

## SAFETY DATA SHEET

### SECTION 1 – IDENTIFICATION OF MATERIAL AND SUPPLIER

<b>SUPPLIER:</b>	Pilot Pen Australia Pty Ltd.	
<b>ABN:</b>	37 144 701 502.	
<b>OFFICE ADDRESS:</b>	39 Enterprise Circuit, Prestons, NSW 2170, Australia.	
<b>POSTAL ADDRESS:</b>	Locked Bag 7010, Liverpool, NSW 1871, Australia.	
<b>TELEPHONE:</b>	1300 325 866.	
<b>AH EMERGENCY TELEPHONE:</b>	13 1126 (24 Hours) – Australian National Poisons Centre.	
<b>WEB PAGE:</b>	www.pilotpen.com.au.	
<b>Product Name:</b>	V Board Master.	
<b>Product Range</b>	Product range of: WBMA-VBM-F-B/R/L/G/O/V. WBMA-VBM-M-B/R/L/G/O/V. WBMA-VBM-MC-B/R/L/G/O. WBMA-VBM-B-B/R/L/G/O. WBS-VBM-B/R/L/G/O/V.	
<b>Proper Shipping Name:</b>	FLAMMABLE LIQUID, N.O.S. (contains ethanol and isopropanol).	
<b>Product Use:</b>	Ink for writing instrument.	
<b>Manufacturer's Product Codes:</b>	Style: <ul style="list-style-type: none"> <li>•WBMA = Marker pen.</li> <li>•WBS = Cartridge for marker pen.</li> </ul> Tip: <ul style="list-style-type: none"> <li>•B = Broad bullet.</li> <li>•F = Fine bullet.</li> <li>•M = Medium bullet.</li> <li>•MC = Medium chisel.</li> </ul> Colours: <ul style="list-style-type: none"> <li>•B = Black.</li> <li>•R = Red.</li> <li>•L = Blue.</li> <li>•G = Green.</li> <li>•O = Orange.</li> <li>•V = Violet.</li> </ul>	
<b>Creation Date:</b>	11 December 2015.	
<b>Revision Date:</b>	Before 10 December 2020.	

### SECTION 2 – HAZARDS IDENTIFICATION

This product is classified as a **HAZARDOUS CHEMICAL** in accordance with the WHS/GHS, and as **DANGEROUS GOODS** according to the ADG Code.

<b>CLASSIFICATION:</b>		
<b>Hazard Classes &amp; Categories:</b>	<b>Hazard Classes</b>	<b>Hazard Category</b>
<b>Physical:</b>	Flammable Liquids.	2
<b>Health:</b>	Serious Eye Damage/Irritation.	2A.
	Specific Target Organ Toxicity (Single Exposure).	3.
<b>Environmental:</b>	Not applicable.	

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### SECTION 2 – HAZARDS IDENTIFICATION (CONTINUED)

**LABEL ELEMENTS:**

**Signal Word:**

**DANGER.**

**Hazard Statements:**

**Highly flammable liquid and vapour.  
 Causes serious eye irritation.  
 May cause drowsiness or dizziness.  
 Repeated exposure may cause skin dryness or cracking.**

**Precautionary Statements:**

**Prevention:**

Keep container tightly closed.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 Avoid breathing vapours.  
 Wash skin thoroughly after handling.  
 Use only outdoors or in a well-ventilated area.  
 Keep away from heat/sparks/open flames/hot surfaces. – No smoking.  
 Use explosion-proof electrical/ventilating/lighting/equipment.  
 Use only non-sparking tools.  
 Ground/bond container and receiving equipment.  
 Take precautionary measures against static discharge.

**Response:**

IF IN EYES: 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.  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with plenty of soap and water, and shower.  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 Call a POISON CENTRE or doctor/physician if you feel unwell.  
 In case of fire: Use alcohol resistant foam (preferred) or normal foam for extinction.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed and cool.  
 Store locked up.

**Disposal:**

Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

**General:**

If medical advice is needed, have product container or label at hand.  
 Keep out of reach of children.  
 Read label before use.

**Pictogram:**



**Pictogram Description:**

Flammable Liquid    Exclamation mark

**Other Hazards which do not result in Classification:**

The product has ototoxic properties due to the presence of Ethanol as a component.



