

**ASHLAND**  
**SAFETY DATA SHEET**  
**MERCEDES-BENZ PART # BQ1030004**

Mercedes® Benz G-48 ANTIFREEZE  
COOLANT  
798694

Page: 1  
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**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

Ashland	Regulatory Information Number	1-800-325-3751
P.O. Box 2219	Telephone	614-790-3333
Columbus, OH 43216	Emergency telephone number	1-800-ASHLAND (1-800-274-5263)
Product name	Mercedes® Benz G-48 ANTIFREEZE COOLANT	
Product code	798694	
Product Use Description	No data	

**2. HAZARDS IDENTIFICATION**

**Emergency Overview**

Appearance: liquid, blue

WARNING! MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. CAUSES EYE IRRITATION. HARMFUL IF SWALLOWED.

**Potential Health Effects**

**Exposure routes**

Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

**Eye contact**

Can cause severe eye irritation. Symptoms include stinging, tearing, redness, and swelling of eyes. Can injure eye tissue.

**Skin contact**

May cause mild skin irritation. Symptoms may include redness and burning of skin. Skin absorption of this material (or a component) may be increased through injured skin.

**Ingestion**

Swallowing this material may be harmful. Liver, kidney and brain damage in humans has resulted from swallowing lethal or near-lethal amounts of ethylene glycol. Ingestion of medications contaminated

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with diethylene glycol has caused kidney failure and death in humans. Products containing diethylene glycol should be considered toxic by ingestion.

### **Inhalation**

It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

### **Aggravated Medical Condition**

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: lung (for example, asthma-like conditions), Liver, Kidney, Central nervous system, Exposure to this material may aggravate any preexisting condition sensitive to a decrease in available oxygen, such as chronic lung disease, coronary artery disease or anemias.

### **Symptoms**

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), Cough, central nervous system excitation (giddiness, liveliness, light-headed feeling) followed by central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other central nervous system effects, involuntary eye movement, pain in the abdomen and lower back, cyanosis (causes blue coloring of the skin and nails from lack of oxygen), lung edema (fluid buildup in the lung tissue), acute kidney failure (sudden slowing or stopping of urine production), liver damage, Convulsions, coma

### **Target Organs**

Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: reproductive effects, kidney damage, liver damage, central nervous system damage, Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans: liver damage, kidney damage

### **Carcinogenicity**

This material is not listed as a carcinogen by the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

### **Reproductive hazard**

Ethylene glycol has caused birth defects in animal studies at high oral doses. However, it did not cause harm to the pregnant animal or to the fetus when applied to the skin of the pregnant animal., This

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material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<b>Hazardous Components</b>	<b>CAS-No.</b>	<b>Concentration</b>
ETHYLENE GLYCOL	107-21-1	>=90-<=100%
DIETHYLENE GLYCOL	111-46-6	>=1.5-<5%
2-ETHYLHEXANOIC ACID, SODIUM SALT	19766-89-3	>=1.5-<5%

### 4. FIRST AID MEASURES

#### **Eyes**

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

#### **Skin**

Remove contaminated clothing. Wash exposed area with soap and water. If symptoms persist, seek medical attention. Launder clothing before reuse.

#### **Ingestion**

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

#### **Inhalation**

If symptoms develop, immediately move individual away from exposure and into fresh air. Seek immediate medical attention; keep person warm and quiet. If person is not breathing, begin artificial respiration. If breathing is difficult, administer oxygen.

#### **Notes to physician**

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**Hazards:** Effects of acute ethylene glycol poisoning appear in three fairly distinct stages. The initial stage occurs shortly after exposure, lasts 6-12 hours, and is characterized by central nervous system effects (transient exhilaration, nausea, vomiting, and in severe cases, coma, convulsions, and possible death). The second stage lasts from 12-36 hours after exposure and is initiated by the onset of coma. This phase is characterized by tachypnea, tachycardia, mild hypotension, cyanosis, and in severe cases, pulmonary edema, bronchopneumonia, cardiac enlargement, and congestive failure. The final stage occurs 24-72 post-exposure and is characterized by renal failure, ranging from a mild increase in blood urea nitrogen and creatinine followed by recovery, to complete anuria with acute tubular necrosis that can lead to death. Oxaluria is found in most cases. The most significant laboratory finding in ethylene glycol intoxication is severe metabolic acidosis. Ingestion or other significant exposure to this material (or a component) may cause metabolic acidosis.

**Treatment:** This product contains ethylene glycol. Ethanol decreases the metabolism of ethylene glycol to toxic metabolites. Ethanol should be administered as soon as possible in cases of severe poisoning since the elimination half-life of ethylene glycol is 3 hours. If medical care will be delayed several hours, give the patient three to four 1-ounce oral "shots" of 86-proof or higher whiskey before or during transport to the hospital. Fomepizole (4-methylpyrazole) is an effective antagonist of alcohol dehydrogenase, and as such, may be used as an antidote in the treatment of ethylene glycol poisoning. Hemodialysis effectively removes ethylene glycol and its metabolites from the body.

