

ASTROBIO™ VL

Bio-Solvents Blend, replacement for benzyl alcohol Technical Data Sheet

Product name: ASTROBIO™ VL
Manufacturer: Liberty Chemicals s.r.l. (Italy)
Contact: info@astrobiosolvent.com

Area of Use:

Sustainable Replacement for benzyl alcohol in many industrial applications, such as in formulation of coatings, laquers, paints, varnishes and inks products based on epoxies and isocyanates. It's **very effective as coalescing agent** in water based and solvent based formulations. **ASTROBIO™ VL** is a powerful solvent for cold cleaning operations on different surfaces. It can also be used, instead of benzyl alcohol, to formulate ecological cleaners for electrical and electronic components.

Technical Benefits:

- Reduced evaporation losses: stays on the job longer than benzyl alcohol.
- 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
192Kg	960Kg	≥ 10MT
net weight	net weight	net weight



Key Features:

Bio-based solvent according to EN 16575

Flashpoint	103° C	EN 3679
RER (BuOAc=1)	0,005	Calculated
Vap. pressure (20°C)	0,02 kPa	Calculated
Boiling Range	187° - 246°C	-

Solvency power:

HSP's	δd	δp	δh	δt	
	15,75	6,30	11,12	20,26	Calculated

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 and Aromatic free.
- Safer than benzyl alcohol, due to its hazard statements, GHS and CLP classification.

LIBERTY CHEMICALS s.r.l.

Guaranteed Specifications

Properties	Standard	ASTROBIO™ VL	Units
Appearance	Visual	Clear colourless liquid	
Colour	ASTRO001 ¹	30	Pt-Co (APHA), Max
Specific gravity (20°C)	ASTRO002 ¹	0,93 – 0,99	g/mL
Moisture	ASTRO003 ¹	0,3	% in weight, max

Technical Performances and properties

Properties	Standard	ASTROBIO™ VL				Units
Chemical composition	-	Blend of organic acids esters ²				-
Solvency power: HSP's	Calculated	δd	δp	δh	δt	Mpa ^{1/2}
		15,75	6,30	11,12	20,26	
Boiling range	-	187 – 246				°C
Flashpoint	Estimated	103				°C
Evaporation rate	Calculated	0,005				RER (BuOAc=1)
Vapore pressure (20° C)	Calculated	0,02				kPa
Dynamic Viscosity (25° C)	ASTRO004 ¹	≈ 5,03				mPa.s

Environmental characteristics and Biodegradability

Properties	Standard/Reference	ASTROBIO™ VL	Units
Ready Biodegradability ³	OECD 301 series	> 85	% w/w in 10 days window
Ultimate biodegradability ⁴	-	100	% w/w at 67 days
Water hazard	WGK Germany	1	Class
VOC content	Directive 2010/75/UE and Swiss Regulation (814.018)	50	% 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).

LIBERTY CHEMICALS s.r.l.

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.