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### SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

Ingredients:	CAS Number:	Proportion:	Component
Ethanol	64-17-5	35 - 79 % w/w	All colours
Isopropanol	67-63-0	4 - 41 % w/w	All colours
Carbon black	1333-86-4	4.0 % w/w	Black
n-Propanol	71-23-8	1 – 2.9 % w/w	Black, Violet
Copper compounds (Non-hazardous)	Not available	< 10 % w/w	Green
Non-hazardous ingredients	Not available	To 100 %w/w	All colours
Total	Not available	100 % w/w	

### SECTION 4 – FIRST AID MEASURES

<b>Scheduled Poisons:</b>	Poisons Information Centre in each Australian State capital city can provide additional assistance for scheduled poisons. (Phone Australia 13 1126) or a doctor (at once).
<b>First Aid Facilities Required:</b>	Eye wash fountains and a general washing facility should be easily accessible in the immediate work area.
<b>Inhalation:</b>	Remove victim from exposure- avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If breathing laboured and patient cyanotic (blue), ensure airways are clear and have a qualified person give oxygen through a facemask. If breathing has stopped apply artificial respiration at once. In the event of cardiac arrest, apply external cardiac massage. Seek immediate medical advice.
<b>Skin Contact:</b>	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If swelling, redness, blistering or irritation occurs seek medical assistance. Wash contaminated clothing before re-use. Do not take clothing home to be laundered. Discard contaminated shoes, belts, and other articles made of leather.
<b>Eye Contact:</b>	Remove victim immediately from source of exposure. Make sure to remove any contact lenses from the eyes before rinsing. If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. Immediately seek medical attention.
<b>Ingestion (Swallowed):</b>	Immediately rinse out mouth and drink 1 or 2 glasses of water. Immediately seek medical attention and bring these instructions. If swallowed DO NOT induce vomiting. Never give anything by mouth to an unconscious patient. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration into the lungs. Get to a doctor or hospital quickly.
<b>PPE for First Aiders:</b>	Wear overalls, safety glasses or goggles and impervious gloves. No special precautions are envisaged to be required. Barrier cream applied before work may make it easier to clean the skin after exposure, but does not prevent absorption through the skin. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.
<b>Advice to Doctor:</b>	Treat symptomatically. Poisons Information Centre in each Australian State capital city can provide additional assistance for scheduled poisons.

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### SECTION 5 – FIRE FIGHTING MEASURES

<b>Suitable Extinguishing Media:</b>	Extinguish with alcohol resistant foam (preferred if available, but normal foam can be used). Use Carbon dioxide (CO <sub>2</sub> ) or dry agent for small fires.
<b>Unsuitable Extinguishing Media:</b>	Not applicable.
<b>Specific Hazards arising from the chemical:</b>	In general fire, upon combustion, this product may emit Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Chlorine compounds, and other possibly toxic gases and vapours.
<b>Special Protective Equipment &amp; Precautions for Fire Fighters:</b>	Wear self-contained breathing apparatus and full body protection. Cool containers / tanks with water spray. Minimise exposure. Do not breathe fumes. Contain run-off, prevent by any means available spillage from entering drains and water course.
<b>Hazchem Code:</b>	•3YE.
<b>IERG:</b>	14.
<b>Flash Point:</b>	14°C (Closed Cup).
<b>Flammability:</b>	Highly flammable liquid and vapour. In general fire, upon combustion, this product may emit Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Chlorine compounds, and other possibly toxic gases and vapours.

### SECTION 6 – ACCIDENTAL RELEASE MEASURES

<b>Spills:</b>	
<b>Personal Precautions, Protective Equipment &amp; Emergency Procedures:</b>	<p>In case of spill, no special precautions are envisaged to be required. See Section 8, Exposure Controls And Personal Protection for further information regarding personal protection. See Section 4, First Aid Measures, for further information.</p> <p><u>Eye and face protection:</u> The use of face shields, chemical goggles, or safety glasses with side shield protection (meeting the requirements of AS/NZS 1337) is recommended. If exposed to dust or fume, wear dust-tight goggles (meeting the requirements of AS/NZS 1337).</p> <p><u>Skin protection:</u></p> <p><u>Hand protection:</u> Chemical resistant gloves (e.g. Butyl gloves &gt;1 mm thickness, complying with AS 2161) should be suitable for intermittent contact. Barrier cream applied before work may make it easier to clean the skin after exposure, but does not prevent absorption through the skin.</p> <p><u>Clothing:</u> Suitable protective clothing complying with AS 4501, suitable chemical resistant footwear complying with AS/NZS 2210 is recommended.</p> <p><u>Respiratory protective equipment:</u> No special ventilation or respiratory equipment is envisaged to be required.</p>
<b>Environmental Precautions:</b>	Do not allow to enter drainage system, surface or ground water. In the event of product entering waters or drainage system, or polluting soil or plants contact the Environmental Protection Authority or your local Waste Management Authority.

