Safety Data Sheet

According to Regulation (EC) No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and (EC) No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878.

Alkaline Phosphatase R1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product Name: Alkaline Phosphatase R1
Product code: A7516-R1

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

Relevant identified uses: For quantitative determination of alkaline phospatase in serum
Uses advised against: Not determined or not applicable.
Reasons why uses advised against: Not determined or not applicable.

1.3 Details of the manufacturer/supplier of the safety data sheet

Manufacturer:
United States
HORIBA Instruments Incorporated
5449 Research Drive
Canton, MI 48188
734-487-8300
horiba.com

1.4 Emergency telephone number:

United States
HORIBA Instruments Incorporated
1-800-445-9853 (24 hours per day)

France
Organisme de conseil/centre antipoison national
+33 1 45 42 59 59 (24 hours per day)

Portugal
Órgão consultor nacional/Centro Antivenenos
+351 800 250 250 (24 hours per day)

Spain
Centro de información toxicológica/organismo asesor nacional
+34 91 562 04 20 (24 hours per day)

Czech Republic
Národní poradní orgán/toxikologické středisko
+420 224 919 293 (24 hours per day)

Greece
Εθνικό συμβουλευτικό όργανο/Κέντρο Δηλητηριάσεων
+30 210 779 3777 (24 hours per day)

Italy
Organismo ufficiale di consultazione nazionale/Centro antiveleni
+39 06 305 4343 (24 hours per day)

Romania
Organism consultativ naţional/Centru pentru otrăviri
+40 21 3183606 (24 hours per day)

Poland
Krajowa instytucja doradcza/Ośrodek zatruć
+48 22 619 66 54 (24 hours per day)

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture:

Classification according to Regulation (EC) No. 1272/2008 (CLP):
Skin corrosion, category 1
Eye Irritation, category 2
Respiratory sensitization, category 1
Specific target organ toxicity - single exposure, category 1
Specific target organ toxicity - repeated exposure, category 1

Hazard-determining components of labeling:
Hydrogen chloride
Zinc sulfate heptahydrate

Additional Information: None

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)
Hazard pictograms:

Signal Word: Danger
Hazard statements:
H314 Causes severe skin burns and eye damage
H319 Causes serious eye irritation
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
H370 Causes damage to organs.
H372 Causes damage to organs through prolonged or repeated exposure.

Precautionary statements:
P260 Do not breathe dust, fumes, gas, mist, vapours or spray.
P264 Wash skin thoroughly after handling.
P280 Wear protective gloves, protective clothing, eye protection and face protection.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray
P270 Do not eat, drink or smoke when using this product
P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P363 Wash contaminated clothing before reuse
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing
P310 Immediately call a POISON CENTER or doctor/physician
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 If eye irritation persists: Get medical advice/attention.
P314 Get medical advice/attention if you feel unwell.

P405 Store locked up
P501 Dispose of contents in accordance with local regulations.

2.3 Other hazards: None known

SECTION 3: Composition/information on ingredients

3.1 Substance: Not applicable.

3.2 Mixture:

Identification	EU REACH Registration No.	Name	Classification according to Regulation (EC) No. 1272/2008 (CLP)	Weight %
CAS number: 7647-01-0 EC number: 231-595-7	–	Hydrogen chloride	Skin Corr. 1A; H314 Acute Tox. 3 (Inh); H331 Press. Gas, Compressed; H280 STOT SE 3 (RI); H335 Eye Dam. 1; H318 Specific concentration limit(s): Skin Corr. 1B; H314: C ≥25% Skin Irrit. 2; H315: 10%≤ C <25% Eye Irrit. 2; H319: 10%≤ C <25% STOT SE 3 (RI); H335: C ≥10%	1.45
CAS number: 7446-20-0 EC number: 231-793-3	–	Zinc sulfate heptahydrate	Acute Tox. 4 (Oral); H302 Eye Dam. 1; H318 Aquatic Acute 1; H400 Aquatic Chronic 1; H410 M-Factor: 1	0.03

Additional information: None
Full Text of H and EUH statements: See section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes:

Show this Safety Data Sheet to the doctor in attendance.

Following inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention.
If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at

rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If exposed, seek medical advice/attention.

Following skin contact:

Treatment is urgent. Seek emergency medical treatment. Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse.

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

Following eye contact:

Immediately rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. Seek immediate medical attention, preferably from an ophthalmologist.

Rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.

Rinse eyes with plenty of water for several minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.

Following ingestion:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. Seek immediate medical attention.

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention.

Self-Protection of the first aider:

Not determined or not available.

4.2 Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Exposure to skin may result in redness, pain, burning, inflammation and tissue damage. Exposure to eyes may result in irritation, redness, pain, inflammation, itching, burning and tearing. Exposure via inhalation may result in cough, sore throat, burning sensation and shortness of breath. Exposure via ingestion may result in burns of the mouth and throat, abdominal pain, burning sensation in the throat and chest, nausea, vomiting, shock or collapse.

Eye contact may result in irritation, redness, pain, inflammation, itching, burning and tearing.

Inhalation exposure may cause allergy, asthma symptoms or breathing difficulties. Symptoms may include cough, chronic phlegm, shortness of breath, wheezing and chest tightness. Symptoms may be delayed.

Causes damage to organs. Effects are dependent on exposure (dose, concentration, contact time).

Delayed symptoms and effects:

Effects are dependent on exposure (dose, concentration, contact time).

Causes damage to organs through prolonged or repeated exposure. Effects are dependent on exposure (dose, concentration, contact time).

4.3 Indication of any immediate medical attention and special treatment needed

Specific treatment:

In case of eye contact, seek prompt medical attention while rinsing is continued.

In case of skin contact, seek prompt medical attention while rinsing is continued.

In case of ingestion, seek prompt medical attention.

If exhibiting symptoms of exposure, seek prompt medical attention.

Notes for the doctor:

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Water mist/fog, carbon dioxide, dry chemical or alcohol resistant foam.

Unsuitable extinguishing media:

Do not use water jet.

5.2 Special hazards arising from the substance or mixture:

Thermal decomposition may produce irritating/toxic fumes/gases.

5.3 Advice for firefighters

Personal protection equipment:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

Special precautions:

Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:

Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.

6.2 Environmental precautions:

Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up:

Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

6.4 Reference to other sections:

For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:

Use appropriate personal protective equipment (see Section 8). Prevent skin contact. Do not get in eyes. Use only with adequate ventilation. Do not add water to the corrosive product. If it is necessary to mix a corrosive product with water, do so slowly adding the corrosive to cold water, in small amounts, and stir frequently. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use. Keep only in original packaging.

7.2 Conditions for safe storage, including any incompatibilities:

Store in cool, dry, well-ventilated location out of direct sunlight and away from exit paths. Store in a

corrosion-resistant container with a resistant inner liner. Inspect containers and storage area regularly for signs of leak and damage. Store containers at a convenient height for handling, below eye level if possible. High shelving increases the risk of dropping containers, personal injury and exposure. Ensure that appropriate fire fighting and spill-clean up equipment is readily available. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Store separately. Keep container tightly sealed. Store away from incompatible materials (See Section 10).
Store between 2-8 °C

7.3 Specific end use(s):
Refer to Section 1 (Recommended Use).

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Only those substances with limit values have been included below.
Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
Bulgaria	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³
	Hydrogen chloride	7647-01-0	TWA: 5 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 10 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³ (10 ppm)
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³ (5 ppm)
Croatia	Hydrogen chloride	7647-01-0	Daily Exposure Limit: 5 ppm
	Hydrogen chloride	7647-01-0	Daily Exposure Limit: 8 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 10 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³ (10 ppm)
	Hydrogen chloride	7647-01-0	8-Hour TWA: 8 mg/m³ (5 ppm)
Czech Republic	Hydrogen chloride	7647-01-0	8-Hour TWA: 8 mg/m³
	Hydrogen chloride	7647-01-0	Ceiling Limit: 15 mg/m³
	Hydrogen chloride	7647-01-0	Ceiling Limit: 15 mg/m³
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³
Estonia	Hydrogen chloride	7647-01-0	8-Hour TWA: 5 ppm
	Hydrogen chloride	7647-01-0	8-Hour TWA: 8 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 10 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³
	Hydrogen chloride	7647-01-0	STEL: 15 mg/m³ (10 ppm)
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³ (5 ppm)
Hungary	Hydrogen chloride	7647-01-0	8-Hour TWA: 8 mg/m³
	Hydrogen chloride	7647-01-0	60-Minute STEL: 16 mg/m³
	Hydrogen chloride	7647-01-0	60-Minute STEL: 16 mg/m³
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³
Latvia	Hydrogen chloride	7647-01-0	8-Hour TWA: 8 mg/m³
	Hydrogen chloride	7647-01-0	8-Hour TWA: 5 ppm

