

Safety data sheet according to 1907/2006/EC, Article 31

Printing date 10.11.2023

Version number 25 (replaces version 24)

Revision: 10.11.2023

SECTION 1: Identification of the substance/mixture and of the company/undertaking

· **1.1 Product identifier**

· **Product name:** Hardness VLR

· **Catalog number:** 00515351, 515350BT, 515351BT, 00515359BT, 4515350BT, 4515351BT

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

· **Application of the substance / the preparation:** Reagent for water analysis

· **1.3 Details of the supplier of the safety data sheet**

· **Supplier:**

Tintometer GmbH
Schleefstraße 8-12
44287 Dortmund
Made in Germany
www.lovibond.com

phone: +49 (0)231 94510-0
e-mail: sales@lovibond.com

The Tintometer Limited
Lovibond® House
Sun Rise Way
Amesbury
Wiltshire SP4 7GR
United Kingdom

phone : +44 1980 664800
e-mail: SDS@lovibond.uk

· **Informing department:**

e-mail: sds@lovibond.com
Product Safety Department

· **1.4 Emergency telephone number:**

+44 1235 239670
Languages: English

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the GB CLP regulation.

· **Hazard pictograms**



GHS07

· **Signal word** Warning

· **Hazard statements**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

· **Precautionary statements**

P280 Wear protective gloves / eye protection.

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P264 Wash thoroughly after handling.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P302+P352 IF ON SKIN: Wash with plenty of water.

· **2.3 Other hazards** No further relevant information available.

· **Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

· **Determination of endocrine-disrupting properties**

The product does not contain substances with endocrine disrupting properties.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Mixture of organic and inorganic compounds

· **Dangerous components:**

CAS: 115-69-5 EINECS: 204-100-7	2-amino-2-methylpropane-1,3-diol	⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	10–20%
CAS: 10101-89-0 EINECS: 231-509-8 Reg.nr.: 01-2119489800-32-XXXX	tri-Sodium phosphate dodecahydrate	⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319	5–<10%

· **Additional information** For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

· **4.1 Description of first aid measures**

· **General information** Instantly remove any clothing soiled by the product.

· **After inhalation** Supply fresh air; consult doctor in case of symptoms.

· **After skin contact**

Instantly rinse with water.

If skin irritation continues, consult a doctor.

· **After eye contact** Rinse opened eye for several minutes (at least 15 min) under running water. Then consult doctor.

· **After swallowing**

Rinse out mouth and then drink 1-2 glasses of water.

In case of persistent symptoms consult doctor.

· **4.2 Most important symptoms and effects, both acute and delayed:**

irritations

after inhalation:

mucosal irritations, cough, shortness of breath

after swallowing of large amounts:

weakness

fatigue

coma

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

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents** Use fire fighting measures that suit the environment.

· **5.2 Special hazards arising from the substance or mixture**

mixture with combustible ingredients

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

Nitrogen oxides (NO_x)

Phosphorus oxides (P_xO_x)

Carbon monoxide (CO) and carbon dioxide (CO₂)

· **5.3 Advice for firefighters**

· **Protective equipment:**

Wear self-contained breathing apparatus.

Wear full protective suit.

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Additional information

- Collect contaminated fire fighting water separately. It must not enter drains.
- Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
- Ambient fire may liberate hazardous vapours.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Advice for non-emergency personnel:

- Wear protective equipment. Keep unprotected persons away.
- Ensure adequate ventilation
- Keep away from ignition sources

Advice for emergency responders: Protective equipment: see section 8

6.2 Environmental precautions: Do not allow product to reach sewage system or water bodies.

6.3 Methods and material for containment and cleaning up:

- Ensure adequate ventilation.
- Collect mechanically.
- Dispose of contaminated material as waste according to item 13.

6.4 Reference to other sections

- See Section 8 for information on personal protection equipment.
- See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Advice on safe handling: Prevent formation of dust.

Hygiene measures:

- Avoid contact with the skin.
- Avoid contact with the eyes.
- Take off immediately all contaminated clothing.
- Wash hands during breaks and at the end of the work.
- Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities
Requirements to be met by storerooms and containers: Store in cool location.

Information about storage in one common storage facility: Store away from oxidising agents.