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### SECTION 6 – ACCIDENTAL RELEASE MEASURES (CONTINUED)

#### Methods & Materials for

#### Containment & Cleaning up:

##### Small Spills:

No special precautions are envisaged to be required. Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal. The wasted material can be disposed of by incineration (preferably high temperature) by an approved agent according to State, Territory and/or Local government regulations.

##### Large Spills:

No special precautions are envisaged to be required. Clear area of all unprotected personnel. Prevent further leakage or spillage if safe to do so. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material, but not sawdust). Collect and seal in properly labelled containers or drums for disposal. If contamination of sewers or waterways has occurred advise local emergency services. The wasted material can be disposed of by incineration (preferably high temperature) by an approved agent according to State, Territory and/or Local government regulations.

### SECTION 7 – HANDLING AND STORAGE

#### Precautions for Safe Handling:

For personal protection see section 8. Avoid spills. Avoid all personal contact, including skin and eye contact and inhalation of vapour, mist or aerosols and avoid contamination of clothing. Wear protective clothing when risk of exposure occurs. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers closed at all times. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Launder contaminated clothing before re-use.

#### Information about Fire and Explosion Protection:

Refer to State Regulations for storage and transport requirements.

#### Conditions for Safe Storage, including any Incompatibilities:

Store in a cool (at temperatures below 25°C), dry, well-ventilated place and out of direct sunlight. Keep containers closed when not in use - check regularly for leaks.

#### Further Information about Storage Conditions:

Not applicable.

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### SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

<b>Exposure Control Measures:</b>	<p>Ensure the use of individual protection measures including Personal Protective Equipment (PPE) and that the appropriate biological monitoring is carried out.</p>
<b>Exposure Standards:</b>	<p>National Occupational Exposure Limits, as published by Safework Australia:  <b>Time-weighted Average (TWA):</b> None established for product.</p> <p>TWA for Carbon Black is 3 mg/m<sup>3</sup> (this is not expected to be released in powder form).          TWA for Ethanol is 1000 ppm, 1880 mg/m<sup>3</sup>.          TWA for Isopropanol is 400 ppm, 983 mg/m<sup>3</sup>.          TWA for n-Propanol is 200 ppm, 492 mg/m<sup>3</sup> (via inhalation only, for skin absorption see below).</p> <p><b>Short Term Exposure Limit (STEL):</b> None established for product.</p> <p>STEL for Isopropanol is 500 ppm, 1230 mg/m<sup>3</sup>.          STEL for n-Propanol is 250 ppm, 614 mg/m<sup>3</sup> (via inhalation only, for skin absorption see below).</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. These 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>The adopted Occupational Exposure Standards listed only consider absorption via inhalation, and are valid only on the condition that significant skin absorption cannot occur.</p>
<b>Biological Monitoring:</b>	<p>Safe Work Australia have not published any Biological Limits for ingredients of this product.</p> <p>However, according to ACGIH:          BEI for Isopropanol as Acetone in urine is 40 mg/L, to be sampled at end of shift (Background determinant, Non-specific determinant).</p>
<b>Engineering Controls:</b>	<p>When using this product use only outdoors or in a well-ventilated area and ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use with local exhaust ventilation (draw off vapours directly at the point of generation and exhaust from the work area) or while wearing appropriate respirator. Vapour is heavier than air - prevent concentration in hollows or sumps. DO NOT enter confined spaces where vapour may have collected. Keep containers closed when not in use. Provide eyewash station and safety shower.</p>

