

according to WHS Regulations

Printing date 28.07.2021

Revision: 28.07.2021

Hazardous according to criteria of Australian Safety and Compensation Council.

1 Identification

- **Product identifier**
- **Trade name:** Standard- GC Benzidines Mix
- **Article number:** N9331032
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**

PerkinElmer, Inc.
710 Bridgeport Avenue
Shelton, Connecticut 06484 USA
CustomerCareUS@perkinelmer.com
203-925-4600

Supplier/Local:

PerkinElmer Australia
Lvl 2, Bldg 5, Brandon Office Park
530-540 Springvale Road
Glen Waverley
Melbourne
VIC 3150
Australia
1-800-033-391
ausales@perkinelmer.com

- **Emergency telephone number:**
CHEMTREC (within US) 800-424-9300
CHEMTREC (from outside US) +1 703-527-3887 (call collect)
CHEMTREC (within AU) +(61)-290372994

2 Hazard(s) Identification

- **Classification of the substance or mixture**



flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



skull and crossbones

Acute Tox. 3 H331 Toxic if inhaled.

(Contd. on page 2)

according to WHS Regulations

Printing date 28.07.2021

Revision: 28.07.2021

Trade name: Standard- GC Benzidines Mix

(Contd. of page 1)



health hazard

Carc. 1A H350 May cause cancer.
STOT SE 1 H370 Causes damage to organs.

· **Label elements**

- **GHS label elements** The product is classified and labelled according to the Globally Harmonised System (GHS).
- **Hazard pictograms** GHS02, GHS06, GHS08
- **Signal word** Danger

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

methanol
benzidine
3,3'-dichlorobenzidine

· **Hazard statements**

H225 Highly flammable liquid and vapour.
H331 Toxic if inhaled.
H350 May cause cancer.
H370 Causes damage to organs.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P241 Use explosion-proof electrical/ventilating/lighting equipment.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Other hazards**

The product does not contain any organic halogen compounds (AOX), nitrates, heavy metal compounds or formaldehydes.

· **Results of PBT and vPvB assessment**

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

3 Composition and Information on Ingredients

- **Chemical characterisation: Mixtures**
- **Description:** Mixture of substances listed below with nonhazardous additions.

· **Dangerous components:**

67-56-1	methanol	99.6%
	Flam. Liq. 2, H225 Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 STOT SE 1, H370	
91-94-1	3,3'-dichlorobenzidine	0.2%
	Carc. 1B, H350 Acute Tox. 4, H312; Skin Sens. 1, H317	


(Contd. on page 3)

according to WHS Regulations

Printing date 28.07.2021

Revision: 28.07.2021

Trade name: Standard- GC Benzidines Mix

92-87-5 benzidine		(Contd. of page 2)
 Carc. 1A, H350  Acute Tox. 4, H302		0.2%

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

4 First Aid Measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Remove breathing equipment only after contaminated clothing have been completely removed.
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**
Supply fresh air or oxygen; call for doctor.
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. Then consult a doctor.
- **After swallowing:** Do not induce vomiting; call for medical help immediately.
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire Fighting Measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental Release Measures

- **Personal precautions, protective equipment and emergency procedures**
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Prevent seepage into sewage system, workpits and cellars.
Dilute with plenty of water.
- **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 item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.

(Contd. on page 4)

AU

according to WHS Regulations

Printing date 28.07.2021

Revision: 28.07.2021

Trade name: Standard- GC Benzidines Mix

(Contd. of page 3)

See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and Storage

- **Handling:**
- **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 ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store in a cool location.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep container tightly sealed.
Store in cool, dry conditions in well sealed receptacles.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls and personal protection

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

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

67-56-1 methanol

WES Short-term value: 328 mg/m³, 250 ppm
Long-term value: 262 mg/m³, 200 ppm
Sk

91-94-1 3,3'-dichlorobenzidine

WES Sk

92-87-5 benzidine

WES Long-term value: -(P) ppm
Sk

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

- **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.

(Contd. on page 5)

according to WHS Regulations

Printing date 28.07.2021

Revision: 28.07.2021

Trade name: Standard- GC Benzidines Mix

(Contd. of page 4)

· **Respiratory protection:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form:	Liquid
Colour:	Transparent
Odour:	Characteristic
Odour threshold:	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/freezing point:	-98 °C
Initial boiling point and boiling range:	64 °C

· **Flash point:** 11 °C

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

· **Ignition temperature:** 455 °C

· **Decomposition temperature:** Not determined.

· **Auto-ignition temperature:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

(Contd. on page 6)

according to WHS Regulations

Printing date 28.07.2021

Revision: 28.07.2021

Trade name: Standard- GC Benzidines Mix

(Contd. of page 5)

· Explosion limits:	
Lower:	5.5 Vol %
Upper:	44 Vol %
· Vapour pressure at 20 °C:	128 hPa
· Density at 20 °C:	0.79 g/cm ³
· Relative density	Not determined.
· Vapour density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with water:	Fully miscible.
· Partition coefficient: n-octanol/water:	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	99.6 %
Solids content:	0.4 %
· Other information	No further relevant information available.

