We create chemistry

Safety data sheet

1. Identification

Product identifier

GLYSANTIN® G05® yellow

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: engine coolant

Details of the supplier of the safety data sheet

Company:
BASF SE
67056 Ludwigshafen
GERMANY
Fuel and Lubricant Solutions

Telephone: +49 621 60-0
E-mail address: RegXcellenceFuelLubes@basf.com

Emergency telephone number

International emergency number:
Telephone: +49 180 2273-112

2. Hazards Identification

Classification of the substance or mixture

According to UN GHS criteria

Acute Tox. 4 (oral)
Skin Irrit. 3
Repr. 1B (fertility)
Repr. 1B (unborn child)
STOT RE (Kidney) 2
Aquatic Acute 3

For the classifications not written out in full in this section the full text can be found in section 16.

Label elements

Globally Harmonized System (GHS)

Pictogram:

Signal Word:
Danger

Hazard Statement:

H316	Causes mild skin irritation.
H302	Harmful if swallowed.
H360	May damage fertility. May damage the unborn child.
H373	May cause damage to organs (Kidney) through prolonged or repeated exposure.
H402	Harmful to aquatic life.

Precautionary Statements (Prevention):

P280	Wear protective gloves, protective clothing and eye protection or face protection.
P260	Do not breathe mist or vapour.
P201	Obtain special instructions before use.
P273	Avoid release to the environment.
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):

P308 + P313	IF exposed or concerned: Get medical advice/attention.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P330	Rinse mouth.
P332 + P313	If skin irritation occurs: Get medical advice/attention.

Precautionary Statements (Storage):

P405	Store locked up.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.

Other hazards

According to UN GHS criteria

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture.

The product does not contain a substance fulfilling the PBT (persistent/bioaccumulative/toxic) criteria or the vPvB (very persistent/very bioaccumulative) criteria.

3. Composition/Information on Ingredients

Substances

Not applicable

Mixtures

Chemical nature

Contains: Ethane-1,2-diol

inhibitors

Hazardous ingredients (GHS)
According to UN GHS criteria

Ethane-1,2-diol

Content (W/W): >= 75 % - <= 100 %	Acute Tox. 4 (oral)
CAS Number: 107-21-1	STOT RE (Kidney) 2
EC-Number: 203-473-3	H302, H373
INDEX-Number: 603-027-00-1	

Sodium benzoate

Content (W/W): >= 1 % - < 3 %	Acute Tox. 5 (oral)
CAS Number: 532-32-1	Eye Irrit. 2A
EC-Number: 208-534-8	H319, H303

Disodium tetraborate, anhydrous

Content (W/W): >= 1 % - < 3 %	Eye Irrit. 2A
CAS Number: 1330-43-4	Repr. 1B (fertility)
EC-Number: 215-540-4	Repr. 1B (unborn child)
INDEX-Number: 005-011-00-4	H319, H360

Sodium nitrite

Content (W/W): >= 0,3 % - < 1 %	Ox. Sol. 2
CAS Number: 7632-00-0	Acute Tox. 3 (oral)
EC-Number: 231-555-9	Eye Irrit. 2A
	Aquatic Acute 1
	M-factor acute: 1
	H272, H319, H301, H400

Condensation product of: bis[sodium (oxysilanylpropylmethoxy/ethoxyphosphonate)] and sodium metasilicate

Content (W/W): >= 0,1 % - < 0,2 %	Acute Tox. 4 (oral)
CAS Number: 148324-78-1	Skin Corr. 1B
EC-Number: 401-770-4	Eye Dam. 1
INDEX-Number: 650-014-00-1	H314, H302

For the classifications not written out in full in this section the full text can be found in section 16.

4. First-Aid Measures

Description of first aid measures

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

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

On skin contact:
Immediately wash thoroughly with soap and water, seek medical attention.

On contact with eyes:
Wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:
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

Indication of any immediate medical attention and special treatment needed

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

Unsuitable extinguishing media for safety reasons:
No applicable information available.

Special hazards arising from the substance or mixture

harmful vapours
Generation of fumes/fog. The substances/groups of substances mentioned can be released in case of fire.

Advice for fire-fighters

Special protective equipment:
Wear a self-contained breathing apparatus.

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 large amounts: Pump off product.
For residues: Pick up with suitable absorbent material. Dispose of absorbed material in accordance with regulations.

