Conforms to Regulation (EC) No. 1907/2006 (REACH)

Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

PRODUCT NAME: NanoGLASS
SYNONYMS:
PRODUCT CODES: NG 1010

MANUFACTURER: NanoLOGIC Pty. Ltd.
DIVISION: NanoAUTO/NanoHOME
ADDRESS: 1033 Sydney Road, Coburg VIC 3058 Australia

EMERGENCY PHONE: + 612 9975 5602
CHEMTREC PHONE: 1 (800) 424-9300
OTHER CALLS: Chemtrec : 1-800-424-9300 (24H)
FAX PHONE: +612 8252 0898

CHEMICAL NAME: Ethyl Alcohol Solution
CHEMICAL FAMILY: Composition from modified hybrid materials in denatured ethanol solution
CHEMICAL FORMULA:

PRODUCT USE: Hydrophobic Glass Coating , Easy to Clean coating
PREPARED BY: Nanovations Pty Ltd

SECTION 1 NOTES:

Section 2. Hazard Identification

2.1 Classification of substance or mixture

Regulation (EC) No 1272/2008 (CLP)	
Hazard classes / Hazard categories	**Hazard Statement**
Flammable liquids, Category 2	H225

67/548/EEC or 1999/45/EC	
Hazard Characteristics	**R-phrase(s)**
Highly flammable.	R11

2.2 Label elements

Hazard pictograms
:
Signal word
Hazard statements

Danger
Highly flammable liquid and vapour.

Health Hazards : May cause irritation to respiratory system.
May cause moderate irritation to skin. May cause eye irritation. Ingestion may cause drowsiness and dizziness. Possibility of organ or organ system damage from prolonged exposure; see Chapter 11 for details. Target organ(s): Liver.

Safety Hazards : Highly flammable. Flammable liquid and vapour.

Environmental Hazards : Not classified as dangerous for the environment.
See Toxicological Information (section 11)

Section 3. Composition, Information on Ingredients

INGREDIENT:

CAS NO.	Concentration	ACGIH TL	OSHA PE
64-17-5	70 – 75	1000 ppm 1880 mg/m	1000 ppm 1900 mg/m
67-63-0	20 – 25	400 ppm 983 mg/m3	400 ppm 980 mg/m3
7631-86-9	< 5	None	None
7732-18-5	< 5	None	None

Section 4. First Aid Measures

Inhalation : Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

Skin Contact : Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.

Eye Contact : Flush eyes with water while holding eyelids open.
If redness, burning, blurred vision, or swelling persist, transport to the nearest medical facility for additional treatment.

Ingestion : If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Indication of immediate medical attention needed : If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. Breathing of high vapour concentrations may cause central nervous system (CNS) depression resulting in dizziness, light-headedness, headache , , nausea and loss of coordination. Continued inhalation may result in unconsciousness and death. Liver damage may be indicated by loss of appetite, jaundice (yellowish skin and eye colour), fatigue, bleeding or easy bruising and sometimes pain and swelling in the upper right abdomen.

Section 5. Fire Fighting Measures

Extinguishing Media : Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable Extinguishing Media : Do not use water in a jet.

Special hazards arising from substance or mixture : Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Ethanol burns with a smokeless blue flame that is not always visible in normal light.

Advice for fire-fighters : Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

Additional Advice : If possibleremove containers from the danger zone. If the fire cannot be extinguished the only course of action is to evacuate immediately. Contain residual material at affected sites to prevent material from entering drains (sewers), ditches, and waterways.

Section 6. Accidental Release Measures

Large Spill and Leak

Small quantities can be mopped or wiped up with rags.
Eliminate all ignition sources. Keep unnecessary personnel away. Stop leak if without risk. Use suitable protective equipment (Section 8). For small spills add absorbent (soil may be used in the absence of other suitable materials) and use a non-sparking or explosion proof means to transfer material to a sealed, appropriate container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Minimize contact of spilled material with soils to prevent runoff to surface waterways

Vapor can travel for considerable distances both above and below the ground surface. Underground services (drains, pipelines, cable ducts) can provide preferential flow paths. Do not breathe fumes, vapor.

