




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

- **Date of compilation:** 06.06.2014
- **1.1 Product identifier**
- **Trade name:** VOC Speedgloss Hardener


- **Article number(s):** 50480
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the preparation:** Hardening agent / Curing agent
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer / Supplier:**
Quartz Refinish Limited, Morleys Group
250 Osmaston Road, Derby
DE23 8LB, England
Phone: +44 1332 611893
Fax: +44 1332 331611
- **E-mail address of the competent person responsible for the Safety Data Sheet:** info@spraygunsdirect.co.uk
- **Informing department:** Sprayguns Direct Limited Morleys Group
- **1.4 Emergency telephone number:** +44 1332 611893

SECTION 2: Hazards identification


- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**
-  **GHS02 flame**
Flam. Liq. 3 H226 Flammable liquid and vapour.
-  **GHS07**
Acute Tox. 4 H332 Harmful if inhaled.
Eye Irrit. 2 H319 Causes serious eye irritation.
Skin Sens. 1 H317 May cause an allergic skin reaction.
STOT SE 3 H335 May cause respiratory irritation.
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

 **Xn; Harmful**

R20: Harmful by inhalation.

 **Xi; Irritant**

R36/37: Irritating to eyes and respiratory system.

 **Xi; Sensitising**

R43: May cause sensitisation by skin contact.

R10-66: Flammable. Repeated exposure may cause skin dryness or cracking.

- **Information concerning particular hazards for human and environment:**
Long or repeated contact with skin may cause dermatitis due to the degreasing effect of the solvent.

- **Classification system:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

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· **Hazard pictograms**

GHS02 GHS07

· **Signal word** Warning· **Hazard-determining components of labelling:**

Methyl isobutyl ketone
Hexane, 1,6-diisocyanato-, homopolymer
5-Methylhexan-2-one
Hexamethylene-di-isocyanate

· **Hazard statements**

H226 Flammable liquid and vapour.
H332 Harmful if inhaled.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H335 May cause respiratory irritation.

· **Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P103 Read label before use.
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P243 Take precautionary measures against static discharge.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P312 Call a POISON CENTER/doctor if you feel unwell.

· **Additional information:**

EUH066 Repeated exposure may cause skin dryness or cracking.
Contains isocyanates. May produce an allergic reaction.

· **2.3 Other hazards**· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.
· **vPvB:** Not applicable.

SECTION 3: Composition/information on ingredients

· **3.2 Chemical characterization: Mixtures**

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

· **Dangerous components:**

CAS: 28182-81-2 NLP: 500-060-2	Hexane, 1,6-diisocyanato-, homopolymer Xi R43 Skin Sens. 1, H317	50-100%
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CAS: 108-10-1 EINECS: 203-550-1 Index number: 606-004-00-4	Methyl isobutyl ketone ☒ Xn R20; ☒ Xi R36/37; ☒ F R11 R66 ☠ Flam. Liq. 2, H225; ⚠ Acute Tox. 4, H332; Eye Irrit. 2, H319; STOT SE 3, H335	10-25%
CAS: 123-86-4 EINECS: 204-658-1 Index number: 607-025-00-1	n-Butyl acetate R10-66-67 ☠ Flam. Liq. 3, H226; ⚠ STOT SE 3, H336	2.5-10%
CAS: 110-12-3 EINECS: 203-737-8 Index number: 606-026-00-4	5-Methylhexan-2-one ☒ Xn R20 R10 ☠ Flam. Liq. 3, H226; ⚠ Acute Tox. 4, H332	2.5-10%
CAS: 822-06-0 EINECS: 212-485-8 Index number: 615-011-00-1	Hexamethylene-di-isocyanate ☠ T R23; ☒ Xn R42/43; ☒ Xi R36/37/38 ☠ Acute Tox. 3, H331; ⚠ Resp. Sens. 1, H334; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; STOT SE 3, H335	< 0.5%

· **Additional information:** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· **General information:**

Immediately remove any clothing contaminated by the product.

Symptoms of poisoning may occur after several hours. Medical observation for at least 48 hours after the accident is recommended.

· **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor.

In case of unconsciousness bring patient into stable side position for transport.