7. Handling and Storage

Precautions for safe handling

No special measures necessary provided product is used correctly.

Protection against fire and explosion:

Take precautionary measures against static discharges.

Conditions for safe storage, including any incompatibilities

Further information on storage conditions: Keep container tightly closed and dry; store in a cool place.

8. Exposure Controls/Personal Protection

Control parameters

Components with occupational exposure limits

107-21-1: Ethane-1,2-diol
532-32-1: Sodium benzoate
1330-43-4: Disodium tetraborate, anhydrous

Exposure controls

Personal protective equipment

Respiratory protection:
Respiratory protection in case of vapour/aerosol release. Combination filter for gases/vapours of organic compounds and solid and liquid particles (f.e. EN 14387 Type A-P2)

Hand protection:
Wear chemically resistant gloves in combination with specific activity training
Chemical resistant protective gloves (EN ISO 374-1)
Suitable materials for short-term contact (recommended: At least protective index 2, corresponding > 30 minutes of permeation time according to EN ISO 374-1)
butyl rubber (butyl) - 0.7 mm coating thickness
nitrile rubber (NBR) - 0.4 mm coating thickness
Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing.
Manufacturer's directions for use should be observed because of great diversity of types.

Eye protection:
Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:
chemical-protection suit (f.e. according to EN 14605)

General safety and hygiene measures
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

9.1. Information on basic physical and chemical properties

State of matter:	liquid	
Form:	liquid	
Colour:	yellow clear	
Odour:	of glycol	
Odour threshold:	not determined	
solidification temperature:	approx. -15 °C	(DIN ISO 3016)
boiling temperature:	> 160 °C	(ASTM D1120)
Flammability:	hardly combustible	(derived from flash point)
Lower explosion limit:	3 %(V) The lower explosion point may be 5 - 15 °C below the flash point.	
Upper explosion limit:	15 %(V)	
Flash point:	117 °C	(ISO 2719)
Auto-ignition temperature:	445 °C	(DIN 51794)
Thermal decomposition:	No decomposition if correctly stored and handled.	
pH value:	6,0 - 7,0	(ASTM D1287)
Viscosity, kinematic:	20 - 30 mm2/s (20 °C)	(DIN 51562)
Thixotropy:	not thixotropic	
Solubility in water:	miscible	
Solubility (qualitative) solvent(s):	polar solvents soluble	
Partitioning coefficient n-octanol/water (log Kow):	not applicable for mixtures	
Vapour pressure:	0,3 hPa (20 °C)	
Density:	1,131 g/cm3 (20 °C)	
Relative vapour density (air):	> 1 (20 °C) Heavier than air.	(estimated)

Particle characteristics

Particle size distribution:	The substance / product is marketed or used in a non solid or granular form. -

9.2. Other information

Information with regard to physical hazard classes

Oxidizing properties

Fire promoting properties: not fire-propagating

Self-heating substances and mixtures

Self heating ability:	It is not a substance capable of spontaneous heating according to UN transport regulations class 4.2.

Corrosion to metals

No corrosive effect on metal.

Other safety characteristics

Radioactivity:	not radioactive for transport purposes
Hygroscopy:	Non-hygroscopic
Other Information:	If necessary, information on other physical and chemical parameters is indicated in this section.
Evaporation rate:	not determined

10. Stability and Reactivity

Reactivity

Corrosion to metals: No corrosive effect on metal.

Chemical stability

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

Peroxides: The product does not contain peroxides. The product/the substance has not a tendency towards the formation of peroxide.

Possibility of hazardous reactions

The substance/product may react with secondary and tertiary amines to form nitrosamines.

Conditions to avoid

Avoid humidity. Avoid sources of ignition.

Incompatible materials

Substances to avoid:
strong oxidizing agents

Hazardous decomposition products

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

11. Toxicological Information

Information on toxicological effects

Acute toxicity

Assessment of acute toxicity:
Of moderate toxicity after single ingestion.

Experimental/calculated data:
ATE (oral): 1.630 mg/kg

ATE (dermal): > 5.000 mg/kg

Information on: Ethane-1,2-diol

Experimental/calculated data:
ATE human (oral): approx. 1.600 mg/kg

Irritation

Assessment of irritating effects:
Skin contact causes slight irritation.

Respiratory/Skin sensitization

Assessment of sensitization:
Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Assessment of mutagenicity:
Based on available data, the classification criteria are not met.

