

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

Printing date 11/29/2017

Reviewed on 11/29/2017

## 1 Identification

- **Product identifier**
- **Trade name:** Verification Standard 610 nm
- **Catalogue number:** 215656, 215650-610, 215660-610
- **Application of the substance / the mixture:** Coloured Standard Solution for calibration purposes
- **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.  
P233 Keep container tightly closed.  
P280 Wear protective gloves / eye protection.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.  
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	5–10%
CAS: 67-68-5 EINECS: 200-664-3 RTECS: PV 6210000	dimethyl sulfoxide Flam. Liq. 4, H227	0.1–1%
CAS: 9036-19-5 EINECS: 264-520-1	Octylphenol polyethoxyethanol ⚠ Eye Dam. 1, H318; ⚠ Aquatic Acute 1, H400 (M=10); Aquatic Chronic 1, H410 (M=1); ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315	0.025–≤0.1%

· **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**

irritations

after inhalation:

drowsiness

coughing

breathing difficulty

dizziness

after resorption:

headache

fatigue

sickness

vomiting

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

- **Indication of any immediate medical attention and special treatment needed:** No further relevant information available.

## 5 Fire-fighting measures

- **Extinguishing media**

- **Suitable extinguishing agents:**

CO<sub>2</sub>, 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.

In case of fire, the following can be released:

Carbon monoxide (CO) and carbon dioxide (CO<sub>2</sub>)

- **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.

### 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.
- **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

- **Handling:**
- **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.  
Avoid contact with the skin.  
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 only in unopened original receptacles.  
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 frost.  
Protect from heat and direct sunlight.  
Protect from exposure to the light.  
Store in the dark.  
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:**  
At this time, the other constituents have no known exposure limits.

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

PEL (USA)	Long-term value: 980 mg/m <sup>3</sup> , 400 ppm
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REL (USA)	Short-term value: 1225 mg/m <sup>3</sup> , 500 ppm Long-term value: 980 mg/m <sup>3</sup> , 400 ppm
TLV (USA)	Short-term value: 984 mg/m <sup>3</sup> , 400 ppm Long-term value: 492 mg/m <sup>3</sup> , 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:**  
Avoid direct contact with the chemical/ the product/ the preparation by organizational measures.  
Wear gloves in case of breakage / leakage.  
After use of gloves apply skin-cleaning agents and skin cosmetics.
- **Material of gloves**  
Chloroprene rubber, CR  
Recommended thickness of the material:  $\geq 0.5$  mm
- **Penetration time of glove material**  
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **As protection from splashes gloves made of the following materials are suitable:**  
Nitrile rubber, NBR  
Recommended thickness of the material:  $\geq 0.11$  mm  
Value for the permeation: Level  $\leq 1$  (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:** Wear safety glasses in case of breakage / leakage.
- **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

· <b>Information on basic physical and chemical properties</b>	
· <b>Appearance:</b>	
Form / Physical state:	Fluid
Color:	Blue
· <b>Odor:</b> Solvent-like	
· <b>Odor threshold:</b>	Not determined.
· <b>pH-value at 20 °C (68 °F):</b>	7,3
· <b>Melting point/freezing point:</b>	Not determined.
· <b>Initial boiling point and boiling range:</b>	82 °C (179.6 °F) (CAS 67-63-0)
· <b>Flash point:</b>	39,5 °C (103.1 °F) (DIN EN IS 2719/A)
· <b>Flammability (solid, gas):</b>	Flammable liquid and vapor.
· <b>Decomposition temperature:</b>	Not determined.

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· <b>Auto-ignition temperature:</b>	Product is not self-igniting.
· <b>Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· <b>Flammability or explosive limits:</b>	
<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.
· <b>Oxidizing properties:</b>	none
· <b>Vapor Pressure:</b>	Not determined.
· <b>Density at 20 °C (68 °F):</b>	0,98 g/cm <sup>3</sup> (8.18 lbs/gal)
· <b>Relative density:</b>	Not determined.
· <b>Vapor density:</b>	Not determined.
· <b>Evaporation rate:</b>	Not determined.
· <b>Solubility(ies)</b>	
<b>Water:</b>	Fully miscible.
· <b>Partition coefficient (n-octanol/water):</b>	Not determined.
· <b>Viscosity:</b>	Not determined.
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	< 10 %
<b>Water:</b>	> 90 %
<b>Solids content:</b>	< 1 %
· <b>Other information</b>	No further relevant information available.

