

**Safety data sheet
according to UK REACH**

Printing date 23.03.2025

Revision: 23.03.2025

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

- **1.1 Product identifier**
- **Trade name:** Base/Neutral Calibration Standard (1X1 mL)
- **Part number:** US-207-1
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
Reagents and Standards for Analytical Chemical Laboratory Use
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Agilent Technologies LDA UK Ltd.
5500 Lakeside Cheadle Royal Business Park,
Cheadle, Cheshire, SK8 3GR
United Kingdom
Tel: +44 (0) 345 712 5292
- **Further information obtainable from:**
Telephone: 0800 603 1000
pdl-msds_author@agilent.com
- **1.4 Emergency telephone number:** CHEMTREC®: +44 20 3807 3798

2 Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



Carc. 1B H350 May cause cancer.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

- **Hazard pictograms**



GHS07 GHS08

- **Signal word** Danger

- **Hazard-determining components of labelling:**

dichloromethane

4-chloroaniline

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· Hazard statements

- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H350 May cause cancer.
- H335 May cause respiratory irritation.
- H373 May cause damage to organs through prolonged or repeated exposure.

· Precautionary statements

- P101 If medical advice is needed, have product container or label at hand.
- P102 Keep out of reach of children.
- P103 Read carefully and follow all instructions.
- P260 Do not breathe vapours.
- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
- P308+P313 IF exposed or concerned: Get medical advice/attention.
- P321 Specific treatment (see on this label).
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P312 Call a POISON CENTER/doctor if you feel unwell.
- P332+P313 If skin irritation occurs: Get medical advice/attention.
- P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· Additional information:

Contains aniline, 4-chloroaniline. May produce an allergic reaction.

· 2.3 Other hazards
· Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

· 3.2 Chemical characterisation: Mixtures

· **Description:** Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

| | | |
|------------------------------------|---|----------|
| CAS: 75-09-2 EINECS: 200-838-9 | dichloromethane ☠ Carc. 2, H351; STOT RE 2, H373; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335 | 98.6428% |
| CAS: 62-53-3 EINECS: 200-539-3 | aniline ☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ Muta. 2, H341; Carc. 2, H351; STOT RE 1, H372; ☠ Eye Dam. 1, H318; ☠ Aquatic Acute 1, H400; ⚠ Skin Sens. 1, H317 | 0.1508% |
| CAS: 88-74-4 EINECS: 201-855-4 | o-nitroaniline ☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ STOT RE 2, H373; Aquatic Chronic 3, H412 | 0.1508% |
| CAS: 99-09-2 EINECS: 202-729-1 | m-nitroaniline ☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ STOT RE 2, H373; Aquatic Chronic 3, H412 | 0.1508% |
| CAS: 100-01-6 EINECS: 202-810-1 | p-nitroaniline ☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ STOT RE 2, H373; Aquatic Chronic 3, H412 | 0.1508% |
| CAS: 106-47-8 EINECS: 203-401-0 | 4-chloroaniline ☠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ☠ Carc. 1B, H350; ☠ Aquatic Acute 1, H400; Aquatic Chronic 1, H410; ⚠ Skin Sens. 1, H317 | 0.1508% |

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· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First aid measures

· 4.1 Description of first aid measures

· **General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.

· **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:** If symptoms persist consult doctor.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

5 Firefighting measures

· 5.1 Extinguishing media

· **Suitable extinguishing agents:** Use fire extinguishing methods suitable to surrounding conditions.

· 5.2 Special hazards arising from the substance or mixture

During heating or in case of fire poisonous gases are produced.

· 5.3 Advice for firefighters

· **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

· 6.1 Personal precautions, protective equipment and emergency procedures

Mount respiratory protective device.

· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

· 6.3 Methods and material for containment and cleaning up:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to section 13.

Ensure adequate ventilation.

· 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 disposal information.

7 Handling and storage

· 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

Prevent formation of aerosols.

· **Information about fire - and explosion protection:** Keep respiratory protective device available.

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- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see section 7.

