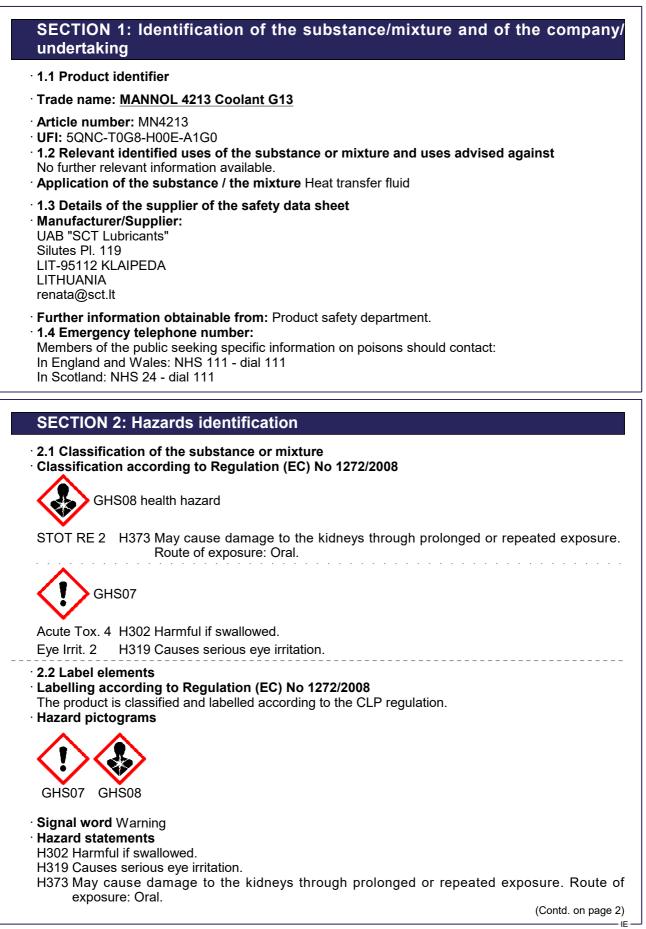
according to Regulation (EC) No 1907/2006, Article 31

Printing date 27.05.2024

Version number 1

Revision: 27.05.2024



according to Regulation (EC) No 1907/2006, Article 31

Printing date 27.05.2024

Version number 1

Revision: 27.05.2024

Trade name: MANNOL 4213 Coolant G13

	(Contd. of page 1)			
 Precautionary sta 	atements			
P101	If medical advice is needed, have product container or label at hand.			
P102	Keep out of reach of children.			
P103	Read carefully and follow all instructions.			
P260	Do not breathe dust/fume/gas/mist/vapours/spray.			
P264	Wash thoroughly after handling.			
P270	Do not eat, drink or smoke when using this product.			
P280	Wear protective gloves/protective clothing/eye protection/face protection/hearing			
	protection.			
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.			
P330	Rinse mouth.			
P305+P351+P338	F IN EYES: Rinse cautiously with water for several minutes. Remove contact			
	lenses, if present and easy to do. Continue rinsing.			
P314	Get medical advice/attention if you feel unwell.			
P337+P313	If eye irritation persists: Get medical advice/attention.			
P501	Dispose of contents/container in accordance with local/regional/national/			
	international regulations.			
2.3 Other hazards				
· Results of PBT and vPvB assessment				
· PBT: Not applicable.				
vPvB: Not applicable.				

SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· Description: Mixture of substances listed below with nonhazardous additions.

[·] Dangerous components:					
CAS: 107-21-1 EINECS: 203-473-3	ethanediol	STOT RE 2, H373; Acute Tox. 4, H302	18–20%		
· Not dangerous substances					
CAS: 7732-18-5 EINECS: 231-791-2	water, distilled, conductivity or of similar purity		78–80%		
	3,5,5-trimethylhexanoate Skin Corr. 1, H314; Eye Dam. 1, H318; Acute Tox. 4, H302				
Additional information: For the wording of the listed hazard phrases refer to section 16.					

SECTION 4: First aid measures

· 4.1 Description of first aid measures

• General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact:

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- After swallowing: Call for a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **4.3 Indication of any immediate medical attention and special treatment needed** No further relevant information available.

(Contd. on page 3)

according to Regulation (EC) No 1907/2006, Article 31

Printing date 27.05.2024

Version number 1

Revision: 27.05.2024

Trade name: MANNOL 4213 Coolant G13

(Contd. of page 2)

SECTION 5: Firefighting measures

- · 5.1 Extinguishing media
- Suitable extinguishing agents:
- CO2. Do not use water.

Use fire extinguishing methods suitable to surrounding conditions.

