COOLTREAT 102

Safety Data Sheet

according to the United Nations GHS (Rev. 10, 2023)
Issue date: 10/20/2024 Revision date: 10/19/2027 Version: 1.0

BCI
الصناعات الكيميائية الأساسية
BASIC CHEMICAL INDUSTRIES

SECTION 1: Identification

1.1. GHS Product identifier

Product form : Mixture
Product name : COOLTREAT 102

1.2. Other means of identification

No additional information available

1.3. Recommended use of the chemical and restrictions on use

Recommended use : Corrosion inhibitor

1.4. Supplier's details

Supplier
Chemical Marketing and Distribution Co. Ltd.
Dammam 31431,
P.O. Box 1053
Saudi Arabia
T +966138217777 - F +966138472648
sales@bci.com.sa

1.5. Emergency phone number

Emergency number : +966138217777

SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Classification according to the United Nations GHS

Acute toxicity (oral), Category 3	H301
Reproductive toxicity, Category 1B	H360
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects : May damage fertility or the unborn child,Toxic if swallowed,Very toxic to aquatic life.

2.2. GHS Label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS UN) :

Signal word (GHS UN) : Danger
Hazardous ingredients : Disodium tetraborate pentahydrate; sodium nitrite
Hazard statements (GHS UN) : H301 - Toxic if swallowed
H360 - May damage fertility. May damage the unborn child.
H400 - Very toxic to aquatic life

Precautionary statements (GHS UN) : P203 - Obtain, read and follow all safety instructions before use.
P264 - Wash hands hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.
P280 - Wear protective clothing, eye protection, face protection, protective gloves.
P301+P316 - IF SWALLOWED: Get emergency medical help immediately.
P318 - IF exposed or concerned, get medical advice.
P321 - Specific treatment (see specific cleansing agent(s), supplemental first aid instruction

on this label).
P330 - Rinse mouth.
P391 - Collect spillage.
P405 - Store locked up.
P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to the United Nations GHS
sodium nitrite	CAS-No.: 7632-00-0	36.91	Ox. Sol. 3, H272 Acute Tox. 3 (Oral), H301 Aquatic Acute 1, H400
sodium benzoate	CAS-No.: 532-32-1	1.17	Eye Irrit. 2A, H319
Disodium tetraborate pentahydrate	CAS-No.: 12179-04-3	0.2	Repr. 1B, H360

Full text of H-statements: see section 16

SECTION 4: First-aid measures

4.1. Description of necessary first-aid measures

First-aid measures general : Call a physician immediately. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Obtain medical attention if breathing difficulty persists.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. Wash skin with plenty of water. Seek medical attention if ill effect or irritation develops.

First-aid measures after eye contact : Rinse immediately with plenty of water. Rinse immediately with plenty of water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists. Rinse eyes with water as a precaution. Seek medical attention if ill effect or irritation develops.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Rinse mouth. Call a physician immediately.

4.2. Most important symptoms/effects, acute and delayed

Chronic symptoms : May damage fertility or the unborn child.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released. Thermal decomposition can lead to the release of irritating gases and vapours.

5.3. Special protective actions for fire-fighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protective equipment for firefighters : Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Evacuate unnecessary personnel.

Personal Precautions, Protective Equipment and Emergency Procedures : Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Prevention Measures for Secondary Accidents : Avoid release to the environment.

6.1.1. For non-emergency personnel

Protective equipment : Wear personal protective equipment. Wear suitable protective clothing. For further information refer to section 8: "Exposure controls/personal protection".

Emergency procedures : Only qualified personnel equipped with suitable protective equipment may intervene.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. Wear recommended personal protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and materials for containment and cleaning up

For containment : Soak up with inert absorbent material (for example sand, sawdust, a universal binder, silica gel). Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials. Notify authorities if product enters sewers or public waters.

Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Provide good ventilation in process area to prevent formation of vapour. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear personal protective equipment.

Hygiene measures : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Separate working clothes from town clothes. Launder separately. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool well ventilated place. Keep container closed when not in use. Store locked up. Store in a well-ventilated place. Keep cool.

Packaging materials : Jerry Can PE.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

sodium benzoate (532-32-1)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Sodium benzoate, as benzoate
ACGIH OEL TWA	2.5 mg/m³ (I - Inhalable particulate matter)
Remark (ACGIH)	TLV® Basis: Kidney changes. Notations: Skin; A5 (Not Suspected as a Human Carcinogen)
ACGIH chemical category	Not Suspected as a Human Carcinogen, Skin - potential significant contribution to overall exposure by the cutaneous route
Regulatory reference	ACGIH 2024

Disodium tetraborate pentahydrate (12179-04-3)	
USA - ACGIH - Occupational Exposure Limits	
Local name	Sodium tetraborate, pentahydrate
ACGIH OEL TWA	2 mg/m³ (inhalable particulate matter (Borate compounds, inorganic)
ACGIH OEL STEL	6 mg/m³ (inhalable particulate matter (Borate compounds, inorganic)
Remark (ACGIH)	TLV® Basis: URT irr. Notations: A4 (Not classifiable as a Human Carcinogen)
ACGIH chemical category	Not Classifiable as a Human Carcinogen
Regulatory reference	ACGIH 2024

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.
Other information : Do not eat, drink or smoke during use.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Personal protective equipment:
Wear protective gloves. Wear protective clothing. Wear foot protection. Wear a mask.

