MATERIAL SAFETY DATA SHEET

CH-109

Prepared to OSHA, ACC, ANSI, NOHSC, WHMIS & 2001/58 EC Standards | MSDS Revision: 1.0 | MSDS Revision Date: 03/10/2010

1. PRODUCT IDENTIFICATION

1.1	Product Name:	**PREMIUM GOLD ENGINE COOLANT w/ BITTERING**
1.2	Chemical Name:	**Ethylene Glycol Solution of Salts**
1.3	Synonyms:	**Excelda #750-114889**
1.4	Trade Names:	**Premium Gold Engine Coolant With Bittering Agent**
1.5	Product Use:	**Automotive – Coolant**
1.6	Manufacturer's Name:	**Excelda Manufacturing**
1.7	Manufacturer's Address:	**12785 Emerson Drive, Brighton, MI. 48116 USA**
1.8	Business Phone:	**+1 (888) 314-4052 / +1 (248) 486-3800**
1.9	Emergency Phone:	**CHEMTREC +1 (800) 424-9300 / +1 (703) 527-3887**

CHEMICAL RESPONSE CARD:	11
RESPONSE TEAM PPE:	
WHMIS:	
HEALTH:	1
FLAMMABILITY:	1
REACTIVITY:	0
PERSONAL PROTECTION:	B

2. HAZARD IDENTIFICATION

2.1 Hazard Identification:

This product is classified as a HAZARDOUS SUBSTANCE but not as DANGEROUS GOODS according to the classification criteria of NOHSC: 1088 (2004) and ADG Code (Australia). Warning! Contains ethylene glycol! Harmful or fatal if swallowed! May cause damage to brain, kidney, or liver. Avoid breathing vapor or mist. For industrial use only. Keep away from children.

2.2 Routes of Entry:	Inhalation:	YES	Absorption:	YES	Ingestion:	YES

2.3 Effects of Exposure:

EYES: Mild to moderate irritation or inflammation.
SKIN: Mild to moderate irritation.
INGESTION: Toxic. Harmful or fatal if swallowed.
INHALATION: Respiratory tract irritation. Possible adverse effects on the nervous system and blood-forming system.

2.4 Symptoms of Exposure:

EYES: Stinging, redness, and watering.
SKIN: Irritation and redness.
INGESTION: No exposure symptoms are reported.
INHALATION: Possible respiratory tract irritation.

2.5 Acute Health Effects:

EYES: Mild to moderate irritation or inflammation.
SKIN: Mild to moderate irritation.
INGESTION: Toxic. Harmful or fatal if swallowed.
INHALATION: Respiratory tract irritation. Possible adverse effects on the nervous system and blood-forming system.

2.6 Chronic Health Effects:

The manufacturer has not reported any chronic health effects.

2.7 Target Organs:

None reported by the manufacturer.

2.8 Toxicological Properties:

None reported by the manufacturer.

3. COMPOSITION & INGREDIENTS

					EXPOSURE LIMITS IN AIR (mg/m³)								
					ACGIH ppm		NOHSC ppm			OSHA ppm			OTHER
CHEMICAL NAME(S)	CAS No.	RTECS No.	EINECS No.	%	TLV	STEL	ES-TWA	ES-STEL	ES-PEAK	PEL	STEL	IDLH	
ETHYLENE GLYCOL	107-21-1	KW2975000	203-473-3	85-95	50	NA	20	40	NF	100	NA	NA	
BORON SODIUM OXIDE	1330-43-4	ED4588000		1.0-5.0									
SODIUM BENZOATE	532-32-1	DH6650000		1.0-5.0									
DIETHYLENE GLYCOL	111-46-6	ID5950000	203-872-2	.001-5.0	NA	NA	23	NF	NF	NA	NA	NA	
BENZENEMETHANAMINIUM	3734-33-6	BO6650000		0.0-0.01									

NA = Not Available; ND = Not Determined; NE = Not Established; NF = Not Found; C = Ceiling Limit; See Section 16 for Additional Definitions of Terms Used. NOTE: all WHMIS required information is included. It is located in appropriate sections based on the ANSI Z400.1-2004 format.