## 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**
  - Reacts with alkaline metals.
  - Reacts with earth alkaline metals.
  - Exothermic reaction with acids.
- **Conditions to avoid** Heating.
- **Incompatible materials:**
  - metals
  - 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		
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)
CAS: 67-68-5 dimethyl sulfoxide		
Oral	LD50	14500 mg/kg (rat) (Gestis)

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Dermal	LD50	40000 mg/kg (rat) (RTECS)
Inhalative	LC <sub>0</sub>	>5.33 mg/l (rat) (4h, OECD 403) (Merck)
<b>CAS: 9036-19-5 Octylphenol polyethoxyethanol</b>		
Oral	LD50	1900–5000 mg/kg (rat)
Dermal	LD50	>3000 mg/kg (rabbit)

- **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.

· <b>Information on components:</b>		
<b>CAS: 67-63-0 propan-2-ol</b>		
Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: irritation)
<b>CAS: 67-68-5 dimethyl sulfoxide</b>		
Irritation of skin	OECD 404	(rabbit: slight irritation)
Irritation of eyes	OECD 405	(rabbit: slight irritation)
<b>CAS: 9036-19-5 Octylphenol polyethoxyethanol</b>		
Irritation of skin	OECD 404	(rabbit: irritation) (ECHA: read across CAS 140-66-9) (rabbit)

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

· <b>Information on components:</b>		
<b>CAS: 67-63-0 propan-2-ol</b>		
Sensitization	OECD 406	(guinea pig: negative) (IUCLID)
<b>CAS: 67-68-5 dimethyl sulfoxide</b>		
Sensitization	OECD 406	(guinea pig: negative) (EPA OPP 81-6: Guinea pig maximisation test)
<b>CAS: 9036-19-5 Octylphenol polyethoxyethanol</b>		
Sensitization	Patch test (human)	(negative)

### · Carcinogenic categories

· <b>IARC (International Agency for Research on Cancer)</b>		
CAS: 67-63-0	propan-2-ol	3

· <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:
- **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.

· <b>Information on components:</b>		
<b>CAS: 67-63-0 propan-2-ol</b>		
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)	

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**CAS: 67-68-5 dimethyl sulfoxide**

OECD 471	(negative) (Salmonella typhimurium)
OECD 473	(negative)
OECD 474	(negative)

· **Additional toxicological information:**

DMSO readily penetrates skin and may carry other dissolved chemicals into the body.

CAS 67-68-5 is skin-resorbing.

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)
EC5	4930 mg/l (Entosiphon sulcatum) (72h)
IC50	>1000 mg/l/72h (Desmodesmus subspicatus) (IUCLID)
LC50	1400 mg/l/96h (bluegill) (ECOTOX)

**CAS: 67-68-5 dimethyl sulfoxide**

LC50	>25000 mg/l/48h (zebrafish) (OECD 203)
EC50	24.6 mg/l/48h (Daphnia magna) (OECD 202)
EC50	17000 mg/l/72 h (Pseudokirchneriella subcapitata) (OECD 201)

**CAS: 9036-19-5 Octylphenol polyethoxyethanol**

EC50 (static)	0.011 mg/l/48h (Daphnia magna) (ECHA: read across CAS 140-66-9)
EC50	1.9 mg/l/96h (Pseudokirchneriella subcapitata) (ECHA: read across CAS 140-66-9)
NOEC	0.012 mg/l (zebrafish) (OECD 210) (ECHA: read across CAS 140-66-9)
	0.03 mg/l (Daphnia magna) (OECD 202, 21d) (ECHA: read across CAS 140-66-9)
LC50	0.26 mg/l/96h (gold orfe) (OECD 203) (ECHA: read across CAS 140-66-9)
	4–8.9 mg/l/96h (fathead minnow) (Merck)

· **Bacterial toxicity:****CAS: 67-63-0 propan-2-ol**

EC5	1050 mg/l (Pseudomonas putida) (16h)
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**CAS: 67-68-5 dimethyl sulfoxide**

EC10	7100 mg/l (Pseudomonas putida) (16 h) (IUCLID)
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· **Persistence and degradability****CAS: 67-63-0 propan-2-ol**

OECD 301 E	95 % / 21 d, aerob (readily biodegradable) (Modified OECD Screening Test)
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**CAS: 67-68-5 dimethyl sulfoxide**

OECD 301 D	31 % / 28 d (not readily biodegradable) (Closed Bottle Test)
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**CAS: 9036-19-5 Octylphenol polyethoxyethanol**

OECD 301 C	22 % / 28 d (not readily biodegradable) (aerob)
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- **Bioaccumulative potential**

Pow = n-octanol/wasser partition coefficient  
log Pow < 1 = Does not accumulate in organisms.



