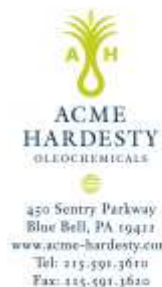


# Material Safety Data Sheet



**PRODUCT NAME: PHMB**

## CHEMICAL PRODUCT AND DISTRIBUTOR IDENTIFICATION

TRADE NAME: PHMB  
DATE: March 28, 2013

DISTRIBUTOR: ACME-HARDESTY COMPANY  
ADDRESS: 450 Sentry Parkway  
Blue Bell, PA 19422

TELEPHONE: (866) 226 – 3834  
FAX: (215) 591 – 3620  
EMERGENCY: CHEMTREC (800) 424-9300

## COMPOSITION / INFORMATION ON INGREDIENTS

DESCRIPTION: Preservative for cosmetics based on Polyaminopropyl Biguanide

DANGEROUS SUBSTANCE	CAS-NR	CONTENT	SYMBOL / R-PHR.
Polyaminopropyl-biguanide (EC – Not applicable)	32289-58-0 Polymer	20 %	Xi, N, R 41-50

## ADDITIONAL INFORMATION:

The CAS-No. 32289-58-0, 28757-47-3, 70170-61-5, 27083-27-8 and 91403-50-8 all refer to the same substance.  
The CAS-No. 27083-27-8 and 91403-50-8 are notified under Directive 98/8/EC (BPD).

## HAZARDS IDENTIFICATION

HAZARDS DESIGNATION: Xi: Irritant  
N: Dangerous for the environment

PARTICULAR DANGERS FOR MAN/ ENVIRONMENT: R41: Risk of serious damage to eyes  
R50: Very toxic for aquatic organisms.

CLASSIFICATION SYSTEM: The health and environmental hazards of this preparation have been assessed by the conventional method described annex II and III of the preparations Directive 1999/45EC.

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### FIRST AID MEASURES

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#### GENERAL INFORMATION:

INHALATION:	Supply fresh air; consult doctor in case of symptoms.
SKIN CONTACT:	Take off contaminated clothing immediately. Wash immediately with plenty of water and soap and rinse thoroughly.
EYE CONTACT:	Rinse thoroughly with plenty of water for at least 10 minutes while holding eyelids open. If symptoms persist, consult a physician.
INGESTION:	Rinse out mouth and then drink water. Do not induce vomiting. Call for medical help. Administer activated charcoal (3 table spoons elutriated in glass of water).

ADVICE TO DOCTOR/TREATMENT: An allergic skin reaction may occur.

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### FIRE FIGHTING MEASURES

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SUITABLE EXTINGUISHING MEDIA:	Water spray jet, extinguishing powder, carbon dioxide, foam
UNSUITABLE EXTINGUISHING MEDIA:	None
SPECIAL EXPOSURE HAZARDS:	In case of fire, toxic incineration products may be released: Nitrogen oxides (NO <sub>x</sub> ) Carbon monoxide (CO) Hydrogen Chloride (HCl)
PROTECTIVE EQUIPMENT:	Wear self-contained breathing apparatus.

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### ACCIDENTAL RELEASE MEASURES

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PERSONAL SAFETY PRECAUTIONS:	Wear protective equipment. Keep unprotected persons away.
ENVIRONMENTAL PROTECTION MEASURES:	As the product is hazardous for aquatic environment, it must be prevented from reaching surface water. Inform authorities in case of contamination of water or sewage system.
CLEANING/COLLECTING MEASURES:	Collect large amounts in suitable container. Cover the rest with absorbent, mix intensively and collect mechanically. Suitable binder: multi-purpose absorbent. Dispose of according to Disposal Considerations section.

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### HANDLING AND STORAGE

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ADVICE ON SAFE HANDLING:	Ensure good exhaust ventilation at the workplace. Avoid splashes or sprays.
FIRE AND EXPLOSION PROTECTION:	No special measures required.
STORAGE ROOMS/VESSELS. REQUIREMENTS:	Use polyolefin containers. Prevent any penetration into the ground.
STORAGE COMPATIBILITY INFORMATION:	None.
ADDITIONAL STORAGE CONDITIONS INFO:	Protect from frost. If the product solidifies at low temperatures, it can be restored by slowly warming the product. The effectiveness is not affected hereby.

