	MATERIAL SAFETY DATA SHEET	MSDS No.	M-01
	BISPHENOL-A	Effective From	20/04/2021

1. IDENTIFICATION

A. Product name

- Bisphenol-A [BPA]

B. Recommended use and restriction on use

- General use : Raw materials for polycarbonate and epoxy resins
 - Restriction on use : Not available

C. Manufacturer / Supplier / Distributor information

o Supplier information

- Company name : Bloomchemag BV
 - Address : Sint-Antoniusstraat 16 b1
 : B-2400, Mol, Belgium
 - Telephone number : +91 72919 74484 / +9172919 74050
 - E-mail address : info@bloomchemag.com

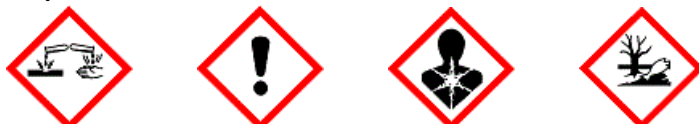
2. HAZARD IDENTIFICATION

A. GHS Classification

- Serious eye damage/irritation : Category 1
 - Skin sensitization : Category 1
 - Reproductive toxicity : Category 1B
 - Specific target organ toxicity(Single exposure) : Category 3(Respiratory tract irritation)
 - Chronic aquatic toxicity : Category 2

B. GHS label elements

o Hazard symbols



o Signal words

- Danger

o Hazard statements


- H317 May cause an allergic skin reaction
 - H318 Causes serious eye damage
 - H335 May cause respiratory irritation.
 - H360 May damage fertility or the unborn child
 - H411 Toxic to aquatic life with long lasting effects

o Precautionary statements

1) Prevention

- P201 Obtain special instructions before use.
 - P202 Do not handle until all safety precautions have been read and understood.
 - P261 Avoid breathing dust/fume.
 - P271 Use only outdoors or in a well-ventilated area.
 - P272 Contaminated work clothing should not be allowed out of the workplace.
 - P273 Avoid release to the environment.
 - P280 Wear protective gloves/protective clothing/eye protection/face protection.
 - P281 Use personal protective equipment as required.

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2) Response

- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P304+P340 IF INHALED: Remove victim 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.
- P308+P313 If exposed or concerned: Get medical advice/attention.
- P310 Immediately call a POISON CENTER or doctor/physician.
- P312 Call a POISON CENTER or doctor/physician if you feel unwell.
- P321 Specific treatment
- P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
- P363 Wash contaminated clothing before reuse.
- P391 Collect spillage.

3) Storage

- P403+P233 Store in a well-ventilated place. Keep container tightly closed.
- P405 Store locked up.

4) Disposal

- P501 Dispose of contents/container in accordance with local/regional/national/international regulation

C. Other hazards which do not result in classification : (NFPA Classification)

o NFPA grade (0 ~ 4 level)

- Health : 2 , Flammability : 1, Reactivity : 0

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Trade names and Synonyms	CAS No.	Content(%)
4,4'-(1-Methylethylidene)bisphenol	4,4'-Dihydroxydiphenylpropane, Bisphenol A	80-05-7	=<100

4. FIRST AID MEASURES

A. Eye contact


- Do not rub your eyes.
- Immediately flush eyes with plenty of water for at least 15 minutes and call a doctor/physician.
- Get medical attention immediately.
- Remove contact lenses if worn.

B. Skin contact

- Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.
- Wash contaminated clothing thoroughly before re-using.
- Get medical attention immediately.
- Go to the hospital immediately if symptoms(flare, irritate) occur.
- Remove contaminated clothing, shoes and isolate.
- Wash thoroughly after handling.
- Wear gloves when washing the patient, and please avoid contact with contaminated clothing.

C. Inhalation contact

- When exposed to large amounts of steam and mist, move to fresh air.
- Take specific treatment if needed.

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- Get medical attention immediately.
- If breathing is stopped or irregular, give artificial respiration and supply oxygen.

D. Ingestion contact

- Please be advised by doctor whether induction of vomit is demanded or not.
- Rinse your mouth with water immediately.
- Get medical attention immediately.

E. Delayed and immediate effects and also chronic effects from short and long term exposure

- Not available

F. Notes to physician

- Notify medical personnel of contaminated situations and have them take appropriate protective measures.
- If exposed or concerned, get medical attention/advice.

5. FIREFIGHTING MEASURES

A. Suitable (Unsuitable) extinguishing media

- Dry chemical, carbon dioxide, regular foam extinguishing agent, spray
- Avoid use of water jet for extinguishing

B. Specific hazards arising from the chemical

- Not available

C. Special protective actions for firefighters

- Keep unauthorized personnel out.
- Notify your local firestation and inform the location of the fire and characteristics hazard.
- In case of conflagration, use automatic fire sprinkler. Major fire may require withdrawal, allowing the object itself to burn.
- Avoid inhalation of materials or combustion by-products.
- Do not access if the tank on fire.
- Keep containers cool with water spray.

