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1. Identification

Product identifier used on the label

GLYSANTIN® G48® blue-green also suitable for electric vehicles

Recommended use of the chemical and restriction on use

Recommended use*: engine coolant Unsuitable for use: None known

* The "Recommended use" identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company: BASF CORPORATION 100 Park Avenue Florham Park, NJ 07932, USA Fuel and Lubricant Solutions

E-mail address: RegXcellenceFuelLubes@basf.com

Emergency telephone number

24 Hour Emergency Response Information CHEMTREC: 1-800-424-9300 BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Chemical family: inhibitors

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Acute Tox.

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Repr. Repr. STOT RE	1B (fertility) 1B (unborn child) 2	Reproductive toxicity Reproductive toxicity Specific target organ toxicity — repeated exposure		
Label elements				
Pictogram:				
Signal Word: Danger				
Hazard Statement: H302 H373	exposure.	ans (Kidney) through prolonged or repeated		
H360	May damage fertility. May	damage the unborn child.		
-	Precautionary Statements (Prevention):			
P280	Wear protective gloves, protective clothing and eye protection or face protection.			
P260	Do not breathe dust/gas/mist/vapours.			
P201	Obtain special instructions before use.			
P202	Do not handle until all safety precautions have been read and understood.			
P270	Do not eat, drink or smoke when using this product.			
P264	Wash contaminated body parts thoroughly after handling.			
Precautionary Statements (Response):				
P314	Get medical advice/attention			
P301 + P312	IF SWALLOWED: Call a P feel unwell.	OISON CENTER or doctor/physician if you		
P308 + P311		Call a POISON CENTER or physician.		
P330	Rinse mouth.			
Precautionary Statements (Storage): P405 Store locked up.				
Precautionary Statements (Disposal): P501 Dispose of contents/container in accordance with local regulations.				

Hazards not otherwise classified

No specific dangers known, if the regulations/notes for storage and handling are considered.

3. Composition / Information on Ingredients

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

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ethylene glycol CAS Number: 107-21-1 Content (W/W): >= 75.0 - 100.0% Synonym: 1,2-Ethanediol; Ethylene glycol

Hexanoic acid, 2-ethyl-, sodium salt CAS Number: 19766-89-3 Content (W/W): >= 1.0 - < 5.0% Synonym: Sodium 2-ethylhexanoate; 2-Ethylhexanoic acid sodium salt

Decanedioic acid, disodium salt CAS Number: 17265-14-4 Content (W/W): >= 1.0 - < 3.0% Synonym: Decanedioic acid disodium salt

Boron sodium oxide (B4Na2O7) CAS Number: 1330-43-4 Content (W/W): >= 0.3 - < 1.0% Synonym: Boric acid (H2B4O7), disodium salt

4. First-Aid Measures

Description of first aid measures

General advice:

Immediately remove contaminated clothing. If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position). First aid personnel should pay attention to their own safety.

If inhaled:

Keep patient calm, remove to fresh air, seek medical attention.

If on skin:

Wash affected areas with water while removing contaminated clothing. Seek medical attention.

If in eyes:

Wash affected eyes for at least 15 minutes under running water with eyelids held open.

Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing. Seek medical attention.

If swallowed:

Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention. Administer 50 ml of pure ethanol in a drinkable concentration.

Most important symptoms and effects, both acute and delayed

Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11., (Further) symptoms and / or effects are not known so far

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Information on: ethylene glycol

Symptoms: Overexposure may cause:, corneal injury, severe pain, skin irritation, coughing, respiratory disorders, dyspnea, nausea, headache, vomiting, dizziness, diarrhea, abdominal cramps

Indication of any immediate medical attention and special treatment needed

Note to physician

Treatment:

Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media

Suitable extinguishing media: water spray, dry powder, foam

Special hazards arising from the substance or mixture

Hazards during fire-fighting: harmful vapours Evolution of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Protective equipment for fire-fighting: Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:

The degree of risk is governed by the burning substance and the fire conditions. Contaminated extinguishing water must be disposed of in accordance with official regulations.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use personal protective clothing. Breathing protection required.

Environmental precautions

Contain contaminated water/firefighting water. Do not discharge into drains/surface waters/groundwater.

Methods and material for containment and cleaning up

For small amounts: Pick up with absorbent material (e.g. sand, sawdust, general-purpose binder). Dispose of absorbed material in accordance with regulations. For large amounts: Pump off product.

Place absorbed material in the same container as the spilled substance/product for disposal.

