

CCM Tests and Charges

- ASTM standards will be followed wherever necessary
- Results along with interpretation will be provided as test reports wherever applicable
- Test reports will be certified by Professional Engineers and Scientists of CCM
- Rates provided are in Indian Rupees
- GST @ 18% will be added to the basic charges
- Payments should be made in favour of:
“The Director, CSRC, Anna University, Chennai 25”, payable at Chennai 600025

Mechanical

1. UTM - Tensile Strength (ASTM D638)	₹ 2500
2. UTM - Tensile Modulus (ASTM D638)	₹ 2500
3. UTM - Tensile Elongation at Break (ASTM D638)	₹ 2500
4. UTM - Flexural Strength (ASTM D790)	₹ 2500
5. UTM - Flexural Modulus (ASTM D790)	₹ 2500
6. UTM - Compressive Strength (ASTM D695)	₹ 2500
7. UTM - Compressive Modulus (ASTM D695)	₹ 2500
8. UTM - Shear Strength (ASTM D3518)	₹ 2500
9. UTM - Shear Modulus (ASTM D3518)	₹ 2500
10. UTM - ILSS (ASTM D2344)	₹ 2500
11. UTM - Peel Strength (ASTM D6862)	₹ 2500
12. Impact Strength - Izod impact notched (ASTM D256)	₹ 2000
13. Impact Strength - Charpy (ASTM D6110)	₹ 1500
14. Fatigue Strength - per hour (ASTM D3479)	₹ 2000
15. Hardness - Rockwell (ASTM D785)	₹ 1500
16. Hardness - Shore (ASTM D2240)	₹ 1500
17. Hardness - Barcol (ASTM D2583)	₹ 1500

Physical

18. Density (ASTM D792)	₹ 1000
19. Water/Moisture Absorption (ASTM D570)	₹ 1000
20. Water Contact Angle (hydrophilicity/hydrophobicity) (ASTM D5946)	₹ 2000

Thermal

21. Coefficient of linear thermal expansion (ASTM D696)	₹ 2000
22. MFI for thermoplastics (ASTM D1238)	₹ 2000
23. HDT/VSP (ASTM D648/ASTM D 1525)	₹ 4000
24. LOI (Loss of ignition-ash content analysis) (ASTM D2584)	₹ 1500
25. LOI (ASTM D5630)	₹ 3000
26. Flammability/flame retardancy (UL 94)	₹ 1500
27. Matrix/Resin and Filler/fiber volume/content	₹ 3000
28. TGA (ASTM E1131)	₹ 2500
29. DSC (for Tg determination)(ASTM D3418)	₹ 2500

Rheological

30. Viscosity (Brookfield) (ASTM D789)	₹ 1500
31. Mooney Viscosity (Rubber) (ASTM D1646)	₹ 1500

Morphological and surface analysis

32. SEM	₹ 4000
33. SEM with EDAX	₹ 5000
34. BET Surface Area	₹ 4000

Chemical and Spectroscopy

35. FTIR spectroscopy (matrix, filler, additive, chemical composition)	₹ 2000
36. UV Visible spectroscopy	₹ 1500
37. Proton NMR	₹ 4000
38. XRD	₹ 3000

Other Tests

39. GPC (number average mol wt, weight average mol wt and MWD)	₹ 5000
40. LOI (Limiting Oxygen Index)	₹ 2500
41. Vickers Hardness (microindentation)	₹ 1000
42. Nanoindentation Hardness	₹ 1000
43. Automatic Densometer and Smoothness test	₹ 4000
44. Automatic Roundness test	₹ 4000
45. Taber Stiffness (Plastics, Rubbers and Paper Boards/Sheets)	₹ 1000
46. Wear test (pin on disc, per hour)	₹ 3000
47. Taylor Hobson's Roundness/cylindricity (precision surface finish)	₹ 5000
48. Corrosion test	₹ 2000
49. Tear Test	₹ 1500
50. Gas permeability test (30 mins)	₹ 3000
51. Water vapour permeability test	₹ 3000
52. Burst strength	₹ 2000
53. Particle size analysis	₹ 3000
54. Microscope (optical)	₹ 2000
55. Thermal imaging camera (electro-optical)	₹ 2000
56. Fuel analysis (flash & fire point, heating value, density, stability)	₹ 5000
57. LCR meter (Dielectric constant)	₹ 2000
58. Electrical (Power quality, power and energy measurements)	₹ 5000
59. Physical properties of cement/polymer mixtures and agglomerates	₹ 5000
60. Cobb test (water absorption by paper and corrugated boards)	₹ 1000
61. Rancimat Oxidation Stability (Fats and oils)	₹ 1500
62. Cyclic Voltametry	₹ 2000



CENTRE FOR COMPOSITE MATERIALS (CCM)
ANNA UNIVERSITY, CHENNAI – 600025



SL.NO:

**REQUISITION FORM
SEM & EDAX**

Name of the User				
Designation				
Name of the Firm/ Industry				
Billing Address				
GST No.				
Mobile Number				
Email- ID				
Sl. No.	Sample code	SEM (please tick)	EDAX (please tick)	SEM + EDX (please tick)
Nature of sample(s):				
Powder/Pellet/Film/Biological				
Conductive/Non-conductive/Magnetic				

Signature of the User

FOR OFFICE USE ONLY:

Signature of Faculty in-charge

Signature of Director, CCM

DD No. Date, Amount & Bank	
Date of sample analysis	
Operator's signature	

Note:

- DD should be drawn in favour of "The Director, CSRC, Anna University, Chennai-25" payable at Chennai.



**CENTRE FOR COMPOSITE MATERIALS (CCM)
ANNA UNIVERSITY, CHENNAI – 600025**



SL.NO:

REQUISITION FORM MECHANICAL TESTING

Name of the User			
Designation			
Name of the Firm/ Industry			
Billing address			
GST No.			
Mobile number			
Email- ID			
Number of sample(s)			
Name of Sample(s)			
Name of test* (Please tick)	<ul style="list-style-type: none"> • Tensile strength (ASTM D638) • Tensile modulus (ASTM D638) • Tensile elongation at break (ASTM D638) • Flexural strength (ASTM D790) • Flexural modulus (ASTM D790) • Compressive strength (ASTM D695) 	<ul style="list-style-type: none"> • Compressive modulus (ASTM D695) • Shear strength (ASTM D3518) • Shear modulus (ASTM D3518) • ILSS (ASTM D2344) • Peel strength (ASTM D6862) • