

TECHNICAL DATA SHEET

EkaSol 1™

What is EkaSol 1?

EkaSol 1 is a VOC compliant solvent that is an efficient and cost effective replacement for Methyl Ethyl Ketone (MEK).

EkaSol 1:

- is formulated to be benzene-free
- is non-carcinogenic
- does not contain
 - hazardous air pollutants (HAPs)
 - environmentally hazardous ingredients
 - ozone depleting or creating chemicals
- is "zero VOC" in 49 states
- is considered an Ultra-Low VOC Solvent in SCAQMD*
- is considered an Ultra Low VOC solvent in Canada**

Advantages

EkaSol 1:

- has high purity and is both biodegradable and less toxic than current solvent alternatives
- is ideal for eliminating/reducing Volatile Organic Compound (VOC) emissions
- dries completely
- has excellent solvency and solubility
- has improved flow characteristics compared to MEK and Acetone
- has a high loading capacity

Uses

EkaSol 1 is designed for a variety of uses and purposes.

- **EkaSol 1 can be used in:**
 - paints and coating formulations and cleaning
 - paint and varnish removers
 - ink and marker formulations and cleaning
 - adhesive formulation and cleaning
 - adhesive removers
 - gelcoat formulation and cleaning
 - fiberglass manufacturing
 - hard surface cleaners
 - lubricating greases and oils
 - automotive chemicals and cleaners
 - undercoat formulation and cleaning
 - waterproofing compounds
 - household dyes and tints
 - laundry starches and shoe polishes
 - nail polish removers
- **EkaSol 1 can also be used as a:**
 - surface preparation and precision cleaner
 - general purpose surface wipe cleaner
 - general and heavy duty degreaser
 - laboratory and equipment wipe solvent
 - brake and contact cleaner
 - paint gun and paint line cleaner

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Physical/Chemical Characteristics

Upper Explosive Limit (UEL %)	15.13
Lower Explosive Limit (LEL %)	3.11
Auto Ignition Temp (°C)	454 (849 °F)
Flashpoint (°C)	5.0 (41 °F)
Average Molecular Weight (g/mol)	79.38
Initial Boiling Point (°C)	64.2 (147.6 °F)
Melting Point (°C)	-71.2 (-96.1 °F)
Density (g/mL @ 25 °C)	0.97 (8.10 lb/gal)
Viscosity (cP @ 25 °C)	0.86
Surface Tension (dynes/cm)	26.1
Specific Gravity	0.97
Solubility in H₂O (g/mL @ 25 °C)	0.211
Evaporation Rate (n-Butyl Acetate = 1)	3.62
Vapour Pressure (mm Hg @ 20 °C)	132.97
Vapour Density (mm Hg Air = 1)	2.79
Kauri Butanol (Kb) Value	79.1
Maximum Incremental Reactivity (MIR)	0.47
Purity (Wt % Min)	99.5%
Water Content (ppm)	<320
Colour (Alpha, max)	10 (Clear)
Volatility (%)	100
Heat of Combustion (btu/lb)	9205.2
(kcal/kg)	5116.8
Heat of Vapourization (btu/lb)	176.9
(kcal/kg)	98.5
(kJ/mol)	32.7
Specific Heat Capacity (J g⁻¹ K⁻¹)	2.03
Molar Heat Capacity (J mol⁻¹ K⁻¹)	161.2
VOC (g/L) (ASTM 313-91)	2.66 ***
Global Warming Potential (100 year GWP)	0
Hansen solubility parameters, total (MPa)^{1/2}	19.1
δD (dispersion)	15.73
δP (polar)	6.43
δH (hydrogen bonding)	8.51

*SCAQMD – South Coast Air Quality Management District

CARB - California Air Resources Board

**2014 NPRI reporting guide, the reporting requirements for the Part 4 Total VOCs:

<http://www.ec.gc.ca/inrp-npri/default.asp?lang=En&n=1FAA2366-1>

Should a facility have 20,000 employee hours or more, all sources of CACs that are released to the air (including VOCs) will need to be considered. Part 4 Total VOC requires all releases, regardless of concentration, need to be calculated and summed. The total is then compared to the 10 tonne reporting threshold. Should the threshold be met or exceeded, the facility will need to submit a Part 4 total VOC report whereby the report contains the total VOC release value for the facility.

EkaSol 1 is considered comprised of 77% exempt material as per CEPA and NPRI.

In the European Union (EU), all components of EkaSol 1 are registered under REACH.

*** EkaSol 1 is comprised of a blend of VOC-exempt solvents and is therefore considered Zero VOC by the EPA. EkaSol 1 is considered UltraLow VOC in SCAQMD.

NO WARRANTY IS MADE OF THE MERCHANTABILITY OR FITNESS OF ANY PRODUCT, AND NOTHING HEREIN WAIVES ANY OF THE SELLER'S CONDITIONS OF SALE.

TBF Environmental Technology Inc. represents that the properties listed are accurate to the best of its knowledge.

These are typical properties, TBF Environmental makes no representation that the material in any particular shipment will conform exactly to the properties listed.

