

Safety Data Sheet acc. to OSHA HCS (HazCom 2012)

Printing date 07/26/2017

Reviewed on 07/26/2017

1 Identification

- **Product identifier**
- **Trade name:** **Phenole No.2**
- **Catalogue number:** 00515961, (4)515960(BT), (4)515961(BT), 00515969(BT)
- **Application of the substance / the mixture:** Reagent for water analysis
- **Manufacturer/Supplier:**
Tintometer Inc.
6456 Parkland Drive
Sarasota, FL 34243
USA
phone: (941) 756-6410
fax: (941) 727-9654
www.lovibond.us
Made in Germany
- **Emergency telephone number:** + 1 866 928 0789 (English, French, Spanish)

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**
- **GHS label elements** The product is classified and labeled according to the Hazard Communication Standard (HCS).
- **Hazard pictograms**



GHS08

- **Signal word** Danger
- **Hazard-determining components of labeling:**
ammonium persulphate
- **Hazard statements**
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H317 May cause an allergic skin reaction.
- **Precautionary statements**
P261 Avoid breathing dust.
P280 Wear protective gloves/protective clothing/eye protection.
P302+P352 If on skin: Wash with plenty of water.
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.

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P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

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· **Other hazards** No further relevant information available.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of organic and inorganic compounds
- **Composition and Information on Ingredients:**
Percent ranges are used due to the confidential product information.

CAS: 7727-54-0 EINECS: 231-786-5 Index number: 016-060-00-6 RTECS: SE 0350000	ammonium persulphate ⚠ Ox. Sol. 3, H272; ⚠ Resp. Sens. 1, H334; ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	10-20%
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- **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

- **Description of first aid measures**
- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air or oxygen; call for doctor.
- **After skin contact:**
Immediately rinse with plenty of water.
If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes (at least 15 min) under running water. Then consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink 1-2 glasses of water.
Seek medical treatment in case of complaints.
- **Most important symptoms and effects, both acute and delayed**
irritations
after inhalation:
coughing
mucous membrane irritation
breathing difficulty
after swallowing:
headache
gastric or intestinal disorders
sickness
vomiting
resorption
cardiovascular disorders
disorder of electrolyte balance
- **Danger:**
risk of skin sensitization
risk of airways sensitization
- **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**
Substance/product is self extinguishing, but can burn when combined with flammable material.
Formation of toxic gases is possible during heating or in case of fire.
nitrous gases
Sulfur oxides (SOx)
Nitrogen oxides (NOx)
Oxygen (O₂)
Sodium oxide
- **Advice for firefighters**
- **Protective equipment:**
Wear self-contained respiratory protective device.

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Wear fully protective suit.

Additional information

Collect contaminated fire fighting water separately. It must not enter the sewage system.

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

Ambient fire may liberate hazardous vapours.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel:

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Advice for emergency responders: Protective equipment: see section 8

Environmental precautions: Do not allow product to reach sewage system or any water course.

Methods and material for containment and cleaning up:

Ensure adequate ventilation.

Pick up mechanically.

Dispose contaminated material as waste according to item 13.

Reference to other sections

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

7 Handling and storage

Handling:
Precautions for safe handling
Advice on safe handling:

Ensure good ventilation/exhaustion at the workplace.

Keep ignition sources away - Do not smoke.

Hygiene measures:

Do not inhale dust / smoke / mist.

Avoid contact with the skin.

Avoid contact with the eyes.

Take off immediately all contaminated clothing.

Wash hands before breaks and at the end of work.

Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles: Store in a cool location.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

Protect from exposure to the light.

Protect from humidity and water.

This product is hygroscopic.

Recommended storage temperature: 20°C +/- 5°C (approx. 68°F)

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Control parameters
Components with limit values that require monitoring at the workplace:
CAS: 7727-54-0 ammonium persulphate

TLV (USA)	Long-term value: 0.1 mg/m ³ as Persulfates
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EL (Canada)	Long-term value: 0.1 mg/m ³ as persulfate
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Additional information: The lists that were valid during the creation were used as basis.

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Engineering measures:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See item 7.

Personal protective equipment:

Breathing equipment: Use respiratory protective device against the effects of fumes/dust/aerosol.

Recommended filter device for short term use: Filter P2

Protection of hands:

Protective gloves

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.

Material of gloves

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.11 mm

Penetration time of glove material

Value for the permeation: Level ≤ 1 (10 min)

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

Eye protection: Safety glasses

Body protection: Protective work clothing

Limitation and supervision of exposure into the environment:

Do not allow product to reach sewage system or any water course.

