

# TECHNICAL BULLETIN



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## METHYLATED SPIRITS

### IMS, DENATURED ALCOHOL

#### MATERIAL & FUNCTION

**METHYLATED SPIRITS** is denatured ethanol. The ethanol used is often 95% (with 5% water), but some grades will employ absolute ethanol (ie 100% ethanol).

The purpose of the denaturants is to render it unsuitable for drinking and to avoid the excise or duty that may be payable.

Other names are **IMS** (for Industrial **METHYLATED SPIRITS**) or **SMS (SPECIALLY METHYLATED SPIRITS)** with a further description for the grade or type such as IMS F1 to F25.

#### PROPERTIES

Appearance: Clear, colourless liquid, characteristic odour, burning taste.

Formula:  $C_2H_5OH$

Boiling Point: 78.3°C

Melting Point: -117°C

Vapour Pressure: 58.1 mm Hg (1 atmosphere)

Specific Gravity: 0.790

Flash Point: Closed Cup 13

Solubility in water: Completely miscible in all proportions

Flammability Limits (% volume in air): LEL: 3.5; UEL: 19.0

#### APPLICATIONS

The Australian Tax Office schedule below lists the following permitted approved formulations (F1 to F25) for specially methylated spirits and their application:

F1 0.5% methanol plus 2.0% benzol, toluol or petrol

For all purposes except those prohibited by the Spirits Act.

Note: The Spirits Act section14(6) prescribes that no **METHYLATED SPIRITS** shall be used in the manufacture or preparation of any articles of food or drink, or of any essences, tinctures, or medicines.

F2 0.5% diethyl phthalate Scents and toilet preparations; deodorisers; products packed in aerosol form.

F3 2.0% methanol For all purposes except those prohibited by the Spirits Act.

Note: The Spirits Act section14(6) prescribes that no **METHYLATED SPIRITS** shall be used in the manufacture or preparation of any articles of food or drink, or of any essences, tinctures, or medicines.

F4 0.25% tertiary butyl alcohol Scents and toilet preparations; deodorisers; products packed

in aerosol form.

F5 90 gm brucine sulphate or alkaloid per 1,000 litres of spirits  
Scents and toilet preparations; deodorisers; products packed in aerosol form.

F6 16 gm bitrex per 1,000 litres of spirits  
Scents and toilet preparations; deodorisers; products packed in aerosol form.

F7 1 kg sucrose octa acetate per 1,000 litres of spirit  
Scents and toilet preparations; deodorisers; products packed in aerosol form.

F8 90 gm quassin per 1,000 litres of spirit. Scents and toilet preparations; deodorisers;  
products packed in aerosol form.

F9 0.2% acetaldehyde Acetic acid; acetone; ethyl acetate; diethyl phthalate.

F10 10.0% acetone Branding ink for meat producers.

F11 5.0% ethyl ether Branding ink for meat producers.

F12 2.0% by weight ethylene glycol monoethyl ether, Mono and diethylene glycol ethers.

F13 0.5% methyl ethyl ketone. Cleaning solution for photocopying systems; industrial felts  
for paper and printing industry.

F14 5.0% butyric acid Butyric esters.

F15 0.5% methanol plus 2.0% oil of thyme. Sausage seasoning (the finished product is to be  
free from methylating substance).

F16 0.75% methyl ethyl ketone  
plus 1.0% dioxitol  
Solvent used in office duplicating process.

F17 5.0% benzol of toluol Narcotics from opium alkaloids.

F18 5.0% sulphuric ether Diethyl ether (anaesthetic ether).

F19 sulphur dioxide (resulting percentage of sulphur dioxide in the spirit to be no less than  
0.5% w/v)  
Sterilising wine bottles.

F20 1.0% carbolic crystals and  
0.5% methanol  
Antiseptics and germicides.

F21 1.0% petrol Power alcohol or blending with petrol.

F22 1.25 litres t-butyl alcohol and  
4.70 grams bitrex per 1,000 litres of spirit  
Scents and toilet preparations; deodorisers; products packed in aerosol form.

F23 7% PEOPS 93% ethanol (PEOPS(TM) – polyethylene oxide/styrene copolymer  
mixed with xylene added to ethanol)  
Manufacture of 'diesohol'.

F24 83.5% ethanol, 16.5% dieselaid D and morpholine 500 ppm.  
Biofuel (fuel ethanol).

F25 0.125% tertiary butyl alcohol and 0.014% brucine sulphate in absolute alcohol  
Cosmetics.

### **CAUTION**

*Take precautions for a Flammable liquid Class 3.*

### **PACKAGING**

20 and 200L drums

### **IMPORTANT NOTICE TO CUSTOMER**

*Since the use of this product is beyond the control of either seller or manufacturer, their only obligation shall be to replace any quantity of product which is proven defective. They cannot assume any risk or liability in excess of the purchase price of the product itself, which does not include labour or any consequential damages resulting from the use of this product. Determining the suitability of this product for any intended use shall be solely the responsibility of the user. **ALWAYS TEST FIRST.***

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