# G1 ClearVision Smart Glass
# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Date of issue: 30/09/2015 Revision date: 22/05/2018 : Version: 1.2

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

### 1.1. Product identifier

Product form : Mixture

Name : ClearVision Smart Glass

Product code : G1

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### 1.2.1. Relevant identified uses

Intended for general public

Main use category : Consumer use,Professional use,Industrial use

Use of the substance/mixture : Glass hydrophobising

#### 1.2.2. Uses advised against

No additional information available

### 1.3. Details of the supplier of the safety data sheet

GTECHNIQ LTD
Unit 2 Langfurlong
Upper Heyford
Northampton
Northamptonshire
NN7 3FA
United Kingdom

Tel: +44 (0)1604 962 553

### 1.4. Emergency telephone number

Emergency number : +44 (0)1604 962553

| Country | Organisation/Company | Address | Emergency number |
|---|---|---|---|
| Ireland | National Poisons Information Centre<br>Beaumont Hospital | Beaumont Hospital Beaumont Road 9 Dublin | : +353 1 8379964 |
| United Kingdom | National Poisons Information Service (NHS Direct) | http://www.npis.org | 111 (England & Wales only) or 112 (EU) or 08454 24 24 24 (Scotland) |

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Flam. Liq. 2: H225

Eye Irrit. 2: H319

STOT SE 3: H336

**Adverse physicochemical, human health and environmental effects**

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

### 2.2. Label elements

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

Hazard statements : H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.

Signal words : Warning

Hazard pictograms : GHS02: Flame
GHS07: Exclamation mark

Precautionary statements (CLP) : P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P260: Do not breathe vapour.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P337+313: If eye irritation persists: get medical advice/attention.
P271: Use only outdoors or in a well-ventilated area.

Supplemental hazard information (EU) : EUH208: Contains zirconium tetrabutanolate. May produce an allergic reaction.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Not applicable

### 3.2. Mixture

PROPAN-2-OL

| EINECS | CAS | PBT / WEL | CLP Classification | Percent |
|---|---|---|---|---|
| 200-661-7 | 67-63-0 | - | Flam. Liq. 2: H225;<br>Eye Irrit. 2: H319;<br>STOT SE 3: H336 | 50-100 |

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep warm and at rest. In case of irregular breathing or respiratory arrest provide artificial respiration.

First-aid measures after skin contact : Remove contaminated, saturated clothing immediately. After contact with skin, wash immediately with plenty of water and soap. Do not use solvents or thinners.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Seek medical advice immediately.

First-aid measures after ingestion : If swallowed, rinse mouth with water (only if the person in conscious). Seek medical advice immediately. Keep victim calm. Do NOT induce vomiting.

### 4.2. Most important symptoms and effects, both acute and delayed

In all cases of doubt, or when symptoms persist, seek medical advice.

### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Alcohol-resistant foam, carbon dioxide, powder, spray mist.

Unsuitable extinguishing media : Strong water jet.

### 5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Dense black smoke occurs durin fire. Inhaling hazardous decomposing products can cause serious health damage.

### 5.3. Advice for firefighters

Provide a conveniently-located respiratory protective device. Do not allow water used to extinguish fire to enter drains, ground or waterways. Treat runoff as hazardous. Cool closed containers that are near the source of the fire.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

Keep away from sources of ignition. Ventilate affected area. Do not breathe vapours.

#### 6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

#### 6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

### 6.2. Environmental precautions

Do not llow to enter surface water or drains. If the product contaminates lakes, rivers or sewages, inform competent authorities in accordance with the local regulations (see section 13).

### 6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Isolate leaked material using non-flammable absorption agent (e.g. sand, earth, vermiculite, diatomaceous earth) and collect it for disposal in appropriate containers in accordance with the local regulations (see section 13). Clean using cleansing agents. Do not use solvents.

Other information : Dispose of materials or solid residues at an authorized site.

