chemical safety assessment:

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing data specification sheet: Health, Safety and Environmental Department.

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)
ICAO: International Civil Aviation Organization
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
CAS: Chemical Abstracts Service (division of the American Chemical Society)
VbF: Verordnung über brennbare Flüssigkeiten, Österreich (Ordinance on the storage of combustible liquids, Austria)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

DE/E