



Semiconductor Materials

Heraeus Semiconductor Materials – Rapid Science

Heraeus Daychem

Heraeus Daychem is a global supplier of semiconductor materials and advanced chemicals for the electronics, display and aerospace industries. Specializing primarily in value added organic chemistry, Heraeus Daychem offers high levels of quality and service. The product range includes:

- Photo Acid Generators (PAG's): from i-line to EUV
- Specialty Resins
- Monomers, Polymers and Crosslinkers
- Materials for Displays and Printed Electronics

Heraeus Daychem Service Portfolio:

- Innovative R&D to meet customer specified targets
- Rapid scale up of customer specific materials

Heraeus Daychem, a globally operating organization based in North America, is the R&D and production site of the Business Line Display and Semiconductor, Heraeus Germany.



Semiconductor Materials

Partner with Heraeus Daychem to develop and scale-up your most demanding molecules.

Scale up:

Heraeus Daychem's scientists work with you to synthesize a molecule and scale-up the product in accelerated time frames. The following tables illustrate the speed at which we can support you:

Customer Specific Photoresist Monomer

Activity	Total Time from Project Start
Customer provides chemical structure	-
Heraeus develops synthesis route	3 weeks
First 1 kg batch delivered	3 months
Third 1 kg batch delivered	5 months
Process/material is considered qualified	7 months
5 kg process developed	8 months

Development/Production of Customer Specific Photoacid Generator (5 steps)

Activity	Total Time from Project Start
Customer provides chemical structure	-
Heraeus develops synthesis route	2 months
Heraeus delivers first 100 gm	3 months
Heraeus delivers first 3 kg	7 months
5 kg batch qualified	24 months (end customer qualification)

Heraeus New Businesses

E-Mail: daychem@heraeus.com

www.heraeus-daychem.com

Americas

**Heraeus Precious Metals
North America Daychem LLC**
970 Industrial Park Drive
Vandalia, OH 45377, USA
Phone: +1 (937) 264-1000

Europe

**Heraeus Deutschland
GmbH & Co. KG**
Building B202, Chempark
51368 Leverkusen
Germany

Korea

Heraeus Materials Korea Corp.
Dogok-RO 111, 12F
Gang-Nam Gu
Yeoksam-dong, Mijin Bldg.
Seoul 135-937, Korea
Phone: +82 (2) 865-0950

Japan

Heraeus K. K.
Sumitomo Fudosan Kojimachi
Bldg. 7F
5-1 Nibancho, Chiyoda-Ku
Tokyo 102-0084, Japan
Phone: +81 (3) 5215-3927

Heraeus Daychem has developed a multitude of chemical processing and synthesis techniques over the years. The following are examples of our techniques, but we are not limited to those listed:

- Friedel-Craft
- Diels Alder
- Grignard
- Lithiation

Synthetic/Production Polymer Expertise

- Linear and cross-linked polymer systems
- Condensation and addition polymerization
- Oligomeric to high molecular weight
- Reactive end-caps
- Photo definable polymers
- Reproducible molecular weight distribution
- Functionalization/grafting
- Liquid crystalline and rigid rods systems