The Ossila Guarantee

- Worldwide Shipping
- Fast Secure Dispatch
- Quality Assured
- Clear Upfront Pricing
- Large Order Discounts
- Expert Support

Read more...

Trusted Worldwide

Arizona State University

"Wonderful company with reasonably priced products and so customer-friendly!"

Shahriar Anwar, PhD

Research Scientist, School for Engineering of Matter, Transport & Energy, Arizona State University

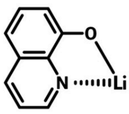
Read more...

8-Quinolinolato lithium (Liq)

CAS Number 25387-93-3

Charge Transport Layer Materials, **Electron Injection Layer Materials**, **Electron Transport Layer Materials**, **High Purity Sublimed Materials**, **Materials**, **OLED Materials**, [+] View more

MSDS



Grade

Sublimed Grade (>99% purity)

Quantity

1g

Product Code **M731-1g**

In stock for priority dispatch

Price **$216**

Tariffs calculated at checkout or quote request

Qty. 1 $ USD Add to Cart / Quote

How to Order | Shipping

Free Shipping

FREE tracked delivery to the United States on qualifying orders when you spend $320 or more.

Read more...

US DELIVERY GUARANTEE

Large Order Discounts

Save 10% on orders over $14,000. Terms apply.

Find out more...

Liq, for efficient electron injection in organic electronic devices

To enhance the operational stability of LEDs, 8-Hydroxyquinolinolato-lithium, CAS No. 25387-93-3, Lithium-8-hydroxyquinolinolate, Lithium 8-quinolinolate, 8-Hydroxyquinolinolato lithium

8-Hydroxyquinolinolato-lithium (Liq), coupled with aluminum (Al), is commonly used as an **electron injection layer (EIL)** material in organic electronic devices, particularly OLEDs. Normally, only a very thin layer (1-2 nm) Liq is needed for efficient electron injection from the electrode to the **electron transport layer (ETL)**.

Liq/Al has also been widely known to be an effective cathode system towards general electron transport layer materials. It has also been reported that ultrathin Liq interlayers can greatly enhance the operational stability of light-emitting diodes [2].

General Information

CAS number	25387-93-3
Chemical formula	C_9H_6LiNO
Molecular weight	151.09 g/mol
Absorption	λ_{max} 261 nm (in THF)
Fluorescence	λ_{em} 331 nm (in THF)
HOMO/LUMO	HOMO = 5.58 eV, LUMO = 3.15 eV [1]
Synonyms	Liq, Lithium-8-hydroxyquinolinolate, Lithium 8-quinolinolate, 8-Hydroxyquinolinolato lithium
Classification / Family	Electron transport layer (ETL) materials, Organic Light-Emitting Diodes, Organic electronics, Sublimed materials

Product Details

Purity	>99% (sublimed), >98% (unsublimed)
Melting point	366-368 °C (lit.)
TGA	$T_d \geq 430$ °C (5%)

FREE shipping on qualifying orders over $320 and zero tariffs on thousands of products

JOIN THE TEAM | ABOUT OSSILA | CONTACT US | HOW TO ORDER | SHIPPING | LOG IN | CREATE ACCOUNT | UNITED STATES, $ USD

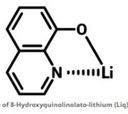
Ossila

Search for...

View Cart / Quote 0

Resources | Equipment | Materials | Substrates & Fabrication | Laboratory Supplies

Chemical Structure



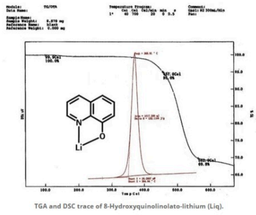
Chemical Structure of 8-Hydroxyquinolinolato-lithium (Liq), CAS 25387-93-3

Device Structure(s)

