

Safety Data Sheet **KTV** NANO GLASS

Section 1. Chemical Product and Company Identification

PRODUCT NAME: KTV Nano Glass
SYNONYMS:
PRODUCT CODES:

MANUFACTURER: KTV Working Drone AS
DIVISION: Industrial coatings
ADDRESS: Hanøytangen 111, N5310 Hauglandshella, Norway

EMERGENCY PHONE: +47 56 15 66 00

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: KTV Working Drone AS

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-phrases
Highly flammable.	R11

2.2 Label elements

Hazard pictograms



Signal word (GHS)

: **Danger**

Hazard statements (GHS0 :

Eye Irritation: Category 2A
Flammable Liquids: Category 2

H225 - Highly flammable liquid and vapour
H302 - Harmful if swallowed
H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation

Precautionary statements (GHS) :

P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking
P233 - Keep container tightly closed
P241 - Use explosion-proof electrical, lighting, ventilating equipment
P242 - Use only non-sparking tools

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

Name	CAS	%	Classification
Ethanol Alcohol, denatured	64-17-5	> 85 %	65, 66,11
Isopropanol Alcohol	67-63-0	> 5 %	65, 66,11
Non hazardous		Balance to 100 %	--

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 (S24)** : Irritating to skin. Remove affected person from source of contamination. Wash contaminated skin promptly with soap or mild detergent and water. Remove clothing promptly, if soaked through, and wash as above.
- Eye Contact** : Irritating to eyes. Can be damaging if large amount is splashed into eyes. Wash eyes promptly with plenty of water, while lifting the eye lids. Continue to rinse for at least 15 minutes, and get medical attention.
- 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.
- Inhalation** : Occupational exposure limits (8-hour reference period) 1000 ppm (1900 mg/m3 . Intoxicating if continuously inhaled for a long period of time. Move the person to fresh air, immediately perform artificial respiration if breathing has stopped. When breathing is difficult, properly-trained personnel may administer oxygen. Keep the person warm and at rest. Get medical attention promptly.

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 possible remove 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

- 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
- Large Spill and Leak**

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 vapors 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

8.1 Control Parameters

Occupational Exposure Limits

Material	Source	Type	ppm	mg/m3	Notation
Ethanol	EH40 WEL	TWA	1,000 ppm	1,920 mg/m3	

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

VENTILATION

Store in a well-ventilated area. Work area must be well ventilated . Use engineering controls to reduce air contamination to permissible exposure level

RESPIRATORS

No specific recommendation made, but respiratory protection must be used if the general level exceeds the Occupational Exposure Level (OEL).

PROTECTIVE GLOVES

Wear gloves of impervious material e.g. laminated film or nitrile. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken .

EYE PROTECTION:

Wear approved chemical safety goggles where eye exposure is reasonably probable. Contact lenses should not be worn when working with this chemical!

OTHER PROTECTION

Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station and safety shower. If engineering controls are not effective in controlling airborne exposure then an approved respirator with a replaceable organic vapour filter should be used. Wear appropriate clothing to prevent repeated or prolonged skin contact.

Section 9. Physical and Chemical Properties

Appearance	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°C]	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		yes

Section 10. Stability and Reactivity

Stability and Reactivity Stable under recommended storage conditions.

Conditions to avoid Heat, flames and sparks. Extremes of temperature and direct sunlight

Incompatibility with Alkali metals, Ammonia, Oxidizing agents, Peroxides

Section 11. Toxicological Information

LD/LC50 values that are relevant:
LD50: ORL-RAT, 7,060 mg/kg (Ethanol)

Carcinogenicity Classification:
IARC (International Agency for Research on Cancer) - Not Listed
NTP (National Toxicology Program) - Not Listed

Eye: Produces irritation, characterized by a burning sensation, redness, tearing, inflammation,

Ingestion: May cause gastrointestinal irritation with nausea, vomiting, and diarrhea. May cause systemic toxicity with acidosis. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. Vapors may cause dizziness or suffocation.

Skin: Causes moderate skin irritation. Dry skin

Chronic: Prolonged or repeated skin contact may cause dermatitis. Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion. Prolonged ingestion may cause liver, kidney, and heart damage.

Section 12. Ecological Information

Eco-toxicity: 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.

The product is biodegradable and has not been shown to interfere in anyway with waste water treatment plants. In high concentrations it harms fish and plankton.

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 needs 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
 EMS No.: F-E, S-D
 14.5 Marine pollutant : No
 14.6 Special Provision : Special Provision: 144

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
 Packaging Instructions (passenger & cargo): 353
 Packaging Instructions (cargo only): 364
 Special Provision: A 46

Section 15. Regulatory Information

**U.S. Regulations
 Other Regulations**

US INVENTORY (TSCA): All components are listed or exempted.
 Australia inventory (AICS): All components are listed or exempted.
 Canada inventory: All components are listed or exempted.
 Japan inventory: All components are listed or exempted.
 China inventory (IECSC): All components are listed or exempted.
 Korea inventory: All components are listed or exempted.
 New Zealand Inventory (NZIoC): All components are listed or exempted.
 Philippines inventory (PICCS): All components are listed or exempted.
 United States inventory (TSCA 8b): All components are listed or exempted.
 Taiwan inventory (CSNN): All components are listed or exempted.

Labeling according to Regulation GHS

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
 Labeling according to Directive 1999/45/EC**

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

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 16. Other Information

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.