Further information about storage conditions:

- Store in cool, dry conditions in well sealed containers.
- Protect from heat and direct sunlight.
- Protect from the effects of light.
- Protect from humidity and keep away from water.
- This product is hygroscopic.

Recommended storage temperature: 20°C +/- 5°C

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Components with limit values that require monitoring at the workplace:
CAS: 9004-34-6 cellulose

WEL (Great Britain)	Short-term value: 20* mg/m ³ Long-term value: 10* 4** mg/m ³ *inhalable dust **respirable
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Regulatory information WEL (Great Britain): EH40/2020

Recommended monitoring procedures:

- Methods for measurement of the workplace atmosphere have to correspond to the requirements of norms DIN EN 482 and DIN EN 689.

Additional information: The lists that were valid during the compilation were used as basis.

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- **8.2 Exposure controls**
 - **Engineering measures:**
Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. See item 7.
 - **Individual protection measures, such as personal protective equipment**
Protective clothing should be selected specifically for the workplace, depending on concentration and quantity of the hazardous substances handled.
 - **Eye/face protection** Safety glasses
 - **Hand protection**
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.
 - **Other skin protection (body protection):** Protective work clothing.
 - **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
 - **Recommended filter device for short term use:** Filter P2
 - **Environmental exposure controls** Do not allow product to reach sewage system or water bodies.
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SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **Physical state** Solid.
- **Form:** Tablets
- **Colour:** Grey
- **Odour:** Odourless
- **Odour threshold:** Not applicable.
- **Melting point/Freezing point:** Not determined.
- **Boiling point or initial boiling point and boiling range** Not determined.
- **Flammability** The product is not combustible.
- **Explosive properties:** Product is not explosive.
- **Lower and upper explosion limit**
- **Lower:** Not applicable.
- **Upper:** Not applicable.
- **Flash point:** Not applicable.
- **Auto-ignition temperature:** Not applicable (solid).
- **Decomposition temperature:** Not determined.
- **pH (7.8 g/l) at 20°C** 10.4
- **Kinematic viscosity** Not applicable (solid).
- **Solubility**
- **Water:** Partly soluble
- **Partition coefficient n-octanol/water (log value)** Not applicable (mixture).
- **Vapour pressure:** Not applicable.
- **Density and/or relative density**
- **Density:** Not determined.
- **Relative density:** Not determined.
- **Relative gas density** Not applicable (solid).
- **Particle characteristics** Not determined.

· 9.2 Other information

- **Information with regard to physical hazard classes**
- **Corrosive to metals** Void
- **Other safety characteristics**
- **Oxidising properties:** none

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Additional information	
Solids content:	100 %

SECTION 10: Stability and reactivity

- **10.1 Reactivity** see section 10.3
- **10.2 Chemical stability** Stable at ambient temperature (room temperature).
- **10.3 Possibility of hazardous reactions**
Aqueous solution reacts alkaline.
Reacts with acids and oxidising agents.
- **10.4 Conditions to avoid** strong heating
- **10.5 Incompatible materials:**
aluminium
copper
non-ferrous metal
- **10.6 Hazardous decomposition products:** see section 5

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values that are relevant for classification:**
The following statements refer to the individual components.

CAS: 115-69-5 2-amino-2-methylpropane-1,3-diol		
Oral	LD50	17000 mg/kg (rat) (RTECS)
CAS: 10101-89-0 tri-Sodium phosphate dodecahydrate		
Oral	LD50	7400 mg/kg (rat) (RTECS)

- **Skin corrosion/irritation** Causes skin irritation.
- **Serious eye damage/irritation** Causes serious eye irritation.

Information on components:		
CAS: 115-69-5 2-amino-2-methylpropane-1,3-diol		
Irritation of skin	OECD 404	(rabbit: irritation)
Irritation of eyes	OECD 405	(rabbit: irritation)

- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **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.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.

SECTION 12: Ecological information

- **12.1 Toxicity**

Aquatic toxicity:	
CAS: 115-69-5 2-amino-2-methylpropane-1,3-diol	
LC50	>10000 mg/l/96h (zebrafish)

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CAS: 10101-89-0 tri-Sodium phosphate dodecahydrate	
LC ₅₀	~2400 mg/l/48h (gold orfe) (OECD 203) (anhydrous substance)
· Bacterial toxicity:	
CAS: 115-69-5 2-amino-2-methylpropane-1,3-diol	
EC10	>10000 mg/l (Pseudomonas putida) (16 h)

· **12.2 Persistence and degradability** No further relevant information available.· **12.3 Bioaccumulative potential**

Pow = n-octanol/wasser partition coefficient

log Pow < 1 = Does not accumulate in organisms.

