POLYMERIC MATERIALS FOR ADVANCED PACKAGING AT THE WAFER-LEVEL
Market & Technology report - November 2018

Polymeric materials market revenue will double over the next five years.

KEY FEATURES
- Detailed analysis of polymeric materials used in the following advanced packaging platforms: WLCSP (fan-in WLP), FOWLP, flip-chip (FC BGA/CSP), 2.5D interposer, 3D stacked TSV
- Thorough analysis of the polymeric materials used in different material-based functionalities, including dielectric material, bonding stacked material, molding compound, underfill, photoresists, and temporary bonding material
- 2017 - 2023 polymeric materials market metrics (value and quantity): breakdown by advanced packaging platform and material functionality
- 2017 global polymeric materials market share in the advanced packaging sector
- 2017 polymeric materials suppliers, by material function
- Overview of the players using polymeric materials, by advanced packaging application and by function
- Roadmap for polymeric materials adoption
- Updated polymeric materials technology trends analysis across advanced packaging platforms

POLYMERIC MATERIALS: MASSIVE MARKET ADOPTION IN THE ADVANCED PACKAGING SECTOR

Driven by movements towards further miniaturization and higher functionalities, megatrend applications like artificial intelligence (AI), 5G, and augmented reality (AR)/virtual reality (VR) are creating huge business opportunities and contributing to the growth of advanced packaging applications. Indeed, these megatrend applications are fueling the next generation of advanced packaging platforms (high-density FOWLP, 3D stacked TSV memory, WLCSP, and flip-chip), which have reached a new level of complexity and now demand higher integration-level requirements. These lofty standards will strongly influence the increasing demand for advanced materials with new technical specifications, in order to achieve better performance.

With respect to materials, polymeric materials (due to their excellent electrical, chemical, and mechanical properties) are already being applied in large-volume manufacturing in some advanced packaging process steps, and will increasingly be implemented when adopting additional functionalities in the same field.

The polymeric materials market generated revenue in excess of $700M in 2018, driven by dielectric material, and is expected to peak at ~$1.3B by 2023 with a 12% compound annual growth rate (CAGR) depending on the material type over this period. Polymeric materials growth will find support mostly from the expansion of dielectric material for more complex devices, followed by the broad introduction of polymeric temporary bonding material. The latter will be accelerated by the ramp-up of 3D stacked TSV in DRAM memory applications.

In this context, Yole Développement’s report explains the dynamics of the polymeric materials market, as well as the advanced packaging platforms currently integrating polymeric materials. This report also offers: a detailed analysis of the polymeric materials market (by volume and value for advanced packaging); a market growth estimate for the 2017 - 2023 timeframe; and breakdowns by advanced packaging platforms and material function type.

<table>
<thead>
<tr>
<th>Polymeric materials: market adoption in the advanced packaging field from 2018 to 2023</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Breakdown by polymeric material function</strong></td>
</tr>
<tr>
<td>Revenue (in $M)</td>
</tr>
<tr>
<td>2018</td>
</tr>
<tr>
<td>----</td>
</tr>
<tr>
<td>Dielectric</td>
</tr>
<tr>
<td>Underfill</td>
</tr>
<tr>
<td>Molding Compound</td>
</tr>
<tr>
<td>Photoresist</td>
</tr>
<tr>
<td>Temporary Bonding</td>
</tr>
</tbody>
</table>

(Yole Développement, November 2018)

DISPERSSION OF POLYMERIC MATERIALS INTO DIFFERENT FUNCTIONALITIES THROUGHOUT THE PACKAGING SECTOR

Polymeric materials are primarily used to protect printed wiring boards (PWB) from moisture, handling, and environmental influences. However, over the last few years, polymeric materials have attracted significant interest in the microelectronics field, while also making serious inroads in the advanced packaging area, adopting numerous functionalities within various packaging platforms. There are a wide variety of polymeric materials available to packaging manufacturers: PI, PBO, BCB, epoxies, silicones, and acrylic, all of which are defined by their constant dielectric, cure temperature, stress, etc. Today, polymeric materials in the advanced packaging industry have already found integration in major process steps: RDL, bump/UBM, through-silicon vias (TSV), and assembly levels, as well as at the bonding interface.
For polymeric dielectric materials-driven RDL passivation and UBM re-passivation, polyimide (PI) based material is often favored. However, it appears that PBO, with its high drop-reliability properties, is an appealing choice for thick RDL layers in a thickness range above >10um. Moreover, it has been demonstrated that warpage and stress are greatly reduced with PBO, especially for bigger wafer sizes (300 mm).