6. ACCIDENTAL RELEASE MEASURES

A. Personal precautions, protective equipment and emergency procedures


- Wear proper personal protective apparatus as indicated in Section 8 and avoid skin contact and inhalation.
- Ventilate closed spaces before entering.
- Do not touch spilled material. Stop leak if you can do it without risk.
- Handle the damaged containers or spilled material after wearing appropriate protective equipment
- Avoid skin contact and inhalation.
- Keep unauthorized people away, isolate hazard area and deny entry.

B. Environmental precautions

- Prevent runoff and contact with waterways, drains or sewers.
- If large amounts have been spilled, inform the relevant authorities.

C. Methods and materials for containment and cleaning up

- Large spill : Stay upwind and keep out of low areas. Dike for later disposal.
- Notification to central government, local government. When emissions at least of the standard amount
- Dispose of waste in accordance with local regulation.
- Appropriate container for disposal of spilled material collected.
- Small liquid state spills: Appropriate container for disposal of spilled material collected.
- Put the spilled material in an appropriate containers and clean the contaminated area
- Prevent the influx to waterways, sewers, basements or confined spaces.
- Spilled material should be treated as a potential risk of waste collected.

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7. HANDLING AND STORAGE

A. Precautions for safe handling

- Wash thoroughly after handling.
- Avoid direct physical contact.
- Avoid contact with incompatible materials.
- Contaminated work clothing should not be allowed out of the workplace.

B. Conditions for safe storage, including any incompatibilities

- Do not apply direct heat.
- Store according to current laws and regulations
- Do not apply any physical shock to container.
- Avoid direct sunlight.
- Keep in the original container.
- Collected them in sealed containers.
- Store away from water and sewer.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

A. Exposure limits

- o **ACGIH TLV**
 - Not available
- o **OSHA PEL**
 - Not available

B. Engineering controls


- Business owner is recommended to maintain below recommended exposure limits for the working place with general exhaust of gas/vapour/mist/fume.

C. Individual protection measures, such as personal protective equipment


- o **Respiratory protection**
 - Under conditions of frequent use or heavy exposure, Respiratory protection may be needed.
 - Respiratory protection is ranked in order from minimum to maximum.
 - Consider warning properties before use.
 - Dust, mist, fume-purifying respiratory protection
 - Air-purifying respirator with high-efficiency particulate filtering
 - Any respiratory protection with a electromotion fan(for dust, mist, fume-purifying)
 - Self-contained breathing apparatus with a corpuscle filter of high efficiency
 - For Unknown Concentration or Immediately Dangerous to Life or Health : Any supplied-air respirator with full facepiece and operated in a pressure-demand or other positive-pressure mode in combination with a separate escape supply. Any self-contained breathing apparatus with a full facepiece.
- o **Eye protection**
 - Wear primary eye protection such as splash resistant safety goggles with a secondary protection face shield.
 - Provide an emergency eye wash station and quick drench shower in the immediate work area.
- o **Hand protection**
 - Wear appropriate glove.
- o **Skin protection**
 - Wear appropriate clothing.
- o **Others**
 - Not available

9. PHYSICAL AND CHEMICAL PROPERTIES

A. Appearance	
- Appearance	Solid, a crystal flask, powder
- Color	White

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B. Odor	Specific odor (a mild phenolic odor)
C. Odor threshold	Not available
D. pH	pKa=9.73

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E. Melting point/Freezing point	152-153°C
F. Initial Boiling Point/Boiling Ranges	250 °C ~ 252 °C
G. Flash point	207 °C
H. Evaporation rate	Not available
I. Flammability(solid, gas)	Not available
J. Upper/Lower Flammability or explosive limits	Upper exp. Limit: 4% Lower exp. Limit: 0.6%
K. Vapour pressure	5x10 ⁻⁶ kPa at 20°C
L. Solubility	120mg/L at 25°C
M. Vapour density	8.1 (Air=1)
N. Specific gravity(Relative density)	Relative density: 1.195 g/cm ³ at 25 °C
O. Partition coefficient of n-octanol/water	LogKow=3.4 at 25°C
P. Autoignition temperature	600 °C
Q. Decomposition temperature	Not available
R. Viscosity	Not available
S. Molecular weight	228.29

10. STABILITY AND REACTIVITY

A. Chemical Stability

- This material is stable under recommended storage and handling conditions.

B. Possibility of hazardous reactions

- Hazardous Polymerization will not occur.

C. Conditions to avoid

- Avoid contact with incompatible materials and condition.
- Avoid : Accumulation of electrostatic charges, Heating, Flames and hot surfaces

D. Incompatible materials

- Not available

E. Hazardous decomposition products

- May emit flammable vapour if involved in fire.