4. FIRST AID

4.1 First Aid:

EYES: Flush eyes thoroughly with copious amounts of water for at least 20 minutes, holding eyelids open to ensure complete flushing. Seek immediate medical attention.

SKIN: Remove contaminated clothing and wash affected areas with soap and water. If irritation persists, seek prompt medical attention. Launder clothing before reuse.

INGESTION: Do not induce vomiting. Call a physician or poison control center for assistance and instructions. Seek immediate medical attention. If vomiting occurs spontaneously, keep victim's head lowered (forward) to reduce the risk of aspiration.

INHALATION: Remove victim to fresh air at once. If breathing is difficult, provide supplemental oxygen. If breathing has stopped, provide artificial respiration. Seek immediate medical attention. Provide supportive treatment, keeping victim warm and quiet.

4.2 Medical Conditions Aggravated by Exposure:

Personnel with pre-existing skin disorders should avoid repeated or prolonged contact with this product.

5. FIRE & EXPLOSION HAZARDS

5.1 Flashpoint & Method:

121.1ºC (250.0ºF) CCC

5.2 Autoignition Temperature:

NA

5.3	Flammability Limits:	Lower Explosive Limit (LEL):	**ND**	Upper Explosive Limit (UEL):	**ND**

5.4 Fire & Explosion Hazards:

Direct water spray may cause frothing which can increase the intensity and range of the fire.

5.5 Extinguishing Methods:

Dry chemical, foam, carbon dioxide, and water fog.

5.6 Firefighting Procedures:

Keep containers cool until well after the fire is out. Use water spray to cool fire-exposed surfaces and to protect personal. Avoid spraying water directly into storage containers because of danger of boilover. Prevent runoff from fire control or dilution from entering sewers, drains, drinking water supply, or any natural waterway. Firefighters must use full bunker gear including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.

6. SPILLS & LEAKS

6.1 Spills:

Secure spill area, remove or minimize all sources of ignition, and maximize ventilation. Stop spill or leak at source if safely possible. Deny entry to all unprotected individuals. Individuals involved in the cleanup must wear appropriate personal protective equipment. Recover free liquid or cover with inert absorbent material and place into appropriate container(s) for disposal. For small spills, absorb or cover with dry earth, sand, or other inert non-combustible absorbent material and place into waste containers for later disposal. Contain large spills to maximize product recovery or disposal. If necessary, dike well ahead of the spill to prevent runoff into drains, sewers or any natural waterway or drinking supply. Contact appropriate local and/or provincial authorities for assistance and/or reporting requirements. Consult an expert on disposal of recovered material. Ensure disposal on compliance with government requirements & secure conformity to local disposal regulations. Notify the appropriate federal & provincial authorities immediately. Take all additional action necessary to prevent & remedy the adverse effects of the spill.

7. STORAGE & HANDLING

7.1 Work & Hygiene Practices:

Use normal hygiene practices. Avoid breathing vapors. Avoid direct skin contact. Wash hands thoroughly after using this product and before eating, drinking, or smoking.

7.2 Storage & Handling:

Use and store in a cool, dry, well-ventilated area. Keep away from excessive heat, open flames, sparks, and other possible sources of ignition. Do not store in unmarked containers or storage devices.

7.3 Special Precautions:

Empty containers may contain product residue. Do not pressurize, cut, heat or weld empty containers. Do not reuse empty containers without commercial cleaning or reconditioning.

