



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name AKWASEAL™ G
Version # 05
Revision date 24-February-2011
Chemical description Liquid
CAS # Mixture
Manufacturer information CETCO
Building Materials Group
2870 Forbs Avenue
Hoffman Estates, IL 60192 US
safety.data@amcol.com
<http://www.cetco.com/>
General Information (800) 527-9948
CHEMTREC® (800) 424-9300

2. Hazards Identification

Emergency overview Irritating to eyes, respiratory system and skin. May cause sensitization by inhalation and skin contact. Prolonged or repeated exposure increases the risk.

Potential health effects

Routes of exposure Inhalation. Skin contact.

Eyes Irritating to eyes. Symptoms include itching, burning, redness and tearing.

Skin Substance causes moderate skin irritation. May cause sensitization by skin contact.

Inhalation May cause irritation of respiratory tract. May cause sensitization by inhalation.

Ingestion Irritating to mouth, throat, and stomach. Ingestion of this product may cause nausea, vomiting and diarrhea.

Signs and symptoms Cough. Discomfort in the chest. Shortness of breath.

3. Composition / Information on Ingredients

Components	CAS #	Percent
1,1'-Methylenebis (isocyanato-) benzene	26447-40-5	10 - 20
METHYLENE BIS(PHENYLISOCYANATE) (DIPHENYL METHANE-4,4'-DIISOCYANATE, MDI)	101-68-8	10 - 20

Composition comments This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

4. First Aid Measures

First aid procedures

Eye contact Immediately flush eyes with plenty of water for at least 20 minutes. Get medical attention if irritation develops or persists.

Skin contact Wash off immediately with plenty of water. Remove and isolate contaminated clothing and shoes. Get medical attention if irritation develops or persists.

Inhalation Move to fresh air. Oxygen or artificial respiration if needed. Get medical attention immediately.

Ingestion If material is ingested, immediately contact a physician or poison control center. Do not induce vomiting without medical advice. If swallowed, rinse mouth with water (only if the person is conscious).

Notes to physician Symptoms may be delayed. Keep under medical supervision for at least 48 hours. Provide general supportive measures and treat symptomatically.

General advice Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties Containers may explode when heated.

Extinguishing media

Suitable extinguishing media Carbon dioxide (CO₂). Alcohol foam. Water spray. Dry chemical. Foam.

Protection of firefighters

Protective equipment and precautions for firefighters Move containers from fire area if you can do it without risk. Do not scatter spilled material with high pressure water streams. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. ALWAYS stay away from tanks engulfed in flame. Cool containers with flooding quantities of water until well after fire is out.

Fire fighting equipment/instructions

Move containers from fire area if you can do it without risk. Do not scatter spilled material with high pressure water streams. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. ALWAYS stay away from tanks engulfed in flame. Cool containers with flooding quantities of water until well after fire is out.

Specific methods

In the event of fire, cool tanks with water spray. Use water spray to cool unopened containers.

6. Accidental Release Measures

Personal precautions

Ensure adequate ventilation. Use personal protective equipment. Do not touch or walk through spilled material. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Keep people away from and upwind of spill/leak.

Environmental precautions

Prevent further leakage or spillage if safe to do so.

Methods for containment

Stop leak if you can do so without risk. Dike the spilled material, where this is possible.

Methods for cleaning up

Dike far ahead of liquid spill for later disposal. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal. After removal flush contaminated area thoroughly with water. Ventilate the contaminated area.

7. Handling and Storage

Handling

Wash hands after handling and before eating. When using do not eat or drink. Avoid contact with skin and eyes. Do not get this material in your eyes, on your skin, or on your clothing. Do not handle or store near an open flame, heat or other sources of ignition.

Storage

Keep locked-up. Keep out of the reach of children. Keep this material away from food, drink and animal feed. Keep containers tightly closed in a dry, cool and well-ventilated place. Do not expose to heat or store at temperatures above 120°F/49°C as can may burst. Keep away from heat, sparks, and flame.