Carcinogenicity

Assessment of carcinogenicity:
Not classified, due to lack of data.

Reproductive toxicity

Assessment of reproduction toxicity:
Causes impairment of fertility in laboratory animals.

Developmental toxicity

Assessment of teratogenicity:
The substance caused malformations/developmental toxicity in laboratory animals.

Information on: Ethane-1,2-diol
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.

Specific target organ toxicity (single exposure)

Assessment of STOT single:
Not classified, due to lack of data.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

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

Information on: Ethane-1,2-diol
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.

Aspiration hazard

No aspiration hazard expected.

Other relevant toxicity information

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

12. Ecological Information

Toxicity

Information on: Ethane-1,2-diol
Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Information on: Sodium benzoate
Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Information on: Disodium tetraborate, anhydrous
Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. Based on long-term (chronic) toxicity study data, the product is very likely not harmful to aquatic organisms.
The product has not been fully tested. The statements have been derived in parts from products of a similar structure or composition.

Information on: Sodium nitrite
Assessment of aquatic toxicity:
Very toxic (acute effect) to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.

Information on: Ethane-1,2-diol
Toxicity to fish:
LC50 (96 h) 72.860 mg/l, Pimephales promelas (EPA 72-1, static)

Information on: Sodium benzoate
Toxicity to fish:
LC50 (96 h) 484 mg/l, Pimephales promelas (OPP 72-1 (EPA-Guideline), Flow through.)
The details of the toxic effect relate to the nominal concentration.

Information on: Disodium tetraborate, anhydrous
Toxicity to fish:
LC50 (96 h) > 100 mg/l, Limanda limanda (other, Flow through.)

Information on: Sodium nitrite
Toxicity to fish:
LC50 (96 h) 0,54 - 26,3 mg/l, Salmo gairdneri, syn. O. mykiss (other, Flow through.)

Information on: Ethane-1,2-diol
Aquatic invertebrates:
EC50 (48 h) > 100 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

Information on: Sodium benzoate
Aquatic invertebrates:
EC50 (96 h) > 100 mg/l, Daphnia magna (Orientating study, static)
The details of the toxic effect relate to the nominal concentration.

Information on: Disodium tetraborate, anhydrous
Aquatic invertebrates:
LC50 (48 h) 142 mg/l, Ceriodaphnia dubia (other, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: Sodium nitrite
Aquatic invertebrates:
LC50 (96 h) 4,93 mg/l, aquatic crustacea (static)
Literature data.

EC50 (48 h) 15,4 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)
The statement of the toxic effect relates to the analytically determined concentration.

Information on: Ethane-1,2-diol
Aquatic plants:
EC50 (96 h) 6.500 - 13.000 mg/l (growth rate), Pseudokirchneriella subcapitata (Algal growth inhibition test)

Information on: Sodium benzoate
Aquatic plants:
EC50 (72 h) > 30,5 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)

EC10 (72 h) 6,5 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)

Information on: Disodium tetraborate, anhydrous
Aquatic plants:

EC50 (72 h) > 100 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

EC10 (72 h) > 100 mg/l (growth rate), Pseudokirchneriella subcapitata (OECD Guideline 201, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: Sodium nitrite
Aquatic plants:
EC50 (72 h) > 100 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static)
The statement of the toxic effect relates to the analytically determined concentration.

Information on: Ethane-1,2-diol
Microorganisms/Effect on activated sludge:
EC20 (30 min) > 1.995 mg/l, activated sludge, domestic (DIN EN ISO 8192, aerobic)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: Sodium benzoate
Microorganisms/Effect on activated sludge:
EC50 (3 h) > 1.000 mg/l, activated sludge, domestic (OECD Guideline 209, static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: Disodium tetraborate, anhydrous
Microorganisms/Effect on activated sludge:
EC10 (3 h) > 100 mg/l, activated sludge (OECD Guideline 209)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Information on: Sodium nitrite
Microorganisms/Effect on activated sludge:
EC10 (3 h) 210 mg/l, activated sludge, domestic (OECD Guideline 209, static)
The details of the toxic effect relate to the nominal concentration.

EC50 (48 h) 421 mg/l, protozoa (other, static)

Persistence and degradability

Information on: Ethane-1,2-diol
Assessment biodegradation and elimination (H2O):
Readily biodegradable (according to OECD criteria).

