

# 安鋒實業股份有限公司

台中市南屯區工業區 24 路 29 號 TEL : 886-4-23501155 (代表) FAX : 886-4-23507373  
E-mail : anvictor@ms45.hinet.net 網站 : www.twanfong.com

## 含 OH 基蓖麻油聚醇樹脂 ALBODUR 965

### 規格：

固成分	: 約 100 %
黏度	: 約 1100 mPas
生質碳含量(以有機碳總量為基礎)	: 78% (後方有相關檢測報告)
OH 價	: 約 291 mgKOH/g
OH 基含量	: 約 8.82 %
OH 當量	: 約 193

### 成膜規格：

94.45% ALBODUR 965+5% Albolith MS C 350 + 0.5% BYK 088+0.05% Fomrez UL-29  
以 Tolonate HDT 架橋，架橋率 110%。

物性	Shore A 硬度	Shore D 硬度	斷裂伸長率
測試結果	93	45	約 110%

### 特性：

1. ALBODUR 965 是一支無溶劑、含 OH 基的蓖麻油聚醇樹脂(可再生的原材料)。
2. ALBODUR 965 與脂肪族異氰酸酯架橋可提供具有良好耐化性的彈塑性表面塗料。

### 應用：

ALBODUR 965 可用於以下應用：

1. 裝飾性地板塗料。
2. 一般工業塗料。
3. 金屬塗料。
4. 黏膠。

### 適用的原材料：

• 消泡劑	Efka SI 2008	BYK 141	BYK 066N	Tego Airex 944
• 流平劑	Efka FL 3740	Tego Wet 270		
• 分散劑	DISPERBYK 111	DISPERBYK 2155	Tego Dispers 675	Efka PU 4063
• 防沉劑	Sylsilia 350	Albothix 85-32	RHEOBYK-7410 ET	GARAMITE 7303
• 除水劑	Albolith MS C 350	Incozol 2	Dynasytan VTMO	
• 催化劑	TIB-KAT 318	Fomrez UL-28	Fomrez UL-29	Dabco 33 LV

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## 滾塗應用透明面漆參考配方 FP 965-03 :

順序	原材料	比例
1	ALBODUR 965	97.55
2	消泡劑 BYK 141	0.50
3	消泡劑 BYK-066N	0.50
4	除水劑 INCOZOL 2	1.00
5	分子篩漿 Purmol 3 STH	0.30
6	催化劑 TIB-KAT 318	0.05
7	表面助劑 BYK-330	0.10
總計		100.00

\*除水劑及分子篩漿加入後需至少 24 小時來與水反應。之後可將塗料用於進一步應用。

• 架橋：

建議 NCO/OH 架橋率 110%或每 100 份上述配方中添加 94.2 份的 Tolonate LV2。  
若要求更高表面硬度，建議使用 Desmodur NZ 300。

• 應用參數：

應用率	操作性
200~400 g/m <sup>2</sup>	30 分鐘

• 機械性(室溫 x1 天+50°Cx3 天)：

物性	Shore A 硬度	Shore D 硬度
測試結果	約 95	約 45

## 裝飾性地板塗料參考配方 FP 965-05 :

順序	原材料	比例
1	ALBODUR 965	44.00
2	消泡劑 Efka SI 2008	0.50
3	分散劑 Efka PU 4063	1.00
4	分子篩漿 Albolith MS C 350	8.00
5	催化劑 Fomrez UL-29	0.10
6	填料 Millisil W6	31.40
7	鈦白粉 Kronos 2190	15.00
總計		100.00

\*Albolith MS C 350 加入後，需時 24 小時來與水反應。之後可將塗料用於進一步應用。

• 架橋：

建議 NCO/OH 架橋率 110%或每 100 份上述配方中添加 48.26 份的 Tolonate HDT LV。

• 機械性(室溫 x1 天+50°Cx3 天)：

物性	Shore A 硬度	Shore D 硬度	斷裂伸長率
測試結果	約 90	約 40	約 110%

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## 儲存：

存放於緊密的容器中，且溫度在於 5~25°C 之間，至少可以存放 6 個月。



**Beta Analytic**<sup>®</sup>  
TESTING LABORATORY

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[info@betalabservices.com](mailto:info@betalabservices.com)

ISO/IEC 17025:2017-Accredited Testing Laboratory

October 21, 2023

Markus Dimmers  
ALBERDINGK BOLEY GmbH  
Duesseldorferstr. 53  
Krefeld  
47829  
Germany

Dear Mr. Dimmers

Please find enclosed your radiocarbon (C14) report for the material recently submitted. The result is reported as "% Biobased Carbon". This indicates the percentage carbon from "natural" (plant or animal by-product) sources versus "synthetic" (petrochemical) sources. For reference, 100 % Biobased Carbon indicates that a material is entirely sourced from plants or animal by-products and 0 % Biobased Carbon indicates that a material did not contain any carbon from plants or animal by-products. A value in between represents a mixture of natural and fossil sources.

