

Safety Data Sheet
acc. to OSHA HCS

Printing date 05/23/2022

Reviewed on 05/23/2022

1 Identification

- **Product identifier**
- **Trade name:** Glas hardener
- **Article number:** Series 700-GL
- **Application of the substance / the mixture** Additive
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
DECO TECHnology Group Inc.
PRINTCOLOR SCREEN AG
TEL (714) 639-3326
FAX (714) 639-2261
- **Information department:** Product safety department
- **Emergency telephone number:** 800-535-5053

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

Sensitization - Respiratory 1

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Specific Target Organ Toxicity - Repeated Exposure 2

H373 May cause damage to organs through prolonged or repeated exposure.



GHS05 Corrosion

Eye Damage 1

H318 Causes serious eye damage.



GHS07

Acute Toxicity - Inhalation 4

H332 Harmful if inhaled.

Sensitization - Skin 1

H317 May cause an allergic skin reaction.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS05 GHS07 GHS08

- **Signal word** Danger

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

N-(3-(trimethoxysilyl)propyl)ethylenediamine
N,N'-Bis[3-(trimethoxysilyl)propyl]ethylenediamine
methanol
ethylenediamine

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Hazard statements

- Harmful if inhaled.
- Causes serious eye damage.
- May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- May cause an allergic skin reaction.
- May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

- Avoid breathing vapours.
- Use only outdoors or in a well-ventilated area.
- Contaminated work clothing must not be allowed out of the workplace.
- Wear protective gloves / eye protection.
- In case of inadequate ventilation wear respiratory protection.
- If on skin: Wash with plenty of water.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Immediately call a poison center/doctor.
- Specific treatment (see on this label).
- Get medical advice/attention if you feel unwell.
- If skin irritation or rash occurs: Get medical advice/attention.
- If experiencing respiratory symptoms: Call a poison center/doctor.
- Wash contaminated clothing before reuse.
- Dispose of contents/container in accordance with local/regional/national/international regulations.

Classification system:

NFPA ratings (scale 0 - 4)



HMIS-ratings (scale 0 - 4)



Other hazards

Results of PBT and vPvB assessment

- PBT:** Not applicable.
- vPvB:** Not applicable.

3 Composition/information on ingredients

Chemical characterization: Mixtures

- Description:** Mixture of the substances listed below with nonhazardous additions.

Dangerous components:

CAS: 1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine	≥50-≤100%
CAS: 68845-16-9	N,N'-Bis[3-(trimethoxysilyl)propyl]ethylenediamine	≥3-≤10%
CAS: 67-56-1	methanol	≥1-<3%
CAS: 107-15-3	ethylenediamine	≥0.1-<1%

4 First-aid measures

Description of first aid measures

- General information:** Immediately remove any clothing soiled by the product.

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- **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
Immediately rinse with water.
If skin irritation continues, consult a doctor.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **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**
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:** Dilute with plenty of water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralizing agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

· **PAC-1:**

CAS: 1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine	23 mg/m ³
CAS: 67-56-1	methanol	530 ppm
CAS: 107-15-3	ethylenediamine	0.88 ppm

· **PAC-2:**

CAS: 1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine	250 mg/m ³
CAS: 67-56-1	methanol	2,100 ppm
CAS: 107-15-3	ethylenediamine	9.7 ppm

· **PAC-3:**

CAS: 1760-24-3	N-(3-(trimethoxysilyl)propyl)ethylenediamine	1,500 mg/m ³
CAS: 67-56-1	methanol	7200* ppm
CAS: 107-15-3	ethylenediamine	20 ppm

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7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:**
Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from foodstuffs.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Storage class:** 10
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

CAS: 67-56-1 methanol

PEL	Long-term value: 260 mg/m ³ , 200 ppm
REL	Short-term value: 325 mg/m ³ , 250 ppm Long-term value: 260 mg/m ³ , 200 ppm Skin
TLV	Short-term value: 250 ppm Long-term value: 200 ppm Skin; BEI

CAS: 107-15-3 ethylenediamine

PEL	Long-term value: 25 mg/m ³ , 10 ppm
REL	Long-term value: 25 mg/m ³ , 10 ppm
TLV	Long-term value: 10 ppm Skin, A4

- **Ingredients with biological limit values:**

CAS: 67-56-1 methanol

BEI	15 mg/L Medium: urine Time: end of shift Parameter: Methanol (background, nonspecific)
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- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing.
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Do not inhale gases / fumes / aerosols.

