Safety Data Sheet

acc. to Hazardous Products Regulations (HPR)

SOLUTHERM(TM) PG HD LEED

Version number: 1.0 Date of compilation: 2025-02-03

1 Identification

1.1 Product identifier

Trade name **SOLUTHERM(TM) PG HD LEED**

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

Relevant identified uses

Coolant
Professional use
Industrial use

1.3 Details of the supplier of the safety data sheet

Recochem Inc.
8725 Holgate Crescent,
Milton Ontario
L9T 5G7
Canada

1-800-361-6030 (Monday-Friday, 9 AM to - 5 PM)
www.recochem.com

1.4 Emergency telephone number

Emergency information service

This number is only for transport emergencies.
POISON CONTROL/ANTIPOISON (24 heures/hours):
Alberta 1-800-332-1414 British Columbia 1-800-567-8911 Manitoba 1-855-776-4766 New Brunswick 911 Newfoundland and Labrador 1-866-727-1110 Northwest Territories 1-800-332-1414 Nova Scotia and Prince Edward Island 1-800-565-8161, 1-800-332-1414 or 911.
Nunavut 1-800-268-9017 Ontario 1-800-268-9017 Quebec 1-800-463-5060 Saskatchewan 1-866-454-1212 Yukon Territory 867-393-8700 United States 1-800-222-1222

2 Hazard identification

2.1 Classification of the substance or mixture

Classification acc. to GHS

This mixture does not meet the criteria for classification.

2.2 Label elements

Labeling

not required

2.3 Other hazards

Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0.1%.

Endocrine disrupting properties

Contains an endocrine disruptor (ED) in a concentration of ≥ 0.1%.

3 Composition/ Information on ingredients

3.1 Substances

Not relevant (mixture)

3.2 Mixtures

Description of the mixture

Hazardous ingredients acc. to GHS

Name of substance	Identifier	Wt%	Classification acc. to GHS	Notes
sodium nitrite	CAS No 7632-00-0 71868-10-5	0.1 – < 1	Ox. Sol. 3 / H272 Acute Tox. 3 / H301 Eye Irrit. 2 / H319	
Boric Acid	CAS No 10043-35-3	0.1 – < 1	Acute Tox. 4 / H332 Repr. 1B / H360FD	

Remarks

For full text of abbreviations: see SECTION 16. Exact percentage of ingredients is withheld as a trade secret.
This table, if present, includes all GHS classified ingredients present above their cut-off limits, even if the finished product is not classified as hazardous by GHS.

4 First-aid measures

4.1 Description of first-aid measures

General notes

Do not leave affected person unattended. Remove victim out of the danger area. Keep affected person warm, still and covered. Take off immediately all contaminated clothing. In all cases of doubt, or when symptoms persist, seek medical advice. In case of unconsciousness place person in the recovery position. Never give anything by mouth.

Following inhalation

If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions. Provide fresh air.

Following skin contact

Wash with plenty of soap and water.

Following eye contact

Remove contact lenses, if present and easy to do. Continue rinsing.

Following ingestion

Rinse mouth with water (only if the person is conscious). Do NOT induce vomiting.

5 Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water spray, Alcohol resistant foam, BC-powder, Carbon dioxide (CO2)

5.2 Special hazards arising from the substance or mixture

none

Hazardous combustion products

Carbon monoxide (CO), Carbon dioxide (CO2)

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Coordinate firefighting measures to the fire surroundings. Do not allow firefighting water to enter drains or water courses. Collect contaminated firefighting water separately. Fight fire with normal precautions from a reasonable distance.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Remove persons to safety.

For emergency responders

Wear breathing apparatus if exposed to vapors/dust/aerosols/gases.

6.2 Environmental precautions

not required

6.3 Methods and material for containment and cleaning up

Advice on how to contain a spill

Covering of drains

Advice on how to clean up a spill

Wipe up with absorbent material (e.g. cloth, fleece). Collect spillage: sawdust, kieselgur (diatomite), sand, universal binder

Appropriate containment techniques

Use of adsorbent materials.

Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

7 Handling and storage

7.1 Precautions for safe handling

Recommendations

- Measures to prevent fire as well as aerosol and dust generation

Use local and general ventilation. Use only in well-ventilated areas.

