

ASTROBIO™ NV

Bio solvent blend, ideal for urethane coatings Technical Data Sheet **hydroxyl - free**

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

Area of Use:

Sustainable and bio-based solvent blend ideal for urethane coating formulations. ASTROBIO™ NV is a completely hydroxyl free specialty so it's compatible with systems containing reactive -NCO groups. It's used to formulate coatings, adhesives, paints and inks based on acrylics, epoxies, alkydics, vinylics, polyesters, melamines, urethanes, phenolics, MDI and ABS resins. It has a great solvency power for wood rosins, modified rosins, nitrocellulose, modified cellulose, some chlorinated polymers and nylons as well. **ASTROBIO™ NV** is also a great choice for formulating bio-based and sustainable paint strippers, PU cleaners, machinery and industrial detergents.

Technical Benefits:

- 20% -30% more efficient in reducing viscosity than other fossil based solvents.
- Reduced evaporation losses: stays on the job longer.
- **Dries completely and leaves no residue.**
- Easy and inexpensive to distill or recycle.
- **Strong solvency power for different resins, polymers grade and soils.**
- **Custom blend available for maximum performances.**
- Outstanding flow down performances.
- High loading capacity.

Available Packaging:

Drums	IBC	Bulk
210Kg	1050Kg	≥ 10MT
net weight	net weight	net weight



Key Features:

Bio-based solvent according to EN 16575

Flashpoint	45° C	EN 3679
RER (BuOAc=1)	0,40	ASTRO005 ¹
Vap. pressure (20°C)	3,77 kPa	Calculated
Boiling range	90° - 215° C	-

Solvency power:

HSP's	δd	δp	δh	δt	Calculated
	15,95	8,50	9,45	20,38	

Environmental Benefits:

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

Health Benefits:

- Aromatics, ketones, paraffins, alogens and terpenics FREE.
- **Safer than other urethane grade solvents** due to it's hazard statements, GHS and CLP classification.

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Guaranteed Specifications

Properties	Standard	ASTROBIO™ NV	Units
Appearance	Visual	Clear colourless liquid	-
Colour	ASTRO001 ¹	20	Pt-Co (APHA), Max
Specific gravity (20°C)	ASTRO002 ¹	1,02 – 1,08	g/mL
Moisture	ASTRO003 ¹	0,2	% in weight, max

Technical Performances and properties

Properties	Standard	ASTROBIO™ NV				Units
Chemical composition	-	Blend of organic acids esters ²				-
Solvency power: HSP's	Calculated	δd	δp	δh	δt	Mpa ^{1/2}
		15,95	8,50	9,45	20,38	
Boiling range	-	90 - 215				°C
Flashpoint	EN 3679	45				°C
Evaporation rate	ASTRO005 ¹	0,40				RER (BuOAc=1)
Vapor pressure (20° C)	Calculated	3,77				kPa
Dynamic Viscosity (25° C)	ASTRO004 ¹	≈ 1,30				mPa.s

Environmental characteristics and Biodegradability

Properties	Standard/Reference	ASTROBIO™ NV	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).

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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.