8. Exposure Controls / Personal Protection

Occupational exposure limits

ACGIH

Components

Type

Value

METHYLENE BIS(PHENYLISOCYANATE) (DIPHENYL METHANE-4,4'-DIISOCYANATE, MDI) (101-68-8)	TWA	0.0050 ppm
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U.S. - OSHA

Components

Type

Value

METHYLENE BIS(PHENYLISOCYANATE) (DIPHENYL METHANE-4,4'-DIISOCYANATE, MDI) (101-68-8)	Ceiling	0.0200 ppm
		0.2000 mg/m ³

Engineering controls

Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. If these are not sufficient to maintain concentrations of particulates and solvent vapor below the OEL, suitable respiratory protection must be worn.

Personal protective equipment

Eye / face protection

Wear safety glasses with side shields (or goggles) and a face shield.

Skin protection

Where contact is likely, wear chemical-resistant gloves, a chemical suit, rubber boots, and chemical safety goggles plus a face shield. Use of butyl rubber or nitrile gloves is recommended.

Respiratory protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators. Wear a NIOSH-approved (or equivalent) full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

General hygiene considerations

Keep away from food and drink. When using do not smoke. Use good industrial hygiene practices in handling this material. Eye wash fountain and emergency showers are recommended.

9. Physical & Chemical Properties

Appearance

Not available.

Color	Brown.
Odor	Slightly. Musty.
Odor threshold	Not available.
Physical state	Not available.
Form	Liquid.
pH	Not available.
Melting point/Freezing point	Not available.
Boiling point	Not available.
Flash point	Not available.
Evaporation rate	Not available.
Flammability limits in air, upper, % by volume	Not available.
Flammability limits in air, lower, % by volume	Not available.
Vapor pressure	Not available.
Vapor density	Not available.
Specific gravity	Not available.
Relative density	0.5413 lb/cu ft estimated
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
VOC	Not available.
Viscosity	350 - 550 cps

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions. No hazards to be especially mentioned.
Conditions to avoid	Direct sources of heat. Keep away from water.
Incompatible materials	This product may react with strong oxidizing agents. Reaction with water may generate much heat which will increase the concentration of fumes in the air.
Hazardous decomposition products	Upon decomposition, this product may yield gaseous nitrogen oxides, carbon monoxide, carbon dioxide and/or low molecular weight hydrocarbons. and hydrogen cyanide (hydrocyanic acid)
Possibility of hazardous reactions	Hazardous polymerization can occur with elevated temperatures. Hazardous polymerization can occur with contact with alkalies. Hazardous polymerization can occur with metallic catalyses.

11. Toxicological Information

Toxicological data

Product

AKWASEAL™ G (Mixture)

Test Results

Acute Dermal LD50 Rabbit: 29736 mg/kg estimated
 Acute Dermal LD50 Rat: 29736 mg/kg
 Acute Inhalation LC50 Rat: 4 mg/l/4h
 Acute Inhalation LC50 Rat: 3.745 mg/l estimated
 Acute Oral LD50 Rabbit: 57.14 ml/kg estimated
 Acute Oral LD50 Rat: 43595 mg/kg

Components

METHYLENE BIS(PHENYLISOCYANATE) (DIPHENYL METHANE-4,4'-DIISOCYANATE, MDI) (101-68-8)

Test Results

Acute Inhalation LC50 Rat: 0.369 mg/l 4.00 Hours
 Acute Oral LD50 Rat: 9200 mg/kg
 Acute Dermal LD50 Rabbit: 6200 mg/kg
 Acute Inhalation LC50 Rat: 0.369 mg/l/4h

1,1'-Methylenebis (isocyanato-) benzene (26447-40-5)

Sensitization

May cause sensitization by inhalation and skin contact.

Local effects	Harmful by inhalation. Irritating to respiratory system and skin.
Chronic effects	Repeated or prolonged contact causes sensitization, asthma and eczemas. Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
Carcinogenicity	Not listed by ACGIH, IARC, NIOSH, NTP OR OSHA.
IARC Monographs. Overall Evaluation of Carcinogenicity	
METHYLENE BIS(PHENYLISOCYANATE) (DIPHENYL METHANE-4,4'-DIISOCYANATE, MDI) (CAS 101-68-8) 3 Not classifiable as to carcinogenicity to humans.	
Mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Further information	Persons allergic to isocyanates, and particularly those suffering from asthma or other respiratory conditions, should not work with isocyanates.

12. Ecological Information

Ecotoxicological data

Product	Test Results
AKWASEAL™ G (Mixture)	EC50 Daphnia: >= 1000 mg/l 24.00 Hours LC50 Fish: >= 1000 mg/l
Ecotoxicity	Components of this product have been identified as having potential environmental concerns.
Environmental effects	We have no quantitative data concerning the ecological effects of this product.
Persistence and degradability	Not available.

13. Disposal Considerations

Disposal instructions Dispose in accordance with all applicable regulations.

14. Transport Information

DOT

Basic shipping requirements:

UN number UN3148
Proper shipping name Water-reactive liquid, n.o.s. (METHYLENE BIS(PHENYLISOCYANATE) (DIPHENYL METHANE-4,4'-DIISOCYANATE, MDI) RQ = 50000 LBS)

Hazard class 4.3
Packing group III

Additional information:

Special provisions IB2

Basic shipping requirements:

Labels required 4.3

Additional information:

Packaging exceptions None
Packaging non bulk 203
Packaging bulk 242
ERG number 138

DOT

Packages less than 83 lbs

Basic shipping requirements:

UN number UN3148
Proper shipping name Water-reactive liquid, n.o.s. (METHYLENE BIS(PHENYLISOCYANATE) (DIPHENYL METHANE-4,4'-DIISOCYANATE, MDI) RQ=50000 LBS)

Hazard class 4.3
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Additional information:

Special provisions IB2

Basic shipping requirements:

Labels required 4.3

Additional information:

Packaging exceptions None
Packaging non bulk 203
Packaging bulk 242

ERG number

138



DOT



DOT

Packages less than 83 lbs

15. Regulatory Information

US federal regulations OSHA Process Safety Standard: This material is not known to be hazardous by the OSHA Highly Hazardous Process Safety Standard, 29 CFR 1910.119.

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: De minimis concentration

METHYLENE BIS(PHENYLISOCYANATE) (DIPHENYL 1.0 %
METHANE-4,4'-DIISOCYANATE, MDI) (CAS 101-68-8)

US EPCRA (SARA Title III) Section 313 - Toxic Chemical: Listed substance

METHYLENE BIS(PHENYLISOCYANATE) (DIPHENYL Listed.
METHANE-4,4'-DIISOCYANATE, MDI) (CAS 101-68-8)

CERCLA (Superfund) reportable quantity

METHYLENE BIS(PHENYLISOCYANATE) (DIPHENYL METHANE-4,4'-DIISOCYANATE, MDI): 5000.0000

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - Yes
Delayed Hazard - Yes
Fire Hazard - No
Pressure Hazard - No
Reactivity Hazard - Yes

Section 302 extremely hazardous substance No

Section 311 hazardous chemical No

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

US - New Jersey Community RTK (EHS Survey): Reportable threshold

METHYLENE BIS(PHENYLISOCYANATE) (DIPHENYL 500 LBS
METHANE-4,4'-DIISOCYANATE, MDI) (CAS 101-68-8)

US - Pennsylvania RTK - Hazardous Substances: Listed substance

METHYLENE BIS(PHENYLISOCYANATE) (DIPHENYL Listed.
METHANE-4,4'-DIISOCYANATE, MDI) (CAS 101-68-8)

16. Other Information

Recommended restrictions

Workers (and your customers or users in the case of resale) should be informed of the potential presence of respirable dust and respirable crystalline silica as well as their potential hazards. Appropriate training in the proper use and handling of this material should be provided as required under applicable regulations.

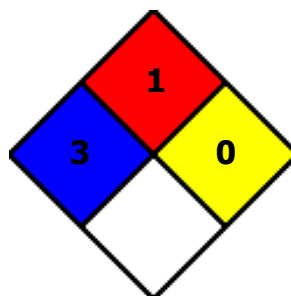
Further information

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

HMIS ratings

HEALTH		*	3
FLAMMABILITY			1
PHYSICAL HAZARD			1
PERSONAL PROTECTION			

NFPA ratings



Disclaimer

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