

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

Printing date 10/14/2021

Reviewed on 10/14/2021

1 Identification

- **Product identifier**
- **Trade name: KS830 - KS966 - Bromophenol Blue Indicator / Solution**
- **Catalogue number:**
45162, 451620, 451621, 451622, 56Z096698, 56L0966, 56L096630, 56U096630, 56L096665, 56U096665, 56Z083098, 56L0830
- **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**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapor.

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



GHS02

- **Signal word** Warning
- **Hazard statements**
H226 Flammable liquid and vapor.
- **Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P280 Wear protective gloves / eye protection.
P233 Keep container tightly closed.
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P370+P378 In case of fire: Use CO2, powder or water spray to extinguish.
P403+P235 Store in a well-ventilated place. Keep cool.
- **Other hazards**
Vapors have narcotic effect.
At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.
Vapours of the product are heavier than air and may accumulate on the ground, in mines, drains or cellars with higher concentration.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** aqueous solution

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Composition and Information on Ingredients:

Percent ranges are used due to the confidential product information.

CAS: 67-63-0 EINECS: 200-661-7 Index number: 603-117-00-0 RTECS: NT 8050000	propan-2-ol	⚠ Flam. Liq. 2, H225; ⚠ Eye Irrit. 2A, H319; STOT SE 3, H336	2.5–5%
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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; consult doctor in case of complaints.
 - **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
 - **After eye contact:**
Rinse opened eye for several minutes (at least 15 min) under running water. If symptoms persist, consult a doctor.
 - **After swallowing:**
Rinse out mouth and then drink 1-2 glasses of water.
Seek medical treatment.
 - **Most important symptoms and effects, both acute and delayed**
after inhalation:
mucous membrane irritation
coughing
after resorption:
headache
drowsiness
dizziness
breathing difficulty
 - **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.
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5 Fire-fighting measures

- **Extinguishing media**
 - **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
 - **For safety reasons unsuitable extinguishing agents:** Water with full jet
 - **Special hazards arising from the substance or mixture**
Can form explosive gas-air mixtures.
Can burn in fire.
Formation of toxic gases is possible during heating or in case of fire.
 - **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.
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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.
Prevent seepage into sewage system, workpits and cellars.
Suppress gases/fumes/haze with water spray.

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- **Methods and material for containment and cleaning up:**
 Ensure adequate ventilation.
 Absorb with liquid-binding material (sand, diatomite, universal binders).
 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.
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7 Handling and storage

- **Precautions for safe handling**
 - **Advice on safe handling:**
 Use only in well ventilated areas.
 Protect from heat.
 Keep ignition sources away - Do not smoke.
 - **Hygiene measures:**
 Do not inhale gases / fumes / aerosols.
 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**
 - **Requirements to be met by storerooms and receptacles:**
 Store in a cool location.
 Do not use light alloy receptacles.
 - **Information about storage in one common storage facility:** Store away from oxidizing agents.
 - **Further information about storage conditions:**
 Protect from heat and direct sunlight.
 Store in the dark.
 Protect from exposure to the light.
 Protect from humidity and water.
 - **Recommended storage temperature:** 20°C +/- 5°C (approx. 68°F)
 - **Specific end use(s)** No further relevant information available.
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8 Exposure controls/personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

CAS: 67-63-0 propan-2-ol

PEL (USA)	Long-term value: 980 mg/m ³ , 400 ppm
REL (USA)	Short-term value: 1225 mg/m ³ , 500 ppm Long-term value: 980 mg/m ³ , 400 ppm
TLV (USA)	Short-term value: 400 ppm Long-term value: 200 ppm BEI, A4
EL (Canada)	Short-term value: 400 ppm Long-term value: 200 ppm
EV (Canada)	Short-term value: 400 ppm Long-term value: 200 ppm

- **Ingredients with biological limit values:**

CAS: 67-63-0 propan-2-ol

BEI (USA)	40 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Acetone (background, nonspecific)
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- **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.

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- **Personal protective equipment:**
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
 - **Breathing equipment:** Use respiratory protective device against the effects of fume/dust/aerosol.
 - **Recommended filter device for short term use:** Filter A
 - **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
use against the effects of fumes / dust
 - **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.
Risk of explosion.
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9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **Appearance:**
- **Form / Physical state:** Solution
- **Color:** Dark blue
- **Odor:** Alcohol-like
- **Odor threshold:** CAS 67-63-0: 1,0-196,1 ppm (Merck)
- **pH-value at 20°C (68°F):** ~ 8
- **Melting point/freezing point:** Not determined.
- **Initial boiling point and boiling range:** 100°C (212°F) (CAS: 7732-18-5 water)
- **Flash point:** > 23 -< 60°C (> 73.4 -< 140°F)
- **Flammability (solid, gas):** Flammable liquid and vapor.
- **Ignition temperature:** Not determined.
- **Decomposition temperature:** Not determined.
- **Auto-ignition temperature:** Product is not self-igniting.
- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
- **Flammability or explosive limits:**
- **Lower:** 2 Vol % (CAS: 67-63-0 propan-2-ol)
- **Upper:** 13.4 Vol % (CAS: 67-63-0 propan-2-ol)
- **Oxidizing properties:** none
- **Vapor Pressure:** Not determined.
- **Density at 20°C (68°F):** 0.99 g/cm³ (8.26 lbs/gal)
- **Relative density:** Not determined.
- **Vapor density:** Not determined.
- **Evaporation rate:** Not determined.
- **Solubility(ies)**
- **Water:** Fully miscible.
- **Partition coefficient (n-octanol/water):** Not applicable (mixture).
- **Viscosity:** Not determined.
- **Kinematic:** Not determined.
- **Other information**
- **Solids content:** <0.1 %
- **Solvent content:**
- **Organic solvents:** < 5 %

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· Water:	> 95 %
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10 Stability and reactivity

- **Reactivity** Fumes can combine with air to form an explosive mixture.
- **Chemical stability** Stable at ambient temperature (room temperature).
- **Possibility of hazardous reactions** No further relevant information available.
- **Conditions to avoid** Heating.
- **Incompatible materials:**
 - light metals
 - rubber
 - various plastics
- **Hazardous decomposition products:** see section 5

11 Toxicological information

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

· LD/LC50 values that are relevant for classification:

CAS: 67-63-0 propan-2-ol		
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Oral	LD50	5045 mg/kg (rat) (RTECS)
	LDLo	3570 mg/kg (human) (RTECS)
Dermal	LD50	12800 mg/kg (rabbit) (RTECS)
Inhalative	LC50/4h	37.5 mg/l (rat) (OECD 403, vapour)

- **Primary irritant effect:**

- **on the skin:** Based on available data, the classification criteria are not met.
- **on the eye:** Based on available data, the classification criteria are not met.

· Information on components:

CAS: 67-63-0 propan-2-ol		
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Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: irritation)

- **Sensitization:** Based on available data, the classification criteria are not met.

· Information on components:

CAS: 67-63-0 propan-2-ol		
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Sensitization	OECD 406	(guinea pig: negative) (IUCLID)
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- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)		
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CAS: 67-63-0	propan-2-ol	3
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· NTP (National Toxicology Program)		
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None of the ingredients is listed.

· OSHA-Ca (Occupational Safety & Health Administration)		
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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:

- **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.

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- **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:**

CAS 67-63-0: Did not show carcinogenic effects in animal experiments.

