

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

Printing date 08/07/2024

Reviewed on 08/07/2024

1 Identification

- **Product identifier**
- **Trade name: QAC Titrant QA3**
- **Catalogue number:**
56Z018498, 56L018465, 56U018465, 56L008965, 56U008965, 56L018499, 56U018499, 56L018420, 56L018497, 56U018497, 56L718465, 56U718465, 56L018430, 56U018430, 56L0184, SDT091
- **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**



GHS05 Corrosion

Eye Damage 1 H318 Causes serious eye damage.

Flammable Liquids 4 H227 Combustible liquid.

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



GHS05

- **Signal word** Danger
- **Hazard-determining components of labeling:**
sodium dodecyl sulphate
butan-1-ol
- **Hazard statements**
H227 Combustible liquid.
H318 Causes serious eye damage.
- **Precautionary statements**
P210 Keep away from heat. - No smoking.
P280 Wear protective gloves / eye protection.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
P310 Immediately call a doctor.
P403+P235 Store in a well-ventilated place. Keep cool.
- **Other hazards** At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.

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3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** aqueous solution
- **Composition and Information on Ingredients:**
Percent ranges are used due to the confidential product information.

CAS: 151-21-3 EINECS: 205-788-1 RTECS: WT1050000	sodium dodecyl sulphate ⚠ Flammable Solids 2, H228; ⚠ Eye Damage 1, H318; ⚠ Acute Toxicity - Oral 4, H302; Acute Toxicity - Inhalation 4, H332; Skin Irritation 2, H315; Specific Target Organ Toxicity - Single Exposure 3, H335; Aquatic Chronic 3, H412	3-≤5%
CAS: 71-36-3 EINECS: 200-751-6 Index number: 603-004-00-6 RTECS: EO 1400000	butan-1-ol ⚠ Flammable Liquids 3, H226; ⚠ Eye Damage 1, H318; ⚠ Acute Toxicity - Oral 4, H302; Skin Irritation 2, H315; Specific Target Organ Toxicity - Single Exposure 3, H335-H336	1-≤2.5%

- **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; consult doctor in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
Generally the product does not irritate the skin.
If symptoms persist consult doctor.
- **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.
If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed**
Irritation and corrosion
Drying-out effect resulting in rough and chapped skin.
after inhalation:
mucosal irritations, cough, breathing difficulty
fatigue
after swallowing:
mucous membrane irritation
- **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**
Can burn in fire.
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Sulfur oxides (SOx)
- **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.
- **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 section 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.
Keep ignition sources away - Do not smoke.
- **Hygiene measures:**
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**
- **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.
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:**
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

CAS: 71-36-3 butan-1-ol	
PEL (USA)	Long-term value: 300 mg/m ³ , 100 ppm
REL (USA)	Ceiling limit value: 150 mg/m ³ , 50 ppm Skin
TLV (USA)	Long-term value: 20 ppm
EL (Canada)	Long-term value: 15 ppm Ceiling limit value: 30 ppm
EV (Canada)	Long-term value: 20 ppm

- **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:** Combination filter A-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
Use protective goggles that have been tested and approved in accordance with government standards (like NIOSH).
- **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:** Liquid
- **Color:** Colorless
- **Odor:** Alcohol-like
- **Odor threshold:** CAS 71-36-3: > 0.1 ppm
- **pH-value:** Neutral
- **Melting point/freezing point:** Not determined.
- **Initial boiling point and boiling range:** Not determined.
- **Flash point:** 80–93°C (176–199.4°F)
- **Flammability (solid, gas):** Combustible liquid.
- **Auto igniting:** 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:** Not determined.
- **Upper:** Not determined.
- **Oxidizing properties:** none
- **Vapor Pressure:** Not determined.
- **Density at 20°C (68°F):** ~ 1 g/cm³ (~ 8.35 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:**
- **Kinematic:** Not determined.
- **Other information**
- **Solids content:** < 2.5 %
- **Solvent content:**
- **Organic solvents:** < 2.5 %
- **Water:** > 95 %

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- **Information with regard to physical hazard classes**

- **Corrosive to metals**

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

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** strong heating
- **Incompatible materials:** aluminum
- **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: 151-21-3 sodium dodecyl sulphate

Oral	LD50	1200 mg/kg (rat) (OECD 404) ECHA: LD50=1427 mg/kg (rat, male); LD50=977 mg/kg (rat, female) --> 1200 mg/kg bw (male, female)
Dermal	LD50.	>2000 mg/kg (rat) (OECD 402) (Registrant, ECHA: read across CAS 142-31-4, limit test, no mortality occurred)
Inhalative	LC50/4h	1.5 mg/l (dust) (ATE)
	LC50	>3.9 mg/l/1h (rat) (RTECS)

CAS: 71-36-3 butan-1-ol

Oral	LD50	790 mg/kg (rat) (RTECS)
Dermal	LD50	3400 mg/kg (rabbit) (OECD 402) (GESTIS)

- **Primary irritant effect:**

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

- **on the eye:**

Causes serious eye damage.

Risk of corneal clouding.