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 10 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³ (10 ppm)
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³ (5 ppm)
Lithuania	Hydrogen chloride	7647-01-0	8-Hour TWA: 8 mg/m³
	Hydrogen chloride	7647-01-0	8-Hour TWA: 5 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 10 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³ (10 ppm)
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³ (5 ppm)
Malta	Hydrogen chloride	7647-01-0	TWA: 5 ppm
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³
	Hydrogen chloride	7647-01-0	STEL: 10 ppm
	Hydrogen chloride	7647-01-0	STEL: 15 mg/m³
	Hydrogen chloride	7647-01-0	STEL: 15 mg/m³ (10 ppm)
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³ (5 ppm)
Poland	Hydrogen chloride	7647-01-0	8-Hour TWA: 5 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 10 mg/m³
	Hydrogen chloride	7647-01-0	STEL: 10 mg/m³
	Hydrogen chloride	7647-01-0	TWA: 5 mg/m³
Romania	Hydrogen chloride	7647-01-0	8-Hour TWA: 8 mg/m³
	Hydrogen chloride	7647-01-0	8-Hour TWA: 5 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 10 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³ (10 ppm)
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³ (5 ppm)
Slovakia	Hydrogen chloride	7647-01-0	8-Hour TWA: 5 ppm
	Hydrogen chloride	7647-01-0	8-Hour TWA: 8 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 10 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³
	Hydrogen chloride	7647-01-0	STEL: 15 mg/m³ (10 ppm)
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³ (5 ppm)
	Zinc sulfate heptahydrate	7446-20-0	8-Hour TWA: 0.1 mg/m³ (Zinc and its inorganic compounds, respirable fraction)
	Zinc sulfate heptahydrate	7446-20-0	8-Hour TWA: 2 mg/m³ (Zinc and its inorganic compounds, inhalable fraction)
Slovenia	Hydrogen chloride	7647-01-0	8-Hour TWA: 8 mg/m³
	Hydrogen chloride	7647-01-0	8-Hour TWA: 5 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 110 ppm
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³ (5 ppm)
Austria	Hydrogen chloride	7647-01-0	TWA: 5 ppm

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³
	Hydrogen chloride	7647-01-0	Ceiling Limit: 10 ppm
	Hydrogen chloride	7647-01-0	Ceiling Limit: 15 mg/m³
	Hydrogen chloride	7647-01-0	Ceiling Limit: 15 mg/m³ (10 ppm)
	Hydrogen chloride	7647-01-0	MAK TWA: 8 mg/m³ (5 ppm)
Belgium	Hydrogen chloride	7647-01-0	8-Hour TWA: 5 ppm
	Hydrogen chloride	7647-01-0	8-Hour TWA: 8 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 10 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³ (10 ppm)
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³ (5 ppm)
Denmark	Hydrogen chloride	7647-01-0	Ceiling Limit: 5 ppm
	Hydrogen chloride	7647-01-0	Ceiling Limit: 8 mg/m³
Finland	Hydrogen chloride	7647-01-0	15-Minute STEL: 5 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 7.6 mg/m³
	Hydrogen chloride	7647-01-0	STEL: 7.6 mg/m³ (5 ppm)
France	Hydrogen chloride	7647-01-0	STEL: 5 ppm
	Hydrogen chloride	7647-01-0	STEL: 7.6 mg/m³
	Hydrogen chloride	7647-01-0	Short Term Limit Value: 7.6 mg/m³ (5 ppm)
Germany (TRGS 900)	Hydrogen chloride	7647-01-0	Level Limit Value: 2 ppm
	Hydrogen chloride	7647-01-0	Level Limit Value: 3 mg/m³
	Hydrogen chloride	7647-01-0	Limit Value: 3 mg/m³ (2 ppm)
Germany (MAK)	Hydrogen chloride	7647-01-0	8-Hour TWA: 2 ppm
	Hydrogen chloride	7647-01-0	8-Hour TWA: 3 mg/m³
	Hydrogen chloride	7647-01-0	8-Hour TWA: 3 mg/m³ (2 ppm)
	Zinc sulfate heptahydrate	7446-20-0	8-Hour TWA: 0.1 mg/m³ (Zinc and its compounds, inorganic, respirable fraction, as Zn)
	Zinc sulfate heptahydrate	7446-20-0	15-Minute STEL: 0.4 mg/m³ (Zinc and its compounds, inorganic, respirable fraction, as Zn)
	Zinc sulfate heptahydrate	7446-20-0	8-Hour TWA: 2 mg/m³ (Zinc and its compounds, inorganic, inhalable fraction, as Zn)
	Zinc sulfate heptahydrate	7446-20-0	15-Minute STEL: 4 mg/m³ (Zinc and its compounds, inorganic, inhalable fraction, as Zn)
Greece	Hydrogen chloride	7647-01-0	8-Hour TWA: 5 ppm
	Hydrogen chloride	7647-01-0	8-Hour TWA: 7 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 5 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 7 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 7 mg/m³ (5 ppm)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Hydrogen chloride	7647-01-0	TWA: 7 mg/m³ (5 ppm)
Ireland	Hydrogen chloride	7647-01-0	8-Hour TWA: 5 ppm
	Hydrogen chloride	7647-01-0	8-Hour TWA: 8 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 10 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³ (10 ppm)
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³ (5 ppm)
Italy	Hydrogen chloride	7647-01-0	8-Hour TWA: 5 ppm
	Hydrogen chloride	7647-01-0	8-Hour TWA: 8 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 10 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³
	Hydrogen chloride	7647-01-0	STEL: 15 mg/m³ (10 ppm)
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³ (5 ppm)
Luxembourg	Hydrogen chloride	7647-01-0	TWA: 5 ppm
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 10 ppm
	Hydrogen chloride	7647-01-0	STEL: 15 mg/m³ (10 ppm)
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³ (5 ppm)
The Netherlands	Hydrogen chloride	7647-01-0	8-Hour TWA: 8 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³
Portugal	Hydrogen chloride	7647-01-0	8-Hour TWA: 5 ppm
	Hydrogen chloride	7647-01-0	8-Hour TWA: 8 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 10 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³
	Hydrogen chloride	7647-01-0	Ceiling Limit: 2 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³ (10 ppm)
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³ (5 ppm)
Spain	Hydrogen chloride	7647-01-0	8-Hour TWA: 5 ppm
	Hydrogen chloride	7647-01-0	8-Hour TWA: 7.6 mg/m³
	Hydrogen chloride	7647-01-0	15-Minute STEL: 10 ppm
	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³
	Hydrogen chloride	7647-01-0	STEL: 15 mg/m³ (10 ppm)
	Hydrogen chloride	7647-01-0	TWA: 7.6 mg/m³ (5 ppm)
Sweden	Hydrogen chloride	7647-01-0	Level Limit Value: 2 ppm
	Hydrogen chloride	7647-01-0	Level Limit Value: 3 mg/m³
	Hydrogen chloride	7647-01-0	Ceiling Limit: 4 ppm
	Hydrogen chloride	7647-01-0	Ceiling Limit: 6 mg/m³
	Hydrogen chloride	7647-01-0	TWA: 3 mg/m³ (2 ppm)
	Hydrogen chloride	7647-01-0	Ceiling Limit: 6 mg/m³ (4 ppm)
United Kingdom	Hydrogen chloride	7647-01-0	TWA: 1 ppm

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Hydrogen chloride	7647-01-0	TWA: 2 mg/m³
	Hydrogen chloride	7647-01-0	STEL: 5 ppm
	Hydrogen chloride	7647-01-0	STEL: 8 mg/m³
	Hydrogen chloride	7647-01-0	STEL: 8 mg/m³ (5 ppm)
	Hydrogen chloride	7647-01-0	TWA: 2 mg/m³ (1 ppm)
European Union	Hydrogen chloride	7647-01-0	15-Minute STEL: 15 mg/m³ (10 ppm; [SCOEL])
	Hydrogen chloride	7647-01-0	8-Hour TWA: 8 mg/m³ (5 ppm; [SCOEL])
	Hydrogen chloride	7647-01-0	STEL: 15 mg/m³ (10 ppm; [IOEL])
	Hydrogen chloride	7647-01-0	TWA: 8 mg/m³ (5 ppm; [IOEL])

Biological limit values:

No biological exposure limits noted for the ingredient(s).