The analytical measurement is cited as "percent modern carbon (pMC)". This is the percentage of C14 measured in the sample relative to a modern reference standard (NIST 4990C). The % Biobased Carbon content is calculated from pMC by applying a small adjustment factor for C14 in carbon dioxide in air today. It is important to note is that all internationally recognized standards using C14 assume that the plant or biomass feedstocks were obtained from natural environments.

Reported results are accredited to ISO/IEC 17025:2017 Testing Accreditation PJLA #59423 standards and all chemistry was performed here in our laboratory and counted in our own accelerators in Miami, Florida.

The international standard method utilized for this analysis is cited under Summary of Results. The standard version used is the latest available as of the date reported (unless otherwise noted). The report also indicates if the result is relative to total carbon (TC) or only total organic carbon (TOC). When interpreting the results, please consider any communications you may have had with us regarding the analysis. If you have any questions please contact us. We welcome your inquiries.

Sincerely,

Ronald E. Hatfield President



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**Summary of Results** - % Biobased Carbon Content  
ASTM D6866-22 Method B (AMS) TOC

**Certificate Number:** 567116677517144095

**Validation:** 

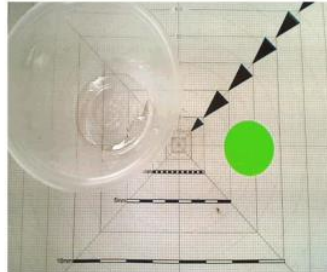
<b>Submitter</b>	Markus Dimmers
<b>Company</b>	ALBERDINGK BOLEY GmbH
<b>Date Received</b>	October 17, 2023
<b>Date Reported</b>	October 21, 2023
<b>Submitter Label</b>	Albodur 965

**RESULT:** 78 % Biobased Carbon Content (as a fraction of total organic carbon)

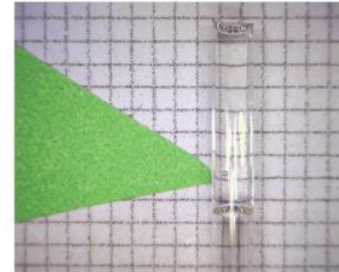
<b>Laboratory Number</b>	Beta-677517
<b>Percent modern carbon (pMC)</b>	78.17 +/- 0.24 pMC
<b>Atmospheric adjustment factor (REF)</b>	100.0; = pMC/1.000



Package received - labeling COC



Representative content (1mm x 1mm scale)



Representative sample analyzed (1mm x 1mm scale)

Disclosures: All work was done at Beta Analytic in its own chemistry lab and AMSs. No subcontractors were used. Beta's chemistry laboratory and AMS do not react or measure artificial C 14 used in biomedical and environmental AMS studies. Beta is a C14 tracer-free facility. Validating quality assurance is verified with a Quality Assurance report posted separately to the web library containing the PDF downloadable copy of this report.

Precision on the RESULT is cited as +/- 3% (absolute). The cited precision on the analytical measure (pMC) is 1 sigma (1 relative standard deviation). The reported result only applies to the analyzed material. The accuracy of the RESULT relies on the measured carbon in the analyzed material having been in recent equilibrium with CO<sub>2</sub> in the air and/or from fossil carbon (more than 40,000 years old) such as petroleum or coal. The RESULT only applies to relative carbon content, not to relative mass content. The RESULT is calculated by adjusting pMC by the applicable "Atmospheric adjustment factor (REF)" cited in this report

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**Summary of Results** - % Biobased Carbon Content  
ASTM D6866-22 Method B (AMS) TOC

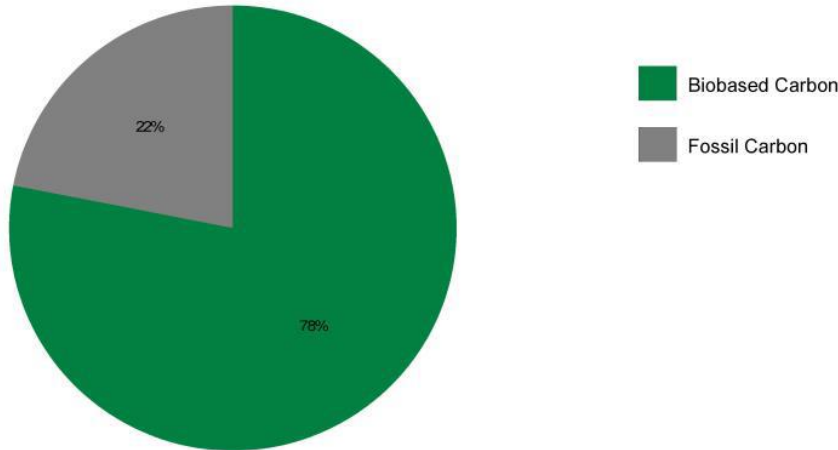
**Certificate Number:** 567116677517144095