· **Ingredients with limit values that require monitoring at the workplace:**

75-09-2 dichloromethane

| | |
|-----|---|
| WEL | Short-term value: 706 mg/m ³ , 200 ppm Long-term value: 353 mg/m ³ , 100 ppm BMGV, Sk |
|-----|---|

62-53-3 aniline

| | |
|-----|--|
| WEL | Long-term value: 4 mg/m ³ , 1 ppm Sk |
|-----|--|

· **Ingredients with biological limit values:**

75-09-2 dichloromethane

| | |
|------|---|
| BMGV | 30 ppm Medium: end-tidal breath Sampling time: post shift Parameter: carbon monoxide |
|------|---|

- **Additional information:** The lists valid during the making were used as basis.

· **8.2 Exposure controls**

· **Personal protective equipment:**

· **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Wash hands before breaks and at the end of work.
- Store protective clothing separately.
- Do not inhale gases / fumes / aerosols.
- Avoid contact with the eyes and skin.

· **Respiratory protection:**

When used as intended with Agilent instruments the use of the product under normal laboratory conditions and with standard practices does not result in significant airborne exposures and therefore respiratory protection is not needed.

Under an emergency condition where a respirator is deemed necessary, use a NIOSH or equivalent approved device equipped with appropriate organic or acid gas cartridge.

· **Protection of hands:**

Although not recommended for constant contact with the chemicals or for clean up, nitrile gloves 11-13mil thickness are recommended for normal use. The breakthrough time is 1hr. For cleaning a spill where there is direct contact of the chemical, butyl rubber gloves are recommended 12-15mil thickness with breakthrough times exceeding 4 hrs. Supplier recommendations should be followed.

· **Material of gloves**

- For normal use: nitrile rubber, 11-13 mil thickness
- For direct contact with the chemical: butyl rubber, 12-15 mil thickness

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- **Penetration time of glove material**
For normal use: nitrile rubber: 1 hour
For direct contact with the chemical: butyl rubber: > 4 hours
- **Eye protection:**
Safety glasses



Tightly sealed goggles

9 Physical and chemical properties

· 9.1 Information on basic physical and chemical properties

· General Information

· Appearance:

| | |
|-------------------------|-----------------|
| Form: | Fluid |
| Colour: | Colourless |
| Odour: | Like chlorine |
| Odour threshold: | Not determined. |

· **pH-value:** Not determined.

· Change in condition

| | |
|---|----------|
| Melting point/freezing point: | -95.1 °C |
| Initial boiling point and boiling range: | 40 °C |

· **Flash point:** Not applicable.

· **Flammability (solid, gas):** Not applicable.

· **Auto-ignition temperature:** 605 °C

· **Decomposition temperature:** Not determined.

· **Ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product does not present an explosion hazard.

· Explosion limits:

| | |
|---------------|----------|
| Lower: | 13 Vol % |
| Upper: | 22 Vol % |

· **Vapour pressure at 20 °C:** 360 hPa

| | |
|--------------------------|---------------------------|
| Density at 20 °C: | 1.29682 g/cm ³ |
| Relative density | Not determined. |
| Vapour density | Not determined. |
| Evaporation rate | Not determined. |

· **Solubility in / Miscibility with water at 20 °C:**

20 g/l

· **Partition coefficient: n-octanol/water:** Not determined.

· Viscosity:

| | |
|--------------------------|-----------------|
| Dynamic at 20 °C: | 0.43 mPas |
| Kinematic: | Not determined. |

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| | |
|--------------------------------|--|
| · Solvent content: | |
| Organic solvents: | 98.8 % |
| VOC (EC) | 98.79 % |
| Solids content: | |
| | 0.9 % |
| · 9.2 Other information | No further relevant information available. |

10 Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

| | | |
|------------|----------|--------------------|
| Oral | LD50 | 71,184 mg/kg (rat) |
| Dermal | LD50 | 59,105 mg/kg |
| Inhalative | LC50/4 h | 100 mg/L |

75-09-2 dichloromethane

| | | |
|------------|----------|--------------------|
| Oral | LD50 | 1,600 mg/kg (rat) |
| Dermal | LD50 | >2,000 mg/kg (rat) |
| Inhalative | LC50/4 h | 88 mg/L (rat) |