Advice on general occupational hygiene

Wash hands after use. Do not eat, drink and smoke in work areas. Remove contaminated clothing and protective equipment before entering eating areas. Never keep food or drink in the vicinity of chemicals. Never place chemicals in containers that are normally used for food or drink. Keep away from food, drink and animal feedingstuffs.

7.2 Conditions for safe storage, including any incompatibilities

There is no additional information.
Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials" (Section 10).

7.3 Specific end use(s)

See section 16 for a general overview.

8 Exposure controls/ Personal protection

8.1 Control parameters

Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Identifier	TWA [ppm]	TWA [mg/m³]	STEL [ppm]	STEL [mg/m³]	Ceiling-C [ppm]	Ceiling-C [mg/m³]	Notation	Source
CA	boric acid	10043-35-3	PEV/VEA		2		6			dust, i	Regulation OHS
CA	boric acid	10043-35-3	OEL (BC)		2		6			i	"BC Regulation"
CA	boric acid	10043-35-3	OEL (ON-MoL)		2		6			i	MoL
CA	1,2-propylene glycol	57-55-6	OEL (ON)		10					aerosol	Regulation 833
CA	1,2-propylene glycol	57-55-6	OEL (ON)	50	155					va	Regulation 833

Notation

aerosol	as aerosols
Ceiling-C	ceiling value is a limit value above which exposure should not occur
dust	as dust
i	inhalable fraction
STEL	short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)
TWA	time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified
va	as vapors and aerosols

Relevant DNELs of components

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
sodium nitrite	7632-00-0 71868-10-5	DNEL	2 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
sodium nitrite	7632-00-0 71868-10-5	DNEL	2 mg/m³	human, inhalatory	worker (industry)	acute - systemic effects
Boric Acid	10043-35-3	DNEL	8.3 mg/m³	human, inhalatory	worker (industry)	chronic - systemic effects
Boric Acid	10043-35-3	DNEL	392 mg/kg bw/day	human, dermal	worker (industry)	chronic - systemic effects

Relevant PNECs of components

Name of substance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
sodium nitrite	7632-00-0 71868-10-5	PNEC	0.005 mg/l	aquatic organisms	freshwater	short-term (single instance)
sodium nitrite	7632-00-0	PNEC	0.006 mg/l	aquatic organ-	marine water	short-term (single

Relevant PNECs of components

Name of sub-stance	CAS No	End-point	Threshold level	Organism	Environmental compartment	Exposure time
	71868-10-5			isms		instance)
sodium nitrite	7632-00-0 71868-10-5	PNEC	21 mg/l	aquatic organ-isms	sewage treatment plant (STP)	short-term (single instance)
sodium nitrite	7632-00-0 71868-10-5	PNEC	0.019 mg/kg	aquatic organ-isms	freshwater sedi-ment	short-term (single instance)
sodium nitrite	7632-00-0 71868-10-5	PNEC	0.022 mg/kg	aquatic organ-isms	marine sediment	short-term (single instance)
sodium nitrite	7632-00-0 71868-10-5	PNEC	0.001 mg/kg	terrestrial organ-isms	soil	short-term (single instance)
Boric Acid	10043-35-3	PNEC	2.9 mg/l	aquatic organ-isms	freshwater	short-term (single instance)
Boric Acid	10043-35-3	PNEC	2.9 mg/l	aquatic organ-isms	marine water	short-term (single instance)
Boric Acid	10043-35-3	PNEC	10 mg/l	aquatic organ-isms	sewage treatment plant (STP)	short-term (single instance)
Boric Acid	10043-35-3	PNEC	5.7 mg/kg	terrestrial organ-isms	soil	short-term (single instance)

8.2 Exposure controls

Appropriate engineering controls

General ventilation.

Individual protection measures (personal protective equipment)

Eye/face protection

Wear eye/face protection.

Skin protection

- Hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- Other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended. Wash hands thoroughly after handling.

