

# Material Safety Data Sheet

CS: 1.4.20

Infosafe No™ LPX2D	Issue Date :December 2007	DRAFT by HILTI	CS: 1.4.20
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Product Name : **HILTI GC22**

Classified as hazardous

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

<b>Product Name</b>	HILTI GC22
<b>Company Name</b>	HILTI (AUST.) PTY LTD
<b>Address</b>	1G Homebush Bay Drive, Rhodes 2138
<b>Telephone/Fax Number</b>	Tel: (02) 8748-1000 Fax: (02) 8748-1190
<b>Recommended Use</b>	Fuel.

## 2. HAZARDS IDENTIFICATION

<b>Hazard Classification</b>	Classified as hazardous HAZARDOUS SUBSTANCE. DANGEROUS GOODS. Hazard classification according to the criteria of NOHSC. Dangerous goods classification according to the Australia Dangerous Goods Code.
<b>Risk Phrase(s)</b>	Classified as hazardous R12 Extremely Flammable.
<b>Safety Phrase(s)</b>	S16 Keep away from sources of ignition - No smoking. S23 Do not breathe gas/fumes/vapour/spray S29 Do not empty into drains. S33 Take precautionary measures against static discharges. S35 This material and its container must be disposed of in a safe way.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

<b>Ingredients</b>	<b>Name</b>	<b>CAS</b>	<b>Proportion</b>	<b>Hazard Symbol</b>	<b>Risk Phrase</b>
	Isobutane	75-28-5	30-80 %	F+	R12
	Propane	74-98-6	30-75 %		
	Ingredients determined not to be hazardous.		10-30 %		
	Propylene	115-07-1	10-30 %		

## 4. FIRST AID MEASURES

<b>Inhalation</b>	If inhaled, remove from contaminated area. Apply artificial respiration if not breathing. Seek medical attention.
<b>Ingestion</b>	Unlikely to occur due to physical state of the product. However, if ingested, rinse mouth with water. Do NOT induce vomiting. Seek medical attention.
<b>Skin</b>	Wash affected area thoroughly with soap and water. Remove contaminated clothing and wash before reuse or discard. If symptoms develop seek medical attention.
<b>Eye</b>	If contact with the eye(s) occur, wash with copious amounts of water, holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. In all cases of eye contamination it is a sensible precaution to seek medical advice.
<b>First Aid Facilities</b>	Eye wash and normal washroom facilities.
<b>Advice to Doctor</b>	Treat symptomatically.

## 5. FIRE FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Use carbon dioxide, dry chemical or foam. Fight large fires with water jet.
<b>Hazards from Combustion Products</b>	Under fire conditions this product may emit toxic and/or irritating fumes including carbon monoxide and carbon dioxide and nitrogen oxides.
<b>Specific Hazards</b>	This product is extremely flammable. Vapours are heavier than air and will 'travel' to low-level areas e.g. sumps, drains, etc. and flashback. Keep

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**Precautions in connection with Fire Unsuitable Extinguishing Media**

storage tanks, pipelines, fire-exposed surfaces etc cool with water spray. Remove sources of re-ignition. Aerosol containers may explode and may become a projectile in a fire. Fire-fighters should wear full protective clothing and self contained breathing apparatus (SCBA) operated in positive pressure mode. Water with a full water jet.

**6. ACCIDENTAL RELEASE MEASURES**

**Emergency Procedures**

Increase ventilation. For liquid spill: Wear appropriate personal protective equipment and clothing to minimize exposure. Extinguish or remove all sources of ignition and stop leak if safe to do so. Evacuate all unnecessary personnel. If possible contain the spill. Place inert non-combustible absorbent material onto spillage. Use clean non-sparking tools to collect the material and place into a suitable labelled containers. Dispose of waste according to federal, Environmental Protection Authority and state regulations. If this material enter the waterways contact the Environmental Protection Authority, or your local Waste Management Authority.

**7. HANDLING AND STORAGE**

**Precautions for Safe Handling**

Use only in a well ventilated area. DO NOT store or use in confined spaces. Prevent concentration in hollows and sumps. Do not enter areas where product vapours or mists may exist without respiratory protection or until the atmosphere has been checked. Build up of mists or vapours in the atmosphere must be prevented. Vapours may spread along floors and form explosive mixtures with air. Avoid inhalation of vapour and mists. Do not use near welding or other ignition sources and avoid sparks. Do not smoke. Do not spray on flames or red hot objects. Protect against electrostatic charges. Do not open by force or throw into fire even after use. Exposure without protection should be prevented in order to lessen the possibility of disorders. It is essential that all who come into contact with this material maintain high standards of personal hygiene ie. washing hands prior to eating, drinking, smoking or using toilet facilities.

**Conditions for Safe Storage**

Store in a cool, dry, well ventilated area away from sources of ignition, oxidising agents, foodstuffs, clothing, DX powder cartridges and out of direct sunlight. Protect container against physical damage. Inspect regularly for deficiencies such as damage or leaks. Have appropriate fire extinguishers available in and near the storage area. Do NOT pressurise, cut or heat containers. Content is under pressure and can explode violently.

