

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 19.07.2018

Version 5.8

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

1.1 Product identifier

Catalogue No.	103058
Product name	4-(Dimethylamino)benzaldehyde GR for analysis Reag. Ph Eur
REACH Registration Number	01-2120752553-54-xxxx 01-2120752553-54-xxxx
CAS-No.	100-10-7

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

Identified uses	Reagent for analysis
	For additional information on uses please refer to the Merck Chemicals portal (www.merckgroup.com).

1.3 Details of the supplier of the safety data sheet

Company	Merck KGaA * 64271 Darmstadt * Germany * Phone:+49 6151 72-0
Responsible Department	LS-QHC * e-mail: prodsafe@merckgroup.com

1.4 Emergency telephone number	Please contact the regional company representation in your country.
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SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Eye irritation, Category 2, H319

Skin sensitisation, Category 1, H317

Chronic aquatic toxicity, Category 2, H411

For the full text of the H-Statements mentioned in this Section, see Section 16.

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2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word

Warning

Hazard statements

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention

P273 Avoid release to the environment.

P280 Wear protective gloves.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

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

Reduced labelling (≤125 ml)

Hazard pictograms



Signal word

Warning

Hazard statements

H317 May cause an allergic skin reaction.

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Precautionary statements

P280 Wear protective gloves.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

Contains: 4-dimethylaminobenzaldehyde

CAS-No. 100-10-7

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

3.1 Substance

Formula 4-[(CH₃)₂N]C₆H₄CHO C₉H₁₁NO (Hill)

EC-No. 202-819-0

Molar mass 149,19 g/mol

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical name (Concentration)

CAS-No.	Registration number	Classification
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4-dimethylaminobenzaldehyde (>= 80 % - <= 100 %)

100-10-7	01-2120752553-54-
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xxxx	01-	Eye irritation, Category 2, H319
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2120752553-54-xxxx	Skin sensitisation, Category 1, H317
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Chronic aquatic toxicity, Category 2, H411
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For the full text of the H-Statements mentioned in this Section, see Section 16.

3.2 Mixture

Not applicable

SECTION 4. First aid measures

4.1 Description of first aid measures

After inhalation: fresh air.

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In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Consult a physician.

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The following applies to aromatic amines in general: systemic effect: methaemoglobinaemia with headache, cardiac dysrhythmia, drop in blood pressure, dyspnoea, and spasms, principal symptom: cyanosis (blue discolouration of the blood).
irritant effects, Allergic reactions, CNS disorders

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water, Foam, Carbon dioxide (CO₂), Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

Fire may cause evolution of:

nitrogen oxides

5.3 Advice for firefighters

Special protective equipment for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

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Further information

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Observe label precautions.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Tightly closed. Dry.

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Recommended storage temperature see product label.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection

Safety glasses

Hand protection

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

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The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

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).

Other protective equipment

protective clothing

Respiratory protection

required when dusts are generated.

Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls

Do not let product enter drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	powder
Colour	greenish-blue to dark grey
Odour	characteristic

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Odour Threshold	not determined
pH	No information available.
Melting point	ca. 70,7 °C at 1.013 hPa Method: OECD Test Guideline 102
Boiling point/boiling range	ca. 310 °C at 1.013 hPa Method: OECD Test Guideline 103
Flash point	No information available.
Evaporation rate	No information available.
Flammability (solid, gas)	does not ignite Flammability (solids)
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	< 0,1 hPa at 20 °C Method: OECD Test Guideline 104 0,21 Pa at 40 °C Method: OECD Test Guideline 104
Relative vapour density	No information available.

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Density	ca.1,22 g/cm ³ at ca. 20,1 °C Method: OECD Test Guideline 109
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Relative density	No information available.
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Water solubility	ca.0,8 g/l at 20 °C Method: OECD Test Guideline 105
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Partition coefficient: n-octanol/water	log Pow: 1,8 (23 °C) OECD Test Guideline 107 Bioaccumulation is not expected.
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Auto-ignition temperature	No information available.
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Decomposition temperature	ca.355 - 485 °C Method: OECD Test Guideline 113 GLP: yes
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Viscosity, dynamic	No information available.
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Explosive properties	Not classified as explosive.
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Oxidizing properties	none
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9.2 Other data

Ignition temperature	445 °C
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Bulk density	ca.350 kg/m ³
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Particle size	Mean particle size 297,8 µm Method: OECD Test Guideline 110
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SECTION 10. Stability and reactivity

10.1 Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Violent reactions possible with:

Strong oxidizing agents, Bases

10.4 Conditions to avoid

no information available

10.5 Incompatible materials

no information available

10.6 Hazardous decomposition products

in the event of fire: See section 5.

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

LD50 Rat: > 2.000 mg/kg

OECD Test Guideline 423

Acute inhalation toxicity

Symptoms: Possible damages:, mucosal irritations

Acute dermal toxicity

This information is not available.