## SAFETY DATA SHEET

### SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION (CONTINUED)

<p><b>Individual Protection Measures Including Personal Protective Equipment (PPE):</b></p>	<p><u>General protective &amp; hygiene measures:</u> The usual precautionary measures are to be adhered to when handling chemicals. Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing, and wash contaminated clothing and other protective equipment before storing or re-using. <b>DO NOT SMOKE IN WORK AREA!</b> Wash at the end of each work shift and before eating, smoking and using the toilet. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke. Avoid contact with the eyes and skin. Ensure that eyewash stations and safety showers are close to the workstation location.</p> <p><u>Eye and face protection:</u> The use of face shields, chemical goggles, or safety glasses with side shield protection (meeting the requirements of AS/NZS 1337) is recommended. If exposed to dust or fume, wear dust-tight goggles (meeting the requirements of AS/NZS 1337).</p> <p><u>Skin protection:</u></p> <p><u>Hand protection:</u> Chemical resistant gloves (e.g. Butyl gloves &gt;1 mm thickness, complying with AS 2161) should be suitable for intermittent contact. However, due to variations in glove construction and local conditions, the user should make a final assessment. Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water. Barrier cream applied before work may make it easier to clean the skin after exposure, but does not prevent absorption through the skin.</p> <p><u>Clothing:</u> Suitable protective clothing complying with AS 4501, suitable chemical resistant footwear complying with AS/NZS 2210 is recommended.</p> <p><u>Respiratory protective equipment:</u> When the product is used in case of inadequate ventilation use a full face air purifying respirator (with Class A filter for organic vapours boiling above 65°C) meeting the requirements of AS/NZS 1715 and AS/NZS 1716.</p>
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### SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical Description/ Properties:</b>	
<b>Appearance:</b>	Coloured liquid (Black, Red, Blue, Green, Orange, Violet).
<b>Odour:</b>	Alcoholic odour.
<b>Odour Threshold:</b>	Not available.
<b>pH:</b>	Not applicable.
<b>Melting Point/ Freezing Point:</b>	Not available.
<b>Initial Boiling Point/ Boiling Range:</b>	Ca. 78°C (Ethanol).
<b>Flashpoint:</b>	Ca. 14°C (Ethanol).
<b>Evaporation Rate:</b>	Not available.
<b>Flammability (solid, gas):</b>	Not applicable.
<b>Upper/Lower Flammability or Explosive Limits:</b>	Not available.
<b>Vapour Pressure:</b>	Ca. 5.8 kPa @ 20°C (Ethanol).



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### SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES (CONTINUED)

<b>Vapour Density:</b>	Ca. 1.6 @ 20°C (Ethanol).
<b>Relative Density:</b>	Ca. 0.81 -0.85 @ 20°C
<b>Solubility:</b>	Slightly soluble in water.
<b>Partition coefficient: n-octanol/water:</b>	Not available.
<b>Auto-ignition Temperature:</b>	Not available.
<b>Decomposition Temperature:</b>	Not applicable.
<b>Viscosity:</b>	5 – 13 mPa s @ 20°C

### SECTION 10 – STABILITY AND REACTIVITY

<b>Reactivity:</b>	No reactivity hazards are known for the material.
<b>Chemical Stability:</b>	Stable under recommended storage conditions.
<b>Possibility of Hazardous Reactions:</b>	Heating can release vapours which can be ignited.
<b>Conditions to Avoid:</b>	Elevated temperatures.
<b>Incompatible Materials:</b>	Strong oxidising agents, reducing agents
<b>Hazardous Decomposition Products:</b>	In general fire, upon combustion, this product may emit Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ), Chlorine compounds, and other possibly toxic gases and vapours.

