Safety Data Sheet

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

ALLFLEET Heavy Duty SCA Pre-Charged 50/50, 100% Antifreeze

Product Use: Heavy Duty Engine Coolant

SDS #: 042
Product Code: 952825050PC, 952820100PC

Manufactured For:
RelaDyne, LLC
8280 Montgomery Road, Suite 101
Cincinnati, OH 45236
www.reladyne.com

Emergency Phone Number:
INFOTRAC 800-535-5053

SECTION 2 HAZARDS IDENTIFICATION

CLASSIFICATION:

Acute toxicity (oral), Category 4	H302
Specific target organ toxicity — Repeated exposure, Category 2	H373

Full text of H statements: see section 16

GHS-US labelling
Hazard pictograms (GHS-US):

GHS07 GHS08

Signal word (GHS-US): Warning

Hazard statements (GHS-US):
H302 - Harmful if swallowed
H373 - May cause damage to organs (kidneys) through prolonged or repeated exposure (oral)

PRECAUTIONARY STATEMENTS:

Prevention:
P201 - Obtain special instructions before use
P202 - Do not handle until all safety precautions have been read and understood
P260 - Do not breathe mist, spray, vapors
P264 - Wash affected areas thoroughly after handling
P270 - Do not eat, drink or smoke when using this product

P280 - Wear personal protective equipment as required
P301+P310 - If swallowed: Immediately call doctor/physician or poison center
P301+P330+P331 - If swallowed: rinse mouth. Do NOT induce vomiting
P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing
P308+P313 - If exposed or concerned: Get medical advice/attention
P405 - Store locked up

Disposal: P501 - Dispose of contents/container to appropriate waste disposal facility, in accordance with local/regional/national/international regulations

HAZARDS NOT OTHERWISE CLASSIFIED:

Other Hazards: No additional information available
Unknown Acute toxicity (GHS US): No data available

SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

COMPONENTS	CAS NUMBER	% by wt	GHS-US classification
ethylene glycol	107-21-1	<= 50	Acute Tox. 4 (Oral), H302
water	7732-18-5	< 50	Not classified
diethylene glycol	111-46-6	< 3	Acute Tox. 4 (Oral), H302 STOT RE 2, H373
denatonium benzoate	3734-33-6	30 - 50 ppm	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye: Remove contact lenses, if present and easy to do. Continue rinsing. Rinse immediately with plenty of water for 15 minutes, lifting lower and upper lids. If eye irritation persists: Get medical advice and attention.

Skin: Remove contaminated clothing. Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation occurs: Rinse immediately with plenty of water (for at least 15 minutes), Get medical advice/attention.

Ingestion: Obtain emergency medical attention. Rinse mouth. If the person is fully conscious, make him/her drink two glasses of water. Never give an unconscious person anything to drink. Do NOT induce vomiting. Call a POISON CENTER/doctor/physician if you feel unwell. If medical advice is delayed, and if the person has swallowed a moderate volume of material (a few ounces), then give three to four ounces of hard liquor, such as whiskey. For children, give proportionally less liquor, according to weight.

Inhalation: If breathing is difficult, give oxygen. If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If you feel unwell, seek medical advice. If not breathing, give artificial respiration.

Most important symptoms and effects, both acute and delayed
IMMEDIATE SYMPTOMS AND HEALTH EFFECTS

Eye: Causes serious eye damage.

Skin: Causes skin irritation.

Ingestion: Swallowing a small quantity of this material will result in serious health hazard. The lethal dose in humans is estimated to be 100 mL (3 oz).

Inhalation: Not expected to be harmful if inhaled. Contains a petroleum-based mineral oil. May cause respiratory irritation or other pulmonary effects following prolonged or repeated inhalation of oil mist at airborne levels above the recommended mineral oil mist exposure limit. Symptoms of respiratory irritation may include coughing and difficulty breathing.

DELAYED OR OTHER SYMPTOMS AND HEALTH EFFECTS: Causes damage to organs (kidneys) Oral.

Indication of any immediate medical attention and special treatment needed
Note to Physicians: A more effective intravenous antidote for physician uses is 4-methylpyrazaole, a potent inhibitor of alcohol dehydrogenases, which effectively blocks the formation of toxic metabolites of ethylene glycol. It has been used to decrease the metabolic consequences of ethylene glycol poisoning before metabolic acidosis coma, seizures, and renal failure have occured.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Alcohol-resistant foam. Water fog. Fine water spray. Foam. Carbon dioxide. Dry chemical powder. Sand. Do not use a heavy water stream. May spread fire.

Unusual Fire Hazards: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

Reactivity: No dangerous reactions known under normal conditions of use.

