

# 150

150 years of helping the world *thrive*

## ABOUT US

Cargill provides food, agriculture, financial and industrial products and services to the world. Together with farmers, customers, governments and communities, we help people *thrive* by applying our insights and nearly 150 years of experience. We have 143,000 employees in 67 countries who are committed to feeding the world in a responsible way, reducing environmental impact and improving the communities where we live and work.

# thrive™

Agri-pure™  
biosolvent

FUNCTIONAL FLUIDS

# Agri-pure™ biosolvent Play it safe

Agri-pure™ AP-406 is a light-colored, vegetable-based fluid with excellent cleaning, thinning and solvent properties.

It offers an alternative to light mineral oils and other petroleum-derived solvents, providing good technical performance as well as other important benefits:

**HUMAN HEALTH**

Agri-pure™ AP-406 is classified as non-toxic in accordance with EC 1272/08. This is especially important in uses such as cleaning / degreasing formulations, mold release agents and products used in the external environment, where human contact may occur (either intentional or not).

**SAFETY IN USE**

The emission of volatile organic compounds (VOCs) is harmful to people, vegetation, forests and crops as well as contributing to greenhouse gases. Agri-pure™ AP-406 is classified as a non-VOC solvent in accordance with EC directive 1999/13/EC. The high flashpoint and boiling point of Agri-pure™ AP-406 greatly assist in the safe handling and storage of the product with respect to fire and explosion control.

**SUSTAINABILITY**

Agri-pure™ AP-406 is based on vegetable oil of European origin, refined from sustainably cultivated oilseed crops.

**BIODEGRADABILITY**

Agri-pure™ AP-406 is readily biodegradable, and has the lowest water hazard rating WGK 1 (Wassergefährungsklassen, German Water

Hazard Classification). This makes it ideally suited to outdoor and environmental loss applications, where the fate of the solvent must be carefully considered.

Agri-pure™ AP-406 biosolvent (additionally) finds uses in plastics additives, consumer ignition products, coatings, defoamers and chemicals, to name but a few. Many products and processes that use paraffinic oils, white spirit, chlorinated hydrocarbons, D-Limonene and light alcohols can consider to switch (partially or completely) to Agri-pure™ AP-406, and experience the benefits of a safer and greener alternative.

**MORE INFORMATION**

If you have questions about Agri-pure™ AP-406 biosolvent, would like to receive a sample, or would like to discuss other products on our range, do not hesitate to contact us using the information request form or our dedicated e-mail address [biosolvents@cargill.com](mailto:biosolvents@cargill.com).

Agri-pure™ AP-406 is an effective thinner for vegetable oils, allowing for a wide range of operating viscosities

## Recommended applications



**PRINTING INKS**

The high solvency power and light color of Agri-pure™ AP-406 is used to advantage in the formulation of solvent-based offset (sheet-fed) inks – including clear, white and pale inks. Compared to petroleum distillates, Agri-pure™ AP-406 gives comparable rheological properties and printability. Agri-pure™ AP-406 is on the EuPIA approved list for food packaging inks.

**CLEANERS & DEGREASERS**

The trend to safe and renewable bio-based cleaners and degreasers continues apace, and Agri-pure™ AP-406 plays a role in providing the solvency and fluid properties needed to reformulate from traditional mineral oil-based cleaners. Established applications include industrial degreasing, oil refinery CIP, removal of concrete stains, graffiti, varnish, adhesives, and hand cleaners.

**LUBRICANTS**

The fluid properties of Agri-pure™ AP-406 resemble light mineral oils, but with added environmental and human health advantages. These, along with specific application benefits, are put to use in the formulation of metal-working fluids, mold-release agents and textile lubricants. It can also be in the production of sulphurised EP additives, and as a carrier fluid / compatibiliser for additive packages.

**CROP PROTECTION**

Agri-pure™ AP-406 has an established and proven performance as an oil adjuvant, improving rain-fastness, softening waxy leaf cuticles and enhancing the activity of specific herbicides at low dosage. [Adjuvants are functional carrier fluids used to deliver and enhance the performance of active ingredients].

## AGRI-PURE™ AP-406 BIOSOLVENT

**PRODUCT CHARACTERISTICS**

<b>Composition</b>	Vegetable ester, free of additives such as pour point depressants, foam inhibitors and antioxidants	Reference method
<b>Appearance</b>	Light yellow, liquid, clear, free of foreign material	Visual test

Property	Unit	Typical value	Reference method
<b>Color</b>	Gardner	2	ASTM D 1544
<b>Kin. viscosity at 40° C</b>	mm²/s	4.4	EN ISO 3104
<b>Water content</b>	mg/kg	180	EN-ISO 12937:1999
<b>Acid value</b>	mgKOH/g	0.1	EN 14104
<b>Iodine value</b>	g/100g	112	EN 14214 Appendix B
<b>Flash point</b>	°C	155	ISO/CD 3679
<b>Pour Point</b>	°C	-12	ISO 3016
<b>Ester content</b>	%	99	DIN EN 14103:2003
<b>Density at 15° C</b>	g/l	883	DIN EN ISO 12185
<b>Kauri Butanol</b>	-	52	ASTM D1133
<b>Viscosity Index</b>	-	210	Calculated
<b>Solubility at 20° C</b>			
<b>Water</b>	% m/m	Insoluble	