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### EXPOSURE CONTROLS / PERSONAL PROTECTION

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ADDITIONAL TECHNICAL SYSTEMS DESIGN INFO:	No further data	
COMPONENTS WITH CRITICAL VALUES THAT REQUIRE MONITORING AT THE WORKSPACE:	The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.	
EXPOSURE LIMITS:	No occupational exposure limit assigned.	
<u>SUBSTANCE</u>	<u>CAS-NR.</u>	<u>VALUE</u>
Polyhexanide (20%)	27083-27-8	----
RESPIRATORY PROTECTION:	Not necessary if room is well ventilated.	
HAND PROTECTION:	Chemical protective gloves (only CE-registration cat. III) Check protective gloves prior to each use for their proper conditions. After use of gloves, apply skin-cleaning agents and skin cosmetics.	
MATERIAL OF GLOVES:	Nitrile rubber, NBR	
UNACCEPTABLE MATERIAL:	Leather gloves	
PENETRATION TIME:	Not known. It depends on different criteria and may be determined by the manufacturer according to the norm DIN EN 374-3.	
EYE PROTECTION:	Safety goggles	
SKIN PROTECTION:	Protective clothing	
HYGIENE MEASURES:	Avoid contact with eyes and skin. Wash hands during breaks and at the end of the shift. Use skin cream for skin protection	
ADDITIONAL INFORMATION:	Information valid at the time of review of safety data sheet.	

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PHYSICAL AND CHEMICAL PROPERTIES

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FORM:	Liquid
COLOR:	Colorless to pale yellow
ODOR:	Odorless
pH VALUE (1% Solution):	4.0 – 6.0
MELTING POINT, °C:	Not determined
BOILING POINT, °C:	102 – 105°C
FLASH POINT:	Not applicable
IGNITION TEMPERATURE, °C:	Product is not self-igniting
FLAMMABILITY, °C:	
LOWER EXPLOSION LIMIT:	Product is not explosive
UPPER EXPLOSION LIMIT:	Product is not explosive
VAPOR PRESSURE @ 20°C:	23 hPa
DENSITY @ 20°C:	1.030 – 1.060
SOLUBILITY/MISCIBILITY IN WATER:	Fully miscible
PARTITION COEFFICIENT: n-octanol/water:	Not available
SOLIDS CONTENT, %:	19 – 21

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STABILITY AND REACTIVITY

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CONDITIONS TO AVOID:	Before handling the product, should neither be diluted nor mixed with other chemicals, in order to avoid negative influences on the active ingredient(s). Protect from temperature < 10°C. Protect from temperature > 70°C.
MATERIALS TO AVOID:	Anionic compounds
DANGEROUS REACTIONS:	No dangerous reactions known.
HAZARDOUS DECOMPOSITION:	None, if storage and handling is done as recommended.

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TOXICOLOGICAL INFORMATION

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	<u>DIMENSION</u>	<u>SPECIES</u>	<u>VALUE</u> :
ACUTE ORAL TOXICITY	LD50	Rat	> 2000 mg/kg
ACUTE DERMAL TOXICITY	LD50	Rat	> 2000 mg/kg
IRRITANT EFFECT ON SKIN:	Slight irritant. After contact with skin for a certain period of time even small quantities of chemicals classified as irritant may affect skin. Always take first aid measures when skin contact has taken place.		
SENSITIZATION:	No sensitizing effect known		
SUBACUTE TO CHRONIC TOXICITY:	Non carcinogenic Non teratogenic (EPA 83-3 a) Not mutagenic (OECD 476)		

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ECOLOGICAL INFORMATION

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ELIMINATION INFORMATION

(PERSISTENCE AND DEGRADABILITY): The product can largely eliminated from waste water by adsorption to the activated sludge in purification plants.

BEHAVIOR IN ENVIRONMENT SYSTEMS: Low potential for bio-accumulate

ECOTOXICOLOGICAL EFFECTS:

AQUATIC TOXICITY:	EC50	161 mg/l	Activated sludge organisms
	EC50 / 48h	1-10 mg/l	Daphnia
	EC50 / 72 h	>0.1 mg/l	Selenastrum capricornutum
	LC50 / 96 h	8 mg/l	Oncorhynchus mykiss

REMARK: Depending on concentration, toxic effects on activated sludge organisms are possible.