### SECTION 11 – TOXICOLOGICAL INFORMATION

<b>Health Effects:</b>	No data for product, following data is compiled on basis of ingredients.
<b>Acute Toxicity Data (Oral):</b>	No data for product. On basis of ingredients: Acute Toxicity for Carbon Black (Oral) LD <sub>50</sub> (rat) > 15,400 mg/kg. Acute Toxicity for Ethanol, (Oral) LD <sub>50</sub> (rat) 7,060 mg/kg; LDLo (human) 1,400 mg/kg. Acute Toxicity for Isopropanol, (Oral) LD <sub>50</sub> (mouse) 3,600 mg/kg; LDLo (human) 5,272 mg/kg. Acute Toxicity for n-Propanol, (Oral) LD <sub>50</sub> (rat) 1,870 mg/kg; LDLo (women) 5,700 mg/kg.
<b>Acute Toxicity Data (Dermal):</b>	No data for product. On basis of ingredients: Acute Toxicity for Carbon Black (Dermal) LD <sub>50</sub> (rabbit) > 3,000 mg/kg. Acute Toxicity for Ethanol, (Dermal) LDLo (rabbit) 20,000 mg/kg. Acute Toxicity for Isopropanol, (Dermal) LD <sub>50</sub> (rabbit) 12,800 mg/kg. Acute Toxicity for n-Propanol, (Dermal) LD <sub>50</sub> (rabbit) 5,040 mg/kg.
<b>Acute Toxicity Data (Inhalation):</b>	No data for product. On basis of ingredients: Acute Toxicity for Ethanol (Inhalation) LC <sub>50</sub> (rat) 20,000 ppm/10 hours. Acute Toxicity for Isopropanol, (Inhalation) LC <sub>50</sub> (rat) 16,000 ppm/8 hours. Acute Toxicity for n-Propanol, (Inhalation) LD <sub>50</sub> (mouse) 48,000 mg/m <sup>3</sup> ; LCLo (rat) 4,000 ppm/4 hours.
<b>Chronic Toxicity Data:</b>	No data for product. On basis of ingredients: Solvent abuse and noise interaction in the work environment may cause hearing loss. The product has ototoxic properties due to the presence of Ethanol as a component.
<b>Skin Corrosion/Irritation:</b>	Product is not classified as Skin Corrosion/Irritation. No data for product.



## SAFETY DATA SHEET

### SECTION 11 – TOXICOLOGICAL INFORMATION (CONTINUED)

<b>Serious Eye Damage/Irritation:</b>	Product is classified as Serious Eye Damage/Irritation, Hazard Category 2A; Causes serious eye irritation.
<b>Respiratory or Skin Sensitisation:</b>	Product is not classified as a Respiratory or Skin Sensitiser. No data for product.
<b>Germ Cell Mutagenicity:</b>	Product is not classified as a Germ Cell Mutagen. No data for product.
<b>Carcinogenicity:</b>	Product is not classified as a Carcinogen. No data for product. On basis of ingredients: Carbon black is considered possibly carcinogenic to humans and classified as a Group 2B carcinogen, because there is sufficient evidence in experimental animals with inadequate evidence in human epidemiological studies. The body of evidence of carcinogenicity in animal studies comes from two chronic inhalation studies and two intratracheal instillation studies in rats, which showed significantly elevated rates of lung cancer in exposed animals. An inhalation study was tested on mice, but did not show significantly elevated rates of lung cancer in exposed animals. Because the Carbon black in this product is encapsulated the product is not considered to present a carcinogenic hazard in its normal use. If the material is handled in accordance with proper industrial handling procedures, exposures should not pose a carcinogenic risk to man.
<b>Reproductive Toxicity:</b>	Product is not classified as Toxic to Reproduction. No data for product.
<b>Specific Target Organ Toxicity (STOT) – Single Exposure:</b>	Product is classified as Specific Target Organ Toxicity (Single Exposure), Hazard Category 3; May cause drowsiness or dizziness. No data for product.
<b>Specific Target Organ Toxicity (STOT) – Repeated Exposure:</b>	Product is not classified as Specific Target Organ Toxicity (Repeated Exposure). No data for product.
<b>Aspiration Hazard:</b>	Product is not classified as Aspiration Hazard. No data for product.
<b>Information on Possible Routes of Exposure:</b>	Inhalation is the primary route of exposure although absorption may occur through skin contact or following accidental ingestion.
<b>Ingestion (Swallowing):</b>	Not to be ingested.
<b>Eye Contact:</b>	Product is classified as Serious Eye Damage/Irritation, Hazard Category 2A; Causes serious eye irritation.
<b>Skin Contact:</b>	Repeated exposure may cause skin dryness or cracking due to defatting of the skin.
<b>Inhalation:</b>	Product is not classified as Acute Toxicity (Inhalation). No data for product. Inhalation of product may cause drowsiness or dizziness.
<b>Other Health Effects:</b>	Not applicable.
<b>Repeated Dose Toxicity:</b>	No data for product.
<b>Developmental Toxicity:</b>	No data for product.

