

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

Printing date 09/17/2019

Reviewed on 09/17/2019

## 1 Identification

- **Product identifier**
- **Trade name: Phenole No.1**
- **Catalogue number:** 00515959, 00515959BT, 4515950BT, 4515951BT, 515951BT, 00515951, 515950BT
- **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

Repr. 1B H360 May damage fertility or the unborn child.



GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

- **Label elements**

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

- **Hazard pictograms**



GHS05



GHS07



GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

lithium hydroxide

disodium tetraborate, anhydrous

4-amino-2,3-dimethyl-1-phenyl-3-pyrazolin-5-one

- **Hazard statements**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H360 May damage fertility or the unborn child.

- **Precautionary statements**

P201

Obtain special instructions before use.

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**Trade name: Phenole No.1**

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P280 Wear protective gloves/protective clothing/eye protection.  
 P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
 Continue rinsing.  
 P308+P310 IF exposed or concerned: Immediately call a poison center/doctor.  
 P405 Store locked up.

• **Other hazards** Acid burns have to treated immediately, as it may otherwise cause badly curing wounds.

### 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: 1330-43-4 EINECS: 215-540-4 Index number: 005-011-00-4 RTECS: ED4588000	disodium tetraborate, anhydrous ⚠ Repr. 1B, H360; ⚠ Eye Irrit. 2A, H319	25-35%
CAS: 1310-65-2 EINECS: 215-183-4	lithium hydroxide ⚠ Acute Tox. 3, H301; ⚠ Skin Corr. 1A, H314; Eye Dam. 1, H318	5-<10%
CAS: 83-07-8 EINECS: 201-452-3 RTECS: CD 2480000	4-amino-2,3-dimethyl-1-phenyl-3-pyrazolin-5-one ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	2.5-5%

- **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.  
Seek medical treatment.
- **After skin contact:**  
Immediately wash with polyethylene glycol 400.  
Immediately rinse with plenty of water.  
Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.
- **After eye contact:**  
Rinse opened eye for several minutes (at least 15 min) under running water.  
Call a doctor immediately.
- **After swallowing:**  
Rinse out mouth and then drink 1-2 glasses of water.  
Do not induce vomiting; immediately call for medical help.
- **Most important symptoms and effects, both acute and delayed**  
burns  
after inhalation:  
coughing  
breathing difficulty  
damage to the affected mucous membranes  
after swallowing:  
vomiting  
CNS disorders
- **Danger:**  
Danger of gastric perforation.  
Danger of disturbed cardiac rhythm.  
Danger of impaired breathing.
- **Indication of any immediate medical attention and special treatment needed:**  
If swallowed or in case of vomiting, danger of entering the lungs.  
Later observation for pneumonia and pulmonary edema.

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### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **For safety reasons unsuitable extinguishing agents:**  
Water  
--> Aqueous solution reacts strongly alkaline.  
If possible use dry extinguishing agents.
- **Special hazards arising from the substance or mixture**  
The product is not combustible.  
Formation of toxic gases is possible during heating or in case of fire.  
In case of fire, the following can be released:  
Nitrogen oxides (NOx)  
Hydrogen chloride (HCl)  
Potassium oxide  
LiOx
- **Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
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.  
Avoid substance contact.  
Ensure adequate ventilation  
Use respiratory protective device against the effects of fumes/dust/aerosol.
- **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

- **Precautions for safe handling**
- **Advice on safe handling:** Prevent formation of dust.
- **Hygiene measures:**  
Do not inhale dust / smoke / mist.  
Do not get in eyes, on skin, or on clothing.  
Take off immediately all contaminated clothing.  
Store protective clothing separately.  
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:** Store away from oxidizing agents.
- **Further information about storage conditions:**  
Store under lock and key and with access restricted to technical experts or their assistants only.  
Store in cool, dry conditions in well sealed receptacles.  
Protect from heat and direct sunlight.

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- 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:**  
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.

<b>CAS: 1330-43-4 disodium tetraborate, anhydrous</b>	
REL (USA)	Long-term value: 1 mg/m <sup>3</sup> anhydrous
TLV (USA)	Short-term value: 6* mg/m <sup>3</sup> Long-term value: 2* mg/m <sup>3</sup> *as inhalable fraction
EL (Canada)	Short-term value: 6 mg/m <sup>3</sup> Long-term value: 2 mg/m <sup>3</sup>
EV (Canada)	Short-term value: 6 mg/m <sup>3</sup> Long-term value: 2 mg/m <sup>3</sup> inorganic, inhalable
<b>CAS: 1310-65-2 lithium hydroxide</b>	
WEEL (USA)	Ceiling limit value: 1 mg/m <sup>3</sup>
EL (Canada)	Ceiling limit value: 1 mg/m <sup>3</sup>
EV (Canada)	Short-term value: 1 mg/m <sup>3</sup> anhydrous

- **Additional information:** The lists that were valid during the creation were used as basis.
- **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:**  
Alkaline resistant gloves  
Check protective gloves prior to each use for their proper condition.  
Protective gloves  
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:** Tightly sealed goggles
- **Body protection:** Alkaline resistant protective 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

