

## Certificate of Compliance

Product Type: **Ethyl Alcohol (Industrial Grade Ethanol IGE – Denatured)**  
 Document No. QA-COC-CB  
 Revision No. 1.0.A  
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Product compliance: Manufactured and tested in accordance with Australian Government, Department of Health, Therapeutic Goods Association (TGA) guidelines, stating that further use for hand sanitiser and disinfectant formulations are based on advice by the World Health Organization and similar decisions by the US Food and Drug Administration with the final formulation of the hand sanitiser containing ethanol minimum 80% v/v (pharmacopoeia grade or food standard grade)

Product Uses: Hand sanitiser, disinfectant, industrial cleaning of large surfaces.  
**NOT for human consumption - contains denaturant**

Testing Methodology: In accordance with appropriate Australian Standards ASTM or Pharmacopoeia standard British Pharmacopoeia (BP2020) or food standard grade USA Food Chemical Codex (F.C.C.) 4th Edition Published 1996 (and first Supplement, published 1997) or food standard grade Food and Agriculture Organization (FAO) of the United Nations for Ethyl Alcohol.

TEST	Test Method	Specification	Result
Odour	DBRL, Olfactory	Spirituos Ethanol, with a mild grain based odour and no foreign odours perceptible, characteristic of fermentation ethanol	Complies
Strength	AS 2371, DBRL – calc.	Not less than 96.0% – refer to Note 1	Complies
Identification A	ASTM D4052, BP2020	Relative density g/cm <sup>3</sup> (0.790 – 0.793) @ 20°C	Complies
Identification B	BP2020	FTIR – sample spectra compares well with ethanol library reference spectra	Complies
Identification C	BP2020 or FG	Blue stain	Complies
Identification D	BP2020 or FG	Yellow precipitate	Complies
Appearance	ITM 16001, BP2020 or FG	Clear and clean of foreign matter	
Acidity or Alkalinity	ASTM D1613, BP2020 or FG	Pink solution, 0.002 (max)	Complies
Absorbance	BP2020	Max 0.40 at 240 nm 0.30 btw 250 - 260 nm 0.10 btw 270 - 340 nm The spectrum shows a steadily decreasing curve with no peaks or shoulders	Complies
Residue on Evaporation	BP2020 or FG	25 ppm m/V	Complies
Volatile / Organic Impurities	BP2020 or FG	% vol 0.010 max, refer to Note 2	Complies
Denaturant	ATO - EBG	Denatonium Benzoate (Bitrex) was added at 5ppm by weight to conform with the Australian Tax Office – Excise Business Group's requirements. <a href="https://www.ato.gov.au/Business/Excise-and-excise-equivalent-goods/">https://www.ato.gov.au/Business/Excise-and-excise-equivalent-goods/</a>	Complies

Note 1: Strength is derived from OIML International Alcoholimetric Tables using density and is not applicable to ethanol containing significant contaminants other than water  
 Note 2: Tests are based on BP2020, FCC or FAO methodology, unless otherwise specified. Prior to addition of denaturants