Looking ahead, the molding compound only used for FOWLP at the wafer packaging level is based primarily on an epoxy which requires a low-as-possible CTE in order to avoid the wafer warpage issues induced via CTE mismatch between mold and silicon. Also, the high adhesion between the polymeric molding material and RDL must undergo a reliability test.

From a technical point of view, liquid molding compound is today the dominant material applied at wafer level for FOWLP. Nevertheless, granular material could move ahead in the polymeric materials market for FOWLP at both wafer and panel level.

Meanwhile, temporary bonding materials differ not only in terms of material function, but also from one advanced packaging platform to another, since the challenges are different depending on the platform. For instance, selecting the right temporary bonding material for FOWLP depends on the molding compound itself with respect to mechanical stress, CTE, thermal conductivity, die shift, and wafer warpage, while topography and post-bonding processing are the main concerns for 3D stacked TSV. These are typically based on thermoplastic or thermostos. Alternative solutions like PI and PBO are being evaluated, but there are still some cleaning-compatibility and removal issues to overcome.

Finally, regarding underfill material, the choice of a specific material and technique depends on a variety of parameters: end-application, thermal & reliability requirements, bump & pad metallurgy, die size, and silicon process node. For standard FC BGA/CSP at the assembly level, capillary underfill (CUF) is mostly used. However, due to further miniaturization and the gap between the substrate and the chip, pre-applied wafer-level underfill is also an option. Meanwhile, pre-applied underfills have gained a lot of traction for high-density applications (i.e. FOWLP and GPU) and for applications requiring large die-size in the range of 30x30 mm², while CUF is much more advantageous for small die-size (10x10 mm²) due to better flow.

Therefore, choosing the right polymeric material strongly depends on technical performance associated with functionality requirements and cost.

This report provides a comprehensive analysis of the different existing polymeric materials used for each advanced packaging process step, along with their status. Also presented is the maturity level of each polymeric material, by advanced packaging function. A technology roadmap showing the future steps for these polymeric materials solutions is included too.

### MATERIALS SUPPLIERS PRIZE SPECIALIZATION AS A MEANS OF DIFFERENTIATING THEMSELVES AND SUCCESSFULLY COMPETING IN THE ADVANCED PACKAGING FIELD

The polymeric materials market is diversified and fragmented into varied suppliers like HD Microsystems, JSR Corporation, Merck, DOW, Nagase, Asahi Kasei, Henkel, Hitachi Chemical, Sumitomo Bakelite, TOK, Brewer Science etc. including several polymeric materials suppliers focused on one specific material. Each company has developed expertise in a specific material or two, but not all of them. Thus there is no clear leader amongst materials suppliers across the different functions and sectors – rather, one supplier is dominant in each material category.

Looking ahead, most materials suppliers involved with advanced packaging originate in myriad fields, from agricultural to pharmaceuticals, and span the entire materials range for microelectronics. Lucrative microelectronics business opportunities drive M&As between materials suppliers entering from different industries in a quest to acquire share in advanced packaging.

Some materials vendors utilize different strategies to skip a step in the advanced packaging polymeric materials process:

- In an effort to evolve towards greater diversification, some materials suppliers have reshuffled the landscape through M&A - i.e. Nissan Chemical’s acquisition of Thin Materials, which allowed Nissan Chemical to enter the temporary bonding materials field.
In the hopes of acquiring market share in other regions, recent acquisitions have transpired amongst materials suppliers aiming to expand their market reach: for example, Mactac America, which acquired Lintec Corp.

Others are already seasoned specialists in materials for microelectronics, and maintain their leadership role by consistently enhancing their product portfolio.

On the other hand, Chinese polymeric materials suppliers (i.e. Kempur) coming from the integrated circuit business are trying to penetrate the advanced packaging market by leveraging their materials line to meet current packaging requirements. Many of these new Chinese players, which still lack significant market share, benefit from strong subsidies offered by local governments. This could help them compete with the top players in the midterm.

Yole Développement’s report provides a map of the key polymeric materials involved in each polymeric material function and advanced packaging process step, as well as the material types offered. This report also provides quantified, detailed market share for major materials suppliers, segmented by process step and material functionality.