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7. Handling and Storage

Precautions for safe handling

Ensure thorough ventilation of stores and work areas. Shut containers immediately after taking product because product takes up the humidity of air.

Protection against fire and explosion: Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

No applicable information available. Unsuitable materials for containers: Galvanized carbon steel (Zinc), Paper/Fibreboard

Further information on storage conditions: Containers should be stored tightly sealed in a dry place. Storage in galvanized containers is not recommended.

8. Exposure Controls/Personal Protection

Components with occupational exposure limits

ethylene glycol	ACGIH, US: ACGIH, US:	TWA value 25 ppm Vapor fraction; STEL value 50 ppm Vapor fraction;
)	STEL value 10 mg/m3 Inhalable fraction, Aerosole ;

Personal protective equipment

Respiratory protection:

Wear a NIOSH-certified (or equivalent) organic vapour/particulate respirator as needed.

Hand protection:

Wear chemically impervious protective gloves.

Eye protection:

Safety glasses with side-shields.

Body protection:

Body protection must be chosen based on level of activity and exposure., Protective coverall and/or impermeable apron and boots as necessary.

General safety and hygiene measures:

Wearing of closed work clothing is required additionally to the stated personal protection equipment. No eating, drinking, smoking or tobacco use at the place of work. Handle in accordance with good industrial hygiene and safety practice.

9. Physical and Chemical Properties

Form:liquidOdour:of glycolOdour threshold:not determinedColour:blue-green

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pH value:	7.1 - 7.3		
Melting temperature:	No applicable information available.		
Freezing point:	No applicable information available.		
Boiling point:	165 °C	(ASTM D1120)	
Sublimation point:	No applicable information available.	,	
Flash point:	127 °C	(ISO 2719)	
Flammability:	hardly combustible	derived from flash	
-		point)	
Lower explosion limit:	For liquids not relevant for	• •	
·	classification and labelling. The lower		
	explosion point may be 5 - 15 °C		
	below the flash point.		
Upper explosion limit:	For liquids not relevant for		
	classification and labelling.		
Autoignition:	> 440 °C	(DIN 51794)	
Vapour pressure:	0.2 hPa		
	(20 °C)		
Density:	1.122 g/cm3	(DIN 51757)	
	(20 °C)		
Relative density:	No applicable information available.		
Vapour density:	> 1	(estimated)	
	(20 °C)		
	Heavier than air.		
Partitioning coefficient n-	Study scientifically not justified.		
octanol/water (log Pow):			
Self-ignition	not self-igniting		
temperature:			
Thermal decomposition:	No decomposition if correctly stored an	d handled.	
Viscosity, dynamic:	No applicable information available.		
Viscosity, kinematic:	20 - 30 mm2/s	(DIN 51562)	
	(20 °C)		
Particle size:	The substance / product is marketed		
	or used in a non solid or granular		
	form.		
Solubility in water:	soluble, The product has not been tested. The statement has		
	been derived from the properties of the	individual components.	
Miscibility with water:	miscible in all proportions		
Solubility (quantitative):	No applicable information available.		
Solubility (qualitative):	soluble		
	solvent(s): polar solvents,		
Molar mass:	No applicable information available.		
Evaporation rate:			
Other Information:	If necessary, information on other physi	ical and chemical	
	parameters is indicated in this section.		

10. Stability and Reactivity

Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Corrosion to metals: No corrosive effect on metal.

Oxidizing properties:

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not fire-propagating

Chemical stability

The product is stable if stored and handled as prescribed/indicated.

Possibility of hazardous reactions

No hazardous reactions when stored and handled according to instructions.

Conditions to avoid

No conditions to avoid anticipated.

Incompatible materials strong oxidizing agents

Hazardous decomposition products

Decomposition products: Hazardous decomposition products: No hazardous decomposition products if stored and handled as prescribed/indicated.

Thermal decomposition: No decomposition if correctly stored and handled.

11. Toxicological information

Primary routes of exposure

Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

<u>Acute toxicity</u> Assessment of acute toxicity: Of moderate toxicity after single ingestion.

<u>Oral</u>

Information on: ethylene glycol Type of value: LD (human) Species: human (male/female) Value: approx. 1,600 mg/kg

Inhalation No applicable information available.

<u>Assessment other acute effects</u> Based on available data, the classification criteria are not met.

Irritation / corrosion

Assessment of irritating effects: Not irritating to eyes and skin.

