

# Material Safety Data Sheet



MSDS No. : 3030E  
Revision : 2  
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## 1. Product and company identification

Product name **YMC-BioPro (Packings)**  
Manufacturer **YMC Co., Ltd**  
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Material Uses **Research & Development, Industry use**

## 2. Hazards identification

GHS Classification **Flammable liquid —Category 3**  
**Eye damage/Eye Irritation —Category 2**  
**Germ cell mutagenicity —Category 1**  
**Reproductive toxicity —Category 1**  
**Specific target organ toxicity (Repeated exposure) —Category 1(Liver), Category 2(Peripheral nervous system)**

Hazard symbol



**Warning!**

Emergency overview

Flammable liquid and vapor.  
Causes serious eye irritation.  
May cause genetic effects.  
May damage fertility or the unborn child.  
Causes damage to organs through prolonged or repeated exposure. (Liver)  
May cause damage to organs through prolonged or repeated exposure. (Peripheral nervous system)

Remarks

<Personal precaution>  
Avoid exposure - obtain and understand special instructions before use. Keep away from heat, sparks and open flame. Wear appropriate protective equipment such as gloves, safety glasses, lab coat. Avoid prolonged contact with skin and breathing of vapor or spray mist. Do not eat, drink or smoke before handling the product. Wash hands thoroughly after handling the product.  
<First-aid>  
EYE CONTACT: Immediately flush eyes with plenty of water for at least 10 minutes, lifting the lids occasionally. Check for and remove contact lenses, if possible./SKIN CONTACT: Remove contaminated clothing and shoes. Wash with plenty of water.  
/EXPOSURE OR POSSIBLE EXPOSURE: Seek medical attention.  
<Storage>  
Store and lock in a cool, dry, well-ventilated area.  
<Disposal>  
Dispose of the product and containers via a licensed waste disposal contractor.

Other toxicity

Not applicable.

## 3. Composition/Information on ingredients

Chemical Name **Hydrophilic acrylic polymers (20% Ethanol suspension)**

Ingredient	Chemical Name	Chemical Formula	% by weight	CAS No
	Hydrophilic acrylic polymers	N/A	15-20	N/A
	Ethanol (Ethyl alcohol)	C <sub>2</sub> H <sub>5</sub> OH	10-15	64-17-5
	Purified water	H <sub>2</sub> O	65-70	N/A

N/A; Not Applicable or Not Available

<b>4. First-aid measures</b>	
INHALATION	Remove victim to fresh air and lay in position to secure breathing. Seek medical attention immediately.
EYE CONTACT	Immediately flush eyes with plenty of water for at least 10 minutes, lifting the lids occasionally. Check for and remove contact lenses, if possible. Seek medical attention immediately.
SKIN CONTACT	Flush thoroughly with a large amount of water. Immediately remove contaminated clothing. Seek medical attention if needed.
INGESTION	Wash mouth with plenty of water. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband. Seek medical attention immediately.
First Aid Instructions	Wear appropriate protective equipment such as gloves, safety glasses, etc. when administering first aid.
Notes to Physician	None
<b>5. Fire-fighting measures</b>	
Extinguishing media	Dry chemical, carbon dioxide, foam, or sand. Water spray to cool fire-exposed containers.
Extinguishing media to be avoided	Water jet.
Unusual hazards	None known
Special fire-fighting procedures	Keep personnel removed and upwind of any fire and isolate the area. Cool surrounded area with water spray to prevent increasing temperature of equipment and containers. Take appropriate measures to avoid discharging the effluent into the environment.
Protection of fire-fighters	Fire-fighters should battle the fire from upwind. Fire-fighters should wear appropriate protective equipment such as heat resistant gloves and full face piece, positive pressure, self-contained breathing apparatus (SCBA).
<b>6. Accidental release measures</b>	
Personal precaution / Personal protective equipment and Emergency measures.	Evacuate and isolate the area. Keep unnecessary and unprotected personnel from entering. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment. Wear protective equipment such as rubber gloves and boots, protective goggles, full protective suit when handling spilled material. Remove all sources of ignition such as sparks, flames, heat, etc and provide adequate ventilation. Avoid breathing vapor or mist.
Environmental precautions Method of containment and cleanup	Avoid dispersal of spilled material and runoff into the soil, waterways and drains. Stop discharge. Transport containers from the area after confirming their safe handling. Dilute spill with water and wipe, or absorb with incombustible material such as sand or diatom earth, and collect in suitable containers (e.g. stainless steel or plastic). Use appropriate procedures to dispose the spilled material. See section 13.
<b>7. Handling and storage</b>	
Handling	<General handling precautions> Always wear proper protective equipment such as protective gloves and goggles/mask when handling. Avoid eye, skin, mucous membrane and clothing contact. Avoid breathing vapor or mist. Do not eat, drink or smoke in areas handling the product including storage, work areas. Keep away from all sources of ignition such as sparks, flame and heat. Wash thoroughly after handling. <Ventilation> Use only in a well-ventilated area equipped with local exhaust ventilation. <Other precautions> Users of this product must be properly trained for safety measures.
Storage	<Storage requirement> Store and lock in cool dry, well-ventilated area protected from direct sunlight. <Container> Store in original container or other suitable containers designed for liquid storage (e.g. stainless steel or polyethylene containers). Keep container tightly closed and sealed to prevent leakage.