8. EXPOSURE CONTROL & PERSONAL PROTECTION

8.1	Ventilation & Engineering Controls: **The use of mechanical dilution ventilation is recommended to maintain airborne concentrations below the recommended occupational exposure limits, whenever this material is used in a confined space, is heated above normal temperatures (up to 38ºC) or is agitated.**
8.2	Respiratory Protection: **Vaporization or misting is not expected at ambient temperatures. Therefore, the need for respiratory protection is not anticipated under normal use conditions and with adequate ventilation. If elevated airborne concentrations above applicable workplace exposure levels are anticipated, a NIOSH-approved organic vapor respirator equipped with a dust/mist prefilter should be used. Protection factors vary depending upon the type of respirator used. Respirators should be used in accordance with OSHA requirements (29 CFR 1910.134).**
8.3	Eye Protection: **Safety glasses equipped with side shields should be adequate protection under most conditions of use. Wear goggles and/or face shield if splashing or spraying is anticipated. Wear goggles and face shield if material is heated above 125°F (51°C). Have suitable eye wash water available.**
8.4	Hand Protection: **Use gloves constructed of chemical resistant materials such as neoprene or heavy nitrile rubber if frequent or prolonged contact is expected. Use heat-protective gloves when handling product at elevated temperatures.**
8.5	Body Protection: **Avoid prolonged and/or repeated skin contact. Use clean and impervious protective clothing (e.g., neoprene or Tyvek®) if splashing or spraying conditions are present. Protective clothing should include long-sleeves, apron, boots and additional facial protection. Remove oil contaminated clothing. Launder oil contaminated clothing before reusing. Contaminated leather goods should be removed promptly and discarded.**

9. PHYSICAL & CHEMICAL PROPERTIES

9.1	Density:	**1.13**
9.2	Boiling Point:	**ND**
9.3	Melting Point:	**<5ºF**
9.4	Evaporation Rate:	**ND**
9.5	Vapor Pressure @ 20°C:	**1.8 mmHg**
9.6	Molecular Weight:	**NA**
9.7	Appearance & Colour:	**Yellow to gold liquid with mild odor.**
9.8	Odour Threshold:	**NA**
9.9	Solubility:	**Infinite miscibility**
9.10	pH:	**6-8**
9.11	Viscosity:	**ND**
9.12	Additional Information:	**NA**

10. STABILITY & REACTIVITY

10.1	Stability: **Stable under normal conditions.**
10.2	Decomposition Products: **Toxic levels of carbon monoxide, carbon dioxide, ammonia, organic vapors and nitrogen containing compounds.**
10.3	Polymerization: **Will not occur.**
10.4	Conditions to Avoid: **Open flames, sparks, high heat, and close proximity to incompatible substances.**
10.5	Incompatible Substances: **Strong oxidizers, acids, and alkalies.**

11. TOXICOLOGICAL INFORMATION

11.1	Toxicity Data: **The manufacturer has not reported any detailed studies on the environmental fate of the material. However, prudent practice would dictate the material not be allowed to enter the environment.**	
11.2	Acute Toxicity: **See section 2.5.**	
11.3	Chronic Toxicity: **See section 2.6.**	
11.4	Suspected Carcinogen: **NO**	
11.5	Reproductive Toxicity:	
	Mutagenicity:	**This product is not expected to cause mutagenic effects in humans.**
	Embryotoxicity:	**This product is not expected to cause embryotoxic effects in humans.**
	Teratogenicity:	**This product is not expected to cause teratogenic effects in humans.**
	Reproductive Toxicity:	**This product is not expected to cause reproductive harm in humans.**
11.6	Irritancy of Product: **NA**	
11.7	Biological Exposure Indices: **NA**	
11.8	Medical Recommendations: **Treat symptomatically.**	

12. ECOLOGICAL INFORMATION

12.1	Environmental Stability: **The manufacturer has not reported any detailed studies on the environmental fate of the material. However, prudent practice would dictate the material not be allowed to enter the environment.**
12.2	Effect on Plants & Animals: **The manufacturer has not reported any plant or animal effects.**
12.3	Effect on Aquatic Life: **The manufacturer has not reported any aquatic life effects.**

13. DISPOSAL CONSIDERATIONS

13.1	Waste Disposal: **Dispose of in accordance with federal, state & provincial hazardous waste laws.**
13.2	Special Considerations: **If the material is unsuitable for recycling or reclamation, enclosed-controlled incineration is recommended unless otherwise prohibited by local ordinance.**

14. TRANSPORTATION INFORMATION

The basic description (ID Number, proper shipping name, hazard class & division, packing group) is shown for each mode of transportation. Additional descriptive information may be required by 49 CFR, IATA/ICAO, IMDG and the CTDGR.

