



Jarefin bv ovve bvba
9051 Sint-Denijs-Westrem

Date printed 09.02.2023, Revision 07.02.2023

Version 2.0. Supersedes version: 1.0

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

1.1 Product identifier

INVISIBLE SHIELD® Glass & Surface Coating / Surface Protectant Liquid - RTU

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

1.2.1 Relevant uses

Coating agent

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

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Poolse-Winglaan 90
9051 Sint-Denijs-Westrem / BELGIUM
Phone +32 9 228 33 23
Homepage <https://www.jarefin.be/>
E-mail INFO@UNELKO.BE

Manufacturer

UNELKO CORPORATION
1616 W. Williams Dr.
AZ 85027 Phoenix / USA
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Fax 480.483.7674
Homepage www.unelko.com
E-mail info@unelko.com

Address enquiries to

Technical information

info@unelko.be

Safety Data Sheet

info@unelko.be

1.4 Emergency telephone number

Company

+32 9 228 33 23

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

Flam. Liq. 2: H225 Highly flammable liquid and vapour.

2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

Hazard pictograms



Signal word

DANGER

Hazard statements

H225 Highly flammable liquid and vapour.

Precautionary statements

P102 Keep out of reach of children.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 Keep container tightly closed.
P403+P235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container in accordance with local/national regulation.

2.3 Other hazards

Physico-chemical hazards

Vapours may form explosive mixture with air.

Other hazards

Further hazards were not determined with the current level of knowledge.



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SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
ca. 92	Ethanol CAS: 64-17-5, EINECS/ELINCS: 200-578-6, EU-INDEX: 603-002-00-5 GHS/CLP: Flam. Liq. 2: H225
1 - 8	Dimethylpolysiloxanes CAS: 94363-18-5

Comment on component parts

Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information

Take off contaminated clothing and wash before reuse.

Inhalation

Ensure supply of fresh air.
Remove the victim into fresh air and keep him calm.
In the event of symptoms seek medical treatment.

Skin contact

When in contact with the skin, clean with soap and water.
Consult a doctor if skin irritation persists.

Eye contact

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion

Do not induce vomiting.
Rinse mouth.
Seek medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Cough
Redness
Nausea, vomiting.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to your doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Foam, dry powder, water spray jet, carbon dioxide
Alcohol-resistant foam.

Extinguishing media that must not be used

Full water jet

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Carbon monoxide (CO)
Carbon dioxide (CO₂)
Silicon compounds



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5.3 Advice for firefighters

Use self-contained breathing apparatus.
Cool containers at risk with water spray jet.
Collect contaminated firefighting water separately, must not be discharged into the drains.
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Keep away from all sources of ignition.
Ensure adequate ventilation.
Wear suitable protective equipment. For personal protection see SECTION 8.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, universal absorbent, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Provide good room ventilation even at ground level (vapours are heavier than air).
Avoid contact with eyes and skin. Use personal protective equipment.
Keep out of reach of children and domestic animals.
Keep away from open flames, hot surfaces and sources of ignition.
Ignitable mixtures can be formed in the empty container.
Use explosion-proofed equipment/fittings and non-sparking tools.
Ground/bond container and receiving equipment.
Wash face and/or hands before break and end of work.
Use barrier skin cream.
Take off contaminated clothing and wash before reuse.
Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.
Provide solvent-resistant and impermeable floor.
Do not store together with oxidizing agents.
Do not store together with acids and alkalies.
Do not store together with food and animal food/diet.
Keep container tightly closed.
Keep container in a well-ventilated place.
Protect from heat/overheating and from sun.
Keep in a cool place. Store in a dry place.
Store in a dark place.

7.3 Specific end use(s)

See product use, SECTION 1.2



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SECTION 8: Exposure controls / personal protection

8.1 Control parameters

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
Eye protection	If there is a risk of splashing: safety glasses (EN 166:2001)
Hand protection	Not required under normal conditions. In full contact: > 0.11 mm. butyl rubber, > 120 min (EN 374) The details concerned are recommendations. Please contact the glove supplier for further information.
Skin protection	Solvent-resistant protective clothing (EN 340)
Other	Avoid contact with eyes and skin. Do not inhale vapours. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	Not required under normal conditions. In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection. Short term: filter apparatus, filter A. (DIN EN 14387)
Thermal hazards	not applicable
Delimitation and monitoring of the environmental exposition	Comply with applicable environmental regulations limiting discharge to air, water and soil.



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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	Liquid
Form	liquid
Color	clear
Odor	alcoholic
Odour threshold	No information available.
pH-value	No information available.
pH-value [1%]	3
Boiling point [°C]	78
Flash point [°C]	10
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	4.4
Density [g/cm ³]	No information available.
Relative density	0.792
Bulk density [kg/m ³]	not applicable
Solubility in water	100 g/l
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	not applicable
Kinematic viscosity	not relevant
Relative vapour density	> 1
Evaporation speed	No information available.
Melting point [°C]	No information available.
Auto-ignition temperature [°C]	No information available.
Decomposition temperature [°C]	No information available.
Particle characteristics	No information available.

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

Evolution of flammable mixtures possible in air when heated above flash point and/or during spraying or misting.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).
Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Reactions with alkalis (lyes).
Reactions with oxidizing agents.
Reactions with acids.

10.4 Conditions to avoid

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.



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10.5 Incompatible materials

See SECTION 10.3.

10.6 Hazardous decomposition products

No decomposition if used and stored according to specifications.
In the event of fire: See SECTION 5.



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SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity

Product
ATE-mix, oral, > 5000 mg/kg
Substance
Ethanol, CAS: 64-17-5
LD50, oral, Rabbit, 7060 mg/kg

Acute dermal toxicity

Product
Based on the available information, the classification criteria are not fulfilled.
Substance
Ethanol, CAS: 64-17-5
LD50, dermal, Rabbit, 7430 mg/kg

Acute inhalational toxicity

Product
Based on the available information, the classification criteria are not fulfilled.
Substance
Ethanol, CAS: 64-17-5
LC50, inhalative, Rat, 37620 mg/m ³ /10h

Serious eye damage/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
Ethanol, CAS: 64-17-5
adverse effect observed

Skin corrosion/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
Ethanol, CAS: 64-17-5
no adverse effect observed

Respiratory or skin sensitisation Based on the available information, the classification criteria are not fulfilled.

Substance
Ethanol, CAS: 64-17-5
no adverse effect observed

Specific target organ toxicity — single exposure Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure Based on the available information, the classification criteria are not fulfilled.

Mutagenicity Based on the available information, the classification criteria are not fulfilled.

Reproduction toxicity Based on the available information, the classification criteria are not fulfilled.

- Fertility



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Substance

Ethanol, CAS: 64-17-5

NOAEL, oral, mouse, 20700 mg/kg bw/d (Effect on fertility), no adverse effect observed

- Development

Substance

Ethanol, CAS: 64-17-5

NOAEC, inhalative, Rat, 30400 mg/m³ (Effect on developmental toxicity), no adverse effect observed

Carcinogenicity Based on the available information, the classification criteria are not fulfilled.

Aspiration hazard Based on the available information, the classification criteria are not fulfilled.

General remarks

Toxicological data of complete product are not available.

11.2 Information on other hazards

Endocrine disrupting properties No information available.

Other information none

SECTION 12: Ecological information

12.1 Toxicity

Substance

Ethanol, CAS: 64-17-5

LC50, (48h), Daphnia sp., > 100 mg/l

LC50, (96h), fish, > 100 mg/l

EC50, (96h), Algae, > 100 mg/l

12.2 Persistence and degradability

Behaviour in environment compartments No information available.

Behaviour in sewage plant No information available.

Biological degradability 94% (CAS 64-17-5)(Lit.)

12.3 Bioaccumulative potential

log Pow: -0.32 (CAS 64-17-5) - Accumulation in organisms is not expected.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

Ecological data of complete product are not available.

Do not discharge product unmonitored into the environment or into the drainage.



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SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Coordinate disposal with the authorities if necessary.

Waste no. (recommended) 070704*
160305*
200113*

Contaminated packaging

Uncontaminated packaging may be taken for recycling.
Packaging that cannot be cleaned should be disposed of as for product.

Waste no. (recommended) 150110* packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID 1170

Inland navigation (ADN) 1170

Marine transport in accordance with IMDG 1170

Air transport in accordance with IATA 1170



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14.2 UN proper shipping name

Transport by land according to ADR/RID Ethanol solution

- Classification Code F1

- Label



- ADR LQ 1 I

- ADR 1.1.3.6 (8.6) Transport category (tunnel restriction code) 2 (D/E)

Inland navigation (ADN) Ethanol solution

- Classification Code F1

- Label



Marine transport in accordance with IMDG Ethanol solution

- EMS F-E, S-D

- Label



- IMDG LQ 1 I

Air transport in accordance with IATA Ethanol solution

- Label



14.3 Transport hazard class(es)

Transport by land according to ADR/RID 3

Inland navigation (ADN) 3

Marine transport in accordance with IMDG 3

Air transport in accordance with IATA 3

14.4 Packing group

Transport by land according to ADR/RID II

Inland navigation (ADN) II

Marine transport in accordance with IMDG II

Air transport in accordance with IATA II



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14.5 Environmental hazards

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Maritime transport in bulk according to IMO instruments

No information available.

SECTION 15: Regulatory information

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

EEC-REGULATIONS 2008/98/EC 2000/532/EC; 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014

TRANSPORT-REGULATIONS ADR (2023); IMDG-Code (2023, 41. Amdt.); IATA-DGR (2023)

NATIONAL REGULATIONS (EU):

- **Observe employment restrictions for people** Observe employment restrictions for young people.
SEVESO III (Directive 2012/18/EU), Hazard categories in accordance with Regulation (EC) No 1272/2008:
P5c FLAMMABLE LIQUIDS
Qualifying quantity (tonnes), Column 2: 5 000
Qualifying quantity (tonnes), Column 2: 50 000

- **VOC (2010/75/CE)** ca. 92 %

15.2 Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H225 Highly flammable liquid and vapour.



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16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform Chemical Information Database
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV@TWA = Threshold limit value – time-weighted average
TLV@STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

Flam. Liq. 2: H225 Highly flammable liquid and vapour. (On basis of test data)

Modified position

SECTION 5 been added: Collect contaminated firefighting water separately, must not be discharged into the drains.

SECTION 5 been added: Silicon compounds

SECTION 10 been added: No decomposition if used and stored according to specifications.



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