10 Stability and Reactivity

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

11 Toxicological Information

- **Information on toxicological effects**
- **Acute toxicity**

· LD/LC50 values relevant for classification:		
67-56-1 methanol		
Oral	LD50	5628 mg/kg (rat)
Dermal	LD50	15800 mg/kg (rabbit)

- **Primary irritant effect:**
- **Skin corrosion/irritation** No irritant effect.
- **Serious eye damage/irritation** No irritating effect.
- **Respiratory or skin sensitisation** No sensitising effects known.

(Contd. on page 7)

according to WHS Regulations

Printing date 28.07.2021

Revision: 28.07.2021

Trade name: Standard- GC Benzidines Mix

(Contd. of page 6)

· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version:

Toxic

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

Carc. 1A

12 Ecological Information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behaviour in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

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.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **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.

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

14 Transport information

· **UN-Number**

· **ADG, IMDG, IATA**

UN1230

· **UN proper shipping name**

· **ADG**

· **IMDG, IATA**

1230 METHANOL

METHANOL

(Contd. on page 8)

according to WHS Regulations

Printing date 28.07.2021

Revision: 28.07.2021

Trade name: Standard- GC Benzidines Mix

(Contd. of page 7)

· **Transport hazard class(es)**

· **ADG**



· **Class**

3 (FT1) Flammable liquids.

· **Label**

3+6.1

· **IMDG**



· **Class**

3 Flammable liquids.

· **Label**

3/6.1

· **IATA**



· **Class**

3 Flammable liquids.

· **Label**

3 (6.1)

· **Packing group**

· **ADG, IMDG, IATA**

II

· **Environmental hazards:**

· **Marine pollutant:**

No

· **Special precautions for user**

Warning: Flammable liquids.

· **Hazard identification number (Kemler code):**

336

· **EMS Number:**

F-E,S-D

· **Stowage Category**

B

· **Stowage Code**

SW2 Clear of living quarters.

· **Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**

· **ADG**

· **Limited quantities (LQ)**

1L

· **Excepted quantities (EQ)**

Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

· **Transport category**

2

· **Tunnel restriction code**

D/E

(Contd. on page 9)

according to WHS Regulations

Printing date 28.07.2021

Revision: 28.07.2021

Trade name: Standard- GC Benzidines Mix

(Contd. of page 8)

- | | |
|-----------------------------------|---|
| · IMDG | |
| · Limited quantities (LQ) | 1L |
| · Excepted quantities (EQ) | Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml |
| · UN "Model Regulation": | UN 1230 METHANOL, 3 (6.1), II |

15 Regulatory information

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

67-56-1	methanol	99.6%
	Flam. Liq. 2, H225 Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331 STOT SE 1, H370	
91-94-1	3,3'-dichlorobenzidine	0.2%
	Carc. 1B, H350 Acute Tox. 4, H312; Skin Sens. 1, H317	
92-87-5	benzidine	0.2%
	Carc. 1A, H350 Acute Tox. 4, H302	

· **Australia: Priority Existing Chemicals**

None of the ingredients is listed.

- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **Seveso category**
H2 ACUTE TOXIC
P5c FLAMMABLE LIQUIDS
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **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 this hazardous material. Exceptions can be made by the authorities in certain cases.
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.
- **Waterhazard class:** Water hazard class 3 (Self-assessment): extremely hazardous for water.
- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

Disclaimer

The information provided in this Material Safety Data Sheet is based on our present knowledge, and believed to be correct at the date of publication. However, no representation is made

(Contd. on page 10)

according to WHS Regulations

Printing date 28.07.2021

Revision: 28.07.2021

Trade name: Standard- GC Benzidines Mix

(Contd. of page 9)

concerning its accuracy and completeness. It is intended as guidance only, and is not to be considered a warranty or quality specification. All materials may present unknown hazards, and should be used with caution. Although certain hazards are described, we cannot guarantee that these are the only hazards which exist. PerkinElmer Life and Analytical Sciences shall not be held liable for any damage resulting from handling or from contact with the product.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H331 Toxic if inhaled.
H350 May cause cancer.
H370 Causes damage to organs.

· **Department issuing SDS: Environmental, Health and Safety**

· **Contact:**

Within the USA: 1-(800)-762-4000
Outside the USA: 1-(203)-712-8488

· **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 Organisation
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
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
Flam. Liq. 2: Flammable liquids – Category 2
Acute Tox. 3: Acute toxicity – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Sens. 1: Skin sensitisation – Category 1
Carc. 1A: Carcinogenicity – Category 1A
Carc. 1B: Carcinogenicity – Category 1B
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1

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