14.1	49 CFR (GND): **NOT REGULATED**
14.2	IATA (AIR): **NOT REGULATED**
14.3	IMDG (OCN): **NOT REGULATED**
14.4	TDGR (CAN): **NOT REGULATED**
14.5	ADR/RID (EU): **NOT REGULATED**
14.6	SCT (MEX): **NOT REGULATED**
14.7	ADGR (AUS): **NOT REGULATED**

15. REGULATORY INFORMATION

15.1	SARA Reporting Requirements: **This product contains ethylene glycol, a substance subject to SARA reporting requirements.**	
15.2	SARA Threshold Planning Quantity: **NA**	
15.3	TSCA Inventory Status: **The components of this product are listed on the TSCA inventory.**	
15.4	CERCLA Reportable Quantity (RQ): **Ethylene Glycol: 5000 lbs; 2270 kg. Potassium hyudroxide: 1000 lbs; 474 kg.**	
15.5	Other Federal Requirements: **NA**	
15.6	Other Canadian Regulations **This product has been classified according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR. The components of this product are listed on the DSL/NDSL. None of the components of this product are listed on the priorities substances list.**	
15.7	State Regulatory Information: **NA**	
15.8	European Union 67/548/EEC and Australia NOHSC:2011 (2003) Requirements: **The primary component of this product is listed in Annex I of EU Directive 67/548/EEC:** **Ethylene Glycol: Harmful (Xn). R: 22 - Harmful if swallowed. S: 26-36/37-39-45-53 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Weaer suitable protective clothing and gloves. Wear eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible.) Avoid exposure - obtain special instructions before use.**	

16. OTHER INFORMATION

16.1	Other Information: **NA**	
16.2	Terms & Definitions: **Please see last page of this MSDS.**	
16.3	Disclaimer: This Material Safety Data Sheet complies with Health Canada's Workplace Hazardous Materials Information System (WHMIS) & U.S. OSHA's Hazard Communication Standard, 29 CFR §1910.1200. To the best of ShipMate's or Mazda's knowledge, the information contained herein is reliable and accurate as of this date; however, accuracy, suitability or completeness is not guaranteed and no warranties of any type, either expressed or implied, are provided. The information contained herein relates only to the specific product. Contact the manufacturer for additional information.	
16.4	Prepared for: **Mazda North American Operations** **7755 Irvine Center Drive** **Irvine, CA 92618-9734** **Phone: +1 (949) 727-6174** **Fax: +1 (949) 727-6722** **Web: http://www.mazdausa.com**	
16.5	Prepared by: **ShipMate, Inc.** **P.O. Box 787** **Sisters, OR 97759-0787** **Phone: +1 (310) 370-3600** **Fax: +1 (310) 370-5700** **E-mail: shipmate@shipmate.com** **http://www.shipmate.com/**	ShipMate Dangerous Goods Training & Consulting

DEFINITION OF TERMS

A large number of abbreviations and acronyms appear on a MSDS. Some of these that are commonly used include the following:

GENERAL INFORMATION:

CAS No.	Chemical Abstract Service Number

EXPOSURE LIMITS IN AIR:

ACGIH	American Conference on Governmental Industrial Hygienists
TLV	Threshold Limit Value
OSHA	U.S. Occupational Safety and Health Administration
PEL	Permissible Exposure Limit
IDLH	Immediately Dangerous to Life and Health

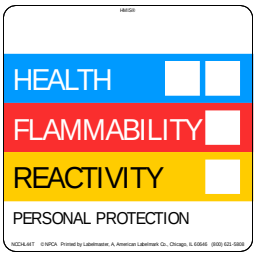
FIRST AID MEASURES:

CPR	Cardiopulmonary resuscitation - method in which a person whose heart has stopped receives manual chest compressions and breathing to circulate blood and provide oxygen to the body.