Information on: Sodium benzoate
Assessment biodegradation and elimination (H2O):
Readily biodegradable (according to OECD criteria).

Information on: Disodium tetraborate, anhydrous
Assessment biodegradation and elimination (H2O):
Not applicable for inorganic substances.

Information on: Sodium nitrite
Assessment biodegradation and elimination (H2O):
Not applicable for inorganic substances.

Information on: Ethane-1,2-diol
Assessment of stability in water:
According to structural properties, hydrolysis is not expected/probable.

Information on: Sodium benzoate
Assessment of stability in water:
According to structural properties, hydrolysis is not expected/probable.

Information on: Disodium tetraborate, anhydrous
Assessment of stability in water:
In contact with water the substance will hydrolyse rapidly.

Information on: Sodium nitrite
Assessment of stability in water:
According to structural properties, hydrolysis is not expected/probable.

Bioaccumulative potential

Information on: Ethane-1,2-diol
Assessment bioaccumulation potential:
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Information on: Sodium benzoate
Assessment bioaccumulation potential:
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be expected.

Information on: Disodium tetraborate, anhydrous
Assessment bioaccumulation potential:
Does not accumulate in organisms.

Information on: Sodium nitrite
Assessment bioaccumulation potential:
Accumulation in organisms is not to be expected.

Mobility in soil

Information on: Ethane-1,2-diol
Assessment transport between environmental compartments:
Volatility: The substance will not evaporate into the atmosphere from the water surface.
Adsorption in soil: Adsorption to solid soil phase is not expected.

Information on: Sodium benzoate
Assessment transport between environmental compartments:
Volatility: The substance will not evaporate into the atmosphere from the water surface.

Adsorption in soil: Adsorption to solid soil phase is not expected.

Information on: Disodium tetraborate, anhydrous
Assessment transport between environmental compartments:
Volatility: No data available.
Adsorption in soil: No data available.

Information on: Sodium nitrite
Assessment transport between environmental compartments:
Volatility: The substance will not evaporate into the atmosphere from the water surface.
Adsorption in soil: Adsorption to solid soil phase is not expected.

Other adverse effects

The product does not contain substances that are listed in the Montreal Protocol on substances that deplete the ozone layer.

13. Disposal Considerations

Waste treatment methods

Must be disposed of or incinerated in accordance with local regulations.

Waste key:
16 01 14¤ antifreeze fluids containing hazardous substances

Contaminated packaging:
Uncontaminated packaging can be re-used.
Packs that cannot be cleaned should be disposed of in the same manner as the contents.

14. Transport Information

Land transport

ADR

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

RID

	Not classified as a dangerous good under transport regulations
UN number or ID number:	Not applicable

UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Inland waterway transport

ADN

Not classified as a dangerous good under transport regulations

UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user:	None known

Transport in inland waterway vessel

Not evaluated

Sea transport

IMDG

Not classified as a dangerous good under transport regulations

UN number or ID number:	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Air transport

IATA/ICAO

Not classified as a dangerous good under transport regulations

UN number or ID number	Not applicable
UN proper shipping name:	Not applicable
Transport hazard class(es):	Not applicable
Packing group:	Not applicable
Environmental hazards:	Not applicable
Special precautions for user	None known

Maritime transport in bulk according to IMO instruments

Maritime transport in bulk is not intended.

15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

If other regulatory information applies that is not already provided elsewhere in this safety data sheet, then it is described in this subsection.

16. Other Information

Full text of classifications, hazard symbols and hazard statements, if mentioned in section 2 or 3:

Acute Tox.	Acute toxicity
Skin Irrit.	Skin irritation
Repr.	Reproductive toxicity
STOT RE	Specific target organ toxicity — repeated exposure
Aquatic Acute	Hazardous to the aquatic environment - acute
Eye Irrit.	Eye irritation
Ox. Sol.	Oxidising solids
Skin Corr.	Skin corrosion
Eye Dam.	Serious eye damage
H302	Harmful if swallowed.
H373	May cause damage to organs (Kidney) through prolonged or repeated exposure.
H319	Causes serious eye irritation.
H303	May be harmful if swallowed.
H360	May damage fertility. May damage the unborn child.
H272	May intensify fire; oxidizer.
H301	Toxic if swallowed.
H400	Very toxic to aquatic life.
H314	Causes severe skin burns and eye damage.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.