· **After skin contact:**

Instantly wash with water and soap and rinse thoroughly.

After prolonged skin contact defatting of skin possible, use skin protecting agent after prolonged skin contact.

If skin irritation continues, consult a doctor.

· **After eye contact:** Rinse opened eye for several minutes under running water. Then consult doctor.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

If swallowed, seek medical advice immediately and show this container or label.

· **4.2 Most important symptoms and effects, both acute and delayed** No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed** symptomatic treatment

SECTION 5: Firefighting measures

· **5.1 Extinguishing media**

· **Suitable extinguishing agents**

Carbon dioxide (CO₂), extinguishing powder or water spray/fog. Fight larger fires with water spray/fog or alcohol-resistant foam.

· **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

· **5.2 Special hazards arising from the substance or mixture**

Nitrogen oxides (NO_x)

Carbon monoxide (CO) and Carbon dioxide (CO₂)

Can form explosive vapour-air mixtures.

· **5.3 Advice for firefighters**

· **Protective equipment:** Wear self-contained breathing apparatus.

· **Additional information**

Cool endangered containers with water spray jet.

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Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
If without risk possible, move drums with material away from dangerous area.

SECTION 6: Accidental release measures

· **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

Remove all ignition sources.

Do not breathe vapour.

Avoid contact with skin and eyes.

· **6.2 Environmental precautions:**

Do not allow to enter drainage system, surface or ground water.

Inform respective authorities in case product reaches water or sewage system.

Prevent material from reaching sewage system, holes and cellars.

· **6.3 Methods and material for containment and cleaning up:**

Ensure adequate ventilation.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of the material collected according to regulations.

· **6.4 Reference to other sections**

See Section 8 for information on personal protection equipment.

SECTION 7: Handling and storage

· **7.1 Precautions for safe handling**

Ensure good ventilation/exhaustion at the workplace.

Ensure good interior ventilation, especially at floor level (fumes are heavier than air).

Use only in well ventilated areas.

Avoid contact with skin and eyes.

Do not breathe vapour/spray.

· **Information about protection against explosions and fires:**

Fumes can combine with air to form an explosive mixture.

Flammable fume/air mixtures may be formed in empty containers.

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage**

· **Requirements to be met by storerooms and containers:**

Observe regulations for storage of flammable liquids.

Observe all local and national regulations for storage of water polluting products.

· **Information about storage in one common storage facility:**

Observe regulations for storage of flammable liquids.

· **Further information about storage conditions:**

Store container in a well ventilated position.

Store in cool, dry conditions in well sealed containers.

Protect from heat and direct sunlight.

· **7.3 Specific end use(s)** No further relevant information available.

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SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

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· **8.1 Control parameters**

· Components with critical values that require monitoring at the workplace:	
108-10-1 Methyl isobutyl ketone	
WEL (Great Britain)	Short-term value: 416 mg/m ³ , 100 ppm Long-term value: 208 mg/m ³ , 50 ppm Sk, BMGV
IOELV (European Union)	Short-term value: 208 mg/m ³ , 50 ppm Long-term value: 83 mg/m ³ , 20 ppm
123-86-4 n-Butyl acetate	
WEL (Great Britain)	Short-term value: 966 mg/m ³ , 200 ppm Long-term value: 724 mg/m ³ , 150 ppm
110-12-3 5-Methylhexan-2-one	
WEL (Great Britain)	Short-term value: 475 mg/m ³ , 100 ppm Long-term value: 95 mg/m ³ , 20 ppm Sk
IOELV (European Union)	Long-term value: 95 mg/m ³ , 20 ppm
822-06-0 Hexamethylene-di-isocyanate	
WEL (Great Britain)	Short-term value: 0.07 mg/m ³ Long-term value: 0.02 mg/m ³ Sen; as -NCO
· Ingredients with biological limit values:	
108-10-1 Methyl isobutyl ketone	
BMGV (Great Britain)	20 µmol/L Medium: urine Sampling time: post shift Parameter: 4-methylpentan-2-one

· **Additional information:** The lists that were valid during the compilation were used as basis.· **8.2 Exposure controls**· **Personal protective equipment**· **General protective and hygienic measures**

Keep away from foodstuffs, beverages and food.

