



**INDIAN INSTITUTE OF TECHNOLOGY BOMBAY**  
**MATERIALS MANAGEMENT DIVISION**  
Powai, Mumbai 400076.

Ref. PR No. 1000052162

RFx. No. 6100002830

**Technical Specification: ANSYS GRANTA SOFTWARE – 1 No.**

<b>Sr. No</b>	<b>Item Description</b>	<b>Detailed Technical Specification</b>	<b>Technical Compliance (Yes / No)</b>	<b>Additional Information (if any)</b>
1	Ansys GRANTA Research Advanced Materials – Metals	<p>Ansys GRANTA Research Advanced Materials - Metals - Paid Up + TECS Perpetual License valid for 1 year.</p> <p><b>A. Advanced Materials – Metals</b></p> <ul style="list-style-type: none"><li>i. Supports browsing, searching, querying, editing, and updating of metal materials data with multiple unit systems, interactive charts, comparison tables, and export to Excel / third-party tools</li><li>ii. Enables systematic materials selection, property-based filtering, equivalency and substitution (“find similar”), performance index evaluation, cost estimation, and report generation</li><li>iii. Comprehensive metals database covering global specifications, standards, temperature-dependent mechanical, thermal, electrical, fatigue, creep, and stress–strain properties</li></ul>		
2	Ansys GRANTA Research Advanced Materials – Polymers	<p>Ansys GRANTA Research Advanced Materials - Polymers - Paid Up + TECS Perpetual License valid for 1 year.</p> <p><b>A. Advanced Materials – Polymers</b></p> <ul style="list-style-type: none"><li>i. Centralized management of polymer and elastomer data including editing, querying, visualization through charts,</li></ul>		

		<p>comparison tables, and data export</p> <ul style="list-style-type: none"> <li>i. Property-driven materials selection with Ashby-style charts, filtering by performance profile, substitution and equivalency analysis, eco audit, and reporting</li> <li>ii. Extensive polymer and elastomer materials library including grades, additives, fillers, processing data, regulatory information, and simulation-ready properties</li> </ul>		
3	<p>Ansys GRANTA Research Advanced Materials – Medical</p>	<p>Ansys GRANTA Research Advanced Materials - Medical valid for 5 years.</p> <p><b>A. Advanced Materials – Medical</b></p> <ul style="list-style-type: none"> <li>i. Structured storage, search, comparison, and visualization of medical and bio-materials data with export and reporting capabilities</li> <li>ii. Materials screening and selection based on mechanical, physical, and functional requirements with support for comparison and substitution analysis</li> <li>iii. Authoritative materials data for medical devices and human biological materials, including tissue-level mechanical properties and application-specific datasets</li> </ul>		
4	<p>General Specification for all the above 3 items</p>	<p><b>A. Material Data Management</b></p> <ul style="list-style-type: none"> <li>i. Multiple Unit System Support</li> <li>ii. Browse Materials Data</li> <li>iii. Edit and Update Materials Data</li> <li>iv. Search and Query Materials Data</li> <li>v. Represent Property Data in Interactive Charts</li> <li>vi. Comparison Tables and Comparison Charts</li> <li>vii. Export Data to Excel and Third-Party Software</li> </ul>		

**B. Materials Selection and Related Tools**

- i. Reference Data for Materials Selection on PC/Laptop
- ii. Interactive 'Ashby Charts' of Materials Property Space
- iii. Systematic Materials Selection Methodology
- iv. Filter Materials Based on Property Profile
- v. Filter Materials Based on Links to Other Materials / Processes / Objects
- vi. Materials Substitution & Equivalency - 'Find Similar'
- vii. Performance Index Finder
- viii. Engineering Solver - Convert Engineering Requirements to Materials Properties
- ix. Hybrid Synthesizer - Predict Properties of Hybrid Materials
- x. Part Cost Estimator
- xi. Selection Reports & Export of Charts for Presentations
- xii. Eco Audit for a Product or Conceptual Design

**C. Data Library – Materials**

- i. Unique materials screening dataset of around 4000 materials, compiled by materials experts
- ii. Covers all classes of engineering materials
- iii. Data for generic grades of materials, linked to specialist grades
- iv. Includes technical, economic, regulatory & eco data
- v. Process: Main manufacturing processes used for shaping, joining and surface treatment  
Key process characteristics  
Process capabilities  
Cost models for primary shaping processes
- vi. Battery cells: Battery cell performance and specifications, representing the performance of the generic battery cell type, Energy and power specifications,

		<p>Weight, Dimensions, Nominal ratings, Charge/discharge behavior</p> <p>vii. Database of materials with properties available:</p> <ul style="list-style-type: none"> <li>a. Physical: Density, viscosity, vapor pressure</li> <li>b. Elastic: Bulk and shear moduli, Poisson's ratio</li> <li>c. Plastic: Tensile and yield strengths, elongation</li> <li>d. Stress-strain: True stress strain curves</li> <li>e. Fatigue: S-N and e-N fatigue curves</li> <li>f. Creep: Creep strength, stress-rupture</li> <li>g. Thermal: Thermal conductivity, specific heat, thermal expansion, thermal diffusivity, emissivity</li> <li>h. Electrical: Electrical conductivity, electrical resistivity</li> </ul>		
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**Terms and Conditions:**

**1. Customer References:**

- a) The supplier must have successfully installed similar or higher-configuration software at a minimum of three (3) sites within India and must provide contact details of the respective clients for verification.

**2. Training & documentation:**

- a) The supplier shall provide comprehensive one (1) day hands-on online training to all engineers after installation, at no additional cost. The training must cover all core functionalities of the software.
- b) Onboarding documentation and three sets of user manuals (in English) must be supplied with the software.

**3. Installation & delivery:**

- a) The supplier shall be responsible for the successful installation of the software.
- b) The license key must be delivered within four (4) weeks from the date of the purchase order.

**4. Support:**

- a) Technical support for a period of one (1) year must also be provided,

covering troubleshooting, maintenance.

**5. Extended support:**

- a) Support for reinstallation or migration in case of hardware changes shall be provided for up to one (1) year at no additional cost.
- b) Perpetual research license support must be ensured for a period of one (1) year beyond technical support period.

**6. Timeline:**

- a) The supplier shall complete the installation, training, and commissioning within 10 to 15 days from the date of delivery of the software.

**7. Payment Terms and Condition:**

- a) 100% payment shall be released upon delivery & installation of the software through ICICI Foundation on behalf of IIT Bombay.