**OBJECTIVES OF THE REPORT**

- Detailed analysis of the major advanced packaging platforms using polymeric materials that could require the use of polymeric materials
- Polymeric materials roadmap for the advanced packaging platforms
- Give the current status of the polymeric material adoption and the various type of polymeric material available on the market
- Provide an overview of the technological trends for polymeric material
- Understand the key benefits and added value of the polymeric material in the field of advanced packaging
- How does polymeric material differ from the other alternative material solutions
- Understand what are the remaining challenges of the implementation of the polymeric material in the field of advanced packaging
- Offer market metrics at polymeric material market level for advanced packaging applications (2017-2023)
- Evaluate market developments in terms of market size (volume, value, quantity), by material function and by advanced packaging platform
- Provide a competitive landscape, identify key players in technology development and manufacturing
- Give an overview of who is doing what, and specificities of each market

**COMPANIES CITED IN THE REPORT (non exhaustive list)**


**TABLE OF CONTENTS**

<table>
<thead>
<tr>
<th>Section</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction, definitions and methodology</td>
<td>6</td>
</tr>
<tr>
<td>Executive summary</td>
<td>16</td>
</tr>
<tr>
<td>Introduction to polymeric materials</td>
<td>21</td>
</tr>
<tr>
<td>2017 – 2023 polymeric materials market status</td>
<td>72</td>
</tr>
<tr>
<td>&gt; Polymeric market forecast (in $M)</td>
<td></td>
</tr>
<tr>
<td>- Per material type</td>
<td></td>
</tr>
<tr>
<td>- Per packaging platform</td>
<td></td>
</tr>
<tr>
<td>&gt; Polymeric market forecast (in volume)</td>
<td></td>
</tr>
<tr>
<td>&gt; 2017 market share per suppliers</td>
<td></td>
</tr>
<tr>
<td>&gt; 2017 overall market share split by functionality type</td>
<td></td>
</tr>
<tr>
<td>Direct materials section</td>
<td>83</td>
</tr>
<tr>
<td>&gt; Dielectric material</td>
<td></td>
</tr>
<tr>
<td>&gt; Bonding stacked material</td>
<td></td>
</tr>
<tr>
<td>&gt; Molding compound</td>
<td></td>
</tr>
<tr>
<td>&gt; Underfill</td>
<td></td>
</tr>
<tr>
<td>Undirect material section</td>
<td>167</td>
</tr>
<tr>
<td>&gt; Photoresist</td>
<td></td>
</tr>
<tr>
<td>&gt; Temporary bonding</td>
<td></td>
</tr>
<tr>
<td>Appendix</td>
<td>208</td>
</tr>
</tbody>
</table>

**RELATED REPORTS**

- Bonding and Lithography Equipment Market for More than Moore Devices
- Wafer Starts for More Than Moore Applications
- Status of Panel Level Packaging 2018
- Second Generation of TSMC’s inFO Packaging for the Apple A11 found in the iPhone X
- 2017 overall market share split by functionality type

**WHAT’S NEW**

- Polymeric materials market - status and evolution since 2012
- Update of our 2017 - 2023 polymeric materials market forecast, including market value and quantities for advanced packaging: WLCSP, FOWLP, FC BGA/CSP, 2.5D interposer, and 3D stacked TSV
- Global polymeric materials market overview, segmented by advanced packaging application and material function: dielectric material, bonding stacked material, molding compound, underfill, photoresists, and temporary bonding material
- 2017 - 2023 global polymeric materials market forecast, in market value and units: split by advanced packaging platform and material function
- Update regarding key 2017 polymeric materials suppliers
- New analysis based on the competitive landscape and market share of polymeric materials suppliers, by material function

**AUTHOR**

Amandine Pizzagalli is a Technology & Market Analyst, Equipment & Materials - Semiconductor Manufacturing, at Yole Développement (Yole). Amandine is part of the development of the Semiconductor & Software division of Yole with the production of reports and custom consulting projects. She is in charge of comprehensive analyses focused on semiconductor equipment, materials and manufacturing processes. Previously, Amandine worked as Process engineer on CVD and ALD processes for semiconductor applications at Air Liquide. Amandine was based in Japan during one year to manage these projects. Amandine graduated from CPE Lyon (France), with a technical expertise in Semiconductor & Nano-Electronics and holds an electronics engineering degree followed by a master’s in semiconductor manufacturing technology from KTH Royal Institute of Technology (Sweden). She has spoken in numerous international conferences and has authored or co-authored more than 10 papers.