Foam Fire-extinguishing powder

- Sand
- · For safety reasons unsuitable extinguishing agents: Water
- 5.2 Special hazards arising from the substance or mixture
- During heating or in case of fire poisonous gases are produced.
- 5.3 Advice for firefighters
- · Protective equipment: Mouth respiratory protective device.
- · Additional information

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
 Mount respiratory protective device.
 Ensure adequate ventilation
 Particular danger of slipping on leaked/spilled product.
 Wear protective clothing.
 6.2 Environmental precautions:
 Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

 6.3 Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to section 13. Ensure adequate ventilation.

6.4 Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

SECTION 7: Handling and storage

· 7.1 Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace. Prevent formation of aerosols.

- · Information about fire and explosion protection: Keep respiratory protective device available.
- · 7.2 Conditions for safe storage, including any incompatibilities

· Storage:

- · Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- Further information about storage conditions: Keep container tightly sealed.
- · 7.3 Specific end use(s) No further relevant information available.

(Contd. on page 4)

according to Regulation (EC) No 1907/2006, Article 31

Printing date 27.05.2024

Version number 1

Revision: 27.05.2024

Trade name: MANNOL 4213 Coolant G13

(Contd. of page 3)

SECTION 8: Exposure controls/personal protection

· 8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace:

107-21-1 ethanediol (30.0%)

OEL Short-term value: 40 mg/m³, 104 ppm Long-term value: 52 mg/m³, 20 ppm Sk, IOELV

111-46-6 2,2'-oxybisethanol (4.0%)

OEL Long-term value: 100 mg/m³, 23 ppm

• Additional information: The lists valid during the making were used as basis.

· 8.2 Exposure controls

- Appropriate engineering controls No further data; see section 7.
- Individual protection measures, such as personal protective equipment

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work.

Store protective clothing separately.

- Avoid contact with the avos
- Avoid contact with the eyes.
- Avoid contact with the eyes and skin.

· Respiratory protection:

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Hand protection



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye/face protection



Tightly sealed goggles

(Contd. on page 5)

Safety data sheet according to Regulation (EC) No 1907/2006, Article 31

Printing date 27.05.2024

Version number 1

Revision: 27.05.2024

(Contd. of page 4)

Trade name: MANNOL 4213 Coolant G13

SECTION 9: Physical and chemical properties				
9.1 Information on basic physical and chen	nical properties			
· General Information				
· Physical state	Fluid			
· Colour:	Green			
· Odour:	Product specific			
· Odour threshold:	Not determined.			
 Melting point/freezing point: 	Undetermined.			
· Boiling point or initial boiling point and				
boiling range	>106 °C			
Flammability	Not applicable.			
· Lower and upper explosion limit	····			
· Lower:	Not determined.			
· Upper:	Not determined.			
· Flash point:	Not applicable.			
· Decomposition temperature:	Not determined.			
· pH	Not determined.			
· Viscosity:				
· Kinematic viscosity	Not determined.			
	Not determined.			
· Dynamic:				
Solubility	Fully missible			
· water:	Fully miscible.			
· Partition coefficient n-octanol/water (log				
value)	Not determined.			
· Vapour pressure:	Not determined.			
· Density and/or relative density				
Density at 20 °C:	1.03–1.04 g/cm ³			
Relative density	Not determined.			
· Vapour density	Not determined.			
• 9.2 Other information				
· Appearance:				
· Form:	Liquid			
· Important information on protection of hea				
and environment, and on safety.				
Ignition temperature:	Product is not selfigniting.			
Explosive properties:	Product does not present an explosion hazard.			
Solvent content:	1 1			
· Water:	78–80 %			
· VOC (EC)	0.00 %			
· Change in condition				
· Evaporation rate	Not determined.			
•				
· Information with regard to physical haza	ara			
classes	N7 · · ·			
Explosives	Void			
Flammable gases	Void			
Aerosols	Void			
· Oxidising gases	Void			
[.] Gases under pressure	Void			
· Flammable liquids	Void			
Flammable solids	Void			
 Self-reactive substances and mixtures 	Void			
· Pyrophoric liquids	Void			
· Pyrophoric solids	Void			
	(Contd. on page 6)			

according to Regulation (EC) No 1907/2006, Article 31

Printing date 27.05.2024

Version number 1

Revision: 27.05.2024

Trade name: MANNOL 4213 Coolant G13

		(Contd. of page 5)
Self-heating substances and mixtures Substances and mixtures, which emit	Void	
flammable gases in contact with water	Void	
Oxidising liquids	Void	
Oxidising solids	Void	
Organic peroxides	Void	
Corrosive to metals	Void	
Desensitised explosives	Void	

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- · 10.2 Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- 10.3 Possibility of hazardous reactions No dangerous reactions known.
- 10.4 Conditions to avoid No further relevant information available.
- 10.5 Incompatible materials: No further relevant information available.
- · 10.6 Hazardous decomposition products:
- Carbon monoxide

Aldehyde Poisonous gases/vapours

Carbon dioxide

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

• Acute toxicity Based on available data, the classification criteria are not met.

