



## ANTIFREEZE

### 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

REACH REGISTRATION	This material is a mixture. All components have been registered under REACH by the Manufacturer or Supplier.
NOTES	
SYNONYMS, TRADE NAMES	Universal Antifreeze G62661 - Antifreeze with Bitrex
APPLICATION	Automotive Industry.
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### 2 HAZARDS IDENTIFICATION

CLASSIFICATION (1999/45) Xn;R22, R48/22.

CLASSIFICATION (EC 1272/2008)

Physical and Chemical Hazards Not classified.

Human health

Acute Tox. 4 - H302;STOT Rep. 2 - H373

Environment

Not classified.

LABEL IN ACCORDANCE WITH (EC) NO. 1272/2008



SIGNAL WORD Warning

CONTAINS Mono Ethylene Glycol

HAZARD STATEMENTS

H302

Harmful if swallowed.

H373

May cause damage to organs through prolonged or repeated exposure.

PRECAUTIONARY STATEMENTS

P501a Dispose of contents/container to a registered waste disposal company

SUPPLEMENTARY PRECAUTIONARY STATEMENTS

P260

Do not breathe dust/fume/gas/mist/vapours/spray.

P270

Do not eat, drink or smoke when using this product.

P301+312

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

P314

Get medical advice/attention if you feel unwell.

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P330

Rinse mouth.

## ENVIRONMENT

The product is not expected to be hazardous to the environment.

## 3 COMPOSITION/INFORMATION ON INGREDIENTS

Mono Ethylene Glycol		60-99%
CAS-No.: 107-21-1	EC No.: 203-473-3	Registration Number: 01-21 19456816-28
Classification (EC 1272/2008) Acute Tox. 4 - H302 STOT Rep. 2 - H373	Classification (67/548/EEC) Xn;R22,R48/22.	
Disodium tetraborate pentahydrate		1-5%
CAS-No.: 12179-04-3	EC No.: 215-540-4	
Classification (EC 1272/2008) Not classified.	Classification (67/548/EEC) Repr. Cat. 2;R60,R61.	

The Full Text for all R-Phrases is Hazard Statements are Displayed in Section 16

## COMPOSITION COMMENTS

Bitrex [Denatonium benzoate CAS 3734-33-6] may have been added in small quantities by customer request.

## 4 FIRST-AID MEASURES

### INHALATION

Remove victim immediately from source of exposure.

Place unconscious person on the side in the recovery position and ensure breathing

Get medical attention.

### INGESTION

DO NOT INDUCE VOMITING!

When risk of unconsciousness, place and transport the victim in secured side position.

Drink plenty of water.

Do not give victim anything to drink if he is unconscious.

Get medical attention immediately!

### SKIN CONTACT

Remove contaminated clothing.

Wash the skin immediately with soap and water.

Get medical attention if any discomfort continues.

### EYE CONTACT

Promptly wash eyes with plenty of water while lifting the eye lids.

Make sure to remove any contact lenses from the eyes before rinsing.

Continue to rinse for at least 15 minutes.

Get medical attention if any discomfort continues.

## 5 FIRE-FIGHTING MEASURES

### EXTINGUISHING MEDIA

Stop flow of material to fire.

Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

Dry chemicals, sand, dolomite etc.

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### SPECIAL FIRE FIGHTING PROCEDURES

Avoid breathing fire vapours.

Use water to keep fire exposed containers cool and disperse vapours.

Keep run-off water out of sewers and water sources. Dike for water control.

### SPECIFIC HAZARDS

In case of fire, toxic gases may be formed (COx, NOx).

### PROTECTIVE MEASURES IN FIRE

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

## 6 ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS

Wear protective clothing as described in Section 8 of this safety data sheet.

### ENVIRONMENTAL PRECAUTIONS

Protect drains by covering to avoid any spillage entering the drainage system.

### SPILL CLEAN UP METHODS

Stop leak if possible without risk.

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate.

Wear necessary protective equipment.

Absorb in vermiculite, dry sand or earth and place into containers.

Disposal should be carried out in accordance with the Hazardous Waste Regulations. If any liquid enters the drainage system or watercourse inform the local authorities, Fire Brigade and Environment Agency

## 7 HANDLING AND STORAGE

### USAGE PRECAUTIONS

Do not use in confined spaces without adequate ventilation and/or respirator.

Eliminate all sources of ignition.

Keep away from heat, sparks and open flame.

Avoid inhalation of vapours.

Avoid acids, moisture, and combustible materials.

### STORAGE PRECAUTIONS

Store in tightly closed original container in a dry, cool and well-ventilated place.

Keep away from heat, sparks and open flame.

## 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
GP3 ANTIFREEZE	WEL	60 mg/m <sup>3</sup>		125 mg/m <sup>3</sup>		
Mono Ethylene Glycol	WEL	20 ppm(Sk)	52 mg/m <sup>3</sup> (Sk)	40 ppm(Sk)	104 mg/m <sup>3</sup> (Sk)	

WEL = Workplace Exposure Limit.

### PROTECTIVE EQUIPMENT



### ENGINEERING MEASURES

Must not be handled in confined space without sufficient ventilation.

Provide adequate ventilation.

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### RESPIRATORY EQUIPMENT

If ventilation is insufficient, suitable respiratory protection must be provided.