**Handling Temperatures Storage Temperatures**

< 50°C  
5 - 25°C

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

National Exposure Standards	Name	STEL		TWA		Footnote
		mg/m3	ppm	mg/m3	ppm	
	Propane					Asphyxiant
	Propylene					Asphyxiant
<b>Biological Limit Values</b>	No biological limit allocated.					
<b>Other Exposure Information</b>	No exposure standards have been established for this material by the National Occupational Health And Safety Commission (NOHSC). However, exposure standards for ingredients are stated above: As published by the National Occupational Health and Safety Commission (NOHSC): TWA - the Time-Weighted Average airborne concentration over an eight-hour working day, for a five-day working week over an entire working life.					

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<b>Engineering Controls</b>	<p>STEL (Short Term Exposure Limit) - the average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.</p> <p>According to current knowledge these concentrations should neither impair the health of, nor cause undue discomfort to, nearly all workers.</p> <p>These Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. Exposure Standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals, they are not a measure of relative toxicity.</p> <p>Provide sufficient ventilation to keep airborne levels below the exposure limit. Where vapours or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate, a flameproof exhaust ventilation system is required.</p>
<b>Respiratory Protection</b>	<p>If engineering controls are not effective in controlling airborne exposure then respiratory protective equipment should be used suitable for protecting against airborne contaminants. Final choice of appropriate breathing protection is dependant upon actual airborne concentrations and the type of breathing protection required will vary according to individual circumstances. Expert advice may be required to make this decision. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices.</p>
<b>Eye Protection</b>	<p>Safety glasses with side shields or goggles as appropriate recommended. Final choice of appropriate eye/face protection will vary according to individual circumstances i.e. methods of handling or engineering controls and according to risk assessments undertaken. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.</p>
<b>Hand Protection</b>	<p>Wear leather gloves. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.</p>
<b>Body Protection</b>	<p>Suitable protective clothing should be worn e.g. cotton overalls buttoned at neck and wrist. When large quantities are handled the use of chemical resistant apron and safety boots is recommended. It is advisable that a local supplier of personal protective clothing is consulted regarding the choice of material.</p>

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	Gaseous colourless.
<b>Odour</b>	Sweetish odour.
<b>Melting Point</b>	Not available
<b>Boiling Point</b>	Not available
<b>Solubility in Water</b>	Not miscible or difficult to mix.
<b>Specific Gravity</b>	1.28 g/cm <sup>3</sup> @ 20°C
<b>pH Value</b>	Not applicable
<b>Vapour Pressure</b>	6390 hPa @ 20°C
<b>Vapour Density (Air=1)</b>	Not available
<b>Flash Point</b>	Not self igniting.
<b>Flammability</b>	Extremely flammable.
<b>Auto-Ignition Temperature</b>	460°C

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<b>Flammable Limits - Lower</b>	1.3%
<b>Flammable Limits - Upper</b>	11.1%
<b>Explosion Properties</b>	The product contains flammable propellant. Under conditions of inadequate ventilation, flammable or explosive air/vapour mixtures may form.

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable under normal conditions of use.
<b>Conditions to Avoid</b>	Heat, direct sunlight, open flames or other sources of ignition.
<b>Incompatible Materials</b>	Oxidising agents.
<b>Hazardous Decomposition Products</b>	None known.
<b>Hazardous Polymerization</b>	Will not occur.

## 11. TOXICOLOGICAL INFORMATION

<b>Toxicology Information</b>	No toxicity data is available for this product.
<b>Inhalation</b>	Inhalation of product vapours may cause irritation of the nose, throat and respiratory system. Inhalation of large quantities of the gases can lead to narcotic effects.
<b>Ingestion</b>	Ingestion of this product may irritate the gastric tract causing nausea and vomiting.
<b>Skin</b>	May cause redness, itching and irritation.
<b>Eye</b>	May cause tearing, stinging, blurred vision, and redness.
<b>Chronic Effects</b>	Repeated and prolonged exposure can result in a health hazard.

## 12. ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Generally not hazardous to water.
<b>Persistence / Degradability</b>	Not available.
<b>Mobility</b>	Not available.
<b>Environ. Protection</b>	Avoid contaminating waterways.

## 13. DISPOSAL CONSIDERATIONS

<b>Disposal Considerations</b>	Dispose of waste according to federal, EPA and state regulations. Labels should not be removed from containers until they have been cleaned. Do not cut, puncture or weld on or near containers. Empty containers may contain hazardous residues. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers. Advise flammable nature.
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## 14. TRANSPORT INFORMATION

<b>Transport Information</b>	This material is classified as a Class 2.1 (Flammable Gas) Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road or Rail. Dangerous goods of Class 2.1 (Flammable Gas) are incompatible in a placard load with any of the following: - Class 1, Explosive - Class 3, Flammable Liquid, if both the Class 2.1 and Class 3 dangerous goods are in bulk - Class 4.1, Flammable Solid
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- Class 4.2, Spontaneously Combustible Substance  
- Class 4.3, Dangerous When Wet Substance  
- Class 5.1, Oxidising Agent  
- Class 5.2, Organic Peroxide  
- Class 7, Radioactive Substance

**U.N. Number** 1950

**Proper Shipping Name** AEROSOLS

**DG Class** 2.1

**Packaging Method**

**Packing Group**

**EPG Number** 2D1

**IERG Number** 49

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**15. REGULATORY INFORMATION**

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**Poisons Schedule** Not Scheduled

**Hazard Category** Extremely Flammable

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**16. OTHER INFORMATION**

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**Date of preparation or last revision of MSDS** MSDS Created: December 2007

**Contact Person/Point** For further information call Hilti (Aust) Pty. Ltd. on: (02) 8748 1000 (Business Hours).  
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