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### SECTION 12 – ECOLOGICAL INFORMATION

<b>Ecotoxicity:</b>	This product is not classified as Hazardous to the aquatic environment.
<b>Fish Toxicity:</b>	No data for product. On basis of ingredients: Acute Toxicity for Carbon Black, LC <sub>0</sub> 1000 mg/L (Zebra fish, Danio rerio, semi-static test, 96 hours). Acute Toxicity for Ethanol, LC <sub>50</sub> 14,200 mg/L (Fathead minnow, Pimephales promelas, 96 hours). Acute Toxicity for Isopropanol, LC <sub>50</sub> 8970-9280 mg/L (Golden Orfe, Leuciscus idus, static test, 48 hours). Acute Toxicity for n-Propanol, LC <sub>50</sub> 4,555 mg/L (Fathead minnow, Pimephales promelas, flow-through test, 96 hours).
<b>Invertebrates Toxicity:</b>	No data for product. On basis of ingredients: Acute Toxicity for Carbon Black, EC <sub>50</sub> > 5,600 mg/L, NOEC 3,200 mg/L (Water flea, Daphnia magna, static test, 24 hours). Acute Toxicity for Ethanol, EC <sub>50</sub> 9,300 mg/L, (Water flea, Daphnia magna, 48 hours). Acute Toxicity for Isopropanol, EC <sub>50</sub> > 10,000 mg/L (Water flea, Daphnia magna, static test, 24 hours). Acute Toxicity for n-Propanol, EC <sub>50</sub> 3,644 mg/L (Water flea, Daphnia magna, static test, 48 hours).
<b>Algae Toxicity:</b>	No data for product. On basis of ingredients: Acute Toxicity for Carbon Black, ErC <sub>50</sub> > 10,000 mg/L, NOEC > 10,000 mg/L Freshwater Algae, Desmodesmus Subspicatus, static test, growth rate inhibition, 72 hours). Acute Toxicity for Ethanol, EC <sub>50</sub> 8,090 mg/L (Freshwater Algae, Pseudokirchneriella subcapitata). Acute Toxicity for Isopropanol, TGK (Toxicity Threshold Concentration) 1,800 mg/L (Green Algae, Scenedesmus quadricauda, static test, growth inhibition, 8 days). Acute Toxicity for n-Propanol, ErC <sub>50</sub> 3,644 mg/L (Freshwater Algae, Pseudokirchneriella subcapitata, growth rate inhibition, static test, 48 hours).
<b>Toxicity to Microorganisms:</b>	No data for product.
<b>Effects on other organisms:</b>	No data for product.
<b>Persistence and Degradability:</b>	No data for product.
<b>Biological Oxygen Demand (BOD):</b>	No data for product.
<b>Theoretical Oxygen Demand (ThOD):</b>	No data for product.
<b>Chemical Oxygen Demand (COD):</b>	No data for product.
<b>BOD/COD Ratio:</b>	No data for product.
<b>Bio-accumulative potential:</b>	There is no evidence to suggest bioaccumulation will occur.
<b>Mobility in Soil:</b>	No data for product. Product floats on water and is partially soluble. The primary mode of removal from surface water is volatilisation.
<b>Ecotoxic Effects:</b>	
<b>Other Adverse Effects:</b>	No data for product.

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### SECTION 12 – ECOLOGICAL INFORMATION (CONTINUED)

**General:** DO NOT DISCHARGE INTO DRAINS, WATERWAYS, SEWER OR ENVIRONMENT. Product is not expected to be hazardous for water. Product is partially soluble in water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Inform local authorities if this occurs.

### SECTION 13 – DISPOSAL CONSIDERATIONS

**Disposal methods:**  
**Product:** When all ink has been consumed in writing instrument the writing instrument may be disposed of as normal household waste. However, in bulk form, waste to be treated as controlled waste. Disposal to licensed waste disposal site in accordance with local Waste Disposal Authority, according to State, Territory and/or Local government regulations, pertinent authorities and adhering to the necessary technical regulations. Do not allow runoff to sewer, waterway or ground. Incinerate with adequate scrubbing and ash disposal.

**Individual Protection Measures:** Refer to Individual Protection Measures Including Personal Protective Equipment (PPE) in Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION.

**Uncleaned Packaging:** Recommended to be disposed of according to official regulations.

**Behaviour in Sewage Processing Plants:** No data for product.

### SECTION 14 – TRANSPORT INFORMATION

**General:** This product is classified as **DANGEROUS GOODS**, according to the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code).