### HAND PROTECTION

The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material.

### EYE PROTECTION

Wear approved safety goggles.

### OTHER PROTECTION

Wear suitable protective clothing as protection against splashing or contamination.

### HYGIENE MEASURES

Wash at the end of each work shift and before eating, smoking and using the toilet.

Wash promptly with soap & water if skin becomes contaminated.

DO NOT SMOKE IN WORK AREA!

## 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Liquid
COLOUR	Blue
ODOUR	Odourless
SOLUBILITY	Miscible with water Miscible with: Acetone Alcohol
BOILING POINT (°C)	165 760 mm Hg
MELTING POINT (°C)	-12
RELATIVE DENSITY	1.13 @ 20 °c
VAPOUR DENSITY (air=1)	2.14
VAPOUR PRESSURE	0.05 kPa @ 20 °c
VISCOSITY	21 cps @ 20 °c
FLASH POINT (°C)	111 CC (Closed cup).
AUTO IGNITION	400
TEMPERATURE (°C)	
FLAMMABILITY LIMIT - LOWER(%)	3.2

## 10 STABILITY AND REACTIVITY

### STABILITY

No particular stability concerns.

### CONDITIONS TO AVOID

Avoid excessive heat for prolonged periods of time. Avoid heat, flames and other sources of ignition.

### MATERIALS TO AVOID

Acids, oxidising. Strong oxidising substances. Sulphuric Acid, Oleum, Phosphorous Pentasulphide, Chlorosulphonic acid

### HAZARDOUS DECOMPOSITION PRODUCTS

In case of fire, toxic gases (CO, CO<sub>2</sub>, NO<sub>x</sub>) may be formed.

## 11 TOXICOLOGICAL INFORMATION

TOXIC DOSE 1 - LD 50	5890-13400 mg/kg (oral rat)
TOXIC DOSE 2 - LD 50	5010 mg/kg (ipr-rat)

### TOXICOLOGICAL INFORMATION

Toxicological information on major component only. As Ethanediol

### GENERAL INFORMATION

NOAEL Rabbit >3549 mg/kg

### INHALATION

No specific health warnings noted.

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### INGESTION

Harmful if swallowed.

### SKIN CONTACT

No specific health warnings noted.

### EYE CONTACT

No specific health warnings noted. May cause temporary eye irritation.

### ROUTE OF ENTRY

Ingestion.

## 12 ECOLOGICAL INFORMATION

### ECOTOXICITY

Not regarded as dangerous for the environment.

LC 50, 96 Hrs, FISH mg/l 22810 (rainbow trout)

EC 50, 48 Hrs, DAPHNIA, mg/l 41000

### MOBILITY

The product is soluble in water.

### BIOACCUMULATION

The product is not bioaccumulating.

### DEGRADABILITY

The product is expected to be biodegradable.

## 13 DISPOSAL CONSIDERATIONS

### DISPOSAL METHODS

Dispose of waste and residues in accordance with local authority requirements.

### WASTE CLASS

This material and container must be disposed of as a HAZARDOUS WASTE.

## 14 TRANSPORT INFORMATION

### GENERAL

The product is not covered by international regulation on the transport of dangerous goods (IMDG, IATA, ADR/RID).

No transport warning sign required.

### SEA TRANSPORT NOTES

Marpol 73/78 IBC Code Chapter 17: proper shipping name - ethylene glycol

### ENVIRONMENTALLY

No.

### HAZARDOUS

### SUBSTANCE/MARINE

### POLLUTANT

### UN NO. ROAD

None

## 15 REGULATORY INFORMATION

### UK REGULATORY REFERENCES

The Control of Substances Hazardous to Health Regulations 2002 (S.I 2002 No. 2677) with amendments.

Health and Safety at Work Act 1974.

### EU DIRECTIVES

Dangerous Substance Directive 67/548/EEC.

Dangerous Preparations Directive 1999/45/EC.

Regulation (EC) No 1272/2008 CLP

Regulation (EC) No 1907/2006 REACH

### STATUTORY INSTRUMENTS

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (S.I 2009 No. 716).

## ANTIFREEZE

Control of Substances Hazardous to Health.

### APPROVED CODE OF PRACTICE

Safety Data Sheets for Substances and Preparations.

Classification and Labelling of Substances and Preparations Dangerous for Supply.

### GUIDANCE NOTES

Workplace Exposure Limits EH40.

## 16 OTHER INFORMATION

### INFORMATION SOURCES

Dangerous Properties of Industrial Chemicals, 7. ed., Sax & Lewis, 1988. Fire and Related Properties of Industrial Chemicals, Fire Protection Association.

### REVISION COMMENTS

Classification in line with CLP

### ISSUED BY

PCL Technical Team

REVISION DATE 21/01/2011

REV. NO./REPL. SDS 7

GENERATED

SDS NO. 10590

### SAFETY DATA SHEET STATUS

Approved.

DATE 05/07/02

### RISK PHRASES IN FULL

R22 Harmful if swallowed.

R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

R61 May cause harm to the unborn child.

R60 May impair fertility.

### HAZARD STATEMENTS IN FULL

H302 Harmful if swallowed.

H373 May cause damage to organs <<Organs>> through prolonged or repeated exposure.

### DISCLAIMER

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.