## 5. FIRE-FIGHTING MEASURES

### Suitable extinguishing media

Dry chemical, Carbon dioxide (CO<sub>2</sub>), Water spray

### Hazardous combustion products

Alcohols, Aldehydes, carbon dioxide and carbon monoxide, ethers, toxic fumes, Hydrocarbons

### Precautions for fire-fighting

Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). DO NOT direct a solid stream of water or foam into hot, burning pools of liquid since this may cause frothing and increase fire intensity. Frothing can be violent and possibly endanger any firefighter standing too close to the burning liquid. Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

### NFPA Flammable and Combustible Liquids Classification

Combustible Liquid Class IIIB

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## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.

### Environmental precautions

Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system.

### Methods for cleaning up

Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).

### Other information

Comply with all applicable federal, state, and local regulations.

## 7. HANDLING AND STORAGE

### Handling

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

### Storage

Store in a cool, dry, ventilated area.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure Guidelines

<b>ETHYLENE GLYCOL</b>		<b>107-21-1</b>	
ACGIH	Ceiling Limit Value:	100 mg/m3	Aerosol.
<b>DIETHYLENE GLYCOL</b>		<b>111-46-6</b>	
WEEL	time weighted average	10 mg/m3	

### General advice

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These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

**Exposure controls**

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

**Eye protection**

Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist. Maintain eye wash station near work area.

**Skin and body protection**

Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.

Wear resistant gloves (consult your safety equipment supplier).

Discard gloves that show tears, pinholes, or signs of wear.

Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use.

Wear resistant gloves (consult your safety equipment supplier).

**Respiratory protection**

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical state</b>	liquid
<b>Form</b>	no data available

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<b>Colour</b>	blue
<b>Odour</b>	mild
<b>Boiling point/boiling range</b>	387.1 °F / 197.3 °C Calculated Phase Transition Liquid/Gas
<b>Melting point/range</b>	no data available
<b>Sublimation point</b>	no data available
<b>pH</b>	(Average) 7.2
<b>Flash point</b>	(>)250 °F / 121 °C
<b>Ignition temperature</b>	no data available
<b>Evaporation rate</b>	no data available
<b>Lower explosion limit/Upper explosion limit</b>	3.2 %(V) / 15.3 %(V) Calculated Explosive Limit
<b>Particle size</b>	no data available
<b>Vapour pressure</b>	3.000 hPa @ 77 °F / 25 °C Calculated Vapor Pressure
<b>Relative vapour density</b>	no data available
<b>Density</b>	(Average) 1.1243 g/cm <sup>3</sup> @ 77.00 °F / 25.00 °C 9.382 lb/gal @ 77.00 °F / 25.00 °C
<b>Bulk density</b>	No data
<b>Water solubility</b>	no data available
<b>Solubility(ies)</b>	no data available
<b>Partition coefficient: n-octanol/water</b>	no data available
<b>log Pow</b>	no data available
<b>Autoignition temperature</b>	no data available
<b>Viscosity, dynamic</b>	no data available
<b>Viscosity, kinematic</b>	no data available
<b>Solids in Solution</b>	no data available
<b>Decomposition temperature</b>	no data available
<b>Burning number</b>	no data available
<b>Dust explosion constant</b>	no data available
<b>Minimum ignition energy</b>	no data available

## 10. STABILITY AND REACTIVITY

### Stability

Stable.

### Conditions to avoid

excessive heat

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**Incompatible products**

Aldehydes, Alkaline earth metals, Alkali metals, Strong acids, strong alkalis, Strong oxidizing agents, Sulphur compounds

**Hazardous decomposition products**

carbon dioxide and carbon monoxide, Aldehydes, ketones, Organic acids, Alcohols, ethers, Hydrocarbons

**Hazardous reactions**

Product will not undergo hazardous polymerization.

**Thermal decomposition**

No data

**11. TOXICOLOGICAL INFORMATION**

**Acute oral toxicity**

ETHYLENE GLYCOL : LD 50 Rat: 6,140 mg/kg  
DIETHYLENE GLYCOL : LD 50 Rat: 12,565 mg/kg  
2-ETHYLHEXANOIC ACID, SODIUM SALT : LD 50 Rat: > 3 g/kg

**Acute inhalation toxicity**

ETHYLENE GLYCOL : no data available  
DIETHYLENE GLYCOL : LC Lo Mouse: 130 mg/m<sup>3</sup>; 2 h  
2-ETHYLHEXANOIC ACID, SODIUM SALT : no data available

**Acute dermal toxicity**

ETHYLENE GLYCOL : LD 50 Rabbit: 9,530 mg/kg  
DIETHYLENE GLYCOL : LD 50 Rabbit: 11,890 mg/kg  
2-ETHYLHEXANOIC ACID, SODIUM SALT : no data available

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## 12. ECOLOGICAL INFORMATION

### Biodegradability

ETHYLENE GLYCOL	:	no data available
DIETHYLENE GLYCOL	:	92 % Exposure time: 28 d
2-ETHYLHEXANOIC ACID, SODIUM SALT	:	no data available