Environmental exposure controls

Use appropriate container to avoid environmental contamination. Keep away from drains, surface and ground water.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Color	greenish-blue
Odor	characteristic
Melting point/freezing point	-51 – -13 °C

Boiling point or initial boiling point and boiling range	102 – 110 °C
Flammability	this material is combustible, but will not ignite readily
Lower and upper explosion limit	not determined
Flash point	>104 °C
Auto-ignition temperature	>400 °C
Decomposition temperature	not relevant
pH (value)	9.2 – 11 (25 °C)
Kinematic viscosity	not determined

Solubility(ies)

Water solubility	miscible in any proportion

Partition coefficient

Partition coefficient n-octanol/water (log value)	this information is not available

Vapor pressure	0.08 mmHg at 20 °C

Density and/or relative density

Density	1 – 1.1 $^{g}/_{cm^3}$ at 20 °C
Relative vapour density	information on this property is not available

Particle characteristics	not relevant (liquid)

9.2 Other information

Information with regard to physical hazard classes	hazard classes acc. to GHS (physical hazards): not relevant

Other safety characteristics

Miscibility	Completely miscible with water.
Temperature class (USA, acc. to NEC 500)	T2 (maximum permissible surface temperature on the equipment: 300°C)

10 Stability and reactivity

10.1 Reactivity

Concerning incompatibility: see below "Conditions to avoid" and "Incompatible materials".

10.2 Chemical stability
The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

10.3 Possibility of hazardous reactions
No known hazardous reactions.

10.4 Conditions to avoid
There are no specific conditions known which have to be avoided.

10.5 Incompatible materials
Oxidizers

10.6 Hazardous decomposition products
Reasonably anticipated hazardous decomposition products produced as a result of use, storage, spill and heating are not known. Hazardous combustion products: see section 5.

11 Toxicological information

11.1 Information on toxicological effects
Test data are not available for the complete mixture.

Classification procedure
The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

Classification acc. to GHS
This mixture does not meet the criteria for classification.

Acute toxicity
Shall not be classified as acutely toxic.
GHS of the United Nations, annex 4: May be harmful in contact with skin.

Acute toxicity estimate (ATE) of components

Name of substance	CAS No	Exposure route	ATE
sodium nitrite	7632-00-0 71868-10-5	oral	100 $^{mg}/_{kg}$
Boric Acid	10043-35-3	inhalation: dust/mist	>2.1 $^{mg}/_{l}$/4h

Skin corrosion/irritation
Shall not be classified as corrosive/irritant to skin.

Serious eye damage/eye irritation
Shall not be classified as seriously damaging to the eye or eye irritant.

Respiratory or skin sensitization
Shall not be classified as a respiratory or skin sensitizer.

Germ cell mutagenicity
Shall not be classified as germ cell mutagenic.

Carcinogenicity
Shall not be classified as carcinogenic.

Reproductive toxicity
Shall not be classified as a reproductive toxicant.

Specific target organ toxicity - single exposure
Shall not be classified as a specific target organ toxicant (single exposure).

Specific target organ toxicity - repeated exposure
Shall not be classified as a specific target organ toxicant (repeated exposure).

Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

12 Ecological information

12.1 Toxicity

Shall not be classified as hazardous to the aquatic environment.

12.2 Persistence and degradability

Data are not available.

12.3 Bioaccumulative potential

Data are not available.

12.4 Mobility in soil

Data are not available.

12.5 Results of PBT and vPvB assessment

Does not contain a PBT-/vPvB-substance at a concentration of ≥ 0.1%.

12.6 Endocrine disrupting properties

Contains an endocrine disruptor (ED) in a concentration of ≥ 0.1%.

12.7 Other adverse effects

Data are not available.

13 Disposal considerations

13.1 Waste treatment methods

Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

Waste treatment of containers/packages

Completely emptied packages can be recycled. Handle contaminated packages in the same way as the substance itself.

Remarks

Please consider the relevant national or regional provisions. Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities.

14 Transport information

14.1	**UN number**	not subject to transport regulations
14.2	**UN proper shipping name**	not relevant
14.3	**Transport hazard class(es)**	none
14.4	**Packing group**	not assigned
14.5	**Environmental hazards**	non-environmentally hazardous acc. to the dangerous goods regulations

14.6 Special precautions for user

There is no additional information.

14.7 Transport in bulk according to IMO instruments

The cargo is not intended to be carried in bulk.