**Validation:**

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**RESULT:** 78 % Biobased Carbon Content (as a fraction of total organic carbon)

<b>Laboratory Number</b>	Beta-677517
<b>Percent modern carbon (pMC)</b>	78.17 +/- 0.24 pMC
<b>Atmospheric adjustment factor (REF)</b>	100.0; = pMC/1.000



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## % Biobased Carbon Content ASTM D6866-22 Method B (AMS) TOC

### Explanation of Results

The result was obtained using the radiocarbon isotope (also known as Carbon-14, C14 or 14C), a naturally occurring isotope of carbon that is radioactive and decays in such a way that there is none left after about 45,000 years following the death of a plant or animal. Its most common use is radiocarbon dating by archaeologists. An industrial application was also developed to determine if consumer products and CO<sub>2</sub> emissions were sourced from plants/biomass or from materials such as petroleum or coal (fossil-based). By 2003 there was growing demand for a standardized methodology for applying Carbon-14 testing within the regulatory environment. The first of these standards was ASTM D6866-04, which was written with the assistance of Beta Analytic. Since ASTM was largely viewed as a US standard, European stakeholders soon began demanding an equivalent CEN standard while global stakeholders called for ISO standardization.

The analytical procedures for measuring radiocarbon content using the different standards are identical. The only difference is the reporting format. Results are usually reported using the standardized terminology "% biobased carbon". Only ASTM D6866 uses the term "% biogenic carbon" when the result represents all carbon present (Total Carbon) rather than just the organic carbon (Total Organic Carbon). The terms "% biobased carbon" and "% biogenic carbon" are now the standard units in regulatory and industrial applications, replacing obscure units of measure historically reported by radiocarbon dating laboratories e.g. disintegrations per minute per gram (dpm/g) or radiocarbon age.

The result was obtained by measuring the ratio of radiocarbon in the material relative to a National Institute of Standards and Technology (NIST) modern reference standard (SRM 4990C). This ratio was calculated as a percentage and is reported as percent modern carbon (pMC). The value obtained relative to the NIST standard is normalized to the year 1950 AD so an adjustment was required to calculate a carbon source value relative to today. This factor is listed on the report sheet as the terminology "REF".

Interpretation and application of the results is straightforward. A value of 100% biobased or biogenic carbon would indicate that 100% of the carbon came from plants or animal by-products (biomass) living in the natural environment and a value of 0% would mean that all of the carbon was derived from petrochemicals, coal and other fossil sources. A value between 0-100% would indicate a mixture. The higher the value, the greater the proportion of naturally sourced components in the material.

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## Quality Assurance Report

This report provides the results of reference materials used to validate radiocarbon analyses prior to reporting. Known-value reference materials were analyzed quasi-simultaneously with the unknowns. Results are reported as expected values vs measured values. Reported values are calculated relative to NIST SRM-4990C and corrected for isotopic fractionation. Results are reported using the direct analytical measure percent modern carbon (pMC) with one relative standard deviation. Agreement between expected and measured values is taken as being within 2 sigma agreement (error x 2) to account for total laboratory error.

Report Date: October 25, 2023  
Submitter: Mr. Markus Dimmers

### QA MEASUREMENTS

#### Reference 1

Expected Value: 0.44 +/- 0.04 pMC

Measured Value: 0.44 +/- 0.04 pMC

Agreement: Accepted

#### Reference 2

Expected Value: 129.41 +/- 0.06 pMC

Measured Value: 129.43 +/- 0.35 pMC

Agreement: Accepted

#### Reference 3

Expected Value: 96.69 +/- 0.50 pMC

Measured Value: 96.63 +/- 0.28 pMC

Agreement: Accepted

COMMENT: All measurements passed acceptance tests.

Validation:

Digital signature on file

Date: October 25, 2023

注意：此為一指導性資料，並不具有約束力，我們建議使用者能在使用之前做有必要的測試，不要把它當做一種直接的替代品，如此才能確保產品適合於指定的應用。