

Creation Date Oct-2013

Revision Date Oct-2018

Revision Number 2

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identification

| | |
|----------------------------------|------------------------------------|
| Product Description: | <u>Benzyl alcohol</u> |
| Product Grade: | ER, SQ |
| Cat No. : | Q11815,Q11817,Q21685,Q21687,Q2168C |
| Synonyms | Phenylmethanol |
| CAS-No | 100-51-6 |
| EC-No. | 202-859-9 |
| Molecular Formula | C7 H8 O |
| Reach Registration Number | 01-2119492630-38 |

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

| | |
|---------------------------------------|---|
| Recommended Use | Laboratory chemicals. |
| Sector of use | SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites |
| Product category | PC21 - Laboratory chemicals |
| Process categories | PROC15 - Use as a laboratory reagent |
| Environmental release category | ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates) |
| Uses advised against | No Information available |

1.3. Details of the supplier of the safety data sheet

| | |
|-----------------------|--|
| Company | Thermo Fisher Scientific India Pvt. Ltd 403-404, B-wing, Delphi, Hiranandani Business Park, Powai, Mumbai 400076, INDIA. |
| E-mail address | laboratorysolutions@thermofisher.com |

1.4. Emergency telephone number

India Toll Free: 18 00 22 22 30
Chemtrec US: (800) 424-9300
Chemtrec EU: 001 (202) 483-7616

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CLP Classification - Regulation (EC) No 1272/2008

Physical hazards

Based on available data, the classification criteria are not met

Health hazards

| | |
|------------------------------------|-------------------|
| Acute oral toxicity | Category 4 (H302) |
| Acute Inhalation Toxicity - Vapors | Category 4 (H332) |
| Serious Eye Damage/Eye Irritation | Category 2 (H319) |

Environmental hazards

Based on available data, the classification criteria are not met

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2.2. Label elements



Signal Word

Warning

Hazard Statements

H302 - Harmful if swallowed
H332 - Harmful if inhaled
H319 - Causes serious eye irritation

Precautionary Statements

P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
P304 + P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

2.3. Other hazards

No information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

| Component | CAS-No | EC-No. | Weight % | CLP Classification - Regulation (EC) No 1272/2008 |
|----------------|----------|-------------------|----------|---|
| Benzyl alcohol | 100-51-6 | EEC No. 202-859-9 | >95 | Acute Tox. 4 (H302) Acute Tox. 4 (H332) Eye Irrit. 2 (H319) |

| | |
|---------------------------|------------------|
| Reach Registration Number | 01-2119492630-38 |
|---------------------------|------------------|

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

| | |
|----------------------------|--|
| General Advice | If symptoms persist, call a physician. |
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. |
| Ingestion | Clean mouth with water and drink afterwards plenty of water. |
| Inhalation | Move to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur. |
| Protection of First-aiders | Ensure that medical personnel are aware of the material(s) involved, take precautions to |

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protect themselves and prevent spread of contamination.

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

Breathing difficulties. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

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

Notes to Physician

Treat symptomatically. Symptoms may be delayed.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Extinguishing media which must not be used for safety reasons

No information available.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors. Containers may explode when heated. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO₂).

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Ensure adequate ventilation.

6.2. Environmental precautions

Should not be released into the environment. Do not flush into surface water or sanitary sewer system.

6.3. Methods and material for containment and cleaning up

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment. Do not get in eyes, on skin, or on clothing. Ensure adequate ventilation. Avoid ingestion and inhalation.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do

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not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Store under an inert atmosphere.

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s):

| Component | Italy | Germany | Portugal | The Netherlands | Finland |
|----------------|-------|---------|----------|-----------------|--|
| Benzyl alcohol | | | | | TWA: 10 ppm 8 tunteina TWA: 45 mg/m ³ 8 tunteina |

| Component | Austria | Denmark | Switzerland | Poland | Norway |
|----------------|---------|---------|-------------|--|--------|
| Benzyl alcohol | | | | TWA: 240 mg/m ³ 8 godzinach | |

| Component | Bulgaria | Croatia | Ireland | Cyprus | Czech Republic |
|----------------|----------------------------|---------|---------|--------|--|
| Benzyl alcohol | TWA: 5.0 mg/m ³ | | | | TWA: 40 mg/m ³ 8 hodinách. Ceiling: 80 mg/m ³ |

| Component | Latvia | Lithuania | Luxembourg | Malta | Romania |
|----------------|--------------------------|-----------------------------------|------------|-------|---------|
| Benzyl alcohol | TWA: 5 mg/m ³ | TWA: 5 mg/m ³ IPRD Oda | | | |

| Component | Russia | Slovak Republic | Slovenia | Sweden | Turkey |
|----------------|---|-----------------|----------|--------|--------|
| Benzyl alcohol | Skin notation MAC: 5 mg/m ³ | | | | |

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

Derived No Effect Level (DNEL) No information available

| Route of exposure | Acute effects (local) | Acute effects (systemic) | Chronic effects (local) | Chronic effects (systemic) |
|------------------------------|-----------------------|--------------------------|-------------------------|----------------------------|
| Oral Dermal Inhalation | | | | |

Predicted No Effect Concentration (PNEC) No information available.