Find more details about this report here: [www.i-micronews.com](http://www.i-micronews.com)
ORDER FORM
Polymeric Materials for Advanced Packaging at the Wafer-Level

BILL TO

Name (Mr/Ms/Dr/Pr):
_________________________________________
Job Title:
_________________________________________
Company:
_________________________________________
Address:
_________________________________________
City:
_________________________________________
State:
_________________________________________
Postcode/Zip:
_________________________________________
Country*:
_________________________________________
*VAT ID Number for EU members:
_________________________________________
Tel:
_________________________________________
Email:
_________________________________________
Date:
_________________________________________

PAYMENT

BY CREDIT CARD
• Visa
• Mastercard
• Amex

Name of the Card Holder:
_________________________________________
Credit Card Number:
_________________________________________
Card Verification Value (3 digits except AMEX: 4 digits):
_________________________________________
Expiration date:
_________________________________________

BY BANK TRANSFER
BANK INFO: HSBC, 1 place de la Bourse,
F-69002 Lyon, France,
Bank code: 30056, Branch code: 00170
SWIFT or BIC code: CCFRFRPP,
IBAN: FR76 3005 6001 7001 7020 0156 587

RETURN ORDER BY
• MAIL: YOLE DÉVELOPPEMENT, Le Quartz,
  75 Cours Emile Zola, 69100 Villeurbanne/Lyon - France

SALES CONTACTS
• Western US & Canada - Steve Laferriere:
  +1 310 600-8267 – laferriere@yole.fr
• Eastern US & Canada - Troy Blanchette:
  +1 704 859 0453 – troy.blanchette@yole.fr
• Europe & RoW - Lizzie Levenez:
  +49 15 123 544 182 – levenez@yole.fr
• Japan & Rest of Asia - Takashi Onozawa:
  +81-80-4371-4887 – onozawa@yole.fr
• Greater China - Mavis Wang:
  +886 979 336 809 – wang@yole.fr
• Specific inquiries: +33 472 830 180 – info@yole.fr

PRODUCT ORDER - Ref YD18045

Please enter my order for above named report:

☐ One user license*: Euro 5,990
☐ Multi user license: Euro 6,490

- The report will be ready for delivery from December 6, 2018
- For price in dollars, please use the day’s exchange rate. All reports are delivered electronically at payment reception. For French customers, add 20% for VAT

I hereby accept Yole Développement’s Terms and Conditions of Sale

Signature: _______________________________________

*One user license means only one person at the company can use the report.

SHIPPING CONTACT

First Name: _____________________________________
Last Name: _____________________________________
Email: _________________________________________
Phone: _________________________________________

ABOUT YOLE DEVELOPPEMENT

Founded in 1998, Yole Développement has grown to become a group of companies providing marketing, technology and strategy consulting, media and corporate finance services, reverse engineering and reverse costing services and well as IP and patent analysis. With a strong focus on emerging applications using silicon and/or micro manufacturing, the Yole group of companies has expanded to include more than 80 collaborators worldwide covering MEMS and Image Sensors, Compound Semiconductors, RF Devices & Technologies, Solid-state Lighting, Displays, Software, Optoelectronics, Microfluidics & Medical, Advanced Packaging, Manufacturing, Nanomaterials, Power Electronics and Batteries & Energy Management.

The “More than Moore” market research, technology and strategy consulting company Yole Développement, along with its partners System Plus Consulting, PISEO and KnowMade, support industrial companies, investors and R&D organizations worldwide to help them understand markets and follow technology trends to grow their business.

CONSULTING AND ANALYSIS
• Market data & research, marketing analysis
• Technology analysis
• Strategy consulting
• Reverse engineering & costing
• Patent analysis
• Design and characterisation of innovative optical systems
• Financial services (due diligence, M&A with our partner)
More information on www.yole.fr

RESEARCH
• Market & technology reports
• Patent investigation and patent infringement risk analysis
• Structure, process and cost analysis
• Cost simulation tool
More information on www.i-micronews.com/reports

MEDIA & EVENTS
• i-Micronews.com website & related @Micronews e-newsletter
• Communication & webinar services
• Events: TechDays, forums…
More information on www.i-micronews.com

CONTACTS
For more information about:
• Consulting & Financial Services: Jean-Christophe Eloy (eloy@yole.fr)
• Reports: David Jourdan (jourdan@yole.fr) Yole Group of Companies
• Press Relations & Corporate Communication: Sandrine Leroy (leroy@yole.fr)


The present document is valid 24 months after its publishing date: November 8, 2018
Definitions: “Acceptance”: Action by which the Buyer accepts the terms and conditions of sale in their entirety. It is done by signing the purchase order which mentions “I hereby accept Yole’s Terms and Conditions of Sale”.