<b>8. Exposure control /Personal protection</b>					
Engineering controls	Use process enclosures or well-ventilated facilities with adequate general or local exhaust ventilation. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use antistatic device and explosion proof equipment to prevent fire or explosion.				
Concentration limits	Not determined				
Exposure limits	TLV-TWA	1000ppm	ACGIH(2005)	(Ethanol)	
Personal protective equipment	<Respiratory protection> Organic vapor respirators or positive pressure, self-contained breathing apparatus. Respirator selection must be based on known or anticipated exposure levels. <Protective Gloves> Rubber gloves (e.g. butyl rubber, chloroprene rubber) <Eye protection> Goggle <Skin protection> Vinyl protective clothing, lab coat or antistatic protective clothing.				
<b>9. Physical and chemical properties</b>					
Physical state	Liquid (particle suspension)				
Color	White (in suspension)				
Odor(threshold)	Alcohol				
pH	Not available				
Melting Point	Not available				
Boiling Point	Not available				
Flash Point	(closed cup)37.7°C				
Evaporation Rate	Not available				
Flammability (Solid, gas)	Not available				
LEL/UEL	(Upper)Not available (Lower)Not available				
Vapor Pressure	Not available				
Vapor Density	Not available				
Specific Gravity (relative density)	Not available				
Solubility	Not available /Easily suspended to water (hot/cold) and organic solvent (alcohol, etc.)				
Partition Coefficient octanol/water	Not available				
Decomposition Temperature	Not available				
Autoignition temperature	Not available				
Viscosity	Not available				
Other data	None				
<b>10. Stability and reactivity</b>					
Stability	Stable at normal handling and storage conditions.				
Hazardous polymerization	Will not occur to produce hazardous substance at normal handling and storage conditions.				
Conditions to Avoid	Avoid all possible sources of ignition (sunlight, spark, flame, or heat).				
Incompatibilities	None				
Hazardous Decomposition Products	Will not occur at normal handling and storage conditions.				
<b>11. Toxicological information</b>					
Acute Toxicity Data	Ethanol	Oral	rat	LD <sub>50</sub>	13.7g/kg
		Dermal	Not available		
		Inhalation (vapor)	rat	LC <sub>50</sub>	20,000ppm/10h (31,600ppm/4h)
		Inhalation (mist)	rat	LC <sub>50</sub>	63,000ppm/4h (118mg/L)
Irritancy (corrosive) Data	No information available.				
Eye effects	Ethanol	OECD TG404	rabbit	moderate	
		Draiz test	rabbit	moderately	
		Damage to corneal epithelium. Conjunctival hyperemia can take 1 or 2 days to heal. Severe irritation.			
	Ethanol	Prolonged and/or repeated skin contact may cause irritations and possibly dermatitis. Inhalation of high vapor concentrations may cause irritations to the respiratory system. In case of prolonged inhalation of high vapor concentrations, narcotic effects may occur.			
Respiratory/Skin effects	No information available.				
Germ cell mutagenicity	Ethanol	On rat and mouse, dominant lethality and aneuploidy induction in mice's germ cell have been reported.			
Carcinogenicity	Ethanol	ACGIH: A4 (Not Classifiable as a Human Carcinogen)			
Reproductive Effects	Ethanol	Chronic ingestion of large amounts of alcohol has been reported to cause teratogenic effects on unborn child and other effects.			
Single exposure	Ethanol	Oral ingestion in human may cause acute intoxication effects to central nervous system, and can be fatal. Possible risks of irritation to respiratory tract, drowsiness, or dizziness have been reported.			
Repeated exposure	Ethanol	Prolonged or repeated exposure can produce liver or nerve damage.			

<b>12. Ecological information</b>	
Ecotoxicity	No information available.
Environmental	No information available.
Physical	No information available.
Other information	The ecological effects of this product have not been evaluated. Avoid release to the environment.
<b>13. Disposal considerations</b>	
Waste disposal	Dispose in accordance with all applicable regulations. Dispose of its contents and waste via a licensed waste disposal contractor.
Contaminated containers and packaging	Dispose in accordance with all applicable regulations. Dispose after cleaning up the containers and packaging until no residual of contents can be observed. Use a licensed waste disposal contractor.
<b>14. Transport information</b>	
International transport regulations	<Maritime Transport> IMO : Not Regulated.  <Air Transport> ICAO: Not Regulated. IATA: Not Regulated.
Special safety practice	Load the containers holding the product securely to prevent drop, fall or damage. Transport such containers carefully to prevent significant wear or agitation. See Section 7. Handling and storage for reference when loading/unloading and transporting the product.
<b>15. Regulatory information</b>	
It was assumed that it was not a flammable liquid as a result of judging pertinent goods based on "United Nations Recommendations on the Transport of Dangerous Goods". However, take care on the handling, because this product contains 10-15% ethanol.	
The regulations that should be noted with the water containing a high concentration of ethanol are shown below.	
US Federal	TSCA /Ethanol: Listed on the TSCA inventory. SARA Codes /Ethanol: acute, chronic, flammable.
State	Ethanol can be found on the following state right to know lists: CA, NJ, PA, MN, MA
EU	Risk phases: R10 flammable.
<b>16. Other information</b>	
Notice to reader Disclaimer	The information above is believed to be accurate and represents the best information currently available to us. It is provided in good faith without warranty to assist in the proper handling and storage of this product. YMC Co., Ltd. makes no representations as to the accuracy or completeness of the information contained herein. Information is supplied on condition that persons receiving such information will make their own determination as to its suitability for their purposes prior to use. In no event will YMC Co., Ltd. be responsible for damages of any nature whatever resulting from the use of or reliance upon the information contained herein.
Reference	Internal test result ACGIH (1996), (2001) PATTY (5th, 2005) RTECS (2004) DFGOT (1996) HSDB (2005)
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