<b>CAS: 67-63-0 propan-2-ol</b>	
log Pow	0.05 (.) (OECD 107)
<b>CAS: 67-68-5 dimethyl sulfoxide</b>	
log Pow	-1.35 (.) (experimental) (Merck)
<b>CAS: 9036-19-5 Octylphenol polyethoxyethanol</b>	
log Pow	2.7 (.) (calculated)

- **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

· <b>UN-Number</b>	UN1993
· <b>DOT, IMDG, IATA</b>	
· <b>UN proper shipping name</b>	Flammable liquids, n.o.s. (Isopropyl alcohol)
· <b>DOT</b>	FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL)
· <b>IMDG, IATA</b>	
· <b>Transport hazard class(es)</b>	
· <b>DOT</b>	
	
· <b>Class</b>	3 Flammable liquids
· <b>Label</b>	3
· <b>IMDG, IATA</b>	
	
· <b>Class</b>	3 Flammable liquids
· <b>Label</b>	3
· <b>Packing group</b>	III
· <b>DOT, IMDG, IATA</b>	
· <b>Environmental hazards:</b>	Not applicable.
· <b>Special precautions for user</b>	Warning: Flammable liquids
· <b>Danger code (Kemler):</b>	30
· <b>EMS Number:</b>	F-E, <u>S</u> -E
· <b>Stowage Category</b>	A

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· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	
· <b>DOT</b>	
· <b>Quantity limitations</b>	On passenger aircraft/rail: 60 L On cargo aircraft only: 220 L
· <b>Limited quantity (LQ):</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <b>IMDG</b>	
· <b>Limited quantities (LQ)</b>	5L
· <b>Excepted quantities (EQ)</b>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml

## 15 Regulatory information

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

· <b>Section 355 (Extremely hazardous substances):</b>	None of the ingredients is listed.	
· <b>Section 313 (Specific toxic chemical listings):</b>	CAS: 67-63-0   propan-2-ol	
· <b>TSCA (Toxic Substances Control Act):</b>	All ingredients are listed.	
· <b>Proposition 65</b>		
· <b>Chemicals known to cause cancer:</b>	None of the ingredients is listed.	
· <b>Chemicals known to cause reproductive toxicity for females:</b>	None of the ingredients is listed.	
· <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>		
CAS: 67-63-0	propan-2-ol	
CAS: 67-68-5	dimethyl sulfoxide	
CAS: 1310-73-2	sodium hydroxide	
· <b>New Jersey Special Hazardous Substance List:</b>		
CAS: 67-63-0	propan-2-ol	F3
CAS: 67-68-5	dimethyl sulfoxide	TE, F2
CAS: 1310-73-2	sodium hydroxide	CO, R1
· <b>Pennsylvania Right-to-Know List:</b>		
CAS: 67-63-0	propan-2-ol	
· <b>Pennsylvania Special Hazardous Substance List:</b>		
CAS: 67-63-0	propan-2-ol	E
· <b>EPA (Environmental Protection Agency)</b>	None of the ingredients is listed.	
· <b>NIOSH-Ca (National Institute for Occupational Safety and Health)</b>	None of the ingredients is listed.	
· <b>US-VOC content:</b>	861.6 g/l / 7.19 lb/gl	

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- **Information about limitation of use:** 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**

H225 Highly flammable liquid and vapor.  
 H227 Combustible liquid.  
 H302 Harmful if swallowed.  
 H315 Causes skin irritation.  
 H318 Causes serious eye damage.  
 H319 Causes serious eye irritation.  
 H336 May cause drowsiness or dizziness.  
 H400 Very toxic to aquatic life.  
 H410 Very toxic to aquatic life with long lasting effects.

- **Date of preparation / last revision** 11/29/2017 / 5

- **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  
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
 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  
 BEI: Biological Exposure Limit  
 Flam. Liq. 2: Flammable liquids – Category 2  
 Flam. Liq. 3: Flammable liquids – Category 3  
 Flam. Liq. 4: Flammable liquids – Category 4  
 Acute Tox. 4: Acute toxicity – Category 4  
 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  
 STOT SE 3: Specific target organ toxicity (single exposure) – Category 3  
 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1  
 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

- **Sources**

Data arise from safety data sheets, reference works and literature.  
 RTECS (Registry of Toxic Effects of Chemical Substances )  
 ECHA: European CHemicals Agency <http://echa.europa.eu>

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US

# Safety Data Sheet

acc. to OSHA HCS (HazCom 2012)

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**Trade name: Verification Standard 610 nm**

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IUCLID (International Uniform Chemical Information Database)  
ECOTOX Database  
GESTIS- Stoffdatenbank (Substance Database, Germany)

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

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