· LD/LC50 values relevant for classification:

107-21-1 ethanediol

Oral LD50 5,840 mg/kg (rat)

Dermal LD50 9,530 mg/kg (rabbit)

- Skin corrosion/irritation Based on available data, the classification criteria are not met.
- Serious eye damage/irritation Causes serious eye irritation.
- Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
- Germ cell mutagenicity Based on available data, the classification criteria are not met.
- · Carcinogenicity Based on available data, the classification criteria are not met.
- · Reproductive toxicity Based on available data, the classification criteria are not met.
- · STOT-single exposure Based on available data, the classification criteria are not met.
- STOT-repeated exposure

May cause damage to the kidneys through prolonged or repeated exposure. Route of exposure: Oral.

- · Aspiration hazard Based on available data, the classification criteria are not met.
- 11.2 Information on other hazards
- · Endocrine disrupting properties

None of the ingredients is listed.

(Contd. on page 7)



according to Regulation (EC) No 1907/2006, Article 31

Printing date 27.05.2024

Version number 1

Revision: 27.05.2024

Trade name: MANNOL 4213 Coolant G13

(Contd. of page 6)

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity: No further relevant information available.

- 12.2 Persistence and degradability No further relevant information available.
- 12.3 Bioaccumulative potential No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- 12.5 Results of PBT and vPvB assessment
- · PBT: Not applicable.
- · **vPvB:** Not applicable.
- · 12.6 Endocrine disrupting properties

The product does not contain substances with endocrine disrupting properties.

- 12.7 Other adverse effects
- · Additional ecological information:
- · General notes:

Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water Do not allow product to reach ground water, water course or sewage system. Danger to drinking water if even small quantities leak into the ground.

SECTION 13: Disposal considerations

- · 13.1 Waste treatment methods
- · Recommendation

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

• European waste catalogue

HP5 Specific Target Organ Toxicity (STOT)/Aspiration Toxicity

HP6 Acute Toxicity

· Uncleaned packaging:

· Recommendation: Disposal must be made according to official regulations.

· Recommended cleansing agents: Water, if necessary together with cleansing agents.

SECTION 14: Transport information

 14.1 UN number or ID number ADR, ADN, IMDG, IATA 	not regulated	
14.2 UN proper shipping name ADR, ADN, IMDG, IATA	not regulated	
· 14.3 Transport hazard class(es)		
· ADR, ADN, IMDG, IATA · Class	not regulated	
 14.4 Packing group ADR, IMDG, IATA 	not regulated	
· 14.5 Environmental hazards:	Not applicable.	
· 14.6 Special precautions for user	Not applicable.	
 14.7 Maritime transport in bulk accordi IMO instruments 	i ng to Not applicable.	
		(Contd. on page 8

according to Regulation (EC) No 1907/2006, Article 31

Printing date 27.05.2024

Version number 1

Revision: 27.05.2024

(Contd. of page 7)

Trade name: MANNOL 4213 Coolant G13

UN "Model Regulation":

not regulated

SECTION 15: Regulatory information

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

- Directive 2012/18/EU
- · Named dangerous substances ANNEX I None of the ingredients is listed.
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II
- None of the ingredients is listed.

· REGULATION (EU) 2019/1148

Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

Annex II - REPORTABLE EXPLOSIVES PRECURSORS

None of the ingredients is listed.

Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases

H302 Harmful if swallowed.

- H314 Causes severe skin burns and eye damage.
- H318 Causes serious eye damage.

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

· Department issuing SDS: Product safety department.

- · Contact: Mrs. Zubaite
- Date of previous version: 15.05.2024

 Abbreviations and acronyms: ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road) IMDG: International Maritime Code for Dangerous Goods IATA: International Air Transport Association GHS: Globally Harmonised System of Classification and Labelling of Chemicals EINECS: European Inventory of Existing Commercial Chemical Substances ELINCS: European List of Notified Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) VOC: Volatile Organic Compounds (USA, EU) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent PBT: Persistent, Bioaccumulative and Toxic vPvB: very Persistent and very Bioaccumulative Acute Tox. 4: Acute toxicity - Category 4



Safety data sheet according to Regulation (EC) No 1907/2006, Article 31

Printing date 27.05.2024

Version number 1

Revision: 27.05.2024

(Contd. of page 8)

Trade name: MANNOL 4213 Coolant G13

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2 STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2 · * **Data compared to the previous version altered.**