Information for each of the UN Model Regulations

Transport information - National regulations - Additional information (UN RTDG)

Not subject to transport regulations: UN RTDG

International Maritime Dangerous Goods Code (IMDG)

Not subject to IMDG.

International Civil Aviation Organization (ICAO-IATA/DGR)

Not subject to ICAO-IATA.

15 Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

National regulations (United States)

Toxic Substance Control Act (TSCA) all ingredients are listed

Superfund Amendment and Reauthorization Act (SARA TITLE III)

- The List of Extremely Hazardous Substances and Their Threshold Planning Quantities (EPCRA Section 302, 304)

none of the ingredients are listed

- Specific Toxic Chemical Listings (EPCRA Section 313)

Toxics Release Inventory: Specific Toxic Chemical Listings			
Name of substance	**CAS No**	**Remarks**	**Effective date**
sodium nitrite	7632-00-0		1995-01-01

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)

- List of Hazardous Substances and Reportable Quantities (CERCLA section 102a) (40 CFR 302.4)

Name of substance	CAS No	Remarks	Statutory code	Final RQ pounds (Kg)
sodium nitrite	7632-00-0		1	100 (45,4)

Legend

1 "1" indicates that the statutory source is section 311(b)(2) of the Clean Water Act

Clean Air Act

none of the ingredients are listed

Right to Know Hazardous Substance List

- Cleaning Product Right to Know Act Substance List (CA-RTK)

Name of substance	CAS No	Functionality	Authoritative Lists
propylene glycol	57-55-6	humectant	
sodium nitrite	71868-10-5	cleaning agent	EC Annex VI CMRs - Cat. 1B
Boric Acid	10043-35-3	cleaning agent	EC Annex VI CMRs - Cat. 1B
Water	7732-18-5	solvent	
acrylic terpolymer	not available		

- Toxic or Hazardous Substance List (MA-TURA)

Name of substance	CAS No	DEP CODE	PBT / HHS / LHS	PBT / HHS Threshold	De Minimis Concentration Threshold
sodium nitrite	7632-00-0				1.0 %

- Hazardous Substance List (NJ-RTK)

Name of substance	CAS No	Remarks	Classifications
sodium nitrite	7632-00-0		

- Hazardous Substance List (Chapter 323) (PA-RTK)

Name acc. to inventory	CAS No	Classification
NITROUS ACID, SODIUM SALT	7632-00-0	E

Legend

E Environmental hazard

California Environmental Protection Agency (Cal/EPA): Proposition 65 - Safe Drinking Water and Toxic Enforcement Act of 1987

none of the ingredients are listed

VOC content

- Regulated Volatile Organic Compounds (VOC-EPA) 0.00016 %
- Regulated Volatile Organic Compounds (VOC-Cal ARB) 0.00016 %

Industry or sector specific available guidance(s)

NPCA-HMIS® III

Hazardous Materials Identification System. American Coatings Association.

Category	Rating	Description
Chronic	/	none
Health	0	no significant risk to health
Flammability	1	material that must be preheated before ignition can occur
Physical hazard	0	material that is normally stable, even under fire conditions, and will not react with water, polymerize, decompose, condense, or self-react. Non-explosive
Personal protection	-	

Chronic:	chronic hazard
Flammability:	flammability hazards
Health:	health hazard
Personal protection:	personal protective equipment (PPE) for normal use
Physical hazard:	reactivity

NFPA® 704

National Fire Protection Association: Standard System for the Identification of the Hazards of Materials for Emergency Response (United States).

Category	Degree of hazard	Description
Flammability	1	material that must be preheated before ignition can occur
Health	0	material that, under emergency conditions, would offer no hazard beyond that of ordinary combustible material
Instability	0	material that is normally stable, even under fire conditions
Special hazard		

National inventories

Country	Inventory	Status
AU	AIIC	all ingredients are listed
CA	DSL	all ingredients are listed
CN	IECSC	all ingredients are listed
EU	ECSI	not all ingredients are listed
EU	REACH Reg.	not all ingredients are listed
JP	CSCL-ENCS	not all ingredients are listed
JP	ISHA-ENCS	not all ingredients are listed
KR	KECI	all ingredients are listed
MX	INSQ	not all ingredients are listed
NZ	NZIoC	all ingredients are listed
PH	PICCS	all ingredients are listed
TR	CICR	not all ingredients are listed
TW	TCSI	all ingredients are listed
US	TSCA	all ingredients are listed (ACTIVE)