### Bioaccumulation

ETHYLENE GLYCOL	:	Species: Crayfish (Procambarus) Exposure time: 61 d Dose: 1,000 mg/l Bioconcentration factor (BCF): 0.27 Method: Flow through
DIETHYLENE GLYCOL	:	no data available
2-ETHYLHEXANOIC ACID, SODIUM SALT	:	no data available

### Ecotoxicity effects

#### Toxicity to fish

ETHYLENE GLYCOL	:	96 h LC 50 Bluegill (Lepomis macrochirus): 27,540.00 mg/l Method: Static; Mortality 96 h LC 50 Fathead minnow (Pimephales promelas): 8,050.00 mg/l ; Mortality
DIETHYLENE GLYCOL	:	96 h LC 50 Western mosquitofish (Gambusia affinis): > 32,000.00 mg/l Method: Static; Mortality
2-ETHYLHEXANOIC ACID, SODIUM SALT	:	no data available

#### Toxicity to daphnia and other aquatic invertebrates.

ETHYLENE GLYCOL	:	48 h LC 50 Water flea (Daphnia magna): > 10,000.00 mg/l Method: Static Mortality
DIETHYLENE GLYCOL	:	24 h LC 50 Water flea (Daphnia magna): > 10,000.00

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mg/l Method: Static Mortality

2-ETHYLHEXANOIC ACID, SODIUM SALT : no data available

**Toxicity to algae**

ETHYLENE GLYCOL : no data available

DIETHYLENE GLYCOL : no data available

2-ETHYLHEXANOIC ACID, SODIUM SALT : no data available

**Toxicity to bacteria**

ETHYLENE GLYCOL : no data available

DIETHYLENE GLYCOL : no data available

2-ETHYLHEXANOIC ACID, SODIUM SALT : no data available

**Biochemical Oxygen Demand (BOD)**

ETHYLENE GLYCOL : no data available

DIETHYLENE GLYCOL : no data available

2-ETHYLHEXANOIC ACID, SODIUM SALT : no data available

**Chemical Oxygen Demand (COD)**

ETHYLENE GLYCOL : no data available

DIETHYLENE GLYCOL : no data available

2-ETHYLHEXANOIC ACID, SODIUM SALT : no data available

**Additional ecological information**

ETHYLENE GLYCOL : no data available

DIETHYLENE GLYCOL : no data available

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2-ETHYLHEXANOIC ACID, SODIUM SALT : no data available

**13. DISPOSAL CONSIDERATIONS**

**Waste disposal methods**

Dispose of in accordance with all applicable local, state and federal regulations.

**14. TRANSPORT INFORMATION**

**REGULATION**

ID NUMBER	PROPER SHIPPING NAME	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
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**U.S. DOT - ROAD**

Not dangerous goods

**U.S. DOT - RAIL**

Not dangerous goods

**U.S. DOT - INLAND WATERWAYS**

Not dangerous goods

**TRANSPORT CANADA - ROAD**

Not dangerous goods

**TRANSPORT CANADA - RAIL**

Not dangerous goods

**TRANSPORT CANADA - INLAND WATERWAYS**

Not dangerous goods

**INTERNATIONAL MARITIME DANGEROUS GOODS**

Not dangerous goods

**INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO**

Not dangerous goods

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**INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER**

Not dangerous goods

**MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES**

Not dangerous goods

\*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

**15. REGULATORY INFORMATION**

**California Prop. 65**

Proposition 65 warnings are not required for this product based on the results of a risk assessment.

**SARA Hazard Classification**

Acute Health Hazard

**SARA 313 Component(s)**

ETHYLENE GLYCOL 93.33 %

**New Jersey RTK Label Information**

ETHYLENE GLYCOL 107-21-1  
DIETHYLENE GLYCOL 111-46-6  
2-ETHYLHEXANOIC ACID, SODIUM SALT 19766-89-3  
DECANEDIOIC ACID, DISODIUM SALT 17265-14-4

**Pennsylvania RTK Label Information**

ETHYLENE GLYCOL 107-21-1  
DIETHYLENE GLYCOL 111-46-6  
2-ETHYLHEXANOIC ACID, SODIUM SALT 19766-89-3

**Notification status**

US. Toxic Substances Control Act y (positive listing)

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Australia. Industrial Chemical (Notification and Assessment) Act	n (Negative listing)
Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)	y (positive listing)
Japan. Kashin-Hou Law List	n (Negative listing)
Korea. Toxic Chemical Control Law (TCCL) List	y (positive listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act	y (positive listing)
China. Inventory of Existing Chemical Substances	y (positive listing)
New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand	n (Negative listing)

**Reportable quantity - Product**

US. EPA CERCLA Hazardous Substances (40 CFR 302) 5357 lbs

**Reportable quantity-Components**

ETHYLENE GLYCOL 107-21-1 5000 lbs

	<b>HMIS</b>	<b>NFPA</b>
Health	2	2
Flammability	1	1
Physical hazards	0	
Instability		0
Specific Hazard	--	--

**16. OTHER INFORMATION**

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances. This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).