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Skin irritation

In vitro study

Result: negative

OECD Test Guideline 439

Eye irritation

Causes serious eye irritation.

In vitro study

Result: Eye irritation

OECD Test Guideline 492

In vitro study

Result: non-corrosive

OECD Test Guideline 437

Sensitisation

Local lymph node assay (LLNA) Mouse

Result: positive

Method: OECD Test Guideline 429

May cause an allergic skin reaction.

Germ cell mutagenicity

Genotoxicity in vitro

Ames test

Escherichia coli/Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 471

Carcinogenicity

This information is not available.

Reproductive toxicity

This information is not available.

Teratogenicity

This information is not available.

Specific target organ toxicity - single exposure

This information is not available.

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Product name 4-(Dimethylamino)benzaldehyde GR for analysis Reag. Ph Eur

Specific target organ toxicity - repeated exposure

This information is not available.

Aspiration hazard

This information is not available.

11.2 Further information

The following applies to aromatic amines in general: systemic effect: methaemoglobinaemia with headache, cardiac dysrhythmia, drop in blood pressure, dyspnoea, and spasms, principal symptom: cyanosis (blue discolouration of the blood).

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12. Ecological information

12.1 Toxicity

Toxicity to fish

LC50 Pimephales promelas (fathead minnow): 45,7 mg/l; 96 h

(External MSDS)

Toxicity to daphnia and other aquatic invertebrates

semi-static test EC50 Daphnia magna (Water flea): 1,58 mg/l; 48 h

Analytical monitoring: yes

OECD Test Guideline 202

Toxicity to algae

Growth inhibition ErC50 Desmodesmus subspicatus (green algae): 72,7 mg/l; 72 h

Analytical monitoring: yes

OECD Test Guideline 201

Growth inhibition EC10 Desmodesmus subspicatus (green algae): 42,2 mg/l; 72 h

Analytical monitoring: yes

OECD Test Guideline 201

12.2 Persistence and degradability

Biodegradability

0 %; 28 d; aerobic

OECD Test Guideline 301F

Not readily biodegradable.

12.3 Bioaccumulative potential

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Partition coefficient: n-octanol/water

log Pow: 1,8 (23 °C)

OECD Test Guideline 107

Bioaccumulation is not expected.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

Surface tension

65,4 mN/m

at 20 °C

Method: OECD Test Guideline 115

similar to water

Additional ecological information

Discharge into the environment must be avoided.

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SECTION 13. Disposal considerations

Waste treatment methods

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. Transport information

Land transport (ADR/RID)

- | | |
|-----------------------------------|---|
| 14.1 UN number | UN 3077 |
| 14.2 Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4-DIMETHYLAMINO BENZALDEHYDE) |
| 14.3 Class | 9 |
| 14.4 Packing group | III |
| 14.5 Environmentally hazardous | yes |
| 14.6 Special precautions for user | yes |
| Tunnel restriction code | - |
- Packages smaller than or equal to 5 kg / L , not dangerous goods of Class 9

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

- | | |
|--------------------------------|---|
| 14.1 UN number | UN 3077 |
| 14.2 Proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4-DIMETHYLAMINO BENZALDEHYDE) |
| 14.3 Class | 9 |
| 14.4 Packing group | III |
| 14.5 Environmentally hazardous | yes |

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14.6 Special precautions for user no

Packages smaller than or equal to 5 kg / L , not dangerous goods of Class 9

Sea transport (IMDG)

14.1 UN number UN 3077

14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (4-DIMETHYLAMINO BENZALDEHYDE)

14.3 Class 9

14.4 Packing group III

14.5 Environmentally hazardous yes

14.6 Special precautions for user yes

EmS F-A S-F

Packages smaller than or equal to 5 kg / L , not dangerous goods of Class 9

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

SECTION 15. Regulatory information

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

EU regulations

Major Accident Hazard SEVESO III

Legislation ENVIRONMENTAL HAZARDS

E2

Quantity 1: 200 t

Quantity 2: 500 t

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

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Regulation (EC) No 850/2004 of the European
Parliament and of the Council of 29 April 2004 on
persistent organic pollutants and amending
Directive 79/117/EEC

not regulated

Substances of very high concern (SVHC)

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 $\geq 0.1\%$ (w/w).

National legislation

Storage class 10 - 13

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H411 Toxic to aquatic life with long lasting effects.

Training advice

Provide adequate information, instruction and training for operators.

Labelling

Hazard pictograms



Signal word

Warning

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Hazard statements

H317 May cause an allergic skin reaction.

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Precautionary statements

Prevention

P273 Avoid release to the environment.

P280 Wear protective gloves.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

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

Contains: 4-dimethylaminobenzaldehyde

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Regional representation

This information is given on the authorised Safety Data Sheet for your country.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.