



## **BIODEGRADABLE DIELECTRIC FLUID**

**IEC 61099 : 2010**



### **DESCRIPTION**

NYCODIEL 1244 is a biodegradable dielectric fluid based on formulated high performance synthetic ester.

### **APPLICATION**

NYCODIEL 1244 has been developed to fulfil the demand of the electrical industry looking for a technical and biodegradable alternative for dielectric mineral and silicone based products.

NYCO's expertise in specialty ester synthesis and know-how in additive formulation allow to offer a dielectric fluid matching IEC 61099 standard.

NYCODIEL 1244 is used in transformers when high fire point and/or biodegradability are requested.

NYCODIEL 1244 can be used as first fill or retro fill.

### **ADVANTAGES**

- **Matches IEC 61099 standard**
- **Excellent oxidation stability (IEC 61125) : long life-time even in harsh conditions. Few deposits, little sludge**
- **Meets IEC 61039 K fire point classification (replacing IEC 61100)**  
**Meets IEC 61039 3 low heat value classification (replacing IEC 61100) :**  
**Fire safety**
- **Very low water content and high moisture tolerance : slow aging of transformer**
- **Biodegradability (OECD 301B) : above 60% within 28 days**
- **NWG (UBA) (Not Hazardous to water) : environmentally friendly**
- **Based on more than 50% renewable carbon**

[www.nycodiel.com](http://www.nycodiel.com)

The values above are typical values. They do not constitute any contractual commitment.  
Sales specifications are available on request. The present technical data sheet replaces all the previous editions.





Characteristic	Unit	Typical Result	IEC 61099	Test method
<b>Physical</b>				
Colour Apha	-	60	max. 200	ISO 2211 ASTM D1209
Appearance	-	Limpid	Limpid	Visual
Density at 20°C	kg/dm3	0.983	max. 1	ISO 12185 ASTM D4052
Kinematic viscosity at 40°C at - 20°C	mm²/s	21.6 665	max. 35 max. 3000	ISO 3104 ASTM D445
Flash point PM	°C	255	min. 250	ISO 2719 ASTM D93
Fire point	°C	304	min. 300	ISO 2592 ASTM D92
Pour point	°C	- 45	max. - 45	ISO 3016
Crystallisation	-	Pass	Pass	IEC 61099 (2010) Annex A
<b>Chemical</b>				
Water content	mg/kg	32	max. 200	ISO 12937
Acid value	mg KOH/g	0.01	max. 0.03	ISO 6618 ASTM D974
Oxidation stability - total acid - total deposit	mg KOH/g %	0.08 0.007	max. 0.3 max. 0.01	IEC 61125 Method C
<b>Electrical</b>				
Breakdown voltage	kV	70	min. 45	IEC 60156
Dielectric dissipation factor 90°C and 50Hz	-	0.01	max. 0.03	IEC 60247
Resistivity at 90°C	GΩ.m	7.5	min. 2	IEC 60247
<b>Biodegradability</b>				
Biodegradability	%	83	-	OECD 301B
% Renewable carbon content	%	62	-	Calculation

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