Derived No Effect Level (DNEL):

Ingredient Name: Hydrogen chloride

CAS #: 7647-01-0

Workers - Systemic Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	No hazard identified
	Chronic - Dermal	No hazard identified
Workers - Local Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	15 mg/m³
	Acute - Dermal	Hazard identified but no DNEL available
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	8 mg/m³
	Chronic - Dermal	Hazard identified but no DNEL available
General Population - Systemic Effects	Acute - Oral	No hazard identified
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	No hazard identified
	Chronic - Inhalation	No hazard identified
	Chronic - Dermal	No hazard identified
General Population - Local Effect	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	15 mg/m³
	Acute - Dermal	Hazard identified but no DNEL available
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	8 mg/m³
	Chronic - Dermal	Hazard identified but no DNEL available

Ingredient Name: Zinc sulfate heptahydrate

CAS #: 7446-20-0

Workers - Systemic Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	1 mg/m³
	Chronic - Dermal	8.3 mg/kg bw/day
Workers - Local Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	No hazard identified
	Chronic - Dermal	No hazard identified
General Population - Systemic Effects	Acute - Oral	No hazard identified
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	0.83 mg/kg bw/day
	Chronic - Inhalation	1.25 mg/m³
	Chronic - Dermal	8.3 mg/kg bw/day
General Population - Local Effect	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	No hazard identified
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	No hazard identified
	Chronic - Dermal	No hazard identified

Predicted No Effect Concentration (PNEC):

Ingredient Name: Hydrogen chloride

CAS #: 7647-01-0

Environmental Protection Target	PNEC
Fresh water	No hazard identified
Freshwater sediments	No hazard identified
Marine water	No hazard identified
Marine sediments	No hazard identified
Microorganisms in sewage treatment	Not determined or not available.
Soil (agricultural)	No exposure expected
Air	No hazard identified
Oral (Secondary Poisoning)	No exposure expected

Ingredient Name: Zinc sulfate heptahydrate

CAS #: 7446-20-0

Environmental Protection Target	PNEC
Fresh water	20.6 µg/L
Freshwater sediments	117.8 mg/kg sediment dw
Marine water	6.1 µg/L
Marine sediments	56.5 mg/kg sediment dw

Microorganisms in sewage treatment	100 µg/L
Soil (agricultural)	35.6 mg/kg soil dw
Air	Not determined or not available.
Oral (Secondary Poisoning)	No exposure expected

Information on monitoring procedures:

Not determined or not applicable.

8.2 Exposure controls

Appropriate engineering controls:

Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Personal protection equipment

Eye and face protection:

Use safety glasses with side shields or goggles. Consider the use of a face shield for splash protection. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and body protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Full body protection should be worn. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Respiratory protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.

General hygienic measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

Environmental exposure controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Product (substance / mixture) related measures to prevent exposure:	Not determined or not applicable.

Instruction measures to prevent exposure:	Not determined or not applicable.
Organisational measures to prevent exposure:	Not determined or not applicable.
Technical measures to prevent exposure:	Not determined or not applicable.

Risk management measures to control exposure:
Not determined or not applicable.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Provided in a two part liquid.
Color	R1 reagent is clear and colorless.
Odor/Odor threshold	Not Available
pH	Combined Reagent = 10.45
Melting point/freezing point	Not Available
Initial boiling point/range	Not Available
Flash point (closed cup)	Not Available
Flammability	Not Available
Upper flammability/explosive limit	Not Available
Lower flammability/explosive limit	Not Available
Vapor pressure	Not Available
Relative vapor density	Not Available
Density	Not Available
Relative density	Not determined or not available.
Solubilities	Not Available
Partition coefficient (n-octanol/water)	Not Available
Auto/Self-ignition temperature	Not Available
Decomposition temperature	Not determined or not available.
Kinematic viscosity	Not Available
Particle characteristics	Not Available

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosives	No data available/Not applicable
Flammable gases	No data available/Not applicable
Aerosols	No data available/Not applicable
Oxidizing gases	No data available/Not applicable
Gases under pressure	No data available/Not applicable
Flammable liquids	No data available/Not applicable
Flammable solids	No data available/Not applicable
Self-reactive substances and mixtures	No data available/Not applicable
Pyrophoric liquids	No data available/Not applicable
Pyrophoric solids	No data available/Not applicable
Self-heating substances and mixtures	No data available/Not applicable

Substances and mixtures, which emit flammable gases in contact with water	No data available/Not applicable
Oxidizing liquids	No data available/Not applicable
Oxidizing solids	No data available/Not applicable
Organic peroxides	No data available/Not applicable
Corrosive to metals	No data available/Not applicable
Desensitized explosives	No data available/Not applicable

9.2.2 Other safety characteristics

None.

SECTION 10: Stability and reactivity

10.1 Reactivity:

Not reactive under recommended handling and storage conditions.

10.2 Chemical stability:

Stable under recommended handling and storage conditions.

10.3 Possibility of hazardous reactions:

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

10.4 Conditions to avoid:

Avoid generation of aerosols and mists, extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.
Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

10.5 Incompatible materials:

Caution, R2 contains Sodium Azides, in contact with heavy metals, may form explosive metal azides.

10.6 Hazardous decomposition products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

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

Product data: No data available.

Substance data:

Name	Route	Result
Hydrogen chloride	oral	LD50 Rat: 238 mg/kg
	dermal	LD50 Rabbit: >5010 mg/kg
	inhalation	LC50 Rat: 1562 ppmV (4h [Gas])
Zinc sulfate heptahydrate	oral	LD50 Mouse: 926 mg/kg
	dermal	LD50 Rat: >2000 mg/kg
	inhalation	LC50 Dog: 8.3 mg/m³ (4 hr [Aerosol])

Skin corrosion/irritation

Assessment:

Causes severe skin burns and eye damage.

Product data:

No data available.

Substance data:

Name	Result
Hydrogen chloride	Causes severe skin burns.

Serious eye damage/irritation

Assessment:

Causes serious eye irritation.

Product data:

No data available.

Substance data:

Name	Result
Hydrogen chloride	Causes serious eye damage.
Zinc sulfate heptahydrate	Causes serious eye damage.

Respiratory or skin sensitization

Assessment:

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Product data:

No data available.

Substance data: No data available.

Carcinogenicity

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

Product data: No data available.

Substance data: No data available.

International Agency for Research on Cancer (IARC):

Name	Classification
Hydrogen chloride	Group 3
	Group 3
Zinc sulfate heptahydrate	Not Applicable

Germ cell mutagenicity

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

Product data: No data available.

Substance data: No data available.

Reproductive Toxicity

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

Product data:

No data available.

Substance data: No data available.

Specific target organ toxicity (single exposure)

Assessment:

Causes damage to organs.

Product data:

No data available.

Substance data:

Name	Result
Hydrogen chloride	May cause respiratory irritation.

Specific target organ toxicity (repeated exposure)

Assessment:

Causes damage to organs through prolonged or repeated exposure.

Product data:

No data available.

Substance data: No data available.

Aspiration toxicity

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

Product data:

No data available.

Substance data: No data available.

Information on likely routes of exposure:

No data available.

Symptoms related to the physical, chemical and toxicological characteristics:

No data available.

11.2 Information on other hazards

Endocrine disrupting properties:

Substance data: No data available.

Other information:

No data available.

SECTION 12: Ecological information

12.1 Toxicity

Acute (short-term) toxicity

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

Product data: No data available.