62-53-3 aniline

| | | |
|------------|----------|-------------------------------------|
| Oral | LD50 | 442 mg/kg (rat) |
| Dermal | LD50 | 820 mg/kg (rabbit) |
| Inhalative | LC50/4 h | 175 mg/L (mouse) 3.27 mg/L (rat) |

88-74-4 o-nitroaniline

| | | |
|------|------|-------------------|
| Oral | LD50 | 1,600 mg/kg (rat) |
|------|------|-------------------|

99-09-2 m-nitroaniline

| | | |
|------|------|-----------------|
| Oral | LD50 | 535 mg/kg (rat) |
|------|------|-----------------|

100-01-6 p-nitroaniline

| | | |
|------|------|-----------------|
| Oral | LD50 | 750 mg/kg (rat) |
|------|------|-----------------|

106-47-8 4-chloroaniline

| | | |
|--------|------|-------------------|
| Oral | LD50 | 310 mg/kg (rat) |
| Dermal | LD50 | 3,200 mg/kg (rat) |

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- **Primary irritant effect:**
- **Skin corrosion/irritation**
Causes skin irritation.
- **Serious eye damage/irritation**
Causes serious eye irritation.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity**
May cause cancer.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure**
May cause respiratory irritation.
- **STOT-repeated exposure**
May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

12 Ecological information

- **12.1 Toxicity**
- **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.
- **Additional ecological information:**
- **General notes:**
Water hazard class 3 (German Regulation) (Self-assessment): extremely hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into the ground.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

* 13 Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.

* 14 Transport information

- **14.1 UN-Number**
- **Not Regulated, De minimus Quantities**
- **ADR, IMDG, IATA** - UN1593

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| | |
|---|--|
| · 14.2 UN proper shipping name · ADR · IMDG, IATA | 1593 DICHLOROMETHANE DICHLOROMETHANE |
| · 14.3 Transport hazard class(es) · ADR, IMDG, IATA | |
|  | |
| · Class · Label | 6.1 Toxic substances. 6.1 |
| · 14.4 Packing group · ADR, IMDG, IATA | III |
| · 14.5 Environmental hazards: | Not applicable. |
| · 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Segregation groups | Warning: Toxic substances. 60 F-A,S-A (SGG10) Liquid halogenated hydrocarbons |
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · Transport/Additional information: | |
| · ADR · Limited quantities (LQ) · Excepted quantities (EQ) | 5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml |
| · Transport category · Tunnel restriction code | 2 E |
| · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) | 5L Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml |
| · UN "Model Regulation": | UN 1593 DICHLOROMETHANE, 6.1, III |

15 Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**

· **Regulated explosives precursors**

None of the ingredients is listed.

· **Regulated poisons**

None of the ingredients is listed.

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· **Reportable explosives precursors**

None of the ingredients is listed.

· **Reportable poisons**

None of the ingredients is listed.

· **Directive 2012/18/EU**

· **Named dangerous substances - ANNEX I** None of the ingredients is listed.

· **National regulations:**

· **Additional classification according to Decree on Hazardous Materials, Annex II:**
Carcinogenic hazardous material group III (dangerous).

· **Information about limitation of use:**

Workers are not allowed to be exposed to the hazardous carcinogenic materials contained in this preparation.
Exceptions can be made by the authorities in certain cases.

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

The information contained in this document is based on Agilent's state of knowledge at the time of preparation. No warranty as to its accurateness, completeness or suitability for a particular purpose is expressed or implied.

· **Relevant phrases**

H301 Toxic if swallowed.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H335 May cause respiratory irritation.
H341 Suspected of causing genetic defects.
H350 May cause cancer.
H351 Suspected of causing cancer.
H372 Causes damage to organs through prolonged or repeated exposure.
H373 May cause damage to organs through prolonged or repeated exposure.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

· **Abbreviations and acronyms:**

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)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
ATE: Acute toxicity estimate values
Acute Tox. 3: Acute toxicity – Category 3
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Dam. 1: Serious eye damage/eye irritation – Category 1
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

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Skin Sens. 1: Skin sensitisation – Category 1

Muta. 2: Germ cell mutagenicity – Category 2

Carc. 1B: Carcinogenicity – Category 1B

Carc. 2: Carcinogenicity – Category 2

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1

STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· *** Data compared to the previous version altered.**

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