Section 7. Handling and Storage

Handling

Keep container closed. Use only with adequate ventilation. Keep away from heat, sparks and flame. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion-proof electrical (ventilating, lighting and material handling equipment).

Storage

Store in a segregated and approved area. Keep container in a cool, well-ventilated area.
closed and sealed until ready for use. Avoid all possible sources of ignition (spark or flame).
Keep container tightly closed.

General Precautions

Avoid breathing vapours or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Chapter 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine Appropriate controls for safe handling, storage and disposal of this material. Air-dry contaminated clothing in a well-ventilated area before laundering.

Section 8. Exposure Controls, Personal Protection

If the American Conference of Governmental Industrial Hygienists (ACGIH) value is provided on this document, it is provided for information only.
Read in conjunction with the Exposure Scenario for your specific use contained in the Annex.

8.1 Control Parameters

Occupational Exposure Limits

Material	Source	Type	ppm	mg/m3	OSHA PE
Ethanol	EH40 WEL	TWA	1,000 ppm	1,920 mg/m3	1000 ppm
	ACGIH	STEL	1,000 ppm		

Material	Source	Type	ppm	mg/m3	OSHA PE
Isopropanol Alcohol	EH40 WEL	TWA	400 ppm	1,920 mg/m3	400 ppm
	ACGIH	STEL	400 ppm		

8.2 Exposure Controls

General Information : The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Use sealed systems as far as possible. Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Local exhaust ventilation is recommended. Eye washes and showers for emergency use. Read in conjunction with the Exposure Scenario for your specific use contained in the Annx.

8.2 Exposure Controls

Hand protection	: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
Body protection	: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Other skin protection	: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
Respiratory protection	: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
Environmental exposure controls	: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Section 9. Physical and Chemical Properties

Apperance	Clear colorless	Odor Odor threshold	Alcoholic 49 ppm
PHYSICAL STATE:	Liquid	pH AS SUPPLIED:	Ca 2
BOILING POINT F: C:	208 78	MELTING POINT F: C:	
VAPOR PRESSURE (mmHg):	5.9 kPa [20℃]	VAPOR DENSITY (AIR = 1):	1.6
VOLATILE ORGANIC COMPOUNDS (VOC):		MOLECULAR WEIGHT: VISCOSITY:	
SPECIFIC GRAVITY (H2O = 1):	0.78 0.7 g / ml	Flashpoint	F: 61 C: 16
EVAPORATION RATE: BASIS (=1):	1.7	SOLUBILITY IN WATER	yes

Section 10. Stability and Reactivity

Stability and Reactivity The product is stable.

Conditions to avoid

Incompatibility with Temperature extremes. Avoid storage heat over 35℃ (95℉)

N/A

Section 11. Toxicological Information

Basis for Assessment	:	Information given is based on product data, a knowledge of the components and the toxicology of similar products.
Acute Oral Toxicity	:	Low toxicity: LD50 >2000 mg/kg , Rat
Acute Dermal Toxicity	:	Not expected to be a hazard.
Acute Inhalation Toxicity	:	Low toxicity by inhalation.
Skin Corrosion/Irritation	:	Slightly irritating to skin. Repeated exposure may cause skin dryness or cracking.
Serious Eye Damage/Irritation	:	Causes serious eye irritation.
Respiratory Irritation	:	Inhalation of vapors or mists may cause irritation.
Respiratory or Skin Sensitization		

Chronic Effects on Humans:

CARCINOGENIC EFFECTS:

Classified PROVEN by State of California Proposition 65 [Ethyl alcohol 200 Proof]. Classified A4 (Not classifiable for human or animal.) by ACGIH [Ethyl alcohol 200 Proof]. MUTAGENIC EFFECTS: Mutagenic for mammalian somatic cells. [Ethyl alcohol 200 Proof]. Mutagenic for bacteria and/or yeast. [Ethyl alcohol 200 Proof]. TERATOGENIC EFFECTS: Classified PROVEN for human [Ethyl alcohol 200 Proof]. DEVELOPMENTAL TOXICITY: Classified Development toxin [PROVEN] [Ethyl alcohol 200 Proof]. Classified Reproductive system/toxin/female, Reproductive system/toxin/male [POSSIBLE] [Ethyl alcohol 200 Proof]

Section 12. Ecological Information

Ecotoxicity: Not available.
BOD5 and COD: Not available.

Products of Biodegradation:

Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation: The product itself and its products of degradation are not toxic**.**

Special Remarks on the Products of Biodegradation: Not available.

Section 13. Disposal Considerations

Waste Information Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Material Disposal	:	Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations. Waste arising from a spillage or tank cleaning should be disposed of in accordance with prevailing regulations, preferably to a recognized collector or contractor. The competence of the collector or contractor should be established beforehand. Do not dispose into the environment, in drains or in water courses. Do not dispose of tank water bottoms by allowing them to drain into the ground. This will result in soil and groundwater contamination.
Container Disposal	:	Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion.

Section 14 Transport Information

Land transport (ADR/RID): ADR

14.1 UN No. : 1170

14.2 UN Proper Shipping Name : ETHYL ALCOHOL SOLUTION

14.3 Transport Hazard Class : 3

14.4 Packing group : II

Danger label (primary risk) : 3

14.5 Environmental Hazard : No

14.6 Special Precautions for user : Special Precautions: Refer to Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or ne eds to comply with in connection with transport.

DOT

DOT Shipping Name: ETHYL ALCOHOL SOLUTION

Canada TDG: ETHYL ALCOHOL SOLUTION

DOT Hazard Class: 3,

Packing group II.

Identification Number: UN1170. UN Number: UN1170.

RID

14.1 UN No. : 1170

14.2 UN Proper Shipping Name : ETHYL ALCOHOL SOLUTION

14.3 Transport Hazard : 3

14.4 Packing group : II

Danger label (primary risk) : 3

14.5 Environmental Hazard : No

14.6 Special Precautions for user : Special Precautions: Refer to Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

Sea transport (IMDG Code):

14.1 UN No. : UN 1170

14.2 UN Proper Shipping Name : ETHYL ALCOHOL SOLUTION

14.3 Transport Hazard Class : 3

14.4 Packing group : II

14.5 Marine pollutant : No

14.6 Special Precautions for user

Air transport (IATA):

14.1 UN No. : 1170

14.2 UN Proper Shipping Name : ETHYL ALCOHOL SOLUTION

14.3 Transport Hazard Class : 3

14.4 Packing group : : II

Special Precautions: Refer to Chapter 7, Handling & Storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

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Section 15. Regulatory Information

U.S. Regulations US INVENTORY (TSCA): Listed on inventory.

Other Regulations AUSTRALIAN INVENTORY (AICS): Listed.
CANADA INVENTORY (DSL): Listed on inventory.
CHINA INVENTORY (IECSC): Listed on inventory.
EC INVENTORY (EINECS/ELINCS): Listed in inventory.
JAPAN INVENTORY (ENCS): Listed in Inventory

Other Regulations: OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).
Other Classifications:
WHMIS (Canada):
15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
EU Regulation (EC) No. 1907/2006 (REACH) Annex XIV - List of substances subject to authorisation
Substances of very high concern

None of the components are listed

Annex XVII – Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles : Not applicable.

Other EU regulations
Europe inventory : This material is listed or exempted.
Black List Chemicals : Not listed
Priority List Chemicals : Not listed
Integrated pollution prevention and control list (IPPC) – Air : Not listed
Integrated pollution prevention and control list (IPPC) - Water: Not listed

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Section 16. Other Information

Labeling according to Regulation (EC) No 1272/2008

H225: Highly flammable liquid and vapor.
ENVIRONMENTAL HAZARDS:
Not classified as an environmental hazard under GHS criteria.

CLP Precautionary statements

Prevention : P102: Keep out of reach of children.
P210: Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
P233: Keep container tightly closed.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Storage : P403+P235: Store in a well-ventilated place. Keep cool.

Labeling according to Directive 1999/45/EC

EC Symbols : F Highly flammable.
EC Classification : Highly flammable.
EC Risk Phrases : R11 Highly flammable.
EC Safety Phrases : S2 Keep out of the reach of children.
S7 Keep container tightly closed.
S16 Keep away from sources of ignition - No smoking.

Section 17. Disclaimer

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.