### 6.4. Reference to other sections

For further information refer to section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Avoid formation of flammable and explosive vapour concentrations in the air and exceeding the exposure limit values. Only use the material in places where open light, fire and other flammable sources can be kept away. Electrical equipment must be protected, meeting the accepted tandard. Product may become electrostatically charged. Provide earthing of containers, equipment, pumps and ventilation facilities. Anti-static clothing including shoes is recommended. Floors must be electrically conductive. Keep away from heat sources, sparks and open flames. Use only spark-proof tools. Avoid contact with skin, eyes and lothes. Do not inhale dusts, particulates and spray mist when using this preparation. Avoid respiration of swarf. For personal protection equipmetn, refer to section 8. Do not empty containers with pressure – no pressure vessel! Follow the legal protection and safety regulations.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated and dry room at temperatures between 15°C and 30°C. Keep container cool and tightly closed. Store carefully closed containers upright to prevent any leaks. Always keep in containers that correspond to the material of the original container. Storage in accordance with the Ordinance on Industrial Safey and Health (BetrSiVO). Keep away from strongly acidic and alkaline materials as well as oxidisers. Protect from direct heat and sunlight, and remove all sources of ignition. Take care of instructions on label.

### 7.3. Specific end use(s)

Observe technical data sheet. Observe instructions for use. Read label before use.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

**Hazardous ingredients:**

PROPAN-2-OL

**Workplace exposure limits:**

| State | 8hourTWA | 15min.STEL |
|---|---|---|
| UK | 999 mg/m3 | 1250 mg/m3 |

**Respirable dust:**

| 8hourTWA | 15min.STEL |
|---|---|
| 400 ppm | 500 ppm |

### 8.2. Exposure controls

Appropriate engineering controls : Ensure good ventilation of the work station and aequate local exhaust ventilation. This can be achieved with local or room suction. If this should not be sufficient to keep aerosol and solvent vapour concentration below the exposure limit values, a suitable respiratory protection must be used.

Personal protective equipment : Protective clothing. Protective goggles. Gloves.

| | | |
|---|---|---|
| Hand protection | : | For prolonged or repeated handling, the following glove material must be used: NBR (nitrile rubber)/Butyl caoutchouc (butyl rubber)<br>Thickness of glove material>= 0.7mm<br>Breakthrough time (maximum wearing time) >480 min.<br>Observe the instructions and details for use, storage, maintenance and replacement provided by the protective glove manufacturer. Penetration time of glove material depending on intensity and duration of exposure to skin. Recommended glove articles DIN EN 374. Barrier creams can help protecting exposed skin areas. In no case should they be used after contact. |
| Eye protection | : | Wear closely-fitting protective glasses in case of splashes. |
| Skin and body protection | : | Wear antistatic clothing of natural fibres (cotton) or heat-resistant synthetic fibres. After contact clean skin throroughly with water and soap or use appropriate cleanser. |
| Respiratory protection | : | If concentration of solvents is beyond the occupational exposure limit values, approved and suitable respiratory protection must be used. Observe the wear time limits according to GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190). Use only respiratory protection equipment with CE-symbol including four digit test number.<br>Recommended respiratory protection: respiratory protective device with half mask filter material type A. The standards EN 136, 140 and 405 of the European Commission for Standardisation (CEN) make recommendations to respirators, the standards EN 149 and EN 143 provide recommendations to respiratory filters. |

| | | |
|---|---|---|
| Environmental exposure controls | : | Do not allow to enter surface water or drains. See section 7. No additional measures necessary. |

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

| | | |
|---|---|---|
| Physical state | : | Liquid |
| Colour | : | Clear |
| Odour | : | Alcoholic |
| Odour threshold | : | No data available |
| pH | : | 2.5 |
| Relative evaporation rate (butylacetate=1) | : | No data available |
| Melting point | : | Not applicable |
| Freezing point | : | No data available |
| Boiling point | : | 82°C |
| Flash point | : | 12°C |
| Auto-ignition temperature | : | 425°C |
| Decomposition temperature | : | No data available |
| Flammability (solid, gas) | : | Not applicable |
| Vapour pressure | : | 46.51 mbar |
| Relative vapour density at 20 °C | : | 0.79g/cm$^3$ |
| Relative density | : | No data available |
| Solubility | : | Insoluble |
| Log Pow | : | No data available |
| Viscosity, kinematic | : | 2.78 mPa-s |
| Viscosity, dynamic | : | 2.78 mPa-s |
| Explosive properties | : | No data available |
| Oxidising properties | : | No data available |
| Explosive limits | : | Lower limit 0.8% vol., upper limit 12% vol. |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

### 10.2. Chemical stability

Stable when applying the recommended regulations for storage and handling. Further information on correct storage: refer to section 7.

### 10.3. Possibility of hazardous reactions

Keep away from strong acids, strong bases and strong oxidising agents to avoid exothermic reactions.