11. TOXICOLOGICAL INFORMATION

A. Information on the likely routes of exposure


- (Respiratory tracts)
 - May cause respiratory irritation.
- (Oral)
 - Not available
- (Eye·Skin)
 - Causes serious eye damage
 - May cause an allergic skin reaction

B. Delayed and immediate effects and also chronic effects from short and long term exposure

- Acute toxicity
 - * Oral
 - Product (ATEmix) : 2000mg/kg < ATEmix <= 5000mg/kg
 - [4,4'-(1-Methylethylidene)bisphenol] : LD50 = 3250 mg/kg Rat (HSDB)
 - * Dermal
 - Product (ATEmix) : 2000mg/kg < ATEmix <= 5000mg/kg
 - [4,4'-(1-Methylethylidene)bisphenol] : LD50 = 3000 mg/kg rabbit (HSDB)
 - * Inhalation
 - Not available

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- **Skin corrosion/irritation**
- Not available
- **Serious eye damage/irritation**

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- Causes serious eye damage
- **Respiratory sensitization**
 - Not available
- **Skin sensitization**
 - May cause an allergic skin reaction
- **Carcinogenicity**
 - * **IARC**
 - Not available
 - * **OSHA**
 - Not available
 - * **ACGIH**
 - Not available
 - * **NTP**
 - Not available
 - * **EU CLP**
 - Not available
- **Germ cell mutagenicity**
 - Not available
- **Reproductive toxicity**
 - May damage fertility or the unborn child
- **STOT-single exposure**
 - May cause respiratory irritation.
- **STOT-repeated exposure**
 - Not available
- **Aspiration hazard**
 - Not available

12. ECOLOGICAL INFORMATION

A. Ecotoxicity

- **Fish**
 - [4,4'-(1-Methylethylidene)bisphenol] : LC50 = 9.4 mg/ℓ 96 hr
- **Crustaceans**
 - [4,4'-(1-Methylethylidene)bisphenol] : LC50 = 1.1 mg/ℓ 96 hr Mysid Shrimp (NITE: MOE Risk Assessment vol. 3 (2004) and others)
- **Algae**
 - Not available

B. Persistence and degradability

- **Persistence**
 - Not available
- **Degradability**
 - [4,4'-(1-Methylethylidene)bisphenol] : BOD5/COD = 0.286

C. Bioaccumulative potential


- **Bioaccumulative potential**
 - [4,4'-(1-Methylethylidene)bisphenol] : BCF = 67.7 (NITE: existing chemical safety inspections data)
- **Biodegradation**
 - [4,4'-(1-Methylethylidene)bisphenol] : TOC: 76% (average of 18 days after) (CERI/NITE Hazard Assessment Report (2005))

D. Mobility in soil

- Not available


E. Other adverse effects

- Not available

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13. DISPOSAL CONSIDERATIONS

A. Disposal methods

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- Since more than two kinds of designated waste is mixed, it is difficult to treat separately, then can be reduction or stabilization by incineration or similar process.
- If water separation is possible, pre-process with Water separation process.
- Dispose by incineration.

B. Special precautions for disposal

- The user of this product must dispose by oneself or entrust it to a waste disposer, a person who recycles other's waste or establishes and operates waste disposal facilities.
- Dispose of waste in accordance with all applicable laws and regulations.

14. TRANSPORT INFORMATION

A. UN No. (IMDG)

- 3077

B. Proper shipping name

- ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S.

C. Hazard Class

- 9

D. IMDG Packing group

- III

E. Marine pollutant

- Applicable
- Applicable


F. Special precautions for user related to transport or transportation measures

- Local transport follows in accordance with Dangerous goods Safety Management Law.
- Package and transport follow in accordance with Department of Transportation (DOT) and other regulatory agency requirements.
- Air transport(IATA): Not subject to IATA regulations.
- EmS FIRE SCHEDULE : F-A (General fire schedule)
- EmS SPILLAGE SCHEDULE : S-F (Water-soluble marine pollutants)


15. REGULATORY INFORMATION

A. National and/or international regulatory information

- o **POPs Management Law**
 - Not applicable
- o **Information of EU Classification**
 - * **Classification**
 - [4,4'-(1-Methylethylidene)bisphenol] : H361f,H335,H318,H317,
- o **U.S. Federal regulations**
 - * **OSHA PROCESS SAFETY (29CFR1910.119)**
 - Not applicable
 - * **CERCLA Section 103 (40CFR302.4)**
 - Not applicable
 - * **EPCRA Section 302 (40CFR355.30)**
 - Not applicable
 - * **EPCRA Section 304 (40CFR355.40)**
 - Not applicable
 - * **EPCRA Section 313 (40CFR372.65)**
 - [4,4'-(1-Methylethylidene)bisphenol] : Applicable
- o **Rotterdam Convention listed ingredients**
 - Not applicable

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- **Stockholm Convention listed ingredients**
 - Not applicable
- **Montreal Protocol listed ingredients**

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- Not applicable

16. OTHER INFORMATION

A. Reference

- The information contained herein is believed to be accurate. It is provided independently of any sale of the product for purpose of hazard communication. It is not intended to constitute performance information concerning the product. No express warranty, or implied warranty of merchantability or fitness for a particular purpose is made with respect to the product or the information contained herein.
- This Safety Data Sheet was compiled with data and information from the following sources: KOSHA, NITE, ESIS, NLM, SIDS, IPCS

B. Issue date

- 2019-06-11

C. Revision number and Last date revised

- Not applicable

D. Other

- This SDS is prepared according to the Globally Harmonized System (GHS).