Substance data:

Name	Result
Hydrogen chloride	Fish LC50 Lepomis macrochirus: 24.6 mg/L (96 hr)
Zinc sulfate heptahydrate	Fish LC50 Oncorhynchus mykiss: 0.103 mg/L (96 hr)

Chronic (long-term) toxicity

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

Product data: No data available.

Substance data: No data available.

12.2 Persistence and degradability

Product data: No data available.

Substance data:

Name	Result
Hydrogen chloride	Substance is non degradable and persistent in the aquatic and terrestrial environment.
Zinc sulfate heptahydrate	Biodegradation is not applicable to metals/inorganic substances.

12.3 Bioaccumulative potential

Product data: No data available.

Substance data:

Name	Result
Hydrogen chloride	Not expected to bioaccumulate (log Kow = -2.65).

Name	Result
Zinc sulfate heptahydrate	Zinc is an essential element which is actively regulated by organisms, so bioconcentration/bioaccumulation is not considered relevant for all inorganic zinc substances.

12.4 Mobility in soil

Product data: No data available.

Substance data:

Name	Result
Zinc sulfate heptahydrate	Kd for solids-water in soil is 158.5 l/kg (log value: 2.2)

12.5 Results of PBT and vPvB assessment

Product data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT.
vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.

Substance data:

PBT assessment:

Hydrogen chloride	This substance is not PBT.
Zinc sulfate heptahydrate	PBT assessment does not apply to inorganic substances.

vPvB assessment:

Hydrogen chloride	This substance is not vPvB.
Zinc sulfate heptahydrate	vPvB assessment does not apply to inorganic substances.

12.6 Endocrine disrupting properties

Substance data: No data available.

12.7 Other adverse effects: No data available.

12.8 Hazard to the ozone layer

Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

13.1.1 Product / Packaging disposal:
Dilute with large volumes of water and dispose of into sewer system, in accordance with local regulations.

Waste codes / waste designations according to LoW: Not determined or not available.

13.1.2 Waste treatment-relevant information: Not determined or not available.

13.1.3 Sewage disposal-relevant information: Not determined or not available.

13.1.4 Other disposal recommendations: It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

International Carriage of Dangerous Goods by Road/Rail (ADR/RID)

UN number or ID number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None

Packing group	None
Environmental hazards	None
Special precautions for user	None

International Carriage of Dangerous Goods by Inland Waterways (ADN)

UN number or ID number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number or ID number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number or ID number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

Maritime Transport in Bulk according to IMO Instruments

Bulk Name	None
Ship type	None
Pollution category	None
IMO hazard class	None
Environmental hazards	None
Material hazardous only in bulk	None
Cargo Group	None

SECTION 15: Regulatory information

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

European regulations

Inventory listing (EINECS): All ingredients are listed or exempt.

REACH SVHC candidate list: None of the ingredients are listed.

REACH SVHC Authorizations: None of the ingredients are listed.

REACH Restriction: None of the ingredients are listed.

Water hazard class (WGK) (Product): Not determined.

Water hazard class (WGK) (Substance):

Ingredient Name	CAS	Class
Hydrogen chloride	7647-01-0	Water hazard class 1: slightly hazardous to water
Zinc sulfate heptahydrate	7446-20-0	Water hazard class 3: highly hazardous to water

Other regulations

Germany TA Luft:

Ingredient Name	CAS	Class	Base Emission Rate	Max Concentration
Hydrogen chloride	7647-01-0	Class III	0.15 kg/h	30 mg/m³

Additional information: Not determined.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: Other information

Abbreviations and Acronyms: None

Classification procedure:

Classification according to Regulation (EC) No. 1272/2008 (CLP)	Method Used
Skin corrosion, category 1	Expert judgement
Eye Irritation, category 2	Expert judgement
Respiratory sensitization, category 1	Expert judgement
Specific target organ toxicity - single exposure, category 1	Expert judgement
Specific target organ toxicity - repeated exposure, category 1	Expert judgement

Summary of classification(s) in section 3:

Skin Corr. 1A	Skin corrosion, category 1A
Acute Tox. 3 (Inh)	Acute toxicity (inhalation), category 3
Press. Gas, Compressed	Compressed gases
STOT SE 3 (RI)	Specific target organ toxicity - single exposure, category 3, respiratory tract irritation
Eye Dam. 1	Serious eye damage, category 1
Acute Tox. 4 (Oral)	Acute toxicity (oral), category 4
Aquatic Acute 1	Acute aquatic hazard, category 1
Aquatic Chronic 1	Chronic aquatic hazard, category 1

Summary of hazard statements in section 3:

H314	Causes severe skin burns and eye damage
H331	Toxic if inhaled
H280	Contains gas under pressure; may explode if heated
H335	May cause respiratory irritation
H318	Causes serious eye damage
H302	Harmful if swallowed
H400	Very toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects

Disclaimer:

This product has been classified in accordance with EC No. 1272/2008 (CLP), as amended by Commission

Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and EC No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation, and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

Initial preparation date: 2023-11-13

End of Safety Data Sheet

Safety Data Sheet

According to Regulation (EC) No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and (EC) No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878.

Alkaline Phosphatase R2

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product Name: Alkaline Phosphatase R2
Product code: A7516-R2

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

Relevant identified uses: For the quantitative determination of alkaline phosphatase in serum
Uses advised against: Not determined or not applicable.
Reasons why uses advised against: Not determined or not applicable.

1.3 Details of the manufacturer/supplier of the safety data sheet

Manufacturer:
United States
HORIBA Instruments Incorporated
5449 Research Drive
Canton, MI 48188
734-487-8300
horiba.com

1.4 Emergency telephone number:

United States
HORIBA Instruments Incorporated
1-800-445-9853 (24 hours per day)

France
Organisme de conseil/centre antipoison national
+33 1 45 42 59 59 (24 hours per day)

Portugal
Órgão consultor nacional/Centro Antivenenos
+351 800 250 250 (24 hours per day)

Spain
Centro de información toxicológica/organismo asesor nacional
+34 91 562 04 20 (24 hours per day)

Czech Republic
Národní poradní orgán/toxikologické středisko
+420 224 919 293 (24 hours per day)

Greece
Εθνικό συμβουλευτικό όργανο/Κέντρο Δηλητηριάσεων
+30 210 779 3777 (24 hours per day)

Italy
Organismo ufficiale di consultazione nazionale/Centro antiveleni
+39 06 305 4343 (24 hours per day)

Romania
Organism consultativ naţional/Centru pentru otrăviri
+40 21 3183606 (24 hours per day)

Poland
Krajowa instytucja doradcza/Ośrodek zatruć
+48 22 619 66 54 (24 hours per day)

SECTION 2: Hazard(s) identification

2.1 Classification of the substance or mixture:

Classification according to Regulation (EC) No. 1272/2008 (CLP):

Skin irritation, category 2
Eye Irritation, category 2
Germ cell mutagenicity, category 2
Carcinogenicity, category 2
Reproductive toxicity, category 2
Specific target organ toxicity - single exposure, category 2
Specific target organ toxicity - repeated exposure, category 2

Hazard-determining components of labeling:

Methanol
Chloramphenicol
Phenol

Additional Information: None

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 (CLP)

Hazard pictograms:

Signal Word: Warning

Hazard statements:

H315 Causes skin irritation
H319 Causes serious eye irritation
H371 May cause damage to organs.
H373 May cause damage to organs through prolonged or repeated exposure.
H361 Suspected of damaging fertility or the unborn child.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.

Precautionary statements:

P264 Wash skin thoroughly after handling.
P280 Wear protective gloves, protective clothing, eye protection and face protection.
P260 Do not breathe dust/fume/gas/mist/vapours/spray
P270 Do not eat, drink or smoke when using this product
P201 Obtain special instructions before use
P202 Do not handle until all safety precautions have been read and understood
P302+P352 IF ON SKIN: Wash with plenty of water and soap.
P321 Specific treatment (see supplemental first aid instructions on this label).
P332+P313 If skin irritation occurs: Get medical advice/attention
P362 Take off contaminated clothing

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P337+P313 If eye irritation persists: Get medical advice/attention.
P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor/physician
P314 Get medical advice/attention if you feel unwell.
P308+P313 If exposed or concerned: Get medical advice/attention.
P405 Store locked up
P501 Dispose of contents and container in accordance with local regulations.