Instantly remove any contaminated garments.

Do not eat, drink or smoke while working.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Wash hands during breaks and at the end of the work.

· **Breathing equipment:**

In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

· **Protection of hands:**

Protective gloves

To avoid skin problems reduce the wearing of gloves to the required minimum.

Check the permeability prior to each renewed use of the glove.

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**

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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**

Protective gloves should be replaced at first signs of wear.

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

· **Eye protection:** Tightly sealed safety glasses

· **Body protection:**

Protective work clothing

Body protection must be chosen depending on activity and possible exposure.

SECTION 9: Physical and chemical properties

· 9.1 Information on basic physical and chemical properties	
· General Information	
· Appearance:	
Form:	liquid
Colour:	colourless
· Smell:	solvent-like
· Odour threshold:	no data available
· pH-value:	not applicable
· Change in condition	
Melting point/Melting range:	not determined
Boiling point/Boiling range:	not determined
· Flash point:	23 °C
· Inflammability (solid, gaseous)	not applicable
· Ignition temperature:	370 °C
· Decomposition temperature:	not determined
· Self-inflammability:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapour mixtures is possible.
· Critical values for explosion:	
Lower:	1.7 Vol %
Upper:	9.0 Vol %
· Oxidizing properties	not applicable
· Vapor pressure:	not determined
· Density at 20 °C:	~ 1 g/cm ³
· Relative density at 20 °C	~ 1 (H ₂ O = 1)
· Vapour density (AIR = 1):	not determined
· Evaporation rate	not determined
· Solubility in / Miscibility with	
Water:	not miscible or difficult to mix
· Partition coefficient (n-octanol/water): not determined	
· Viscosity:	
dynamic:	not determined
kinematic at 20 °C:	> 40 s (ISO 6 mm)

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- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** see 10.3
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
Avoid impact, friction, heat, sparks, electrostatic charges.
- **10.3 Possibility of hazardous reactions**
Flammable vapour-air mixtures may develop.
Used empty containers may contain product gases which form explosive mixtures with air.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** Strong oxidizing agents
- **10.6 Hazardous decomposition products:**
Nitrogen oxides (NO_x)
Carbon monoxide (CO) and Carbon dioxide (CO₂)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

· LD/LC50 values that are relevant for classification:		
28182-81-2 Hexane, 1,6-diisocyanato-, homopolymer		
Oral	LD50	> 2000 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg (rat)
108-10-1 Methyl isobutyl ketone		
Oral	LD50	2100 mg/kg (rat)
Dermal	LD50	16000 mg/kg (rabbit)
Inhalative	LC50/4 h	8.3 - 16.6 mg/l (rat)
123-86-4 n-Butyl acetate		
Oral	LD50	13100 mg/kg (rat)
Dermal	LD50	14100 mg/kg (rabbit)
Inhalative	LC50/4 h	> 21 mg/l (rat)
110-12-3 5-Methylhexan-2-one		
Oral	LD50	5700 mg/kg (rat)
Dermal	LD50	8140 mg/kg (rabbit)
Inhalative	LC50/4 h	3.813 mg/l (rat)
		LC50/6 h
822-06-0 Hexamethylene-di-isocyanate		
Oral	LD50	1050 mg/kg (rat)
Inhalative	LC50/4 h	0.124 mg/l (rat)

- **Primary irritant effect:**
- **on the skin:** Long or repeated contact can defat skin and may cause dermatitis.
- **on the eye:** Irritant effect
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

Harmful
Irritant

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- Sensitising
- **Sensitisation** May cause sensitisation by skin contact.
- **Repeated dose toxicity** not classified
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
According to present knowledge no CMR-effects known.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

123-86-4 n-Butyl acetate

EC50	959 mg/l (<i>pseudomonas putida</i>) (EC10)
EC50/24 h	72.8 mg/l (water flea (<i>daphnia magna</i>))
IC50/72 h	674.7 mg/l (algae (<i>Scenedesmus subspicatus</i>))
LC50/96 h	62 mg/l (<i>leuciscus idus</i>) 100 mg/l (bluegill (<i>lepomis macrochirus</i>)) 18 mg/l (fathead minnow (<i>pimephales promelas</i>))
NOEC/21 d	23 mg/l (water flea (<i>daphnia magna</i>))