CAS: 115-69-5 2-amino-2-methylpropane-1,3-diol	
log Pow	<-3.8 (.)

· **12.4 Mobility in soil** No further relevant information available.· **12.5 Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

· **12.6 Endocrine disrupting properties** The product does not contain substances with endocrine disrupting properties.· **12.7 Other adverse effects**

Depending on the concentration, phosphorus and/or nitrogen compounds may contribute to the eutrophication of water supplies. Avoid transfer into the environment.

· **Water hazard:**

Rinse off of bigger amounts into drains or the aquatic environment may lead to increased pH-values. A high pH-value harms aquatic organisms.

Do not allow product to reach ground water, water bodies or sewage system.

Danger to drinking water if even small quantities leak into soil.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**· **Recommendation**


Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Hand over to disposers of hazardous waste.

· European waste catalogue	
16 05 06*	laboratory chemicals, consisting of or containing hazardous substances, including mixtures of laboratory chemicals

· **Uncleaned packagings:**· **Recommendation:** Disposal must be made according to official regulations.· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· 14.1 UN number or ID number	
· ADR, IMDG, IATA	UN3259
· 14.2 UN proper shipping name	
· ADR	3259 AMINES, SOLID, CORROSIVE, N.O.S. (2-amino-2-methylpropane-1,3-diol)
· IMDG, IATA	AMINES, SOLID, CORROSIVE, N.O.S. (2-amino-2-methylpropane-1,3-diol)
· 14.3 Transport hazard class(es)	
· ADR	
	
· Class	8 (C8) Corrosive substances.

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· Label	8
· IMDG, IATA	
	
· Class	8 Corrosive substances.
· Label	8
· 14.4 Packing group	
· ADR, IMDG, IATA	III
· 14.5 Environmental hazards:	Not applicable.
· 14.6 Special precautions for user	Warning: Corrosive substances.
· Kemler Number:	80
· EMS Number:	F-A,S-B
· Stowage Category	A
· Segregation Code	SG35 Stow "separated from" SGG1-acids
· 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
· Transport/Additional information:	
· ADR	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· Transport category	3
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	5 kg
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g

SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

· Poisons Act UK

· Regulated explosives precursors

None of the ingredients is listed.

· Regulated poisons

None of the ingredients is listed.

· Reportable explosives precursors

None of the ingredients is listed.

· Reportable poisons

None of the ingredients is listed.

· Regulation (EU) 2019/1148 on the marketing and use of explosives precursors not regulated

· Regulation (EU) No 649/2012 concerning the export and import of hazardous chemicals (PIC)

None of the ingredients is listed.

· Regulation (EC) No 1334/2000 setting up a Community regime for the control of exports of dual-use items and technology:

None of the ingredients is listed.

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

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· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors
None of the ingredients is listed.
· Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:
None of the ingredients is listed.
· REGULATION (EU) 2019/1021 on persistent organic pollutants (POP)
None of the ingredients is listed.
· LIST OF SUBSTANCES SUBJECT TO AUTHORISATION (ANNEX XIV)
None of the ingredients is listed.
· Substances of very high concern (SVHC) according to REACH, Article 57 This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).
· Substances of very high concern (SVHC) according to UK REACH This product does not contain any substances of very high concern above the legal concentration limit of $\geq 0.1\%$ (w / w).
· Directive 2012/18/EU (SEVESO III):
· Named dangerous substances - ANNEX I None of the ingredients is listed.
· Information about limitation of use: Not required.
· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

* SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

This Safety Data Sheet is in compliance with Regulation (EC) No 1907/2006, Article 31 as amended by Regulation (EU) 2020/878.

· **Training hints** Provide adequate information, instruction and training for operators.

· **Relevant phrases**

H315 Causes skin irritation.

H319 Causes serious eye irritation.

· **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

ADR: Accord relatif au transport international 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

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

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

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

· **Sources**

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

RTECS (Registry of Toxic Effects of Chemical Substances)

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