PROTECTION OF FIRE FIGHTERS:
Fire Fighting Instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment. Do not enter fire area without proper protective equipment, including respiratory protection. Wear positive pressure self-contained breathing apparatus (SCBA). Protective fire fighting clothing (includes fire-fighting helmet, coat, pants, boots and gloves).

Combustion Products: Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Protective Measures: Evacuate unnecessary personnel. Equip cleanup crew with proper protection. Refer to section 8.2. Ventilate area.

Environmental Precautions: Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

Spill Management: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Small quantities of liquid spill: take up in non-combustible absorbent material and shovel into container for disposal. Store away from other materials.

Reporting: Report spills to local authorities and/or the U.S. Coast Guard's National Response Center at (800) 424-8802 as appropriate or required.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

Hygiene Measures: Do not eat, drink or smoke when using this product. Wash affected areas thoroughly after handling.

Storage conditions: Keep only in the original container in a cool, well ventilated place away from : Heat sources. Keep container closed when not in use. Product may become solid at temperatures below -37 ºC (-34 ºF). Do not store near food, foodstuffs, drugs or potable water supplies. Do not cut, drill, weld, use a blowtorch on, etc. containers even when empty.

Incompatible products: Keep away from strong acids, strong bases and oxidizing agents.

Incompatible materials: Sources of ignition.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

GENERAL CONSIDERATIONS:
Consider the potential hazards of this material (see Section 3), applicable exposure limits, job activities, and other substances in the work place when designing engineering controls and selecting personal protective equipment. If engineering controls or work practices are not adequate to prevent exposure to harmful levels of this material, the personal protective equipment listed below is recommended. The user should read and understand all instructions and limitations supplied with the equipment since protection is usually provided for a limited time or under certain circumstances.

ENGINEERING CONTROLS:
Use in a well-ventilated area.

PERSONAL PROTECTIVE EQUIPMENT
Avoid all unnecessary exposure. Gloves. Safety glasses.

Eye/Face Protection: Chemical goggles or safety glasses.

Skin Protection: Wear protective gloves.

Respiratory Protection: : Respiratory protection not required in normal conditions. If exposed to levels above exposure limits wear appropriate respiratory protection.

Other Information:

Occupational Exposure Limits: Do not eat, drink or smoke during use.

Component	Agency	TWA	STEL	Ceiling	Notation
ethylene glycol (107-21-1)	ACGIH	10 mg/m³	—-	—-	Upper Respiratory Tract (URT) & Eye irritant

Consult local authorities for appropriate values.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Attention: the data below are typical values and do not constitute a specification.

Color: Pink
Physical State: Liquid
Odor: Mild
Odor Threshold: No data available
pH: 10.5-11
Vapor Pressure: 0.1 mm Hg @ 20 ºC
Vapor Density (Air = 1): No data available
Initial Boiling Point: 107 °C (224 ºF)
Solubility: Water: Complete
Freezing Point: -37 °C (-34 ºF)
Specific Gravity: 1.06
Viscosity: No data available
Decomposition temperature: No data available
Density: 1.06 kg/l (8.84 lbs/gal)

FLAMMABLE PROPERTIES:
Flammability (solid, gas): No Data Available

Flashpoint: 116 °C (241 ºF) [100% Ethylene Glycol] ASTM D56

Autoignition: 400 °C (752 ºF) [100% Ethylene Glycol] Literature

Flammability (Explosive) Limits (% by volume in air): Not applicable

SECTION 10 STABILITY AND REACTIVITY

Reactivity: No dangerous reactions known under normal conditions of use.

Chemical Stability: Stable.

Incompatibility With Other Materials: Keep away from strong acids, strong bases and oxidizing agents.

Hazardous Decomposition Products: Carbon dioxide. Carbon monoxide. Fume. alcohols. Aldehydes. Ethers.

Hazardous Polymerization: Hazardous polymerization will not occur.

Conditions to avoid: Extremely high or low temperatures. Keep away from any flames or sparking source.

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects
Serious Eye Damage/Irritation: Not classified.
pH: 10.5 - 11

Skin Corrosion/Irritation: Not classified.
pH: 10.5 - 11

Skin Sensitization: Not classified

Acute Dermal Toxicity: The acute dermal toxicity hazard is based on evaluation of data for product components.

Acute Oral Toxicity: The acute oral toxicity hazard is based on evaluation of data for product components.

Acute Inhalation Toxicity: The acute inhalation toxicity hazard is based on evaluation of data for product components.

Acute Toxicity Estimate: Not Determined

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Reproductive Toxicity: Not classified

Specific Target Organ Toxicity - Single Exposure: Not classified

Specific Target Organ Toxicity - Repeated Exposure: May cause damage to organs (kidneys) through prolonged or repeated exposure (oral).

Aspiration hazard: Not classified

Potential adverse human health effects and symptoms: Based on available data, the classification criteria are not met.