“Buyer”: Any business user (i.e anyone acting in the course of its business activities, for its business needs) entering into the following general conditions to the exclusion of consumers acting in their personal, familial or non-professional interests.

“Contracting Parties” or “Parties”: The Seller on the one hand and the Buyer on the other hand.

“Intellectual Property Rights” (“IPR”) means any right or property interest, whether patent, trademark, design, copyright, trade secret, software, database, know how, technical information, company or trading names and any other intellectual property right, whether national or international, notwithstanding the fact that they have been registered or not and including any pending registration of one of the above mentioned rights.

“License”: For the reports and databases, 3 different license are proposed. The buyer has to choose one license:

• One user license: one person at the company can use the report.
• Multi-user license: the report can be used by unlimited users within the company. Subsidiaries and Joint-Ventures are not included.
• Corporate license: purchased under “Annual Subscription” reports and databases can be used by unlimited users within the company. Joint-Ventures are not included.

“Products”: Depending on the purchase order, reports or database on MEMS, CSC, Optics/CMEMS, Nano, etc., to be purchased by the Buyer, at the price indicated on an annual subscription. (i.e. subscription for a period of 12 calendar months).

2. MAILING OF THE PRODUCTS

1. The Contracting Parties, analysts, Yole works worldwide with the key industrial companies, and a consulting approach, is defined in the order. Reports are annual subscription to a package (i.e. a global discount based on a particular purchase order). The effective price is reevaluated from time to time. The effective price is deemed to be one applicable at the time of the order.

2. Yole may offer a pre-release discount for the companies willing to acquire the products in their final form before the fact that the report may be released later than the anticipated release date. In exchange for this uncertainty, the company will get a discount that can vary from 15% to 10%.

3. Payments due by the Buyer shall be sent by cheque payable to Yole Développement, credit card or by electronic transfer to the following account:

- IBAN: FR76 3005 6001 7001 7020 0156 587
- Account n°: 0170 200 1565 87
- BIC or SWIFT code: CCFRFRPP

To ensure payment, the Buyer agrees to request the right to receive down payments from the Buyer. In this case, the number of down payments will be mentioned on the order.

4. Payment is due by the Buyer to the Seller within 30 days from invoice date, except in the case of a particular written agreement. If the Buyer fails to pay within this time and fails to contact the Seller, the latter shall be entitled to invoice interest in arrears based on the annual rate Ref of the BCE + 7 points, in accordance with article L 441-6 of the French Commercial Code (i.e. bank interest, portage, database, tool,...) are delivered only after reception of these payments.

5. In the event of termination of the contract, or of misconduct, during the contract, the Seller will have the right to invoice the stage in progress, and to take legal action for damages.

LIABILITIES

4.1 The Buyer or any other individual or legal person acting on its behalf, being a business user buying the Products for its business activities, shall be solely responsible for choosing the Products and for the use and interpretations he makes of the documents it purchases, of the results he obtains, and of the business activities, shall be solely responsible for choosing the Products and for the use and interpretations he makes of the results he obtains, and of the advice and acts it deduces thereof.

4.2 The Seller shall only be liable for (i) direct and (ii) foreseeable damages, losses or costs resulting from the Products or arising from a material breach of this agreement.

4.3 In no event shall the Seller be liable for:

a) damages of any kind, including without limitation, incidental or consequential damages (including, but not limited to, damages for loss of profits, business interruption and loss of program or data files) resulting from the use of, inability to use the Seller’s website or the Products, or any information provided on the website, or in the Products;

b) any special, indirect, punitive, exemplary or other inaccuracy in the Products or interpretations thereof.

4.4 All the information contained in the Products has been obtained from sources believed to be reliable. The Seller does not warrant the accuracy, completeness adequacy or reliability of such information, which cannot be guaranteed to be free from errors.