9 Physical and chemical properties

Information on basic physical and chemical properties
Appearance:

Form / Physical state:	Tablets
Color:	Whitish

Odor: Odorless

Odor threshold: Not applicable.

pH-value (13.3 g/l) at 20°C (68 °F): 4.5

Melting point/freezing point: Not determined.

Initial boiling point and boiling range: Not determined.

Flash point: Not applicable.

Flammability (solid, gas): The product is not combustible.

Decomposition temperature: $> 120^{\circ}\text{C}$ ($> 248^{\circ}\text{F}$) (CAS 7727-54-0)

Auto-ignition temperature: Product is not self-igniting.

Danger of explosion: Product does not present an explosion hazard.

Flammability or explosive limits:

Lower:	Not applicable.
Upper:	Not applicable.

Oxidizing properties: CAS 7727-54-0: is classified as oxidizing.
Oxidizing potential

Vapor Pressure: Not applicable.

Density at 20°C (68 °F): 1.82 g/cm^3 (15.188 lbs/gal)

Relative density: Not determined.

Vapor density: Not applicable.

Evaporation rate: Not applicable.

Solubility(ies)

Water: Soluble.

Partition coefficient (n-octanol/water): Not applicable.

Viscosity: Not applicable.

Solvent content:

Organic solvents: 0.0 %

Solids content: 100 %

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Other information	No further relevant information available.
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10 Stability and reactivity

- **Reactivity** Substance/product is self extinguishing, but can burn when combined with flammable material.
- **Chemical stability** Stable at ambient temperature (room temperature).
- **Possibility of hazardous reactions**
 - Reacts with reducing agents.
 - Reacts with peroxides.
 - Reacts with strong acids and alkali.
 - Reacts with oxidizing agents.
- **Conditions to avoid**
 - Exposure to moisture.
 - Strong heating (decomposition)
- **Incompatible materials:**
 - aluminum, copper, zinc, metal ions
 - Ammonia (NH₃)
 - Iron
- **Hazardous decomposition products:**
 - Ammonia (NH₃)
 - oxygen
 - In case of fire: see section 5.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Based on available data, the classification criteria are not met.

Acute toxicity estimate (ATE _(MIX)) - Calculation method:		
Oral	GHS ATE _(MIX)	4,824 mg/kg (.)

LD/LC50 values that are relevant for classification:		
CAS: 7727-54-0 ammonium persulphate		
Oral	LD50	742 mg/kg (rat) (OECD 401)
Dermal	LD ₀	2,000 mg/kg (rat) (MERCK, ECHA)
Inhalative	LC ₀	2.95 mg/l (rat) (4h, OECD 403) (MERCK, ECHA)

- **Primary irritant effect:**
- **on the skin:**
 - Irritant to skin and mucous membranes.
 - Causes skin irritation.
- **on the eye:** Causes serious eye irritation.

Information on components:		
CAS: 7727-54-0 ammonium persulphate		
Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: no irritation)

- **Sensitization:**
 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 - May cause an allergic skin reaction.

Information on components:		
CAS: 7727-54-0 ammonium persulphate		
Sensitization	OECD 406	(guinea pig: positive)

Carcinogenic categories		
IARC (International Agency for Research on Cancer)		
None of the ingredients is listed.		

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· NTP (National Toxicology Program)	
None of the ingredients is listed.	
· OSHA-Ca (Occupational Safety & Health Administration)	
None of the ingredients is listed.	
· Other information: see section 8 / 15	
· Synergistic Products: None	
· CMR effects (carcinogenity, mutagenicity and toxicity for reproduction): The following statements refer to the mixture:	
· Germ cell mutagenicity Based on available data, the classification criteria are not met.	
· Carcinogenicity Based on available data, the classification criteria are not met.	
· Reproductive toxicity Based on available data, the classification criteria are not met.	
· STOT (specific target organ toxicity) -single exposure Based on available data, the classification criteria are not met.	
· STOT (specific target organ toxicity) -repeated exposure Based on available data, the classification criteria are not met.	
· Aspiration hazard Based on available data, the classification criteria are not met.	
· Information on components:	
OECD 414: Teratogenicity testing	
OECD 473: Mutagenicity testing	
OECD 471, 474, 476, 487: Germ cell mutagenicity testing	
CAS: 7727-54-0 ammonium persulphate	
OECD 471	(guinea pig: negative) (Bacterial Reverse Mutation Test - Ames test) (Salmonella typhimurium)