Symptoms/injuries after skin contact: Causes skin irritation.

Symptoms/injuries after eye contact: Causes serious eye damage.

Symptoms/injuries after ingestion: Swallowing a small quantity of this material will result in serious health hazard. The lethal dose in humans is estimated to be 100 mL (3 oz).

diethylene glycol (111-46-6)	
LD50 dermal rabbit	11,890.00 mg/kg (Rabbit)
ATE US (oral)	500.00 mg/kg bodyweight
ATE US (dermal)	11,890.00 mg/kg bodyweight
ethylene glycol (107-21-1)	
LD50 oral rat	> 5,000.00 mg/kg (Rat; Literature study)
ATE US (oral)	500.00 mg/kg bodyweight
denatonium benzoate (3734-33-6)	
LD50 oral rat	584.00 mg/kg (Rat; Literature study)
LD50 dermal rabbit	> 2,000.00 mg/kg (Rabbit; Literature study)
ATE US (oral)	584.00 mg/kg bodyweight

SECTION 12 ECOLOGICAL INFORMATION

ECOTOXICITY

diethylene glycol (111-46-6)	
LC50 fish 1	> 5,000.00 mg/l (LC50; 24 h)
EC50 Daphnia 1	> 10,000.00 mg/l (EC50; 24 h)
ethylene glycol (107-21-1)	
EC50 Daphnia 1	> 10,000.00 mg/l (EC50; 24 h)
LC50 fish 2	40,761.00 mg/l (LC50; 96 h; Salmo gairdneri)
denatonium benzoate (3734-33-6)	
LC50 fish 1	> 1,000.00 mg/l (LC50; 96 h; Salmo gairdneri)
EC50 Daphnia 1	13.00 mg/l (EC50; 48 h; Daphnia magna)

MOBILITY IN SOIL

diethylene glycol (111-46-6)

Surface tension	0.05 N/m
Log Koc	Koc,SRC PCKOCWIN v1.66; 1; Calculated value; log Koc; SRC PCKOCWIN v1.66; 0; Calculated value

ethylene glycol (107-21-1)

Surface tension	0.05 N/m (20 ºC / 68 ºF)

PERSISTENCE AND DEGRADABILITY

diethylene glycol (111-46-6)

Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Highly mobile in soil. Photolysis in the air.
Biochemical oxygen demand (BOD)	0.02 g O_2/g substance
Chemical oxygen demand (COD)	1.51 g O_2/g substance
ThOD	1.51 g O_2/g substance
BOD (% of ThOD)	0.02

ethylene glycol (107-21-1)

Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil.
Biochemical oxygen demand (BOD)	0.47 g O_2/g substance
Chemical oxygen demand (COD)	1.24 g O_2/g substance
ThOD	1.29 g O_2/g substance
BOD (% of ThOD)	0.36

denatonium benzoate (3734-33-6)

Persistence and degradability	Biodegradability in water: no data available. No (test) data on mobility of the substance available.

POTENTIAL TO BIOACCUMULATE

diethylene glycol (111-46-6)

BCF fish 1	100.00 (BCF; Other; 3 days; Leuciscus melanotus; Static system; Fresh water; Experimental value)
Log Pow	-1.98 (Calculated; Other)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

ethylene glycol (107-21-1)

BCF fish 1	10.00 (BCF; 72 h)
BCF other aquatic organisms 1	0.21 - 0.6 (BCF)
BCF other aquatic organisms 2	190.00 (BCF; 24 h)
Log Pow	-1.34 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

denatonium benzoate (3734-33-6)

BCF fish 1	1.4 - 3.6 (BCF; BCFBAF v3.00)
Log Pow	1.78 (Estimated value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

Other adverse effects

Effect on ozone layer	:	No known effect on the ozone layer
Effect on global warming	:	No known effects from this product.
Other information	:	Avoid release to the environment.

SECTION 13 DISPOAL CONSIDERATIONS

Dispose of contents/container to appropriate waste disposal facility, in accordance with local/regional/national/international regulations. Avoid release to the environment.

SECTION 14 TRANSPORT INFORMATION

In accordance with DOT

Transport document description	:	UN3082 Environmentally hazardous substances, liquid, n.o.s., 9, III
UN-No.(DOT)	:	UN3082
Proper Shipping Name (DOT)	:	Environmentally hazardous substances, liquid, n.o.s.
Class (DOT)	:	9 - Class 9 - Miscellaneous hazardous material 49 CFR 173.140
Packing group (DOT)	:	III - Minor Danger
Hazard labels (DOT)	:	9 - Class 9 (Miscellaneous dangerous materials)

DOT Packaging Non Bulk (49 CFR 173.xxx)	:	203
DOT Packaging Bulk (49 CFR 173.xxx)	:	241
DOT Symbols	:	G - Identifies PSN requiring a technical name
DOT Packaging Exceptions (49 CFR 173.xxx)	:	155
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	No limit
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	No limit
DOT Vessel Stowage Location	:	A - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel
Other information	:	Non Bulk: Not regulated by the US D.O.T. (in quantities under 5,000 lbs in any one inner package).