Hand protection : Impermeable protective gloves. protective gloves
Eye protection : Chemical goggles or safety glasses. Safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment. [In case of inadequate ventilation] wear respiratory protection. Wear suitable respiratory equipment in case of insufficient ventilation

Personal protective equipment symbol(s)

8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state : Liquid

Colour	:	Pale yellow liquid.
Odour	:	Not available
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Non flammable
Lower explosion limit	:	Not available
Upper explosion limit	:	Not available
Flash point	:	Not available
Auto-ignition temperature	:	Not available
Decomposition temperature	:	Not available
pH	:	11
pH solution	:	Not available
Viscosity, kinematic (calculated value) (40 °C)	:	Not available
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50°C	:	Not available
Density	:	1.28 g/cm³
Relative density	:	Not available
Relative vapour density at 20°C	:	Not available
Solubility	:	Not available
Particle size	:	Not applicable

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid exposure to extreme heat, moisture, and strong acids.

10.5. Incompatible materials

Reacts with strong acids, leading to potential evolution of gases such as nitrogen oxides (due to sodium nitrite).

10.6. Hazardous decomposition products

Thermal decomposition may produce hazardous gases such as nitrogen oxides, carbon oxides, and sodium oxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	:	Toxic if swallowed.
Acute toxicity (dermal)	:	Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	:	Not classified (Based on available data, the classification criteria are not met)

COOLTREAT 102	
ATE UN (oral)	89.053 mg/kg bodyweight

COOLTREAT 102	
Unknown acute toxicity (GHS UN)Unknown acute toxicity (GHS UN)	61.33% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 98.24% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 61.33% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

sodium benzoate (532-32-1)	
LD50 oral rat	4070 mg/kg (Source: NLM_CIP)
LD50 oral	2100 mg/kg bodyweight
LD50 dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit
LD50 dermal	2500 mg/kg
LC50 Inhalation - Rat	> 12.2 mg/l air Animal: rat
LC50 Inhalation - Rat (Dust/Mist)	12.2 mg/l/4h

Disodium tetraborate pentahydrate (12179-04-3)	
LD50 oral rat	2403 mg/kg (Source: NZ_CCID)
LD50 dermal rat	> 2000 mg/kg Source: ECHA
LC50 Inhalation - Rat (Dust/Mist)	> 2.04 mg/l Source: ECHA

sodium nitrite (7632-00-0)	
LD50 oral rat	85 mg/kg (Source: JAPAN_GHS)
LD50 oral	180 mg/kg bodyweight
LC50 Inhalation - Rat	5.5 mg/l/4h

Skin corrosion/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 11

Serious eye damage/irritation : Not classified (Based on available data, the classification criteria are not met)
pH: 11

Respiratory or skin sensitization : Not classified (Based on available data, the classification criteria are not met)

Germ cell mutagenicity : Not classified (Based on available data, the classification criteria are not met)

Carcinogenicity : Not classified (Based on available data, the classification criteria are not met)

Reproductive toxicity : May damage fertility. May damage the unborn child.

STOT-single exposure : Not classified (Based on available data, the classification criteria are not met)

STOT-repeated exposure : Not classified (Based on available data, the classification criteria are not met)

sodium benzoate (532-32-1)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat
NOAEL (dermal, rat/rabbit, 90 days)	> 2500 mg/kg bodyweight Animal: rabbit, Guideline: EPA OPP 82-2 (Repeated Dose Dermal Toxicity -21/28 Days)
NOAEC (inhalation, rat, dust/mist/fume, 90 days)	≤ 0.025 mg/l air Animal: rat, Guideline: OECD Guideline 412 (Subacute Inhalation Toxicity: 28-Day Study)

sodium nitrite (7632-00-0)	
NOAEL (subchronic, oral, animal/male, 90 days)	220 mg/kg bodyweight Animal: mouse, Animal sex: male
NOAEL (subchronic, oral, animal/female, 90 days)	165 mg/kg bodyweight Animal: mouse, Animal sex: female

Aspiration hazard : Not classified (Based on available data, the classification criteria are not met)

Other information : Likely routes of exposure: ingestion, inhalation, skin and eye.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short–term (acute) : Very toxic to aquatic life.
Classification procedure (Hazardous to the aquatic environment, short–term (acute)) : Calculation method
Hazardous to the aquatic environment, long–term (chronic) : Not classified (Based on available data, the classification criteria are not met)

sodium benzoate (532-32-1)	
LC50 - Fish [1]	420 – 558 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through] Source: EPA)
LC50 - Fish [2]	> 100 mg/l (Exposure time: 96 h - Species: Pimephales promelas [static] Source: EPA)
EC50 - Crustacea [1]	< 650 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 - Other aquatic organisms [1]	> 100 mg/l waterflea
EC50 - Other aquatic organisms [2]	30.5 mg/l
EC50 72h - Algae [1]	> 30.5 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
NOEC chronic fish	10 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio) Duration: '144 h'
NOEC chronic crustacea	5.81 mg/l
NOEC chronic algae	6.5 mg/l

