

- **Technical Data Sheet**

## Isobutanol

CAS No. 78-83-1

IUPAC name: 2-methyl-1-propanol

Other names: 2-methylpropan-1-ol, isobutyl alcohol, IBA

### TYPICAL PHYSICAL PROPERTIES

| Parameter                    | Conditions                 | Units   | Value             |
|------------------------------|----------------------------|---|-------------------|
| Molecular weight             |                            | g   | 74.12             |
| Density                      | 20°C                       | kg/l  | 0.802             |
| Boiling point                | 760 mm Hg                  | °C  | 108               |
| Azeotrope with water         | 760 mm Hg                  |   |                   |
|                              | wt % solvent               | % weight  | 70                |
|                              | Boiling point of azeotrope | °C  | 89.7              |
| Flash Point                  | ACC                        | °C  | 28                |
| Auto-ignition temperature    |                            | °C  | 427               |
| Flammable limits             | Upper                      | % volume  | 11                |
|                              | Lower                      | % volume  | 1.7               |
| Viscosity                    | 20°C                       | cP  | 4.113             |
| Refractive index             | $n_D^{20}$                 |   | 1.3962            |
| Vapour pressure              | 20°C                       | mbar  | 9.64              |
| Relative evaporation rate    | 20°C                       | (n-butyl acetate=1)                                     | 0.67              |
| Volume resistivity           | 25°C                       | $\Omega\text{m}$  | $2.6 \times 10^5$ |
| Hansen solubility parameters | $\delta_d$                 | $\text{MPa}^{1/2} \{ \{ \text{cal.cm}^{-3} \}^{1/2} \}$ | 15.1 (7.38)       |
|                              | $\delta_p$                 | $\text{MPa}^{1/2} \{ \{ \text{cal.cm}^{-3} \}^{1/2} \}$ | 5.7 (2.79)        |
|                              | $\delta_h$                 | $\text{MPa}^{1/2} \{ \{ \text{cal.cm}^{-3} \}^{1/2} \}$ | 15.9 (7.77)       |
| NHE solubility parameters    | Solubility parameter       |   | 10.7              |
|                              | Fractional polarity        |   | 0.111             |
|                              | Hydrogen bonding index     |   | -18               |

### ABBREVIATIONS

ACC Abel Closed Cup

NHE Nelson, Hemwall & Edwards

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