TDG

Refer to current TDG Canada for further Canadian regulations

Transport by sea

Proper Shipping Name (IMDG)	:	Not regulated by IMDG (in quantites under 5,000 lbs in any one inner package)

Air transport

Proper Shipping Name (IATA)	:	Not regulated by IATA (in quantites under 5,000 lbs in any one inner package)

SECTION 15 REGULATORY INFORMATION

US Federal Regulations

ALLFLEET Heavy Duty SCA Pre-Charged 50/50 Antifreeze, ALLFLEET Heavy Duty SCA Pre-Charged 100% Antifreeze

EPA TSCA Regulatory Flag	Toxic Substances Control Act (TSCA): The intentional ingredients of this product are listed

diethylene glycol (111-46-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

ethylene glycol (107-21-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

Subject to reporting requirements of United States SARA Section 313

EPA TSCA Regulatory Flag	T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA
CERCLA RQ	5000 lb(s)
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard Ethylene glycol is subject to Tier I and/or Tier II annual inventory reporting
SARA Section 313 - Emission Reporting	Ethylene glycol is subject to Form R Reporting requirements.

denatonium benzoate (3734-33-6)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

International Regulations

Canada

ALLFLEET Heavy Duty SCA Pre-Charged 50/50 Antifreeze, ALLFLEET Heavy Duty SCA Pre-Charged 100% Antifreeze

WHMIS Classification	This SDS has been prepared according to the criteria of the Hazardous Products Regulations (HPR) (WHMIS 2015) and the SDS contains all of the information required by the HPR. Applicable GHS information is listed in section 2.2 of this SDS

EU-Regulations

No additional information available

National regulations

ALLFLEET Heavy Duty SCA Pre-Charged 50/50 Antifreeze, ALLFLEET Heavy Duty SCA Pre-Charged 100% Antifreeze

DSL (Canada): The intentional ingredients of this product are listed ECL

(South Korea): The intentional ingredients of this product are listed EINECS

(Europe): The intentional ingredients of this product are listed ENCS

(Japan): The intentional ingredients of this product are listed

US State Regulations

California Proposition 65 - This product contains, or may contain, substance(s) known to the state of California to cause cancer, developmental toxicity and/or reproductive toxicity

ethylene glycol (107-21-1)

U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	Non-significant risk level (NSRL)
No	Yes	No	No	

diethylene glycol (111-46-6)

U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

ethylene glycol (107-21-1)

U.S. - Massachusetts - Right To Know List

U.S. - New Jersey - Right to Know Hazardous Substance List

U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 OTHER INFORMATION

NFPA RATINGS: Health: 1 Flammability: 1 Reactivity: 0

HMIS RATINGS: Health: 2 Flammability: 1 Reactivity: 0

(0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme, PPE:- Personal Protection Equipment Index recommendation, *- Chronic Effect Indicator). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association (NFPA) or the National Paint and Coating Association (for HMIS ratings).

Full text of H-statements:

H302	Harmful if swallowed
H315	Causes skin irritation
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure

REVISION STATEMENT: This revision updates the following sections of this Safety Data Sheet: 1-16

Revision Date: April 9, 2018

ABBREVIATIONS THAT MAY HAVE BEEN USED IN THIS DOCUMENT:

TLV - Threshold Limit Value	TWA - Time Weighted Average
STEL - Short-term Exposure Limit	PEL - Permissible Exposure Limit
GHS - Globally Harmonized System	CAS - Chemical Abstract Service Number

ACGIH - American Conference of Governmental Industrial Hygienists	IMO/IMDG - International Maritime Dangerous Goods Code
API - American Petroleum Institute	SDS - Safety Data Sheet
HMIS - Hazardous Materials Information System	NFPA - National Fire Protection Association (USA)
DOT - Department of Transportation (USA)	NTP - National Toxicology Program (USA)
IARC - International Agency for Research on Cancer	OSHA - Occupational Safety and Health Administration
NCEL - New Chemical Exposure Limit	EPA - Environmental Protection Agency
SCBA - Self-Contained Breathing Apparatus	

Amended to conform to the United Nations' Globally Harmonized System of Classifications and Labeling of Chemicals (OSHA/GHS).

This Safety Data Sheet is prepared according to the Hazard Communication Standard (CFR29 1910.1200) HazCom 2012. The information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

***** END OF SAFETY DATA SHEET *****