<b>Information on basic physical and chemical properties</b>	
<b>Appearance:</b>	
Form / Physical state:	Tablets
Color:	Whitish
<b>Odor:</b>	Odorless

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· <b>Odor threshold:</b>	Not applicable.
· <b>pH-value (11.3 g/l) at 20°C (6820°F):</b>	~ 12
· <b>Melting point/freezing point:</b>	Not determined.
· <b>Initial boiling point and boiling range:</b>	Not determined.
· <b>Flash point:</b>	Not applicable.
· <b>Flammability (solid, gas):</b>	The product is not combustible.
· <b>Ignition temperature:</b>	Not applicable.
· <b>Decomposition temperature:</b>	Not determined.
· <b>Auto-ignition temperature:</b>	Product is not self-igniting.
· <b>Danger of explosion:</b>	Product does not present an explosion hazard.
· <b>Flammability or explosive limits:</b>	
<b>Lower:</b>	Not applicable.
<b>Upper:</b>	Not applicable.
· <b>Oxidizing properties:</b>	none
· <b>Vapor Pressure:</b>	Not applicable.
· <b>Density at 20°C (6820°F):</b>	2.1 g/cm <sup>3</sup> (17.52 2,1 lbs/gal)
· <b>Relative density:</b>	Not determined.
· <b>Vapor density:</b>	Not applicable.
· <b>Evaporation rate:</b>	Not applicable.
· <b>Solubility(ies)</b>	
<b>Water:</b>	Soluble.
· <b>Partition coefficient (n-octanol/water):</b>	Not applicable.
· <b>Viscosity:</b>	Not applicable.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	0.0 %
<b>Solids content:</b>	100.0 %
· <b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

- **Reactivity** see section "Possibility of hazardous reactions"
- **Chemical stability** Stable at ambient temperature (room temperature).
- **Possibility of hazardous reactions**
  - Aqueous solution reacts alkaline.
  - Aqueous solution reacts with metals.
  - Reacts with light alloys in the presence of moisture to form hydrogen.
  - Reacts with strong acids and oxidizing agents.
  - > Forms heat.
- **Conditions to avoid**
  - Exposure to moisture.
  - Strong heating (decomposition)
- **Incompatible materials:**
  - organic substances
  - aluminum
  - zinc
- **Hazardous decomposition products:** see section 5

## \*11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:** Classification according to calculation procedure.

### · **Acute toxicity estimate (ATE<sub>(mix)</sub>) - Calculation method:**

Oral	GHS ATE <sub>(mix)</sub>	1859 mg/kg (.)
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· <b>LD/LC50 values that are relevant for classification:</b>		
<b>CAS: 1310-65-2 lithium hydroxide</b>		
Oral	LD50	210 mg/kg (rat) (RTECS)
	LC50	>3.4 mg/l/4h (rat) (Registrant, ECHA: no mortality at this concentration)
<b>CAS: 83-07-8 4-amino-2,3-dimethyl-1-phenyl-3-pyrazolin-5-one</b>		
Oral	LD50	1700 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:**  
Caustic effect on skin and mucous membranes.  
Causes severe skin burns.
- **on the eye:**  
Causes serious eye damage.  
Risk of blindness!

· <b>Information on components:</b>		
<b>CAS: 1330-43-4 disodium tetraborate, anhydrous</b>		
Irritation of skin	OECD 404	(rabbit: no irritation) (Registrant, ECHA, Sodium tetraborate pentahydrate)
Irritation of eyes	OECD 405	(rabbit: irritation) (Registrant, ECHA, Sodium tetraborate pentahydrate)

- **Sensitization:** No sensitizing effects known.
- **Carcinogenic categories**

· <b>IARC (International Agency for Research on Cancer)</b>
None of the ingredients is listed.

· <b>NTP (National Toxicology Program)</b>
None of the ingredients is listed.

· <b>OSHA-Ca (Occupational Safety &amp; Health Administration)</b>
None of the ingredients is listed.

- **Other information:** see section 8 / 15

- **Synergistic Products:** None

- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction):**

The following statements refer to the mixture:

Repr. 1B

- **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** May damage fertility or the unborn child.
- **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

- **Additional toxicological information:**

The following applies to lithium compounds in general:

after absorption: CNS disorders, ataxia (impaired locomotor coordination) due to disturbed electrolyte balance

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach

CAS 1330-43-4: Absorption through gastro-intestinal tract, mucous membranes

Boric acid / Borate may cause developmental changes based on published data, at doses many times in excess of those that could occur through inhalation of dust in occupational settings.

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

- **Experience with humans:**

CAS 1310-65-2: Can cause liver damage.

CAS 1310-65-2: Can cause kidney damages.

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CAS 1310-65-2: May cause lung damages.

