# ASTROBIO™ VG *the power of nature*

## Heavy duty, safe cleaner replacement for naphta hydrocarbons, Gas oil, Kerosene

## Technical Data Sheet

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



### Area of Use:

**ASTROBIO™ VG** is a high performance, plant derived bio-solvent suitable for heavy-duty industrial cleaning and degreasing operations. Rapidly **dissolves greases, lubricant, tar, bitumen, asphalt, heavy hydrocarbons and combustion residues**. **ASTROBIO™ VG** can be used pure or diluited in water. It's used for cleaning and manteinance in chemical processing plants, gas production plants, off-shore drilling platforms (RIG WASH), glass and steel foundries, refineries (pipe line cleaning), mining industry and in wood processing industry (slip agent and odorless sawing lubricant). **ASTROBIO™ VG has no labeling**, so it meets the needs of production and maintenance managers in terms of performance, absence of toxicity, environmental and safety criteria.

### Technical Benefits:

- 20% -30% more efficient in cleaning and degreasing operations than naphta hydrocarbons, kerosene or gas oil.
- Emulsifiable in water.
- **It can be used pure or diluited in water.**
- **Water rinsible,** leaving a clean residue free surface.
- **Exceptionally powerful solvency properties.**
- Very low volatility, reduced solvent consumption.
- Non-flammable – it **can be used on cold or on hot surfaces** - very high flashpoint
- Versatile in wide range of applications.

### Available Packaging:

| Drums | IBC | Bulk |
|---|---|---|
| 177Kg | 885Kg | ≥ 10MT |
| net weight | net weight | net weight |

### Key Features:

| Bio-based solvent according to EN 16575 | | |
|---|---|---|
| Flashpoint | 164° C | EN 3679 |
| RER (BuOAc=1) | 0,00 | Calculated |
| Vap. pressure (20°C) | 0,005 kPa | Calculated |
| In. Boiling Point | > 330° C | - |
| CFPP | - 12°C | EN 14214 |

### Solvency power:

| HSP's | δd | δp | δh | δt | Calculated |
|---|---|---|---|---|---|
| | 16,36 | 3,32 | 4,85 | 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:

- Guaranteed FREE of hazardous or toxic substances.
- No warning label required (CLP, GHS)
- Non irritating and non sensitizing.
- Non flammable.

**LIBERTY CHEMICALS s.r.l.**
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Codice Fiscale/P. IVA 02253660126 - R.E.A. Varese 241902 - Reg. Imp. 02253660126 - Capitale Sociale € 10.920,00 int. vers.

## Guaranteed Specifications

| Properties | Standard | ASTROBIO™ VG | Units |
|---|---|---|---|
| Appearence | Visual | Clear straw yellow liquid | - |
| Colour | ASTRO001[1] | 200 | Pt-Co (APHA), Max |
| Specific gravity (20°C) | ASTRO002[1] | 0,85 – 0,91 | g/mL |
| Moisture | ASTRO003[1] | 0,5 | % in weight, max |

## Technical Performances and properties

| Properties | Standard | ASTROBIO™ VG | | | | Units |
|---|---|---|---|---|---|---|
| Chemical composition | - | Blend of organic acids esters[2] | | | | - |
| Solvency power: HSP's | Calculated | δd | δp | δh | δt | Mpa$^{1/2}$ |
| | | 16,36 | 3,32 | 4,85 | 17,38 | |
| Initial Boiling point | - | > 330 | | | | °C |
| Flashpoint | EN 3679 | 164 | | | | °C |
| Evaporation rate | Calculated | 0,00 | | | | RER (BuOAc=1) |
| Vapor pressure (20° C) | Calculated | 0,005 | | | | kPa |
| Dynamic Viscosity (25° C) | ASTRO004[1] | ≈ 6,05 | | | | mPa.s |
| CFPP | EN 14214 | - 12 | | | | °C |

## Environmental characteristics and Biodegradabilty

| Properties | Standard/Reference | ASTROBIO™ VG | 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 (Europen 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.