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8.2. Exposure controls

Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection Goggles (European standard - EN 166)
Hand Protection Protective gloves

| Glove material | Breakthrough time | Glove thickness | EU standard | Glove comments |
|----------------|-----------------------------------|-----------------|-------------|-----------------------|
| Viton (R) | See manufacturers recommendations | - | EN 374 | (minimum requirement) |

Skin and body protection Long sleeved clothing

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Respiratory Protection When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

Large scale/emergency use Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced
Recommended Filter type: Organic gases and vapours filter Type A Brown conforming to EN14387

Small scale/Laboratory use Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Recommended half mask:- Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141
When RPE is used a face piece Fit Test should be conducted

Environmental exposure controls Prevent product from entering drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

| | | |
|---------------------------------|---|--|
| Appearance | Light yellow | |
| Physical State | Liquid | |
| Odor | aromatic | |
| Odor Threshold | No data available | |
| pH | No information available | |
| Melting Point/Range | -15 °C / 5 °F | |
| Softening Point | No data available | |
| Boiling Point/Range | 205 °C / 401 °F | |
| Flash Point | 96 °C / 204.8 °F | Method - No information available |
| Evaporation Rate | No data available | |
| Flammability (solid,gas) | Not applicable | Liquid |
| Explosion Limits | Lower 1.3 vol% Upper 13 vol% | |
| Vapor Pressure | 0.13 mbar @ 20 °C | |
| Vapor Density | 3.72 (Air = 1.0) | (Air = 1.0) |

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| | | |
|---|--------------------------|--------|
| Specific Gravity / Density | 1.044 | |
| Bulk Density | Not applicable | Liquid |
| Water Solubility | 40 g/l (20°C) | |
| Solubility in other solvents | No information available | |
| Partition Coefficient (n-octanol/water) | | |
| Component | log Pow | |
| Benzyl alcohol | 1.1 | |
| Autoignition Temperature | 435 °C / 815 °F | |
| Decomposition Temperature | No data available | |
| Viscosity | 6.6 mPa.s at 20 °C | |
| Explosive Properties | No information available | |
| Oxidizing Properties | No information available | |

9.2. Other information

| | |
|-------------------|---------|
| Molecular Formula | C7 H8 O |
| Molecular Weight | 108.14 |

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

None known, based on information available

10.2. Chemical stability

Air sensitive, Hygroscopic.

10.3. Possibility of hazardous reactions

| | |
|--------------------------|--|
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | None under normal processing. |

10.4. Conditions to avoid

Incompatible products. Excess heat. Exposure to moist air or water. Exposure to air.

10.5. Incompatible materials

Strong oxidizing agents.

10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO₂).

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information

(a) acute toxicity;

| | |
|------------|--|
| Oral | Category 4 |
| Dermal | Based on available data, the classification criteria are not met |
| Inhalation | Category 4 |

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|----------------|---------------------------|--------------------------|-----------------------------|
| Benzyl alcohol | LD50 = 1230 mg/kg (Rat) | LD50 = 2 g/kg (Rabbit) | LC50 = 8.8 mg/L (Rat) 4 h |

(b) skin corrosion/irritation; Based on available data, the classification criteria are not met

(c) serious eye damage/irritation; Category 2

(d) respiratory or skin sensitization;

| | |
|-------------|--|
| Respiratory | Based on available data, the classification criteria are not met |
| Skin | Based on available data, the classification criteria are not met |

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| | |
|--|---|
| (e) germ cell mutagenicity; | Based on available data, the classification criteria are not met |
| (f) carcinogenicity; | Not mutagenic in AMES Test Based on available data, the classification criteria are not met There are no known carcinogenic chemicals in this product |
| (g) reproductive toxicity; | Based on available data, the classification criteria are not met |
| (h) STOT-single exposure; | Based on available data, the classification criteria are not met |
| (i) STOT-repeated exposure; | Based on available data, the classification criteria are not met |
| Target Organs | None known. |
| (j) aspiration hazard; | Based on available data, the classification criteria are not met |
| Symptoms / effects, both acute and delayed | Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting |

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecotoxicity effects

This product contains the following substance(s) which are hazardous for the environment. Contains a substance which is: Harmful to aquatic organisms. The product contains following substances which are hazardous for the environment.

| Component | Freshwater Fish | Water Flea | Freshwater Algae | Microtox |
|----------------|---|-----------------------------------|---|----------|
| Benzyl alcohol | LC50: = 10 mg/L, 96h static (Lepomis macrochirus) LC50: = 460 mg/L, 96h static (Pimephales promelas) | EC50: = 23 mg/L, 48h (water flea) | EC50: = 35 mg/L, 3h (Anabaena variabilis) | |

12.2. Persistence and degradability

Persistence Degradation in sewage treatment plant

Readily biodegradable
Soluble in water, Persistence is unlikely, based on information available.
Contains substances known to be hazardous to the environment or not degradable in waste water treatment plants.

12.3. Bioaccumulative potential

Bioaccumulation is unlikely

| Component | log Pow | Bioconcentration factor (BCF) |
|----------------|---------|-------------------------------|
| Benzyl alcohol | 1.1 | No data available |

12.4. Mobility in soil

The product is water soluble, and may spread in water systems. Will likely be mobile in the environment due to its water solubility. Highly mobile in soils

12.5. Results of PBT and vPvB assessment

No data available for assessment.

12.6. Other adverse effects

Endocrine Disruptor Information Persistent Organic Pollutant Ozone Depletion Potential

This product does not contain any known or suspected endocrine disruptors
This product does not contain any known or suspected substance
This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused

Waste is classified as hazardous. Dispose of in accordance with the European Directives

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| | |
|---------------------------------------|---|
| Products | on waste and hazardous waste. Dispose of in accordance with local regulations. |
| Contaminated Packaging | Dispose of this container to hazardous or special waste collection point. |
| European Waste Catalogue (EWC) | According to the European Waste Catalogue, Waste Codes are not product specific, but application specific. |
| Other Information | Do not dispose of waste into sewer. Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. |

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO Not regulated

14.1. UN number
14.2. UN proper shipping name
14.3. Transport hazard class(es)
14.4. Packing group

ADR Not regulated

14.1. UN number
14.2. UN proper shipping name
14.3. Transport hazard class(es)
14.4. Packing group

IATA Not regulated

14.1. UN number
14.2. UN proper shipping name
14.3. Transport hazard class(es)
14.4. Packing group

14.5. Environmental hazards No hazards identified

14.6. Special precautions for user No special precautions required

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

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

International Inventories X = listed

| Component | EINECS | ELINCS | NLP | TSCA | DSL | NDSL | PICCS | ENCS | IECSC | AICS | KECL |
|----------------|-----------|--------|-----|------|-----|------|-------|------|-------|------|------|
| Benzyl alcohol | 202-859-9 | - | | X | X | - | X | X | X | X | X |

National Regulations

WGK Classification WGK Classification Hazardous to water/Class 1

| Component | Germany - Water Classification (VwVwS) | Germany - TA-Luft Class |
|----------------|--|-------------------------|
| Benzyl alcohol | WGK 1 | |

| Component | France - INRS (Tables of occupational diseases) |
|----------------|--|
| Benzyl alcohol | Tableaux des maladies professionnelles (TMP) - RG 84 |

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.

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

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at

FSUB2550

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work

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

SECTION 16: OTHER INFORMATION

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

H302 - Harmful if swallowed

H319 - Causes serious eye irritation

H332 - Harmful if inhaled

Legend

CAS - Chemical Abstracts Service

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

IECSC - Chinese Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

WEL - Workplace Exposure Limit

ACGIH - American Conference of Governmental Industrial Hygienists

DNEL - Derived No Effect Level

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code

OECD - Organisation for Economic Co-operation and Development

BCF - Bioconcentration factor

Key literature references and sources for data

Suppliers safety data sheet, Chemadviser - LOLI, Merck index, RTECS

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

ENCS - Japanese Existing and New Chemical Substances

AICS - Australian Inventory of Chemical Substances

NZIoC - New Zealand Inventory of Chemicals

TWA - Time Weighted Average

IARC - International Agency for Research on Cancer

PNEC - Predicted No Effect Concentration

LD50 - Lethal Dose 50%

EC50 - Effective Concentration 50%

POW - Partition coefficient Octanol:Water

vPvB - very Persistent, very Bioaccumulative

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association

MARPOL - International Convention for the Prevention of Pollution from Ships

ATE - Acute Toxicity Estimate

VOC - Volatile Organic Compounds

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Chemical incident response training.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

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Next Revision Date Oct-2023

Revision Summary SDS section 1 updated and update to Format.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet