

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

Printing date 10/08/2018

Reviewed on 10/08/2018

1 Identification

- **Product identifier**
- **Trade name:** **KS336 - Propan-2-ol / Iso-Propyl Alcohol**
- **Catalogue number:**
56Z033698, 56L033665, 56U033665, 56L033689, 56U033689, 56L033692, 56U033692, 56L033698, 56U033698
- **CAS Number:**
67-63-0
- **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. 2 H225 Highly flammable liquid and vapor.



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

- **Label elements**

· **GHS label elements** The substance is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS02



GHS07

- **Signal word** Danger

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

propan-2-ol

- **Hazard statements**

H225 Highly flammable liquid and vapor.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

- **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 Keep container tightly closed.
P271 Use only outdoors or in a well-ventilated area.
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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P403+P235 Store in a well-ventilated place. Keep cool.

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- **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: Substances**

- **CAS No. Description**

67-63-0 propan-2-ol

- **Identification number(s)**

- **EC number: 200-661-7**

* 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. Then 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**

irritations

Drying-out effect resulting in rough and chapped skin.

after swallowing:

vomiting

unconsciousness

after inhalation:

dizziness

coughing

mucous membrane irritation

drowsiness

breathing difficulty

- **Danger:** Condition may deteriorate with alcohol consumption.

- **Indication of any immediate medical attention and special treatment needed:**

If swallowed or in case of vomiting, danger of entering the lungs.

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 burn in fire.

Can form explosive gas-air mixtures.

Formation of toxic gases is possible during heating or in case of fire.

Carbon monoxide (CO) and carbon dioxide (CO₂)

- **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.

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 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.
 - Avoid substance contact.
 - 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.
 - **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.
-

7 Handling and storage

- **Precautions for safe handling**
 - **Advice on safe handling:**
 - Use only in well ventilated areas.
 - Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
 - Protect from heat.
 - Keep ignition sources away - Do not smoke.
 - Take precautionary measures against static discharge.
 - **Hygiene measures:**
 - Do not inhale gases / fumes / aerosols.
 - 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.
 - Do not use light alloy receptacles.
 - **Information about storage in one common storage facility:** Store away from oxidizing agents.
 - **Further information about storage conditions:**
 - Store in cool, dry conditions in well sealed receptacles.
 - 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.
-

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

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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: 984 mg/m ³ , 400 ppm Long-term value: 492 mg/m ³ , 200 ppm BEI
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.

· **Personal protective equipment:**

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

· **Recommended filter device for short term use:** Filter A

· **Protection of hands:**

Solvent resistant gloves

Apply solvent resistant skin cream before beginning work.

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

· **Material of gloves**

Nitrile rubber, NBR

Recommended thickness of the material: ≥ 0.4 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.

Risk of explosion.

* 9 Physical and chemical properties

· Information on basic physical and chemical properties	
· Appearance:	
Form / Physical state:	Fluid
Color:	Clear
· Odor:	Alcohol-like
· Odor threshold:	CAS 67-63-0: 1,0-196,1 ppm (Merck)
· pH-value:	Neutral
· Melting point/freezing point:	-89.5°C (-129.1°F)
· Initial boiling point and boiling range:	82.4°C (180.3°F)
· Flash point:	12°C (53.6°F) (c.c.)
· Flammability (solid, gas):	Highly flammable liquid and vapor.
· Ignition temperature:	425°C (797°F) (DIN 51794, Merck)
· Decomposition temperature:	Not determined.
· Auto-ignition temperature:	Product is not self-igniting.

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Trade name: KS336 - Propan-2-ol / Iso-Propyl Alcohol

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· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Flammability or explosive limits:	
Lower:	2 Vol %
Upper:	13.4 Vol %
· Oxidizing properties:	none
· Vapor Pressure at 20°C (68°F):	43 hPa (32.3 mm Hg)
· Density at 20°C (68°F):	0.79 g/cm ³ (6.59 lbs/gal)
· Relative density:	Not determined.
· Vapor density:	Not determined.
· Evaporation rate:	Not determined.
· Solubility(ies)	
Water:	Fully miscible.
· Partition coefficient (n-octanol/water):	0.05 log POW (OECD 107, Merck)
· Viscosity:	
Dynamic at 20°C (68°F):	2.2 mPas
Organic solvents:	100.0 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity**

Fumes can combine with air to form an explosive mixture.
Possible formation of peroxide.