2.3 Other hazards: None known

SECTION 3: Composition/information on ingredients

3.1 Substance: Not applicable.

3.2 Mixture:

Identification	EU REACH Registration No.	Name	Classification according to Regulation (EC) No. 1272/2008 (CLP)	Weight %
CAS number: 108-95-2 EC number: 203-632-7	–	Phenol	Acute Tox. 3 (Oral); H301 Acute Tox. 3 (Dermal); H311 Acute Tox. 3 (Inh); H331 Skin Corr. 1B; H314 STOT RE 2; H373 Muta. 2; H341 Eye Dam. 1; H318 Specific concentration limit(s): Skin Corr. 1B; H314: C ≥3% Skin Irrit. 2; H315: 1%≤ C <3% Eye Irrit. 2; H319: 1%≤ C <3%	1

CAS number: 67-56-1 EC number: 200-659-6	–	Methanol	Flam. Liq. 2; H225 Acute Tox. 3 (Oral); H301 Acute Tox. 3 (Dermal); H311 Acute Tox. 3 (Inh); H331 STOT SE 1; H370 Specific concentration limit(s): STOT SE 1; H370: C ≥10% STOT RE 2; H373: 3%≤ C <10% Acute Toxicity Estimate: Oral ATE: 100 mg/kg Dermal ATE: 300 mg/kg Inhalation ATE: 3 mg/L	0.2
CAS number: 56-75-7 EC number: 200-287-4	–	Chloramphenicol	Eye Dam. 1; H318 Carc. 2; H351 Repr. 2; H361	0.06

Additional information: None
Full Text of H and EUH statements: See section 16

SECTION 4: First aid measures

4.1 Description of first aid measures

General notes:

Show this Safety Data Sheet to the doctor in attendance.

Following inhalation:

If inhaled, remove person to fresh air and place in a position comfortable for breathing. If respiratory symptoms develop or persist, seek medical advice/attention.

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If experiencing respiratory symptoms, seek medical advice/attention.

If inhaled, remove person to fresh air and place in a position comfortable for breathing. Keep person at rest. If breathing is difficult, administer oxygen. If breathing has stopped, provide artificial respiration. If symptoms develop or persist, seek medical advice/attention.

Following skin contact:

Wash affected area with plenty of soap and water. Remove contaminated clothing and launder before reuse. If skin irritation develops or persists, seek medical advice/attention.

Remove contaminated clothing and shoes. Rinse skin with copious amounts of water [shower] for several minutes. Launder contaminated clothing before reuse. If symptoms develop or persist, seek medical advice/attention.

Following eye contact:

Immediately rinse eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. If eye irritation develops or persists, seek medical advice/attention.
Rinse eyes with plenty of water for several minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.
Rinse eyes with plenty of gently flowing lukewarm water for 15 minutes. Remove contact lenses if present and easy to do so. Protect unexposed eye. If symptoms develop or persist, seek medical advice/attention.

Following ingestion:

If swallowed, DO NOT induce vomiting unless told to do so by a physician or poison control center. Rinse mouth with water. Never give anything by mouth to an unconscious person. If spontaneous vomiting occurs, place on the left side with head down to prevent aspiration of liquid into the lungs. If symptoms develop or persist, seek medical advice/attention.

Self-Protection of the first aider:

Not determined or not available.

4.2 Most important symptoms and effects, both acute and delayed

Acute symptoms and effects:

Skin contact may result in redness, pain, burning and inflammation.
Eye contact may result in irritation, redness, pain, inflammation, itching, burning and tearing.
May cause damage to organs. Effects are dependent on exposure (dose, concentration, contact time).

Delayed symptoms and effects:

Effects are dependent on exposure (dose, concentration, contact time).
May cause damage to organs through prolonged or repeated exposure. Effects are dependent on exposure (dose, concentration, contact time).
Long term exposure may affect fertility. Symptoms include, but are not limited to: menstrual problems, altered sexual behavior/fertility/ and pregnancy outcome. Long term exposure may also affect development of the unborn child. Symptoms include, but are not limited to: intrauterine growth retardation, pre-term birth, birth defects and postnatal death.
Exposure may cause genetic defects. Effects are dependent on exposure (dose, concentration, contact time).
Suspected of causing cancer. Effects are dependent on exposure (dose, concentration, contact time).

4.3 Indication of any immediate medical attention and special treatment needed

Specific treatment:

If exhibiting symptoms of exposure, seek prompt medical attention.

Notes for the doctor:

Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Water mist/fog, carbon dioxide, dry chemical or alcohol resistant foam.

Unsuitable extinguishing media:

Do not use water jet.

5.2 Special hazards arising from the substance or mixture:

Thermal decomposition may produce irritating/toxic fumes/gases.

5.3 Advice for firefighters

Personal protection equipment:

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus

(SCBA).
Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full-face piece operated in positive pressure mode.

Special precautions:
Avoid contact with skin, eyes, hair and clothing. Do not breathe fumes/gas/mists/aerosols/vapors/dusts. Move containers from fire area if safe to do so. Use water spray/fog for cooling fire exposed containers. Avoid unnecessary run-off of extinguishing media which may cause pollution.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Avoid contact with skin, eyes and clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling.
Evacuate unnecessary personnel. Ventilate area. Extinguish any sources of ignition. Wear recommended personal protective equipment (see Section 8). Do not get on skin, eyes or on clothing. Avoid breathing mist, vapor, dust, fume and spray. Do not walk through spilled material. Wash thoroughly after handling. Remove contaminated clothing and launder before reuse.

6.2 Environmental precautions:
Prevent further leakage or spillage if safe to do so. Prevent from reaching drains, sewers and waterways. Discharge into the environment must be avoided.

6.3 Methods and material for containment and cleaning up:
Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).
Do not touch damaged containers or spilled material unless wearing appropriate personal protective clothing. Avoid breathing dust, mist, fumes, vapors or spray. Stop leak if you can do it without risk. Contain and collect spillage and place in suitable container for future disposal. Dispose of in accordance with all applicable regulations (see Section 13).

6.4 Reference to other sections:
For personal protective equipment see Section 8. For disposal see Section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling:
Use appropriate personal protective equipment (see Section 8). Use only with adequate ventilation. Avoid breathing mist/vapor/spray/dust. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with skin, eyes and clothing. Wash affected areas thoroughly after handling. Keep away from incompatible materials (See Section 10). Keep containers tightly closed when not in use.

7.2 Conditions for safe storage, including any incompatibilities:
Store in cool, dry, well-ventilated location out of direct sunlight. Keep away from food and beverages. Protect from freezing and physical damage. Store away from heat, open flames and other sources of ignition. Keep container tightly sealed. Store away from incompatible materials (See Section 10).
Store between 2-8 °C

7.3 Specific end use(s):
Refer to Section 1 (Recommended Use).

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Only those substances with limit values have been included below.

Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
Czech Republic	Methanol	67-56-1	8-Hour TWA: 250 mg/m³
	Methanol	67-56-1	Ceiling Limit: 1000 mg/m³
	Phenol	108-95-2	8-Hour TWA: 7.5 mg/m³
	Phenol	108-95-2	Ceiling Limit: 15 mg/m³
Estonia	Methanol	67-56-1	8-Hour TWA: 250 mg/m³ (200 ppm)
	Methanol	67-56-1	15-Minute STEL: 350 mg/m³ (250 ppm)
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
Hungary	Methanol	67-56-1	8-Hour TWA: 260 mg/m³
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³
Poland	Methanol	67-56-1	8-Hour TWA: 100 mg/m³
	Methanol	67-56-1	15-Minute STEL: 300 mg/m³
	Phenol	108-95-2	8-Hour TWA: 7.8 mg/m³
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (NDSCh)
Slovakia	Methanol	67-56-1	8-Hour TWA: 260 mg/m³ (200 ppm)
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
Slovenia	Methanol	67-56-1	8-Hour TWA: 260 mg/m³ (200 ppm)
	Methanol	67-56-1	15-Minute STEL: 1040 mg/m³ (800 PPM)
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
Austria	Methanol	67-56-1	8-Hour TWA: 262 mg/m³ (200 ppm)
	Methanol	67-56-1	STEL: 1040 mg/m³ (800 ppm [4 x 15 min])
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	STEL: 16 mg/m³ (4 ppm [4 x 15 min])
Belgium	Methanol	67-56-1	8-Hour TWA: 266 mg/m³ (200 ppm)
	Methanol	67-56-1	15-Minute STEL: 333 mg/m³ (250 ppm)
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³ (2 ppm)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
Denmark	Methanol	67-56-1	8-Hour TWA: 260 mg/m³ (200 ppm)
	Methanol	67-56-1	15-Minute STEL: 520 mg/m³ (400 ppm)
	Phenol	108-95-2	8-Hour TWA: 4 mg/m³ (1 ppm)
	Phenol	108-95-2	15-Minute STEL: 8 mg/m³ (2 ppm)
Finland	Methanol	67-56-1	8-Hour TWA: 270 mg/m³ (200 ppm)
	Methanol	67-56-1	15-Minute STEL: 330 mg/m³ (250 ppm)
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
France	Methanol	67-56-1	8-Hour TWA: 260 mg/m³ (200 ppm)
	Phenol	108-95-2	8-Hour TWA: 7.8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 15.6 mg/m³ (4 ppm)
Germany (MAK)	Methanol	67-56-1	8-Hour TWA: 130 mg/m³ (100 ppm)
	Methanol	67-56-1	15-Minute STEL: 260 mg/m³ (200 ppm)
Greece	Methanol	67-56-1	8-Hour TWA: 260 mg/m³ (200 ppm)
	Methanol	67-56-1	15-Minute STEL: 325 mg/m³ (250 ppm)
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
The Netherlands	Methanol	67-56-1	8-Hour TWA: 133 mg/m³
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³
Portugal	Methanol	67-56-1	STEL: 250 ppm
	Methanol	67-56-1	8-Hour TWA: 260 mg/m³ (200 ppm)
	Methanol	67-56-1	STEL: 250 ppm
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
Sweden	Methanol	67-56-1	15-Minute STEL: 350 mg/m³ (250 ppm)
	Methanol	67-56-1	8-Hour TWA: 250 mg/m³ (200 ppm)
	Phenol	108-95-2	8-Hour TWA: 4 mg/m³ (1 ppm)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Phenol	108-95-2	Ceiling Limit: 16 mg/m³ (4 ppm)
Bulgaria	Methanol	67-56-1	TWA: 260 mg/m³ (200 ppm)
	Chloramphenicol	56-75-7	TWA: 1 mg/m³
	Phenol	108-95-2	TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
Croatia	Methanol	67-56-1	8-Hour TWA: 260 mg/m³ (200 ppm)
	Phenol	108-95-2	TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 6 mg/m³ (4 ppm)
European Union	Methanol	67-56-1	8-Hour TWA: 260 mg/m³ (200 ppm; [IOEL])
	Sodium azide	26628-22-8	8-Hour TWA: 0.1 mg/m³ ([SCOEL])
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³ (2 ppm)
Germany (TRGS 900)	Methanol	67-56-1	15-Minute STEL: 260 mg/m³ (200 ppm)
	Methanol	67-56-1	8-Hour TWA: 130 mg/m³ (100 ppm)
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
Ireland	Methanol	67-56-1	8-Hour TWA: 260 mg/m³ (200 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
	Phenol	108-95-2	TWA: 8 mg/m³ (2 ppm)
Italy	Methanol	67-56-1	8-Hour TWA: 260 mg/m³ (200 ppm)
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
Latvia	Methanol	67-56-1	8-Hour TWA: 260 mg/m³ (200 ppm)
	Chloramphenicol	56-75-7	8-Hour TWA: 1 mg/m³
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
Lithuania	Methanol	67-56-1	8-Hour TWA: 260 mg/m³ (200 ppm)

Country (Legal Basis)	Substance	Identifier	Permissible concentration
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
Luxembourg	Methanol	67-56-1	TWA: 260 mg/m³ (200 ppm)
	Phenol	108-95-2	TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
Malta	Methanol	67-56-1	TWA: 260 mg/m³ (200 ppm)
	Phenol	108-95-2	TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
Romania	Methanol	67-56-1	8-Hour TWA: 260 mg/m³ (200 ppm)
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
Spain	Methanol	67-56-1	8-Hour TWA: 266 mg/m³ (200 ppm)
	Methanol	67-56-1	STEL: 333 mg/m³ (250 ppm)
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
United Kingdom	Methanol	67-56-1	15-Minute STEL: 333 mg/m³ (250 ppm)
	Methanol	67-56-1	8-Hour TWA: 266 mg/m³ (200 ppm)
	Phenol	108-95-2	8-Hour TWA: 7.8 mg/m³ (2 ppm)
	Phenol	108-95-2	15-Minute STEL: 16 mg/m³ (4 ppm)
Cyprus	Methanol	67-56-1	8-Hour TWA: 260 mg/m³ (200 ppm)
	Phenol	108-95-2	8-Hour TWA: 8 mg/m³ (2 ppm)
	Phenol	108-95-2	STEL: 16 mg/m³ (4 ppm)

Biological limit values:

Country (Legal Basis)	Substance	Identifier	Determinant	Specimen	Sampling time	Permissible limits
Spain	Methanol	67-56-1	Methanol	Urine	End of shift	15 mg/L
	Phenol	108-95-2	Phenol with hydrolysis	Creatinine in urine	End of shift	120 mg/g
Italy	Methanol	67-56-1	Methanol	Urine	End of shift	15 mg/L
	Phenol	108-95-2	Phenol with hydrolysis	Creatinine in urine	End of shift	250 mg/g
Portugal	Methanol	67-56-1	Methanol	Urine	End of shift	15 mg/L
	Phenol	108-95-2	Phenol with hydrolysis	Creatinine in urine	End of shift	250 mg/g

Country (Legal Basis)	Substance	Identifier	Determinant	Specimen	Sampling time	Permissible limits
Slovakia	Methanol	67-56-1	Methanol	Urine	EOS/EOW	30 mg/L [938 µmol/L]
	Methanol	67-56-1	Methanol	Creatinine in urine	EOS/EOW	20 mg/g [70.7 µmol/mmol]
	Phenol	108-95-2	Phenol	Creatinine in urine	End of shift	133.7 mg/g [160.7 µmol/mmol]
	Phenol	108-95-2	Phenol	Urine	End of shift	200 mg/L [2130 µmol/L]
Croatia	Methanol	67-56-1	Methanol	Creatinine in urine	End of shift.	7.0 mg/g (24.7 mmol/mol)
	Phenol	108-95-2	Phenol	Creatinine in urine	End of shift	120 mg/g [0.14 mol/mol]
Czech Republic	Methanol	67-56-1	Methanol	Urine	End of shift.	15 mg/L (0.47 mmol/l)
	Phenol	108-95-2	Phenol	Creatinine in urine	End of shift	300 mg/g (360 µmol/mmol)
France	Methanol	67-56-1	Méthanol	Urine	End of shift	15 mg/L
	Phenol	108-95-2	Total phenol	Creatinine in urine	End of shift	250 mg/g
Germany (TRGS 903)	Methanol	67-56-1	Methanol	Urine	EOW/EOS	15 mg/L
	Phenol	108-95-2	Phenol with hydrolysis	Creatinine in urine	End of shift	120 mg/g
Romania	Methanol	67-56-1	Methanol	Urine	End of shift.	6 mg/L
	Phenol	108-95-2	Total phenol	Urine	End of shift	120 mg/g
Slovenia	Methanol	67-56-1	Methanol	Urine	EOSLD	15 mg/L
	Phenol	108-95-2	Phenol with hydrolysis	Creatinine in urine	End of shift	120 mg/g
Hungary	Methanol	67-56-1	Methanol	Urine	End of shift	30 mg/L [940 µmol/L]
	Phenol	108-95-2	Phenol	Creatinine in urine	End of shift	120 mg/g [144 µmol/mmol]
European Union	Phenol	108-95-2	Phenol	Creatinine in urine	End of shift	120 mg/g
Finland	Phenol	108-95-2	Total phenol	Urine	End of shift	1.3 mmol/L
Bulgaria	Phenol	108-95-2	Phenol	Urine	End of shift	200 mg/L