Disodium tetraborate pentahydrate (12179-04-3)	
LC50 - Fish [1]	74 mg/l Source: ECHA
EC50 - Crustacea [1]	109 mg/l Source: ECHA

sodium nitrite (7632-00-0)	
LC50 - Fish [1]	0.19 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through] Source: EPA)
LC50 - Fish [2]	0.092 – 0.13 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [flow-through] Source: EPA)
EC50 - Crustacea [1]	15.4 mg/l Test organisms (species): Daphnia magna
EC50 - Other aquatic organisms [1]	15.4 mg/l waterflea
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)

12.2. Persistence and degradability

COOLTREAT 102	
Persistence and degradability	Rapidly degradable

sodium benzoate (532-32-1)	
Persistence and degradability	Easily biodegradable (concerning to the criteria of the OECD).

Disodium tetraborate pentahydrate (12179-04-3)	
Persistence and degradability	Rapidly degradable

sodium nitrite (7632-00-0)	
Persistence and degradability	Rapidly degradable

12.3. Bioaccumulative potential

COOLTREAT 102	
Bioaccumulative potential	No additional information available

sodium benzoate (532-32-1)	
BCF - Fish [1]	(no bioaccumulation)
Partition coefficient n-octanol/water (Log Pow)	-2.13

Disodium tetraborate pentahydrate (12179-04-3)	
Partition coefficient n-octanol/water (Log Pow)	-1.53 Source: ECHA

sodium nitrite (7632-00-0)	
Partition coefficient n-octanol/water (Log Pow)	-3.7 (at 25 °C)

12.4. Mobility in soil

COOLTREAT 102	
Mobility in soil	No additional information available

sodium benzoate (532-32-1)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	1.89 @20°C

12.5. Other adverse effects

Ozone : Not classified (Based on available data, the classification criteria are not met)
Other adverse effects : No additional information available
Effect on the ozone layer : No additional information available.
Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Dispose of in a safe manner in accordance with local/national regulations.
Ecological waste information : Avoid release to the environment.

SECTION 14: Transport information

In accordance with UN RTDG / IMDG / IATA /

UN RTDG	IMDG	IATA
14.1. UN number		
1500	1500	1500
14.2. UN Proper Shipping Name		
SODIUM NITRITE	SODIUM NITRITE	Sodium nitrite
14.3. Transport hazard class(es)		
5.1 (6.1)	5.1 (6.1)	5.1 (6.1)
		

UN RTDG	IMDG	IATA
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes
No supplementary information available		

14.6. Special precautions for user

UN RTDG

Limited quantities (UN RTDG) : 5 kg
Excepted quantities (UN RTDG) : E1
Packing instruction (UN RTDG) : P002, IBC08
Special packing provisions (UN RTDG) : B3
Portable tank and bulk container special instructions (UN RTDG) : T1
Portable tank and bulk container special provisions (UN RTDG) : TP33

IMDG

Limited quantities (IMDG) : 5 kg
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : P002
IBC packing instructions (IMDG) : IBC08
IBC special provisions (IMDG) : B3
Tank instructions (IMDG) : T1
Tank special provisions (IMDG) : TP33
EmS-No. (Fire) : F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage) : S-Q - SPILLAGE SCHEDULE Quebec - OXIDIZING SUBSTANCES
Stowage category (IMDG) : A
Segregation (IMDG) : SGG12, SG38, SG49
Properties and observations (IMDG) : Colourless deliquescent solid. Soluble in water. Mixtures with combustible material are readily ignited and may burn fiercely. Mixtures with ammonium compounds or cyanides may explode. Decomposes if heated, giving off toxic nitrous fumes and gases supporting combustion. Harmful if swallowed or by dust inhalation.

IATA

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y546
PCA limited quantity max net quantity (IATA) : 10kg
PCA packing instructions (IATA) : 559
PCA max net quantity (IATA) : 25kg
CAO packing instructions (IATA) : 563
CAO max net quantity (IATA) : 100kg
Special provisions (IATA) : A803
ERG code (IATA) : 5P

14.7. Transport in bulk according to IMO instruments

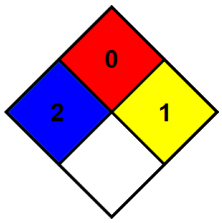
Not applicable

SECTION 15: Regulatory information

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

No additional information available

SECTION 16: Other information



NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.

NFPA specific hazard : None

Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Issue date : 10/20/2024

Revision date : 10/19/2027

Other information : None.

Full text of H-statements:	
Eye Irrit. 2A	Serious eye damage/eye irritation, Category 2A
Ox. Sol. 3	Oxidising Solids, Category 3
H272	May intensify fire; oxidiser
H301	Toxic if swallowed
H319	Causes serious eye irritation
H360	May damage fertility or the unborn child
H400	Very toxic to aquatic life

Safety Data Sheet (SDS), UN

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.