**UN Number:** UN 1993.

**UN Proper Shipping Name or Technical Name:** FLAMMABLE LIQUID, N.O.S. (contains ethanol and isopropanol).

**ADG Class:** 3.

**Packing Group:** II.

**Environmental Hazards for Transport Purposes:** Product is not a marine pollutant.

**HAZCHEM Code:** •3YE.

**IERG:** 14.

**Segregation:** Not to be loaded with Explosives (Class 1), Toxic Gas (Class 2.3), Spontaneously Combustible (Class 4.2) Oxidising Agents (Class 5.1), Organic Peroxides (Class 5.2) or Radioactive Material (Class 7), however exemptions may apply.

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### SECTION 14 – TRANSPORT INFORMATION (CONTINUED)

<b>Marine Transport:</b>	This product is classified as <b>DANGEROUS GOODS</b> by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea. This product is not classified as a severe Marine Pollutant (PP) according to the International Maritime Dangerous Goods Code.
<b>UN Number:</b>	UN 1993.
<b>UN Proper Shipping Name or Technical Name:</b>	FLAMMABLE LIQUID, N.O.S. (contains ethanol and isopropanol).
<b>ADG Class:</b>	3.
<b>Packing Group:</b>	II.
<b>Air Transport:</b>	This product is classified as <b>DANGEROUS GOODS</b> by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.
<b>UN Number:</b>	UN 1993.
<b>UN Proper Shipping Name or Technical Name:</b>	FLAMMABLE LIQUID, N.O.S. (contains ethanol and isopropanol).
<b>ADG Class:</b>	3.
<b>Packing Group:</b>	II.

### SECTION 15 – REGULATORY INFORMATION

<b>Australian Standards:</b>	<p>AS/NZS 1337.1:2010: Personal eye protection - Eye and face protectors for occupational applications.</p> <p>AS/NZS 1715:2009: Selection, use and maintenance of respiratory protective equipment.</p> <p>AS/NZS 1716:2012: Respiratory protective devices.</p> <p>AS 1940:2004: The storage and handling of flammable and combustible liquids.</p> <p>AS/NZS 2161.1:2000: Occupational protective gloves: Selection, use and maintenance.</p> <p>AS/NZS 2161.2:2005: Occupational protective gloves: General requirements.</p> <p>AS/NZS 2161.10.1:2005: Occupational protective gloves: Protective gloves against chemicals and micro-organisms —Terminology and performance requirements.</p> <p>AS/NZS 2161.10.2:2005: Occupational protective gloves: Protective gloves against chemicals and micro-organisms—Determination of resistance to penetration.</p> <p>AS/NZS 2161.10.3:2005: Occupational protective gloves: Protective gloves against chemicals and micro-organisms—Determination of resistance to permeation by chemicals.</p> <p>AS/NZS 2210.1:2010: Safety, protective and occupational footwear - Guide to selection, care and use.</p> <p>AS/NZS 2210.2:2009: Occupational protective footwear - Test methods (ISO 20344:2004, MOD).</p> <p>AS/NZS 2210.4:2009: Occupational protective footwear - Specification for protective footwear (ISO 20346:2004, MOD).</p> <p>AS/NZS 4501.1:2008: Occupational protective clothing - Guidelines on the selection, use, care and maintenance of protective clothing.</p>
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## SAFETY DATA SHEET

### SECTION 15 – REGULATORY INFORMATION (CONTINUED)

<b>NICNAS:</b>	AS/NZS 4501.2:2006: Occupational protective clothing - General requirements. All ingredients present on AICS.
<b>SUSMP:</b>	No Poisons Schedule allocated.