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Avoid contact with the eyes and skin.

- **Breathing equipment:** Suitable respiratory protective device recommended.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:**



Goggles recommended during refilling.

9 Physical and chemical properties

- **Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

Form: Fluid
Color: According to product specification

- **Odor:** Characteristic

- **Odor threshold:** Not determined.

- **pH-value:** Not determined.

- **Change in condition**

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 259 °C (498.2 °F)

- **Flash point:** 138 °C (280.4 °F) (Abel Pensky)

- **Flammability (solid, gaseous):** Not applicable.

- **Decomposition temperature:** Not determined.

- **Auto igniting:** Product is not selfigniting.

- **Danger of explosion:** Product does not present an explosion hazard.

- **Explosion limits:**

Lower: Not determined.
Upper: Not determined.

- **Vapor pressure at 20 °C (68 °F):** <1.3 hPa (<1 mm Hg)

- **Density at 20 °C (68 °F):** 1.03 g/cm³ (8.6 lbs/gal)

- **Relative density** Not determined.

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· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not determined.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent separation test	
VOC content:	1.1-<4 %
	41.2 g/l / 0.34 lb/gal
VOC (EC)	1.1-<4 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the eye:** Strong irritant with the danger of severe eye injury.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.

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- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Must not reach bodies of water or drainage ditch undiluted or unneutralized.
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **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, ADR, IMDG, IATA	Void
· UN proper shipping name	
· DOT, ADR, IMDG, IATA	Void
· Transport hazard class(es)	
· DOT, ADR, ADN	
· Class	Void
· IMDG, IATA	
· Class	Void Not restricted good
· Packing group	
· DOT, ADR, IMDG, IATA	Void
· 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.
· UN "Model Regulation":	Void

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.

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· **Sara**

· **Section 355 (extremely hazardous substances):**

CAS: 107-15-3 | ethylenediamine

· **Section 313 (Specific toxic chemical listings):**

CAS: 67-56-1 | methanol

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

CAS: 67-56-1 | methanol

· **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:**

CAS: 67-56-1 | methanol

· **Carcinogen categories**

· **EPA (Environmental Protection Agency)**

CAS: 107-15-3 | ethylenediamine

D

· **TLV (Threshold Limit Value)**

CAS: 107-15-3 | ethylenediamine

A4

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

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS05 GHS07 GHS08

· **Signal word** Danger

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

N-(3-(trimethoxysilyl)propyl)ethylenediamine
N,N'-Bis[3-(trimethoxysilyl)propyl]ethylenediamine
methanol
ethylenediamine

· **Hazard statements**

Harmful if inhaled.
Causes serious eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause an allergic skin reaction.
May cause damage to organs through prolonged or repeated exposure.

· **Precautionary statements**

Avoid breathing vapours.
Use only outdoors or in a well-ventilated area.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves / eye protection.

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In case of inadequate ventilation wear respiratory protection.

If on skin: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a poison center/doctor.

Specific treatment (see on this label).

Get medical advice/attention if you feel unwell.

If skin irritation or rash occurs: Get medical advice/attention.

If experiencing respiratory symptoms: Call a poison center/doctor.

Wash contaminated clothing before reuse.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **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.

· **Department issuing SDS:** Product safety department

· **Contact:** hse@printcolor.ch

· **Date of preparation / last revision** 05/23/2022 / -

· **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

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)

NFPA: National Fire Protection Association (USA)

HMS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

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

Acute Toxicity - Inhalation 4: Acute toxicity – Category 4

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

Sensitization - Respiratory 1: Respiratory sensitisation – Category 1

Sensitization - Skin 1: Skin sensitisation – Category 1

Specific Target Organ Toxicity - Repeated Exposure 2: Specific target organ toxicity (repeated exposure) – Category 2