



Materials Safety Data Sheet

BENZALDEHYDE

Section 1 - Chemical Product and Company Identification

MSDS Name: Benzaldehyde

CAS No.: 100-52-7

Details of the supplier:

Manufacturer/Supplier: Wuhan Biet Co., Ltd
Room 1004, Block V, Wuhan Furniture Plaza, Qiaokou District,
Wuhan, Hubei, China 430000

For information, call: +86 27 8369 8488

For technical support, call: +86 27 8369 8488

For emergencies in China, call: 112

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	Hazard Symbol
100-52-7	Benzaldehyde	>99%	XN

Section 3 - Hazards Identification

WARNING! MAY CAUSE ALLERGIC SKIN REACTION. HARMFUL IF SWALLOWED OR INHALED. AFFECTS CENTRAL NERVOUS SYSTEM. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT. COMBUSTIBLE LIQUID AND VAPOR.

Target Organs: antigens respiratory mucosa, eyes, skin.

Potential Health Effects

Eye: May cause moderate eye irritation. Causes redness and pain.

Skin: May cause irritation with redness and pain. May cause allergic skin reactions. May have a local anesthetic effect.



Ingestion: May cause sore throat, abdominal pain, nausea, central nervous system depression, convulsions, and respiratory failure. Estimated lethal dose 2 ounces.

Inhalation: May cause irritation to the respiratory tract. Symptoms may include coughing, sore throat, labored breathing, and chest pain. High concentrations have a narcotic effect.

Chronic: Chronic exposure may cause skin effects.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Call a physician if irritation persists.

Skin: Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse. **Ingestion:** If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

Notes to Physician: Blood benzyl alcohol and benzoic acid, and urine hippuric acid may be helpful in diagnosis. Monitor for metabolic acidosis, central nervous system depression, and hypotension.

Section 5 - Fire Fighting Measures

Fire:

Flash point: 64C (147F)

Autoignition temperature: 192C (378F)

Flammable limits in air % by volume:

l_{el}: 1.4

Combustible.

Explosion:

Above the flash point, explosive vapor-air mixtures may be formed. Vapors can flow along surfaces to distant ignition source and flash back. Sealed containers may rupture when heated. An explosion occurred after mixing sodium hydrosulfite, aluminum powder, potassium carbonate and benzaldehyde.

Fire Extinguishing Media:

Water spray, dry chemical, alcohol foam, or carbon dioxide. Water spray may be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.

Special Information:

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained



breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

Section 6 - Accidental Release Measures

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

Section 7 - Handling and Storage

Store in a tightly closed container. Protect against physical damage. Outside or detached storage is preferred. Inside storage should be in a standard flammable liquids storage room or cabinet. Separate from oxidizing materials. Storage and use areas should be No Smoking areas. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

Section 8 - Exposure Controls, Personal Protection

Airborne Exposure Limits:

AIHA Workplace Environmental Exposure Limit:

8-hour TWA: 2 ppm; 15-min STEL: 4 ppm

Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved):

If the exposure limit is exceeded and engineering controls are not feasible, a full facepiece respirator with organic vapor cartridge may be worn up to 50 times the



exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. **WARNING:** Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection:

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

Section 9 - Physical and Chemical Properties

Appearance: Clear, colorless liquid.

Odor: Characteristic odor of volatile oil of almonds.

Solubility: 3.3g/l(20°C)

Specific Gravity: 1.05g/cm³(20°C)

pH: ~5.9(1g/l H₂O)

Boiling Point: 179°C (1013 hPa)

Melting Point: -26°C

Vapor Density (Air=1): 3.66

Vapor Pressure (mm Hg): ~26°C (79F)

Section 10 - Stability and Reactivity

Stability:

Stable under ordinary conditions of use and storage. Turns yellow on keeping. Oxidizes slowly in air to benzoic acid.

Hazardous Decomposition Products:

Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

Performic acid and other oxidizing materials. An explosion occurred after mixing sodium hydrosulfite, aluminum powder, potassium carbonate and benzaldehyde.

Conditions to Avoid:

Heat, flames, ignition sources and incompatibles.



Section 11 - Toxicological Information

Oral rat: LD₅₀: 1300 mg/kg

Irritation data: skin rabbit, standard Draize, 500 mg/24H moderate; investigated as a tumorigen, mutagen.

-----\Cancer Lists\-----

---NTP Carcinogen---

Ingredient	Known	Anticipated	IARC Category
Benzaldehyde (100-52-7)	No	No	None

Section 12 - Ecological Information

Environmental Fate:

When released into the soil, this material may leach into groundwater. When released into the soil, this material may biodegrade to a moderate extent. When released into water, this material may evaporate to a moderate extent. When released into water, this material is expected to readily biodegrade. This material has an estimated bioconcentration factor (BCF) of less than 100. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals. When released into the air, this material is expected to have a half-life between 1 and 10 days. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition.

Section 13 - Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

Section 14 - Transport Information

Domestic (Land, D.O.T.)

**Proper Shipping Name:** BENZALDEHYDE**Hazard Class:** 9**UN/NA:** UN1990**Packing Group:** III**Information reported for product/size:** 4L**International (Water, I.M.O.)**
-----**Proper Shipping Name:** BENZALDEHYDE**Hazard Class:** 9**UN/NA:** UN1990**Packing Group:** III**Information reported for product/size:** 4L**International (Air, I.C.A.O.)**
-----**Proper Shipping Name:** BENZALDEHYDE**Hazard Class:** 9**UN/NA:** UN1990**Packing Group:** III**Information reported for product/size:** 4L**Section 15 - Regulatory Information**

-----\Chemical Inventory Status - Part 1\-----

Ingredient	TSCA	EC	Japan	Australia
Benzaldehyde (100-52-7)	Yes	Yes	Yes	Yes

-----\Chemical Inventory Status - Part 2\-----

Ingredient	Korea	DSL	NDSL	Phil.
Benzaldehyde (100-52-7)	Yes	Yes	No	Yes

-----\Federal, State & International Regulations - Part 1\-----

Ingredient	-SARA 302- RQ	TPQ	-----SARA 313----- List	Chemical Catg.
Benzaldehyde (100-52-7)	No	No	No	No

-----\Federal, State & International Regulations - Part 2\-----



Ingredient	CERCLA	-RCRA- 261.33	-TSCA- 8(d)
----- Benzaldehyde (100-52-7)	No	No	Yes

Chemical Weapons Convention: No TSCA 12(b): No CDTA: Yes
SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No
Reactivity: No (Pure / Liquid)

Australian Hazchem Code: None allocated.

Poison Schedule: None allocated.

WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

Section 16 - Additional Information

NFPA Ratings: Health: **2** Flammability: **2** Reactivity: **0**

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event WUHAN BIET CO.,LTD be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if WUHAN BIET CO.,LTD has been advised of the possibility of such damages.