110-12-3 5-Methylhexan-2-one

EC50/96 h	560 mg/l (<i>daphnia</i>)
LC50/48 h	164 - 193 mg/l (<i>leuciscus idus</i>)
LC50/96 h	> 81.4 mg/l (<i>daphnia</i>) 81.4 mg/l (fathead minnow (<i>pimephales promelas</i>))

822-06-0 Hexamethylene-di-isocyanate

EC0/48 h	≥ 89.1 mg/l (water flea (<i>daphnia magna</i>))
EC50/72 h	> 77.4 mg/l (algae (<i>Scenedesmus subspicatus</i>))
LC0/96 h	≥ 82.8 mg/l (zebra fish (<i>danio rerio</i>))

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:** Water hazard class 2 (Self-assessment): hazardous for water
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Disposal must be made according to official regulations.
- **European waste catalogue:**
Waste disposal key numbers from EWC have to be assigned depending on origin and processing.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

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SECTION 14: Transport information

· 14.1 UN-Number · ADR, IMDG, IATA	UN1263
· 14.2 UN proper shipping name · ADR · IMDG, IATA	UN1263 PAINT RELATED MATERIAL, Special provision 640E PAINT RELATED MATERIAL
· 14.3 Transport hazard class(es) · ADR	
	
· Class · Label	3 (F1) Flammable liquids. 3
· IMDG, IATA	
	
· Class · Label	3 Flammable liquids. 3
· 14.4 Packing group · ADR, IMDG, IATA	III
· 14.5 Environmental hazards: · Marine pollutant:	NO
· 14.6 Special precautions for user · Kemler Number: · EMS Number:	Warning: Flammable liquids. 30 F-E,S-E
· 14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	Transport by post may be prohibited or restricted.
· ADR · Excepted quantities (EQ): · Limited quantities (LQ): · Transport category: · Tunnel restriction code: · Remarks:	E1 5L 3 D/E According to 2.2.3.1.5 ADR/RID the product in receptacles of less than 450 litres capacity is not subject to ADR/RID.
· IMDG · Remarks:	According to 2.3.2.5 IMDG-Code the product in receptacles of less than 30 litres capacity is not subject to IMDG-Code.
· UN "Model Regulation":	UN1263, PAINT RELATED MATERIAL, Special provision 640E, 3, III

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SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **National regulations**
- **Information about limitation of use:** Employment restrictions concerning young persons must be observed.
- **Decree to be applied in case of technical fault:**
Quantity limits according to "EC Seveso directive" should be observed.
- **Water hazard class:** Water hazard class 2 (Self-assessment): hazardous for water
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

The(se) R- resp. H-phrase(s) are those of the ingredient(s) and do(es) not necessarily represent the classification of the preparation/mixture.

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H332 Harmful if inhaled.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.
- H336 May cause drowsiness or dizziness.

- R10 Flammable.
- R11 Highly flammable.
- R20 Harmful by inhalation.
- R23 Toxic by inhalation.
- R36/37 Irritating to eyes and respiratory system.
- R36/37/38 Irritating to eyes, respiratory system and skin.
- R42/43 May cause sensitisation by inhalation and skin contact.
- R43 May cause sensitisation by skin contact.
- R66 Repeated exposure may cause skin dryness or cracking.
- R67 Vapours may cause drowsiness and dizziness.

- **Department issuing MSDS:**

Sprayguns Direct Limited Morleys Group
250 Osmaston Road, Derby
DE23 8LB, England

Phone: +44 1332 611893

Fax: +44 1332 331611

- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 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)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 Flam. Liq. 2: Flammable liquids, Hazard Category 2
 Flam. Liq. 3: Flammable liquids, Hazard Category 3
 Acute Tox. 3: Acute toxicity, Hazard Category 3

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Acute Tox. 4: Acute toxicity, Hazard Category 4
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2
Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1
Skin Sens. 1: Sensitisation - Skin, Hazard Category 1
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

· *** Data compared to the previous version altered.**

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