Derived No Effect Level (DNEL):
Ingredient Name: Methanol
CAS #: 67-56-1

Workers - Systemic Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	130 mg/m³
	Acute - Dermal	20 mg/kg bw/day
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	130 mg/m³
	Chronic - Dermal	20 mg/kg bw/day

Workers - Local Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	130 mg/m³
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	130 mg/m³
	Chronic - Dermal	No hazard identified
General Population - Systemic Effects	Acute - Oral	4 mg/kg bw/day
	Acute - Inhalation	26 mg/m³
	Acute - Dermal	4 mg/kg bw/day
	Chronic - Oral	4 mg/kg bw/day
	Chronic - Inhalation	26 mg/m³
	Chronic - Dermal	4 mg/kg bw/day
General Population - Local Effect	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	26 mg/m³
	Acute - Dermal	No hazard identified
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	26 mg/m³
	Chronic - Dermal	No hazard identified

Ingredient Name: Phenol
CAS #: 108-95-2

Workers - Systemic Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	Hazard identified but no DNEL available
	Acute - Dermal	Hazard identified but no DNEL available
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	8 mg/m³
	Chronic - Dermal	1.23 mg/kg bw/day
Workers - Local Effects	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	16 mg/m³
	Acute - Dermal	Hazard identified but no DNEL available
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	Hazard identified but no DNEL available
	Chronic - Dermal	Hazard identified but no DNEL available
General Population - Systemic Effects	Acute - Oral	Exposure based waiving
	Acute - Inhalation	Exposure based waiving
	Acute - Dermal	Exposure based waiving
	Chronic - Oral	0.5 mg/kg bw/day
	Chronic - Inhalation	0.452 mg/m³
	Chronic - Dermal	0.5 mg/kg bw/day

General Population - Local Effect	Acute - Oral	Not determined or not applicable.
	Acute - Inhalation	Exposure based waiving
	Acute - Dermal	Exposure based waiving
	Chronic - Oral	Not determined or not applicable.
	Chronic - Inhalation	No exposure expected
	Chronic - Dermal	Hazard identified but no DNEL available

Predicted No Effect Concentration (PNEC):
Ingredient Name: Methanol
CAS #: 67-56-1

Environmental Protection Target	PNEC
Fresh water	No hazard identified
Freshwater sediments	No hazard identified
Marine water	No hazard identified
Marine sediments	No hazard identified
Microorganisms in sewage treatment	No hazard identified
Soil (agricultural)	No hazard identified
Air	No hazard identified
Oral (Secondary Poisoning)	No exposure expected

Ingredient Name: Phenol
CAS #: 108-95-2

Environmental Protection Target	PNEC
Fresh water	0.008 mg/L
Freshwater sediments	0.091 mg/kg sediment dw
Marine water	0.001 mg/L
Marine sediments	0.009 mg/kg sediment dw
Microorganisms in sewage treatment	2.1 mg/L
Soil (agricultural)	0.136 mg/kg soil dw
Air	No hazard identified
Oral (Secondary Poisoning)	No exposure expected

Information on monitoring procedures:
Not determined or not applicable.

8.2 Exposure controls

Appropriate engineering controls:
Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).
Emergency eye wash stations and safety showers should be available in the immediate vicinity of use or handling. Provide adequate ventilation to maintain the airborne concentrations of vapor, mists, and/or dusts below the applicable workplace exposure limits, while observing recognized national standards (or equivalent).

Personal protection equipment

Eye and face protection:
Safety glasses or goggles. Use eye protection equipment that has been tested and approved by recognized national standards (or equivalent).

Skin and body protection:

Chemical resistant, impervious gloves approved by the appropriate standards. Gloves must be inspected prior to use. Avoid skin contact with used gloves. Appropriate techniques should be used to remove used gloves and contaminated clothing. Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Ensure that all personal protective equipment is approved by recognized national standards (or equivalent).

Respiratory protection:

If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn.
If engineering controls do not maintain airborne concentrations below the applicable workplace exposure limits, or to an acceptable level (if exposure limits have not been established), a respirator approved by recognized national standards (or equivalent) must be worn. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

General hygienic measures:

When handling chemical products, do not eat, drink or smoke. Wash hands after handling, before breaks, and at the end of the workday. Avoid contact with skin, eyes and clothing. Wash contaminated clothing before reuse. Perform routine housekeeping.

Environmental exposure controls:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Product (substance / mixture) related measures to prevent exposure:	Not determined or not applicable.
Instruction measures to prevent exposure:	Not determined or not applicable.
Organisational measures to prevent exposure:	Not determined or not applicable.
Technical measures to prevent exposure:	Not determined or not applicable.

Risk management measures to control exposure:

Not determined or not applicable.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Provided in a two part liquid.
Color	R2 reagent is slight yellow in color.
Odor/Odor threshold	Not Available
pH	Combined Reagent = 10.45
Melting point/freezing point	Not Available
Initial boiling point/range	Not Available
Flash point (closed cup)	Not Available
Flammability	Not Available
Upper flammability/explosive limit	Not Available
Lower flammability/explosive limit	Not Available
Vapor pressure	Not Available
Relative vapor density	Not Available
Density	Not Available

Relative density	Not Available
Solubilities	Not Available
Partition coefficient (n-octanol/water)	Not Available
Auto/Self-ignition temperature	Not Available
Decomposition temperature	Not Available
Kinematic viscosity	Not Available
Particle characteristics	Not Available

9.2 Other information

9.2.1 Information with regard to physical hazard classes

Explosives	No data available/Not applicable
Flammable gases	No data available/Not applicable
Aerosols	No data available/Not applicable
Oxidizing gases	No data available/Not applicable
Gases under pressure	No data available/Not applicable
Flammable liquids	No data available/Not applicable
Flammable solids	No data available/Not applicable
Self-reactive substances and mixtures	No data available/Not applicable
Pyrophoric liquids	No data available/Not applicable
Pyrophoric solids	No data available/Not applicable
Self-heating substances and mixtures	No data available/Not applicable
Substances and mixtures, which emit flammable gases in contact with water	No data available/Not applicable
Oxidizing liquids	No data available/Not applicable
Oxidizing solids	No data available/Not applicable
Organic peroxides	No data available/Not applicable
Corrosive to metals	No data available/Not applicable
Desensitized explosives	No data available/Not applicable

9.2.2 Other safety characteristics

None.

SECTION 10: Stability and reactivity

10.1 Reactivity:

Not reactive under recommended handling and storage conditions.

10.2 Chemical stability:

Stable under recommended handling and storage conditions.

10.3 Possibility of hazardous reactions:

Hazardous reactions are not anticipated under recommended conditions of handling and storage.

10.4 Conditions to avoid:

Extreme heat, open flames, hot surfaces, sparks, ignition sources and incompatible materials.

10.5 Incompatible materials:

Caution, R2 contains Sodium Azides, in contact with heavy metals, may form explosive metal azides.

10.6 Hazardous decomposition products:

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

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

Product data: No data available.

Substance data:

Name	Route	Result
Methanol	Oral ATE	LD50 Rat: 100 mg/kg
	Dermal ATE	LD50 Rabbit: 300 mg/kg
	Inhalation ATE	LC50 Rat: 3 mg/L (4 hr [vapor])
Chloramphenicol	oral	LD50 Rat: 2500 mg/kg
Phenol	oral	LD50 Mouse: 270 mg/kg
	dermal	LD50 Rabbit: 630 mg/kg
	inhalation	LC50 Rat: 0.5 mg/L (4 hr [dust/mist])

Skin corrosion/irritation

Assessment:

Causes skin irritation.

Product data:

No data available.

Substance data:

Name	Result
Phenol	Causes severe skin burns.

Serious eye damage/irritation

Assessment:

Causes serious eye irritation.

Product data:

No data available.

Substance data:

Name	Result
Chloramphenicol	Causes serious eye damage.
Phenol	Causes serious eye damage.

Respiratory or skin sensitization

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

Product data:

No data available.

Substance data: No data available.

Carcinogenicity

Assessment:

Suspected of causing cancer.

Product data: No data available.

Substance data:

Name	Species	Result
Chloramphenicol		Suspected of causing cancer. Numerous case reports detail the occurence of leukemia following chloramphenicol-induced aplastic anemia.