AOX-INDICATION: The product does not contain substances, which can influence the AOX of waste water.  
Care should be paid to properly washing out the chloride when performing the AOX method.

HEAVY METALS/ COMPOUNDS CONTAINED

PER EC GUIDELINE NO. 76/464 EC: Due to its formulation, the product does not contain heavy metals.

GENERAL NOTES: The product contains materials that are harmful to the environment.  
Avoid transfer into the environment.

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DISPOSAL CONSIDERATIONS

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DISPOSAL/PRODUCT: Product must be disposed of according to local regulations pertaining to the disposal of hazardous waste

EUROPEAN WASTE CATALOGUE:

16 00 00	wastes not otherwise specified in the list
16 03 00	off-specification batches and unused products
16 03 05	organic wastes containing dangerous substances

DISPOSAL/CONTAMINATED PKG: Dispose of packaging according to regulations on the disposal of packaging.  
Empty contaminated packaging thoroughly.  
They can be recycled after thorough and proper cleaning.

CLEANING AGENT: Water, if necessary with cleaning agent

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TRANSPORT INFORMATION

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LAND TRANSPORT ADR/RID (cross-border domestic):

Class/Division/Group:	9
ADR/RID/ADG (Australia) Class:	9 (M6) Miscellaneous dangerous substances and articles
KEMLER NO.:	90
UN No.:	3082
Label:	9
Packing Group	III
Proper shipping name	Environmentally hazardous substance, Liquid, N.O.S. (Poly(hexamethylenebiguanide HYDROCHLORIDE))

MARINE TRANSPORT IMDG/GGV SEA:

Class:	9
UN-No.:	3082
Label:	9
Packing Group	III
EMS Number:	F-A, S-F
Marine Pollutant:	No
Proper shipping name	Environmentally hazardous substance, Liquid, N.O.S. (Polyhexamethylenebiguanide)

AIR TRANSPORT/ICAO AND IATA-DGR

Class:	9
UN/ID No.:	3082
Label:	9
Packing Group	III
Proper shipping name	Environmentally hazardous substance, Liquid, N.O.S. (Polyhexamethylenebiguanide)

REMARKS:

Packing Instructions / max.net weight  
Passenger aircraft: 914 / not limited  
Cargo aircraft: 914 / not limited

## REGULATORY INFORMATION

DESIGNATION ACCORDING TO EC GUIDELINES:	The product has been classified and labeled in accordance to EC Directives / Ordinance on Hazardous Materials (CHIP)
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LABELING HAZARD SYMBOLS:

Xi:	Irritant
N:	Dangerous for the environment

**RISK PHRASES:** R41: Risk of serious damage to eyes.  
R50: Very toxic to aquatic organisms.

SAFETY PHRASES:

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S37/39: Wear suitable gloves, and eye/face protection.

S60: This material and its container must be disposed of as hazardous waste.

S61: Avoid release to the environment. Refer to special instruction/safety data sheets.

DESIGNATION AND CONCENTRATION OF BIOCIDAL  
INGREDIENTS ACCORDING TO EC DIRECTIVE 98/8/EC: Polyaminopropyl-biguanide (INCI): 200.0 g/kg

CONTROL OF MAJOR ACCIDENT HAZARDS (COMAH):	Critical quantity values according to the regulations on accidents should be adhered to.
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WATER HAZARD CLASS: WGK2 (Self VwVwS Ann.4)

The data herein are based on our current knowledge and believed to be reliable. Acme-Hardesty Co., provides this information without any representation or warranty, expressed or implied, regarding its accuracy or correctness.

Users must make their own determination that handling, storage and use of the product in the anticipated manner is safe and appropriate. Because these actions of the user are out of our control, and may be beyond our knowledge, we do not assume responsibility and expressly disclaim liability for loss, damage, expense or any other claim arising out of or in any way connected with the handling, storage, use or disposal of the product.

Disposal of containers must comply with applicable federal, state and local laws and regulations. Empty containers should never be given to individuals.