Device structure	ITO (150 nm)/NPB (70 nm)/mCP:Firpic-8.0%:Ir(ppy)$_2$-0.5%:Ir(piq)$_3$-0.5% (30 nm)/TPBi (30 nm)/**Liq** (2 nm)/Al (120 nm) [3]
Colour	White
Max. Luminance	37,810 cd/m^2
Max. Current Efficiency	48.1 cd/A
Device structure	ITO (180 nm)/TAPC (60 nm)/mCP:Firpic–8 wt% (10 nm)/Ir(ppz)$_3$ (1.5 nm)/mCP:Firpic–8 wt% (10 nm)/Ir(ppz)$_3$ (1.5 nm)/mCP:Firpic–8 wt% (10 nm)/TPBi (30 nm)/**Liq** (2 nm)/Al (120 nm) [4]
Colour	Blue
Luminance@200 cd/m^2	32,570 cd/m^2
Max. Current Efficiency	43.76 cd/A
Max. Power Efficiency	21.4 lm W^{-1}
Device structure	Al/MoO$_3$ (3 nm)/mCP (50 nm)/Ir(tfmppy)$_2$(tpip)* (0.5 nm)/TPBi (2.5 nm)/mCP (2.5 nm)/Ir(tfmppy)$_2$(tpip) (0.5 nm)/TPBi (10 nm)/BPhen (45 nm)/**Liq** (1 nm)/Al (1 nm)/Ag (22 nm)/mCP (80 nm) [5]
Colour	Green
Max. Current Efficiency	126.3 cd/A
Device structure	ITO/ NPB (70 nm)/DPVBi:BCzVBi (15 wt%, 15 nm)/ADN:BCzVBi (15% wt%, 15 nm)/BPhen (30 nm)/ **Liq** (2 nm)/Al (100 nm) [6]
Colour	Deep Blue
Max. Luminance	8,668 cd/m^2
Max. Current Efficiency	5.16 cd/A
Device structure	ITO/NPB/**DPVBi**:BCzVBi-6%/MADN:DCM2-0.5%/Bphen/Liq/Al [7]
Colour	White
Max. Luminance	15,400 cd/m^2
Max. Current Efficiency	6.19 cd/A
Device structure	ITO/PEDOT:PSS (40 nm)/ CzDMAC-DPS* (40 nm)/TPBi (40 nm)/**Liq** (1.6 nm)/Al (100 nm) [8]
Colour	Greenish-Blue
Max. Current Efficiency	30.6 cd/A
Max. Power Efficiency	12.2 lm W^{-1}
Device structure	ITO/HTL (100 nm)/CBP:9 wt%DACT-II*(40 nm)/BAlq (30 nm)/**Liq**/Al [9]
Colour	Green
Max. EQE	41.3%

**For chemical structure information, please refer to the cited references.*

Characterisation



TGA and DSC trace of 8-Hydroxyquinolinolato-lithium (Liq).

Pricing

Grade	Order Code	Quantity	Price
Sublimed (>99% purity)	M731	1 g	$216
Unsublimed (>98% purity)	M732	5 g	$203
Sublimed (>99% purity)	M731	5 g	$702

MSDS Documentation

8-Quinolinolato lithium MSDS sheet

Literature and Review

1. *Lithium-Quinolate Complexes as Emitter and Interface Materials in Organic Light-Emitting Diodes*, C. Schmitz et al., Chem. Mater., 12, 3012-3019 (2000); **doi: 10.1021/cm0010248**
2. *Operational stability enhancement in organic light-emitting diodes with ultrathin Liq interlayers*, DPK. Tsang et al., Sci Rep., 6: 22463 (2016); doi:10.1038/srep22463.
3. *Study of Sequential Dexter Energy Transfer in High Efficient Phosphorescent White Organic Light-Emitting Diodes with Single Emissive Layer*, J-K. Kim et al., Sci. Reports, 4. 7009 (2014); DOI: 10.1038/srep07009.

[+] View Literature and Reviews

Ossila
About Ossila
Press and Media
Our Writing Team
Awards and Testimonials
Leave Feedback
Terms and Conditions
Privacy Policy

Copyright © 2025 Ossila

Join the Team
Careers at Ossila
Jobs in Sheffield
Jobs in Leiden

Collaborate
Free Digital Assets
Conference Sponsorship for Students
Science Outreach Support
Graduation Awards
Letters of Support

Your Account
Log in
Create Account

Order Information
How to Order
Worldwide Shipping
Returns and Cancellations
Warranty Information
Regional Distributors
Deals and Discounts
Price Drop Guarantee

Customer Support
Send an Enquiry
info@ossila.com
Main Office
+44 (0)114 2999 180
Mon-Fri, 8:00-17:00 (GMT/BST)
EU Office
+31 (0)718 081020
Mon-Fri, 9:00-17:00 (CET/CEST)

Ossila Ltd Company Number 06920105 VAT Number GB 978 2092 81 EORI Number GB978209281000
Ossila BV CCI number 84102241 VAT Number NL 863097182B01 EORI Number NL863097182

The Ossila website uses cookies for core functionality. By continuing to browse the website you agree to the use of these cookies. More Information Accept & Close

Return to the top