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Sensitization

Assessment of sensitization: Skin sensitizing effects were not observed in animal studies. Human data do not fully exclude a skin sensitizing potential.

<u>Aspiration Hazard</u> No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity

Assessment of repeated dose toxicity: Repeated exposure may affect certain organs.

Information on: ethylene glycol

Assessment of repeated dose toxicity: The substance may cause damage to the kidney after repeated ingestion. The substance may cause damage to the kidney after repeated skin contact with high doses.

Genetic toxicity

Assessment of mutagenicity: Based on the ingredients, there is no suspicion of a mutagenic effect.

Carcinogenicity

Assessment of carcinogenicity: The whole of the information assessable provides no indication of a carcinogenic effect.

Reproductive toxicity

Assessment of reproduction toxicity: Contains a component that causes reproductive toxicity in test animals.

Information on: Boron sodium oxide (B4Na2O7) Assessment of reproduction toxicity: Causes impairment of fertility in laboratory animals.

Teratogenicity

Assessment of teratogenicity: Contains a component that causes teratogenicity in test animals.

Information on: Boron sodium oxide (B4Na2O7) Assessment of teratogenicity: The substance caused malformations/developmental toxicity in laboratory animals.

Information on: ethylene glycol

Assessment of teratogenicity: Developmental toxicity was observed after oral ingestion of high doses in studies with rats and mice, but this effect was not seen in a study with rabbits. Mechanistic studies show that the rabbit is the relevant species for the classification for human health. As such, and since ethylene glycol is not a developmental toxicant in the rabbit, no classification is warranted.

Other Information

The product has not been tested. The statement has been derived from the properties of the individual components.

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12. Ecological Information

Toxicity

Aquatic toxicity Assessment of aquatic toxicity: There is a high probability that the product is not acutely harmful to aquatic organisms.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

Persistence and degradability

Assessment biodegradation and elimination (H2O) Study scientifically not justified.

Bioaccumulative potential

Assessment bioaccumulation potential Study scientifically not justified.

<u>Bioaccumulation potential</u> Accumulation in organisms is not to be expected.

Mobility in soil

<u>Assessment transport between environmental compartments</u> The substance will not evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.

Additional information

Adsorbable organically-bound halogen(AOX): This product contains no organically-bound halogen.

Other ecotoxicological advice: The product has not been tested. The statements on ecotoxicology have been derived from the properties of the individual components.

Do not release untreated into natural waters.

13. Disposal considerations

Waste disposal of substance:

Dispose of in accordance with national, state and local regulations. It is the waste generator's responsibility to determine if a particular waste is hazardous under RCRA.

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Container disposal:

Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport Information

Land transport

USDOT

Not classified as a dangerous good under transport regulations

Sea transport IMDG

Not classified as a dangerous good under transport regulations

Air transport IATA/ICAO

Not classified as a dangerous good under transport regulations

Further information

DOT: This product is regulated if the amount in a single receptacle exceeds the Reportable Quantity (RQ). Please refer to Section 15 of this SDS for the RQ for this product. Bulk Shipments: RQ,UN3082 Environmentally Hazardous Substance, Liquid NOS (Ethyleneglycol), 9, PG III

15. Regulatory Information

Federal Regulations

Registration status:

Chemical TSCA, US released; restriction on use / listed

This product contains a substance subject to a Significant New Use Rule (SNUR) or consent order restriction. 40 CFR 721.11080

EPCRA 311/312 (Hazard categories): Refer to SDS section 2 for GHS hazard classes applicable for this product.

EPCRA 313:

CAS Number	Chemical name
107-21-1	ethylene glycol

CERCLA RQ 5000 LBS CAS Number 107-21-1 Chemical name ethylene glycol

State regulations		
State RTK	CAS Number	Chemical name
NJ	107-21-1	ethylene glycol
PA	107-21-1	ethylene glycol

Safe Drinking Water & Toxic Enforcement Act, CA Prop. 65:

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WARNING: This product can expose you to chemicals including ETHYLENE GLYCOL (INGESTED), which is known to the State of California to cause birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov.

NFPA Hazard codes: Health: 1 Fire: 1 Reactivity: 0 Special:

HMIS III rating Health: 1^a Flammability: 1 Physical hazard:0

16. Other Information

SDS Prepared by:

BASF NA Product Regulations SDS Prepared on: 2024/04/05

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

GLYSANTIN® G48® blue-green also suitable for electric vehicles is a registered trademark of BASF Corporation or BASF SE

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