4.5 All the Products at the Seller sells may, upon prior notice to the Buyer from time to time be modified or substituted with similar Products meeting the needs of the Buyer. This modification being made at the risk of the Seller provided that the Seller ensures the substituted Product is similar to the Product initially ordered.

4.6 In the case where, after notification, it is ascertained that the Product is defective, the Seller undertakes to replace the defective products as far as the supplies allow and without indemnities or compensation of any kind for labor costs, delays, damages or losses of any kind. The replacement is guaranteed for a maximum of two months starting from the delivery date. Any replacement is excluded for any event as set out in article 3.5.

4.7 The deadlines that the Seller is asked to state for the mailing of the Products are given for information only and are not guaranteed. The Seller shall not be liable for any damages or cancellation of the orders, except for non acceptable delays exceeding [6] months from the stated deadline, without information from the Seller. In such case only, the Buyer shall be entitled to ask for a reimbursement of its first down payment to the exclusion of any further damages.

The Seller does not make any warranties, express or implied, including, without limitation, those of saleability and fitness for a particular purpose, with respect to the Products. Although the Seller has taken due care to avoid the introduction of any defects, the Seller cannot guarantee that any Product will be free from infection.

5. FORCE MAJEURE

The Seller shall not be liable for any delay in performance directly or indirectly caused by or relating to acts of nature, fire, flood, accident, riot, war, government intervention, embargoes, strikes, labor difficulties, equipment failure, late deliveries by suppliers or other circumstances which are beyond the control, and not the fault of the Seller.

6. PROTECTION OF THE SELLER’S IPR

6.1 All the IPR attached to the Products are and remain the property of the Seller and are protected under French and international copyright law and conventions.

6.2 The Buyer agreed not to disclose, copy, reproduce, redistribute, resell or publish the Product, or any part of it, to any other party other than employees of its company.

6.3 The Seller will have the right to use the Products solely for its own internal information purposes. In particular, the Buyer shall therefore not use the Product for purposes such as:

• Information storage and retrieval systems;

• Recordings and re-transmitters over any network (including and area network);

• Use in any timesharing, service bureau, bulletin board or similar arrangement or public display;

• Purchasing any Product through any other online service (including bulletin boards or the Internet);

• Licensing, leasing, selling, offering for sale or assigning the Product to any third party.

6.4 The Buyer shall define its own company’s point of contact for the needs of the contract. This person will be the recipient of each new report in PDF format. This person shall also be responsible for requesting any discount for, or accounts, the Products contain defects, the Seller undertakes to replace

6.5 In the case of annual subscriptions, the person of contact shall be the one who will be responsible for the payment. The Buyer may not send the product on-line or the Seller has not been notified of this fact. The Products are not disseminated out of the company.

6.6 In the event of a multi-licensing, only the employee of the buyer can access the report or the employee of the companies in which the Buyer have 100% shares. As a matter of fact, the investor of a company, the joint venture done with a third party etc cannot access the report and should pay a full license price.

7. TERMINATION

7.1 If the Buyer cancels the order in whole or in part or postpones the date of mailing, the Buyer will indemnify the Seller for the entire costs that have been incurred as at the date of notification by the Buyer of such delay or cancellation. This may also apply for any other direct or indirect consequential consequences their entire company.

7.2 In the event of breach by one Party under these conditions or the non-breaching Party may send a notification to the other by recorded delivery letter upon which, after a period of thirty (30) days following the sending of the notice, the non-breaching Party shall be entitled to terminate all the pending orders, without being liable for any compensation.

8. MISCELLANEOUS

All the provisions of these Terms and Conditions are for the benefit of the Seller and its licensors, employees and agents. Each of them is entitled to assert and enforce those provisions against the Buyer.

Any modifications to these Terms and Conditions shall be in writing. They shall be effective upon receipt by the other Party.

The Seller may, from time to time, update these Terms and Conditions. In such case, the Buyer will be deemed to have accepted the latest version of these terms and conditions upon receiving the updated terms communicated to him in due time.

9. GOVERNING LAW AND JURISDICTION

9.1 Any dispute arising out or linked to these Terms and Conditions shall be settled by the French Commercial Courts of Lyon, which shall have exclusive jurisdiction upon such issues.

9.2 French law shall govern the relation between the Buyer and the Seller, in accordance with these Terms and Conditions.