12 Ecological information

· Toxicity	
· Aquatic toxicity:	
CAS: 7727-54-0 ammonium persulphate	
EC50	120 mg/l/48h (Daphnia magna) (IUCLID)
LC50	76 mg/l/96h (rainbow trout) (IUCLID)
· Bacterial toxicity:	
sulfates toxic > 2.5 g/l	
CAS: 7727-54-0 ammonium persulphate	
EC10	36 mg/l (Pseudomonas putida) (18h) (IUCLID)
· Other information:	
Toxic for fish:	
sulfates > 7 g/l	
NH ₄ ⁺ > 0.3 mg/l	
· Persistence and degradability No further relevant information available.	
· Bioaccumulative potential No further relevant information available.	
· Mobility in soil No further relevant information available.	
· Other adverse effects	
Reacts with water to form toxic decomposition products.	
Avoid transfer into the environment.	

13 Disposal considerations

· Waste treatment methods	
· Recommendation:	
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.	
Hand over to hazardous waste disposers.	
· Uncleaned packagings:	
· Recommendation: Disposal must be made according to official regulations.	

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· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· UN-Number	
· DOT, IMDG, IATA	none
· UN proper shipping name	
· DOT, IMDG, IATA	none
· Transport hazard class(es)	
· DOT, IMDG, IATA	
· Class	none
· Packing group	
· DOT, IMDG, IATA	none
· Environmental hazards:	Not applicable.
· Special precautions for user	Not applicable.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	Not dangerous according to the above specifications.

15 Regulatory information

· Safety, health and environmental regulations/legislation specific for the substance or mixture
· Sara
· Section 355 (Extremely hazardous substances):
None of the ingredients is listed.
· Section 313 (Specific toxic chemical listings):
None of the ingredients is listed.
· TSCA (Toxic Substances Control Act):
All ingredients are listed.
· Proposition 65
· Chemicals known to cause cancer:
None of the ingredients is listed.
· Chemicals known to cause reproductive toxicity for females:
None of the ingredients is listed.
· Chemicals known to cause reproductive toxicity for males:
None of the ingredients is listed.
· Chemicals known to cause developmental toxicity:
None of the ingredients is listed.
· New Jersey Right-to-Know List:
CAS: 7727-54-0 ammonium persulphate
· New Jersey Special Hazardous Substance List:
None of the ingredients is listed.
· Pennsylvania Right-to-Know List:
CAS: 7757-82-6 sodium sulphate
· Pennsylvania Special Hazardous Substance List:
CAS: 7757-82-6 sodium sulphate
· EPA (Environmental Protection Agency)
None of the ingredients is listed.
· NIOSH-Ca (National Institute for Occupational Safety and Health)
None of the ingredients is listed.

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Information about limitation of use:

Employment restrictions concerning pregnant and lactating women must be observed.
Employment restrictions concerning young persons must be observed.

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

16 Other information

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

Relevant phrases

H272 May intensify fire; oxidizer.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.

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Abbreviations and acronyms:

OECD: Organisation for Economic Co-operation and Development
STOT: specific target organ toxicity
SE: single exposure
RE: repeated exposure
EC50: half maximal effective concentration
IC50: half maximal inhibitory concentration
NOEL or NOEC: No Observed Effect Level or Concentration
ACGIH® - American Conference of Governmental Industrial Hygienists
•A1 - Confirmed human carcinogen
•A2 - Suspected human carcinogen
•A3 - Confirmed animal carcinogen with unknown relevance to humans
•A4 - Not classifiable as a human carcinogen
•A5 - Not suspected as a human carcinogen
IARC - International Agency for Research on Cancer
•Group 1 - Carcinogenic to humans
•Group 2A - Probably carcinogenic to humans
•Group 2B - Possibly carcinogenic to humans
•Group 3 - Not classifiable as to carcinogenicity to humans
•Group 4 - Probably not carcinogenic to humans
NTP - National Toxicology Program, U.S. Department of Health and Human Services
•Group K - Known to be Human Carcinogens
•Group R - Reasonably Anticipated to be Human Carcinogens
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NIOSH: National Institute for Occupational Safety
OSHA: Occupational Safety & Health
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Ox. Sol. 3: Oxidizing solids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
Resp. Sens. 1: Respiratory sensitisation – Category 1
Skin Sens. 1: Skin sensitisation – Category 1
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Sources

Data arise from safety data sheets, reference works and literature.
ECHA: European Chemicals Agency <http://echa.europa.eu>
IUCLID (International Uniform Chemical Information Database)