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### \*12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

**CAS: 1330-43-4 disodium tetraborate, anhydrous**

LC50 1085–1402 mg/l/48h (Daphnia magna)  
(IUCLID)

IC50 158 mg/l/96 h (Desmodesmus subspicatus)  
(IUCLID)

LC50 340 mg/l/96h (fish)  
(IUCLID)

- **Bacterial toxicity:**

**CAS: 1330-43-4 disodium tetraborate, anhydrous**

EC5 1.3 mg/l (Entosiphon sulcatum) (72h)

- **Other information:**

The following applies for lithium compounds in general:

fish toxic from 100 mg/l, Daphnia toxic from 16 mg/l, plants toxic from 0,2 mg/l

- **Persistence and degradability** No further relevant information available.

- **Bioaccumulative potential**

Pow = n-octanol/wasser partition coefficient

log Pow < 1 = Does not accumulate in organisms.

**CAS: 83-07-8 4-amino-2,3-dimethyl-1-phenyl-3-pyrazolin-5-one**

log Pow -0.07 (.)

- **Mobility in soil** No further relevant information available.

- **Other adverse effects**

Forms corrosive mixtures with water even if diluted.

Harmful effect due to pH shift.

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.

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

### 14 Transport information

- **UN-Number**

- **DOT, IMDG, IATA**

UN2680

- **UN proper shipping name**

- **DOT**

Lithium hydroxide

- **IMDG**

LITHIUM HYDROXIDE

- **IATA**

LITHIUM HYDROXIDE, SOLID

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<ul style="list-style-type: none"> <li>· Transport hazard class(es)</li> <li>· DOT</li> </ul>	
	
<ul style="list-style-type: none"> <li>· Class</li> <li>· Label</li> </ul>	8 Corrosive substances 8
<ul style="list-style-type: none"> <li>· IMDG, IATA</li> </ul>	
	
<ul style="list-style-type: none"> <li>· Class</li> <li>· Label</li> </ul>	8 Corrosive substances 8
<ul style="list-style-type: none"> <li>· Packing group</li> <li>· DOT, IMDG, IATA</li> </ul>	
	II
<ul style="list-style-type: none"> <li>· Environmental hazards:</li> <li>· Marine pollutant:</li> </ul>	
	No
<ul style="list-style-type: none"> <li>· Special precautions for user</li> <li>· Danger code (Kemler):</li> <li>· EMS Number:</li> <li>· Segregation groups</li> <li>· Stowage Category</li> <li>· Segregation Code</li> </ul>	
	Warning: Corrosive substances 80 F-A,S-B Alkalis A SG35 Stow "separated from" SGG1-acids
<ul style="list-style-type: none"> <li>· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</li> </ul>	
	Not applicable.
<ul style="list-style-type: none"> <li>· Transport/Additional information:</li> </ul>	
<ul style="list-style-type: none"> <li>· IMDG</li> <li>· Limited quantities (LQ)</li> <li>· Excepted quantities (EQ)</li> </ul>	
	1 kg Code: E2 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 500 g

## \* 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 components have the value ACTIVE.

### · Hazardous Air Pollutants

None of the ingredients is 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.

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<b>· Chemicals known to cause reproductive toxicity for males:</b>	
None of the ingredients is listed.	
<b>· Chemicals known to cause developmental toxicity:</b>	
None of the ingredients is listed.	
<b>· New Jersey Right-to-Know List:</b>	
None of the ingredients is listed.	
<b>· New Jersey Special Hazardous Substance List:</b>	
None of the ingredients is listed.	
<b>· Pennsylvania Right-to-Know List:</b>	
CAS: 1330-43-4	disodium tetraborate, anhydrous
<b>· Pennsylvania Special Hazardous Substance List:</b>	
None of the ingredients is listed.	
<b>· EPA (Environmental Protection Agency)</b>	
CAS: 1330-43-4	disodium tetraborate, anhydrous
	I (oral)
<b>· NIOSH-Ca (National Institute for Occupational Safety and Health)</b>	
None of the ingredients is listed.	
<b>· Information about limitation of use:</b>	
Employment restrictions concerning pregnant and lactating women must be observed.	
Employment restrictions concerning young persons must be observed.	
<b>· Chemical safety assessment:</b> 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

- H301 Toxic if swallowed.
- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H318 Causes serious eye damage.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.
- H360 May damage fertility or the unborn child.

- **Recommended restriction of use:** professional/industrial use only
- **Date of preparation / last revision** 09/17/2019 / 39

### · Abbreviations and acronyms:

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
 ICAO: International Civil Aviation Organisation  
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)  
 EC50: effective concentration, 50 percent (in vivo)  
 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

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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  
Acute Tox. 3: Acute toxicity – Category 3  
Acute Tox. 4: Acute toxicity – Category 4  
Skin Corr. 1A: Skin corrosion/irritation – Category 1A  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A  
Repr. 1B: Reproductive toxicity – Category 1B  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

**• Sources**

Data arise from safety data sheets, reference works and literature.  
RTECS (Registry of Toxic Effects of Chemical Substances )  
IUCLID (International Uniform Chemical Information Database)

**• \* Data compared to the previous version altered.**

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