- **Information on components:**

CAS 71-36-3: chronic: dermatitis

CAS: 151-21-3 sodium dodecyl sulphate

Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 492	(rabbit: irritation)

CAS: 71-36-3 butan-1-ol

Irritation of skin	OECD 404	(rabbit: irritation) (Draize Test)
Irritation of eyes	OECD 492	(rabbit: irritation) (OECD 405) (not fully reversible within 7 days - causes serious eye damage)

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

- **Information on components:**

CAS: 151-21-3 sodium dodecyl sulphate

Sensitization	OECD 406	(guinea pig: negative) (EPA OPP 81-6: Guinea pig maximisation test)
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- **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: 151-21-3 sodium dodecyl sulphate	
OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames test) (<i>Salmonella typhimurium</i>)
OECD 476	(negative) (In Vitro Mammalian Cell Gene Mutation Test)
CAS: 71-36-3 butan-1-ol	
OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames test) (<i>Salmonella typhimurium</i>)
OECD 476	(negative) (In Vitro Mammalian Cell Gene Mutation Test)
· Additional toxicological information:	
CAS: 71-36-3 butan-1-ol	
. (source: GESTIS)	
Main toxic effects:	
acute: strong irritating effect on the eyes, less so on the skin, irritation of the upper respiratory tract,	
Disturbance in the central nervous system (narcotic effect)	
chronic: skin damage (with frequent liquid contact); inflammation and corneal changes due to vapors in the eyes,	
insufficient information on systemic effects	

12 Ecological information

· Toxicity	
· Aquatic toxicity:	
CAS: 151-21-3 sodium dodecyl sulphate	
EC50	6 mg/l/48h (<i>Daphnia magna</i>) (IUCLID)
EC10	3.6 mg/l (<i>fathhead minnow</i>) (28d, OECD 210) (ECHA)
NOEC	1.357 mg/l (<i>fathhead minnow</i>) (42 d) (ECHA)
EC50	53 mg/l/72h (<i>Desmodesmus subspicatus</i>) (DIN 38412) (IUCLID)
LC50	29 mg/l/96h (<i>fathhead minnow</i>) (OECD 203) (ECHA)
CAS: 71-36-3 butan-1-ol	
EC50	1328 mg/l/48h (<i>Daphnia magna</i>) (OECD 202) (Registrant, ECHA)
EC50	225 mg/l/96h (<i>Pseudokirchneriella subcapitata</i>) (OECD 201) (Registrant, ECHA)

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NOEC	4.1 mg/l (Daphnia magna) (OECD 211, 21d) (Registrant, ECHA)
LC50	1376 mg/l/96h (fathhead minnow) (OECD 203) (Registrant, ECHA)

· **Bacterial toxicity:**

CAS: 151-21-3 sodium dodecyl sulphate

EC50 0.46 mg/l (Photobacterium phosphoreum) (30 min)
(IUCLID)

CAS: 71-36-3 butan-1-ol

EC50 4390 mg/l (Pseudomonas putida) (DIN 38421 Teil 8, 17h)
(Registrant, ECHA)

· **Persistence and degradability**

The organic portion of the product is biodegradable.

CAS: 151-21-3 sodium dodecyl sulphate

OECD 301 B 95 % / 28 d (readily biodegradable) (CO2 Evolution Test)

CAS: 71-36-3 butan-1-ol

OECD 301 E 98 % / 28 d (readily biodegradable) (Modified OECD Screening Test)

· **Bioaccumulative potential**

Pow = n-octanol/wasser partition coefficient

log Pow 1-3 = Not worth-mentioning accumulating in organisms.

CAS: 151-21-3 sodium dodecyl sulphate

log Pow 1.6 (.) (experimental)

CAS: 71-36-3 butan-1-ol

log Pow 1 (.) (OECD 117, 25°C)
(Merck)

· **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	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.

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Transport/Additional information:	Not dangerous according to the above specifications.
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15 Regulatory information

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

Section 355 (Extremely hazardous substances):
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None of the ingredients is listed.

Section 313 (Specific toxic chemical listings):
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CAS: 71-36-3 butan-1-ol

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.

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: 71-36-3 butan-1-ol

New Jersey Special Hazardous Substance List:

CAS: 71-36-3 butan-1-ol	F3
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Pennsylvania Right-to-Know List:

CAS: 71-36-3 butan-1-ol

Pennsylvania Special Hazardous Substance List:

None of the ingredients is listed.

EPA (Environmental Protection Agency)
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CAS: 71-36-3 butan-1-ol	D
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NIOSH-Ca (National Institute for Occupational Safety and Health)

None of the ingredients is listed.

- **US-VOC content:** 17.1 g/l / 0.14 lb/gal

- **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**

- H226 Flammable liquid and vapor.

- H228 Flammable solid.

- H302 Harmful if swallowed.

- H315 Causes skin irritation.

- H318 Causes serious eye damage.

- H332 Harmful if inhaled.

- H335 May cause respiratory irritation.

- H336 May cause drowsiness or dizziness.

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H412 Harmful to aquatic life with long lasting effects.

· **Version number / date of revision:** 7 / 08/07/2024· **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

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

Flammable Liquids 3: Flammable liquids – Category 3

Flammable Liquids 4: Flammable liquids – Category 4

Flammable Solids 2: Flammable solids – Category 2

Acute Toxicity - Oral 4: Acute toxicity – Category 4

Skin Irritation 2: Skin corrosion/irritation – Category 2

Eye Damage 1: Serious eye damage/eye irritation – Category 1

Specific Target Organ Toxicity - Single Exposure 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

· **Sources**

Data arise from safety data sheets, reference works and literature.

ECHA: European CHemicals Agency <http://echa.europa.eu>

GESTIS- Stoffdatenbank (Substance Database, Germany)

RTECS (Registry of Toxic Effects of Chemical Substances)

IUCLID (International Uniform Chemical Information Database)

· * Data compared to the previous version altered.