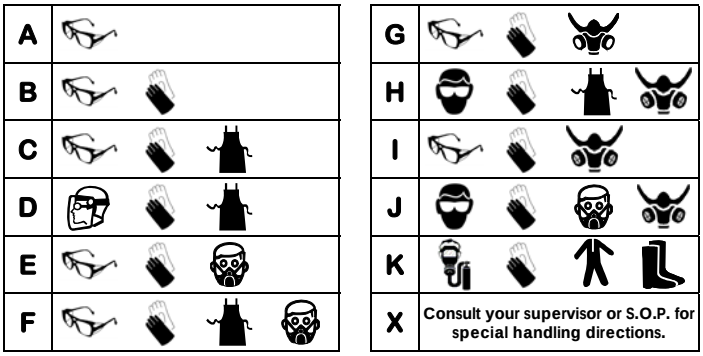
HAZARDOUS MATERIALS IDENTIFICATION SYSTEM: HMIS

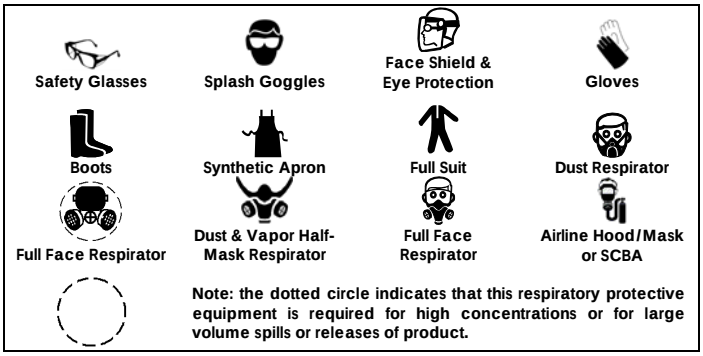
HEALTH, FLAMMABILITY & REACTIVITY RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard



PERSONAL PROTECTION RATINGS:





OTHER STANDARD ABBREVIATIONS:

NA	Not Available
NR	No Results
NE	Not Established
ND	Not Determined
ML	Maximum Limit
SCBA	Self-Contained Breathing Apparatus

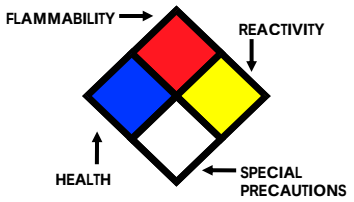
NATIONAL FIRE PROTECTION ASSOCIATION: NFPA

FLAMMABILITY LIMITS IN AIR:

Autoignition Temperature	Minimum temperature required to initiate combustion in air with no other source of ignition
LEL	Lower Explosive Limit - lowest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source
UEL	Upper Explosive Limit - highest percent of vapor in air, by volume, that will explode or ignite in the presence of an ignition source

HAZARD RATINGS:

0	Minimal Hazard
1	Slight Hazard
2	Moderate Hazard
3	Severe Hazard
4	Extreme Hazard
ACD	Acidic
ALK	Alkaline
COR	Corrosive
~~W~~	Use No Water
OX	Oxidizer



TOXICOLOGICAL INFORMATION:

LD_{50}	Lethal Dose (solids & liquids) which kills 50% of the exposed animals s
LC_{50}	Lethal concentration (gases) which kills 50% of the exposed animal
ppm	Concentration expressed in parts of material per million parts
TD_{lo}	Lowest dose to cause a symptom
TCLo	Lowest concentration to cause a symptom
TD_{lo}, LD_{lo}, & LD_o or TC, TC_o, LC_{lo}, & LC_o	Lowest dose (or concentration) to cause lethal or toxic effects
IARC	International Agency for Research on Cancer
NTP	National Toxicology Program
RTECS	Registry of Toxic Effects of Chemical Substances
BCF	Bioconcentration Factor
TL_m	Median threshold limit
log K_{ow} or log K_{OC}	Coefficient of Oil/Water Distribution

REGULATORY INFORMATION:

WHMIS	Canadian Workplace Hazardous Material Information System
DOT	U.S. Department of Transportation
TC	Transport Canada
EPA	U.S. Environmental Protection Agency
DSL	Canadian Domestic Substance List
NDSL	Canadian Non-Domestic Substance List
NOHSC	Australia National Occupational Health & Safety Code
PSL	Canadian Priority Substances List
TSCA	U.S. Toxic Substance Control Act
EU	European Union (European Union Directive 67/548/EEC)

EC INFORMATION:

C	E	F	N	O	T+	Xi	Xn
Corrosive	Explosive	Flammable	Harmful	Oxidizing	Toxic	Irritant	Harmful