International Agency for Research on Cancer (IARC):

Name	Classification
Methanol	Not Applicable
Chloramphenicol	Group 2A
Phenol	Group 3

Germ cell mutagenicity

Assessment:

Suspected of causing genetic defects.

Product data: No data available.

Substance data:

Name	Result
Phenol	Suspected of causing genetic defects.

Reproductive Toxicity

Assessment:

Suspected of damaging fertility or the unborn child.

Product data:

No data available.

Substance data:

Name	Result
Chloramphenicol	Suspected of damaging fertility or the unborn child.

Specific target organ toxicity (single exposure)

Assessment:

May cause damage to organs.

Product data:

No data available.

Substance data:

Name	Result
Methanol	Causes damage to Optic nerve (nervus opticus), central nervous system.

Specific target organ toxicity (repeated exposure)

Assessment:

May cause damage to organs through prolonged or repeated exposure.

Product data:

No data available.

Substance data:

Name	Result
Phenol	May cause damage to organs (kidney, liver, skin, nervous system) through prolonged or repeated exposure.

Aspiration toxicity

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

Product data:
No data available.

Substance data: No data available.

Information on likely routes of exposure:
No data available.

Symptoms related to the physical, chemical and toxicological characteristics:
No data available.

11.2 Information on other hazards

Endocrine disrupting properties:

Substance data: No data available.

Other information:
No data available.

SECTION 12: Ecological information

12.1 Toxicity

Acute (short-term) toxicity

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

Product data: No data available.

Substance data:

Name	Result
Methanol	Fish LC50 Lepomis macrochirus: 15,400 mg/L (96 hr)
	Aquatic Invertebrates EC50 Daphnia magna: 18,260 mg/L (96 hr)
	Aquatic Plants EC50 Selenastrum capricornutum: 22,000 mg/L (96 hr [growth rate])
Chloramphenicol	Aquatic Invertebrates EC50 Penaeus stylirostris: >100 mg/L (48 hr [Intoxication])
Phenol	Fish LC50 Oreochromis mossambicus: 28.49 mg/L (96 hr)
	Aquatic Invertebrates LC50 Daphnia magna: 12.9 mg/L (48 hr [mobility])
	Aquatic Plants EC50 Algae: 217.6 mg/L (72 hr [growth rate])

Chronic (long-term) toxicity

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

Product data: No data available.

Substance data:

Name	Result
Methanol	Aquatic Invertebrates NOEC Daphnia magna: 122 mg/L (21 d [reproduction])
Phenol	Fish LC50 Oncorhynchus mykiss: 0.15 mg/L (27 d)
	Aquatic Invertebrates EC50 Daphnia magna: 0.48 mg/L (21 d [reproduction])

12.2 Persistence and degradability

Product data: No data available.

Substance data:

Name	Result
Methanol	The substance is readily biodegradable. 97% degradation after 20 days, measured by Oxygen consumption.
Phenol	The substance is readily biodegradable. 86% degradation, measured by O2 consumption, after 28 days.

12.3 Bioaccumulative potential

Product data: No data available.

Substance data:

Name	Result
Methanol	This substance does not significantly bioaccumulate in fish. Experimental BCFs of < 10 in fish species.
Phenol	Bioaccumulation is not expected. BCF (aquatic species): 17.5 dimensionless

12.4 Mobility in soil

Product data: No data available.

Substance data:

Name	Result
Methanol	The substance is highly mobile with a very low potential for adsorption to soil and sediment. Koc: 0.13 - 1 dimensionless
Phenol	The substance is mobile in soil with a low potential for adsorption to soil and sediment. Koc at 20 °C: 82.8

12.5 Results of PBT and vPvB assessment

Product data:

PBT assessment: This product does not contain any substances that are assessed to be a PBT.
vPvB assessment: This product does not contain any substances that are assessed to be a vPvB.

Substance data:

PBT assessment:

Methanol	The substance is not PBT.
Phenol	The substance is not PBT.

vPvB assessment:

Methanol	The substance is not vPvB.
Phenol	The substance is not vPvB.

12.6 Endocrine disrupting properties

Substance data: No data available.

12.7 Other adverse effects: No data available.

12.8 Hazard to the ozone layer

Assessment: Based on available data, the classification criteria are not met.
Product data: No data available.
Substance data: No data available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

13.1.1 Product / Packaging disposal:
Dispose of contents to an approved waste disposal plant.

Waste codes / waste designations according to LoW: Not determined or not available.

13.1.2 Waste treatment-relevant information: Not determined or not available.

13.1.3 Sewage disposal-relevant information: Not determined or not available.

13.1.4 Other disposal recommendations: It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities

SECTION 14: Transport information

International Carriage of Dangerous Goods by Road/Rail (ADR/RID)

UN number or ID number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Carriage of Dangerous Goods by Inland Waterways (ADN)

UN number or ID number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Maritime Dangerous Goods (IMDG)

UN number or ID number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number or ID number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

Maritime Transport in Bulk according to IMO Instruments

Bulk Name	None
Ship type	None
Pollution category	None
IMO hazard class	None
Environmental hazards	None
Material hazardous only in bulk	None
Cargo Group	None

SECTION 15: Regulatory information

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

European regulations

Inventory listing (EINECS): All ingredients are listed or exempt.

REACH SVHC candidate list: None of the ingredients are listed.

REACH SVHC Authorizations: None of the ingredients are listed.

REACH Restriction:

67-56-1	Methanol	Listed
56-75-7	Chloramphenicol	Not Listed
108-95-2	Phenol	Not Listed

Water hazard class (WGK) (Product): Not determined.

Water hazard class (WGK) (Substance):

Ingredient Name	CAS	Class
Methanol	67-56-1	Water hazard class 2: obviously hazardous to water
Phenol	108-95-2	Water hazard class 2: obviously hazardous to water

Other regulations

Germany TA Luft:

Ingredient Name	CAS	Class	Base Emission Rate	Max Concentration
Methanol	67-56-1	Class I	0.1 kg/h	20 mg/m³
Phenol	108-95-2	Class I	0.1 kg/h	20 mg/m³

Additional information: Not determined.

15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance/mixture by the supplier.

SECTION 16: Other information

Abbreviations and Acronyms: None

Classification procedure:

Classification according to Regulation (EC) No. 1272/2008 (CLP)	Method Used
Skin irritation, category 2	Expert judgement
Eye Irritation, category 2	Expert judgement
Germ cell mutagenicity, category 2	Expert judgement
Carcinogenicity, category 2	Expert judgement
Reproductive toxicity, category 2	Expert judgement
Specific target organ toxicity - single exposure, category 2	Expert judgement
Specific target organ toxicity - repeated exposure, category 2	Expert judgement

Summary of classification(s) in section 3:

Acute Tox. 3 (Oral)	Acute toxicity (oral), category 3
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), category 3
Acute Tox. 3 (Inh)	Acute toxicity (inhalation), category 3
Skin Corr. 1B	Skin corrosion, category 1B
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
Muta. 2	Germ cell mutagenicity, category 2
Eye Dam. 1	Serious eye damage, category 1

Flam. Liq. 2	Flammable liquids, category 2
STOT SE 1	Specific target organ toxicity - single exposure, category 1
Carc. 2	Carcinogenicity, category 2
Repr. 2	Reproductive toxicity, category 2

Summary of hazard statements in section 3:

H301	Toxic if swallowed
H311	Toxic in contact with skin
H331	Toxic if inhaled
H314	Causes severe skin burns and eye damage
H373	May cause damage to organs (state all organs affected, if known) through prolonged or repeated exposure (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
H341	Suspected of causing genetic defects (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
H318	Causes serious eye damage
H225	Highly flammable liquid and vapour
H370	Causes damage to organs (or state all organs affected, if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
H351	Suspected of causing cancer (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)
H361	Suspected of damaging fertility or the unborn child (state specific effect if known) (state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard)

Disclaimer:

This product has been classified in accordance with EC No. 1272/2008 (CLP), as amended by Commission Regulation (EU) 2019/521 and Commission Delegated Regulation (EU) 2020/217, and EC No. 1907/2006 (REACH), as amended by Commission Regulation (EU) 2020/878. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage, transportation, and disposal and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

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End of Safety Data Sheet