OECD 414: Teratogenicity testing

OECD 473: Mutagenicity testing

OECD 471, 474, 476, 487: Germ cell mutagenicity testing

CAS: 67-63-0 propan-2-ol

OECD 471 (negative) (Bacterial Reverse Mutation Test - Ames test)
(Salmonella typhirium, IUCLID)

OECD 476 (negative) (In Vitro Mammalian Cell Gene Mutation Test)

OECD 474 (negative) (Mammalian Erythrocyte Micronucleus Test)

- **Additional toxicological information:**

Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:**

CAS: 67-63-0 propan-2-ol

EC50 13299 mg/l/48h (Daphnia magna)
(IUCLID)

EC5 4930 mg/l (Entosiphon sulcatum) (72h)

IC50 >1000 mg/l/72h (Desmodesmus subspicatus)
(IUCLID)

LC50 1400 mg/l/96h (bluegill)
(ECOTOX)

- **Bacterial toxicity:**

CAS: 67-63-0 propan-2-ol

EC5 1050 mg/l (Pseudomonas putida) (16h)

- **Persistence and degradability**

CAS: 67-63-0 propan-2-ol

OECD 301 E 95 % / 21 d, aerob (readily biodegradable) (Modified OECD Screening Test)

- **Bioaccumulative potential**

Pow = n-octanol/wasser partition coefficient

log Pow < 1 = Does not accumulate in organisms.

CAS: 67-63-0 propan-2-ol

log Pow 0.05 (.) (OECD 107)

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

- **Other adverse effects** 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.

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14 Transport information

<ul style="list-style-type: none"> · UN-Number · DOT · IMDG, IATA 	<ul style="list-style-type: none"> NA1993 UN1993
<ul style="list-style-type: none"> · UN proper shipping name · DOT · IMDG, IATA 	<ul style="list-style-type: none"> Flammable liquids, n.o.s. (Isopropyl alcohol) FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL)
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT 	<ul style="list-style-type: none"> 3 Flammable liquids
<div style="text-align: center;">  </div> <ul style="list-style-type: none"> · Class · Label 	<ul style="list-style-type: none"> 3
<ul style="list-style-type: none"> · IMDG, IATA 	<ul style="list-style-type: none"> 3 Flammable liquids
<div style="text-align: center;">  </div> <ul style="list-style-type: none"> · Class · Label 	<ul style="list-style-type: none"> 3
<ul style="list-style-type: none"> · Packing group · DOT, IMDG, IATA 	<ul style="list-style-type: none"> III
<ul style="list-style-type: none"> · Environmental hazards: 	<ul style="list-style-type: none"> Not applicable.
<ul style="list-style-type: none"> · Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category 	<ul style="list-style-type: none"> Warning: Flammable liquids 33 F-E,<u>S</u>-E B
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	<ul style="list-style-type: none"> Not applicable.
<ul style="list-style-type: none"> · Transport/Additional information: · DOT · Quantity limitations 	<ul style="list-style-type: none"> On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<ul style="list-style-type: none"> 1L Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

15 Regulatory information

<ul style="list-style-type: none"> · Safety, health and environmental regulations/legislation specific for the substance or mixture · Sara 	<ul style="list-style-type: none"> Section 355 (Extremely hazardous substances):
	<ul style="list-style-type: none"> None of the ingredients is listed.
	<ul style="list-style-type: none"> Section 313 (Specific toxic chemical listings):
	<ul style="list-style-type: none"> CAS: 67-63-0 propan-2-ol
	<ul style="list-style-type: none"> TSCA (Toxic Substances Control Act):
	<ul style="list-style-type: none"> All components have the value ACTIVE.
	<ul style="list-style-type: none"> Hazardous Air Pollutants
	<ul style="list-style-type: none"> None of the ingredients is listed.

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· 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: 67-63-0 | propan-2-ol

· New Jersey Special Hazardous Substance List:

CAS: 67-63-0 | propan-2-ol

F3

· Pennsylvania Right-to-Know List:

CAS: 67-63-0 | propan-2-ol

· Pennsylvania Special Hazardous Substance List:

CAS: 67-63-0 | propan-2-ol

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· 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.

· **Information about limitation of use:** Not required.

· **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

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

· **Date of preparation / last revision** 10/14/2021 / 2

· 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

c.c.: closed cup

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

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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
BEI: Biological Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

· Sources

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

· * Data compared to the previous version altered.

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