

ASTROBIO™ G4 *the power of nature*

Bio-based blend of linear fatty acids methyl esters

Technical Data Sheet

Product name: ASTROBIO™ G4

Manufacturer: Liberty Chemicals s.r.l. (Italy)

Contact: info@astrobiosolvent.com

Area of Use:

ASTROBIO™ G4 it's a high performance, plant derived solvent coming mainly from natural oils (e.g. soy, rapeseed, palm and/or sunflower). Fully miscible with many organic solvents and completely not miscible in water. It has very high boiling point, slow evaporation rate and a great solvency power for many kinds of resins, polymers and soils. ASTROBIO™ G4 is used to make hand cleaners, mastic/adhesive/graffiti removers, industrial cleaners, paint strippers, paints and coatings. It's a very powerful asphalt or concrete release agent, being safer than many other fossil based solvents like diesel, gas oil or kerosene. It's also used for cleaning and maintenance in industrial settings cause it readily dissolves greases, lubricant, tar, bitumen, asphalt, heavy hydrocarbons and combustion residues. ASTROBIO™ G4 has no labeling, so it meets safety needs of production and maintenance managers.

Technical Benefits:

- Outstanding results in cleaning/degreasing formulations.
- Better cleaning power and reduced solvent usage than many other fossil based solvents.
- **Non-flammable – it can be used on cold or on hot surfaces - very high flashpoint.**
- Easy and inexpensive to distill or recycle.
- **Strong solvency power for different resins, polymers grade and soils.**
- High loading capacity.

Available Packaging:

Drums	IBC	Bulk
176Kg	880Kg	≥ 10MT
net weight	net weight	net weight



Key Features:

Bio-based solvent according to EN 16575

Flashpoint	164° C	EN 3679
RER (BuOAc=1)	0,001	Calculated
Vap. pressure (20°C)	0,005 kPa	Calculated
Boiling range	302° - 379° C	-
CFPP	- 12° C	EN 14214

Solvency power:

HSP's	δ_d	δ_p	δ_h	δ_t	Calculated
	16,40	3,30	4,70	17,38	

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 fossil-based solvents due to its CLP and GHS classification.**
- Not flammable.

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Guaranteed Specifications

Properties	Standard	ASTROBIO™ G4	Units
Appearance	Visual	Clear yellowish liquid	-
FAME content	ASTRO009 ¹	96	% w/w, min
Colour	ASTRO001 ¹	200	Pt-Co (APHA), Max
Specific gravity (20°C)	ASTRO002 ¹	0,86 – 0,90	g/mL
Moisture	ASTRO003 ¹	0,5	% in weight, max

Technical Performances and properties

Properties	Standard	ASTROBIO™ G4				Units
Chemical composition	-	Linear fatty acids methyl esters blend ²				-
Solvency power: HSP's	Calculated	δd	δp	δh	δt	Mpa ^{1/2}
		16,40	3,30	4,70	17,38	
Boiling range	-	302 - 379				°C
Flashpoint	EN 3679	164				°C
Evaporation rate	Calculated	0,001				RER (BuOAc=1)
Vapor pressure (20° C)	Calculated	0,005				kPa
Dynamic Viscosity (25° C)	ASTRO004 ¹	≈ 4,50				mPa.s
CFPP	EN 14214	- 12				°C

Environmental characteristics and Biodegradability

Properties	Standard/Reference	ASTROBIO™ G4	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)	0	% w/w
	Directive 2004/42/CE	0	% 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 or inherently biodegradable according to one or more of the following OECD guidelines: OECD 301 A, B, C, D, E, F or OECD 302 A, B, C, D.
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.