- **Chemical stability**

Stable at ambient temperature (room temperature).
sensitivity to light
sensitive to air

- **Possibility of hazardous reactions**

Reacts with alkaline metals.
Reacts with oxidizing agents.
Reacts with earth alkaline metals.
Exothermic reaction with acids.

- **Conditions to avoid** Heating.

- **Incompatible materials:**

light metals
aluminum
rubber
various plastics

- **Hazardous decomposition products:**

peroxides
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.

- **LD/LC50 values that are relevant for classification:**

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

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Trade name: **KS336 - Propan-2-ol / Iso-Propyl Alcohol**

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- **Primary irritant effect:**
- **on the skin:** Based on available data, the classification criteria are not met.
- **on the eye:** Causes serious eye irritation.

· Information on components:		
CAS: 67-63-0 propan-2-ol		
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		
Sensitization	OECD 406	(guinea pig: negative) (IUCLID)

- **Carcinogenic categories**

· IARC (International Agency for Research on Cancer)		
3		

· NTP (National Toxicology Program)		
Substance is not listed.		

· OSHA-Ca (Occupational Safety & Health Administration)		
Substance is not listed.		

- **Other information:**

see section 8 / 15

Isopropyl alcohol:

A4 (not classifiable for humans or animals) by ACGIH

3 (not classifiable for humans) by IARC

- **Synergistic Products:** None

- **CMR effects (carcinogenity, mutagenicity and toxicity for reproduction):**
- **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** May cause drowsiness or dizziness.
- **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.

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:**

In addition to local irritant manifestations, there is a narcotic effect when inhaling high concentrations, with the danger of central respiratory arrest.

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

- **Experience with humans:**

CAS 67-63-0: Can cause liver damage.

CAS 67-63-0: Can cause kidney damages.

12 Ecological information

- **Toxicity**

· Aquatic toxicity:		
CAS: 67-63-0 propan-2-ol		
EC50	13299 mg/l/48h (Daphnia magna) (IUCLID)	

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EC5	4930 mg/l (Entosiphon sulcatum) (72h)
IC50	>1000 mg/l/72h (Desmodosmus 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.

14 Transport information

· UN-Number	
· DOT, IMDG, IATA	UN1219
· UN proper shipping name	
· DOT	Isopropyl alcohol
· IMDG, IATA	ISOPROPANOL
· Transport hazard class(es)	
· DOT	
	
· Class	3 Flammable liquids
· Label	3
· IMDG, IATA	
	
· Class	3 Flammable liquids
· Label	3
· Packing group	
· DOT, IMDG, IATA	II

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· Environmental hazards:	Not applicable.
· Special precautions for user	Warning: Flammable liquids
· Danger code (Kemler):	33
· EMS Number:	F-E,S-D
· Stowage Category	B
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Quantity limitations	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L
· IMDG	
· Limited quantities (LQ)	1L
· Excepted quantities (EQ)	Code: E2 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 500 ml

*15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· Section 355 (Extremely hazardous substances):

Substance is not listed.

· Section 313 (Specific toxic chemical listings):

Substance is listed.

· TSCA (Toxic Substances Control Act):

Substance is listed.

· Proposition 65

· Chemicals known to cause cancer:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

· Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

· Chemicals known to cause developmental toxicity:

Substance is not listed.

· New Jersey Right-to-Know List:

Substance is listed.

· New Jersey Special Hazardous Substance List:

F3

· Pennsylvania Right-to-Know List:

Substance is listed.

· Pennsylvania Special Hazardous Substance List:

E

· EPA (Environmental Protection Agency)

Substance is not listed.

· NIOSH-Ca (National Institute for Occupational Safety and Health)

Substance is not listed.

· **US-VOC content:** 0.0 g/l / 0.00 lb/gal· **Information about limitation of use:** Employment restrictions concerning young persons must be observed.

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· **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.

· **Date of preparation / last revision** 10/08/2018 / 3

· **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

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

BEI: Biological Exposure Limit

Flam. Liq. 2: Flammable liquids – Category 2

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.

· *** Data compared to the previous version altered.**