### 10.4. Conditions to avoid

Hazardous decomposition byproducts may form with exposure to high temperatures.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

Hazardous decomposition byproducts may form with expposure to high temperatures, e.g. carbon dioxide, carbon monoxide, smoke, nitrogen oxides.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity:

| **PROPAN-2-OL** (67-63-0) | |
|---|---|
| LD50 oral rat | 5280 mg/kg Method:OECD 401 |
| LD50 dermal rabbit | 13900 mg/kg Method: OECD 402 |
| LC50 inhalation rat (mg/l) | 25 mg/l/6h Method: OECD 403 |

Relevant hazards for substance:

| **Hazard** | **Route** | **Basis** |
|---|---|---|
| Skin corrosion/irritation | DRM | Hazardous: calculated |
| Serious eye damage/irritation | OPT | Hazardous: calculated |

| | | |
|---|---|---|
| Respiratory or skin sensitisation | : | Not classified |
| Germ cell mutagenicity | : | Not classified |
| Carcinogenicity | : | Not classified |
| Reproductive toxicity | : | Not classified |
| Specific target organ toxicity (single exposure) | : | Not classified |
| Specific target organ toxicity (repeated exposure) | : | Not classified |
| Aspiration hazard | : | Not classified |

**Other observations:**
Inhaling of solvent components above the MWC-value can lead to health damage, e.g. irritation of the mucous membrane and respiratory organs, as well as damage to the liver, kidneys and the central nerve system. Indications for this are: headache, dizziness, fatigue, amyosthenia, drowsiness, in serious cases: unconsciousness. Solvents may cause some of the aforementioned effects through skin resorption. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and/or absorption through skin. Splashing may cause eye irritation and reversible damage.

## SECTION 12: Ecological information

### 12.1. Toxicity

| **PROPAN-2-OL** (67-63-0) | |
|---|---|
| EC50 | > 100 mg/l (EC50; 72 h; Scenedesmus subspicatus;<br>Algae toxicity, ErC50: > 1000 mg/L; Bacteria toxicity: > 100 mg/L. |

| | | |
|---|---|---|
| Ecology - general | : | Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]. There is no information available on the preparation itself. |

### 12.2. Persistence and degradability

PROPAN-2-OL : 95 % (5 d); evaluation Readily biodegradable (according to OECD criteria).

### 12.3. Bioaccumulative potential

No additional information available

### 12.4. Mobility in soil

No additional information available

### 12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

| | | |
|---|---|---|
| Waste treatment methods | : | Dispose of contents/container in accordance with licensed collector's sorting instructions. |
| Waste disposal recommendations | : | Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. |
| Ecology - waste materials | : | Avoid release to the environment. |
| Proposed waste codes/designations (EWC) | : | 190208: liquid combustible wastes containing dangerous substances. |
| Packaging recommendations | : | Non-contaminated packages may be recycled. Vessels not properly emptied are special waste. |

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

| ADR | IMDG | IATA | ADN | RID |
|---|---|---|---|---|
| **14.1. UN number** | | | | |
| 1219 | | | | |
| **14.2. UN proper shipping name** | | | | |
| Isopropanol solution | ISOPROPANOL (ISOPROPYL ALCOHOL) SOLUTION | Isopropyl Alcohol | Not applicable | Isopropanol solution |
| **14.3. Transport hazard class(es)** | | | | |
| 3 | | | | |
| **14.4. Packing group** | | | | |
| II | | | | |
| **14.5. Environmental hazards** | | | | |
| Dangerous for the environment : No | Dangerous for the environment : No<br>Marine pollutant : No | Dangerous for the environment : No | Dangerous for the environment : No | Dangerous for the environment : No |

### 14.6. Special precautions for user

#### 14.6.1. Overland transport

Tunnel restriction code : D/E

#### 14.6.2. Transport by sea

EmS-No. : F-E, S-D

#### 14.6.3. Air transport

#### 14.6.4. Inland waterway transport

Carriage prohibited (ADN) : No

Not subject to ADN : No

#### 14.6.5. Rail transport

Carriage prohibited (RID) : No

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

**VOC Switzerland**

Weight fraction in % : 99.70

#### 15.1.2. National regulations

Restrictions of occupation : Observe empoyment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out

## SECTION 16: Other information

**Phrases used in s.2 and s.3:** H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.

**Additional information**

Classification for mixtures and used evaluation method according to regulation (EC) 1207/2008 [CLP]

SDS EU_NSC

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*