

# ASTROBIO™ K1

## Bio-Solvents Blend, replacement for acetone Technical Data Sheet

**Product name:** ASTROBIO™ K1  
**Manufacturer:** Liberty Chemicals s.r.l. (Italy)  
**Contact:** [info@astrobiosolvent.com](mailto:info@astrobiosolvent.com)

### Area of Use:

**Sustainable Replacement for acetone** in many industrial applications, such as in formulation of coatings, laquers, paints, verniches and inks products based on acrylics, polyamides, polyesters, epoxies and vinylics resins. Very effective as cleaner in industrial settings: i.e. for rollers, de-icers, industrial and professional application tools for paints and coatings. Suitable for cold degreasing after polymerization in synthesis reactors. ASTROBIO™ K1 is also available in cosmetic grade for formulating eco-friendly nail vernishes and polishers.

### Technical Benefits:

- 20% -30% more efficient in reducing viscosity than acetone.
- Reduced evaporation losses: stays on the job longer than acetone.
- Easy and inexpensive to distill or recycle.
- Strong solvency power for different resins and polymers grades.
- **Custom blend available for maximum performances.**
- Excellent flow characteristics.
- High loading capacity.

### Available Packaging:

Drums	IBC	Bulk
178Kg	890Kg	≥ 10MT
net weight	net weight	net weight



### Key Features:

#### Bio-based solvent according to EN 16575

Flashpoint	4° C	EN 3679
RER (BuOAc=1)	1,51	Calculated
Vap. pressure (20°C)	7,93 kPa	Calculated
Boiling Range	71° - 151°C	-

### Solvency power:

HSP's	δd	δp	δh	δt	Calculated
	15,88	6,08	9,96	20,06	

### Environmental Benefits:

- Readily biodegradable raw materials.
- Slow Climate change: carbon neutral balance.
- Sustainable chemistry: renewable raw materials.
- No ozone depleting chemicals.
- No environmental hazardous ingredients.
- No hazardous air pollutants.

### Health Benefits:

- Chlorine, Halogens, Ketons, Aromatic and Paraffins free.
- Safer than acetone due to its higher flashpoint.

### LIBERTY CHEMICALS s.r.l.

### Guaranteed Specifications

Properties	Standard	ASTROBIO™ K1	Units
Appearance	Visual	Clear colourless liquid	
Colour	ASTRO001 <sup>1</sup>	20	Pt-Co (APHA), Max
Specific gravity (20°C)	ASTRO002 <sup>1</sup>	0,86 – 0,92	g/mL
Moisture	ASTRO003 <sup>1</sup>	0,2	% in weight, max

### Technical Performances and properties

Properties	Standard	ASTROBIO™ K1				Units
Chemical composition	-	Blend of organic acids esters <sup>2</sup>				-
Solvency power: HSP's	Calculated	δd	δp	δh	δt	Mpa <sup>1/2</sup>
		16,03	7,19	10,67	20,58	
Boiling range	-	71 – 151				°C
Flashpoint	EN 3679	4				°C
Evaporation rate	Calculated	1,51				RER (BuOAc=1)
Vapour pressure (20° C)	Calculated	7,93				kPa
Dynamic Viscosity (25° C)	ASTRO004 <sup>1</sup>	≈ 0,66				mPa.s

### Environmental characteristics and Biodegradability

Properties	Standard/Reference	ASTROBIO™ K1	Units
Ready Biodegradability <sup>3</sup>	OECD 301 series	> 85	% w/w in 10 days window
Ultimate biodegradability <sup>4</sup>	-	100	% w/w at 67 days
Water hazard	WGK Germany	1	Class
VOC content	Directive 2010/75/UE and Swiss Regulation (814.018)	100	% w/w
	Directive 2004/42/CE	100	% w/w

This product has to be subjected from any industrial or professional user to careful tests, in order to evaluate his effectiveness for expected applications. Our company waives any responsibility in case of any improper usage of this product.

**Manufactured in Italy (European Union).**  
**ASTROBIO™** is a trade mark of Liberty Chemicals s.r.l.  
 (Italy)

**Issued by: ASTROBIO™** division | Liberty Chemicals s.r.l. (Italy).

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**Footnotes:**

1. Analysis conducted according to an internal standard protocol.
2. All ingredient are REACH registered.
3. Product has not been tested itself to access ready biodegradability, but all raw materials used during manufacture are classified as readily biodegradable according to one or several of the following OECD guidelines: OECD 301 A, B, C, D, E, F.
4. Product has not been tested itself to access ultimate biodegradability, but all raw materials used during manufacture are completely (100%) biodegradable in 67 days or less.