Legend

AIIC	Australian Inventory of Industrial Chemicals
CICR	Chemical Inventory and Control Regulation
CSCL-ENCS	List of Existing and New Chemical Substances (CSCL-ENCS)
DSL	Domestic Substances List (DSL)
ECSI	EC Substance Inventory (EINECS, ELINCS, NLP)
IECSC	Inventory of Existing Chemical Substances Produced or Imported in China
INSQ	National Inventory of Chemical Substances
ISHA-ENCS	Inventory of Existing and New Chemical Substances (ISHA-ENCS)
KECI	Korea Existing Chemicals Inventory
NZIoC	New Zealand Inventory of Chemicals
PICCS	Philippine Inventory of Chemicals and Chemical Substances (PICCS)
REACH Reg.	REACH registered substances
TCSI	Taiwan Chemical Substance Inventory
TSCA	Toxic Substance Control Act

Additional information

The contained substances are listed in the following national inventories:
TSCA (United States)

15.2 Chemical Safety Assessment

Chemical safety assessments for substances in this mixture were not carried out.

16 Other information

Indication of changes (revised safety data sheet)

Alignment to regulation: Globally Harmonized System of Classification and Labelling of Chemicals ("Purple book").
Restructuring: section 9, section 14

Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
"BC Regulation"	OHS Regulation: Section 5.48 (British Columbia)
Acute Tox.	Acute toxicity
ATE	Acute Toxicity Estimate
Cal ARB	California Air Resources Board
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)
Ceiling-C	Ceiling value
DEP CODE	Department of Environmental Protection Code
DGR	Dangerous Goods Regulations (see IATA/DGR)
DNEL	Derived No-Effect Level
ED	Endocrine disruptor
EINECS	European Inventory of Existing Commercial Chemical Substances
ELINCS	European List of Notified Chemical Substances
EPA	Environmental Protection Agency. An agency of the federal government of the United States charged with protecting human health and the environment
Eye Dam.	Seriously damaging to the eye
Eye Irrit.	Irritant to the eye
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations
HHS	Higher hazard substance
IATA	International Air Transport Association
IATA/DGR	Dangerous Goods Regulations (DGR) for the air transport (IATA)
ICAO	International Civil Aviation Organization
IMDG	International Maritime Dangerous Goods Code
LHS	Lower hazard substance
MoL	Ministry of Labor: Current Occupational Exposure Limits for Ontario Workplaces Required under Regulation 833
NLP	No-Longer Polymer
NPCA-HMIS® III	National Paint and Coatings Association: Hazardous Materials Identification System - HMIS® III, Third Edition
Ox. Sol.	Oxidizing solid
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
ppm	Parts per million
Regulation 833	R.R.O. 1990, Reg. 833: Control of exposure to biological or chemical agents (Ontario)
Regulation OHS	Regulation respecting occupational health and safety: Permissible exposure values for airborne contam-

Abbr.	Descriptions of used abbreviations
	inants (Quebec)
Repr.	Reproductive toxicity
STEL	Short-term exposure limit
TWA	Time-weighted average
UN RTDG	UN Recommendations on the Transport of Dangerous Good
VOC	Volatile Organic Compounds
vPvB	Very Persistent and very Bioaccumulative

Key literature references and sources for data

Hazardous Products Regulations (HPR)
SOR/2022-272: Regulations Amending the Hazardous Products Regulations (GHS, Seventh Revised Edition)
UN Recommendations on the Transport of Dangerous Good. International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

Classification procedure

Physical and chemical properties: The classification is based on tested mixture.
Health hazards, Environmental hazards: The method for classification of the mixture is based on ingredients of the mixture (additivity formula).

List of relevant phrases (code and full text as stated in section 2 and 3)

Code	Text
H272	May intensify fire; oxidizer.
H301	Toxic if swallowed.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H360FD	May damage fertility. May damage the unborn child.

Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.