### SECTION 16 – OTHER INFORMATION

#### **Acronyms and Comments:**

<b>ACGIH:</b>	American Conference of Industrial Hygienists.
<b>ADG Code:</b>	Australian Code for the Transport of Dangerous Goods by Road and Rail.
<b>AICS:</b>	Australian Inventory of Chemical Substances.
<b>AS:</b>	Standards issued by Standards Australia, GPO Box 476, Sydney NSW 2001, Australia.
<b>AS/NZ:</b>	Standards issued by Standards Australia, GPO Box 476, Sydney NSW 2001, Australia and Standards New Zealand, Private Bag 2439 Wellington 6140, New Zealand.
<b>BEI:</b>	Biological Exposure Indices published by the Conference of Governmental Industrial Hygienists (ACGIH), 1330 Kemper Meadow Drive, Cincinnati, OH 45240-4148, USA.
<b>CAS Number:</b>	Chemical Abstracts Service Registry Number.
<b>GHS:</b>	Globally Harmonized System of Classification and Labelling of Chemicals, a globally harmonized system for classification and labelling of chemicals proposed by the United Nations.
<b>HAZCHEM:</b>	An emergency action code of numbers and letters which gives information to emergency services.
<b>IARC:</b>	International Agency for Research on Cancer.
<b>IERG:</b>	Dangerous Goods Initial Emergency Response Guide (SAA/SNZ HB 76:2010 Standards Australia/Standards New Zealand).
<b>IMDG:</b>	International Maritime Dangerous Goods Code for transport by sea.
<b>LC/LD:</b>	The median lethal dose, LD50 (abbreviation for "lethal dose, 50%"), LC50 (lethal concentration, 50%) is the dose required to kill half the members of a tested population after a specified test duration. LD50 figures are frequently used as a general indicator of a substance's acute toxicity.
<b>NICNAS:</b>	National Industrial Chemicals Notification and Assessment Scheme.
<b>NOEC:</b>	No-Observed-Effect-Concentration. The highest concentration of toxicant to which organisms are exposed in a full life-cycle or partial life-cycle (short-term) test, that causes no observable adverse effects on the test organisms (i.e., the highest concentration of toxicant in which the values for the observed responses are not statistically significantly different from the controls).
<b>NOEL:</b>	No-Observable-Effect-Level. It is the greatest concentration or amount of a substance, found by experiment or observation, that causes no alterations of morphology, functional capacity, growth, development, or life span of target organisms distinguishable from those observed in normal (control) organisms of the same species and strain under the same defined conditions of exposure.
<b>NTP:</b>	National Toxicology Program (USA Department of Health and Human Services).
<b>OSHA:</b>	Occupational Safety and Health Administration (USA).
<b>PPE:</b>	Personal Protective Equipment.

## SAFETY DATA SHEET

### SECTION 16 – OTHER INFORMATION (CONTINUED)

<b>Safe Work Australia:</b>	Safe Work Australia was formerly the Australian Safety and Compensation Council, which included the National Occupational Health and Safety Commission (NOHSC).
<b>SDS:</b>	Safety Data Sheet.
<b>STEL:</b>	Exposure standard - short term exposure limit, a 15 minute TWA exposure which should not be exceeded at any time during a working day even if the eight-hour TWA average is within the TWA exposure standard. Exposures at the STEL should not be longer than 15 minutes and should not be repeated more than four times per day. There should be at least 60 minutes between successive exposures at the STEL. According to current knowledge this concentration should neither impair the health of, nor cause undue discomfort to, nearly all workers.
<b>SUSMP:</b>	Standard for the Uniform Scheduling of Medicines and Poisons.
<b>TDL<sub>0</sub>:</b>	Total Dose Low means the smallest deadly dose, which caused a toxic or other harmful effect after application on humans or animal.
<b>TWA:</b>	Exposure standard - time-weighted average, the average airborne concentration of a particular substance when calculated over a normal eight hour working day, for a five-day working week.
<b>UN Number:</b>	United Nations Number.
<b>WHS:</b>	Model work health and safety legislation introduced by the Australian government which consists of an integrated package of a model Work Health and Safety (WHS) Act, supported by model Work Health and Safety (WHS) Regulations, model Codes of Practice and a National Compliance and Enforcement Policy. The WHS Regulations implement a new system of chemical hazard classification, labelling and safety data sheet requirements based on the GHS.
<b>Issue Date:</b>	11 December 2015.
<b>Supersedes Issue Date:</b>	New issue.
<b>Revision Information:</b>	Not applicable.
<b>Contact Point:</b>	Customer Service.
<b>Telephone:</b>	1300 325 866.
<b>Note:</b>	Safety Data Sheets are updated frequently. Please ensure that you have a current copy.
<b>Disclaimer:</b>	This SDS summarises at the date of issue our best knowledge of the health and safety hazard information of this product, and in particular how to safely handle and use this product in the workplace. Since Pilot Pen Australia Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, review this SDS in the context of how the user intends to handle and use the product in the workplace. This SDS does not represent a guarantee for the properties of the product(s) described in terms of the legal warranty regulations. If clarification or further information is needed to ensure that an appropriate assessment can be made, the user should contact this company.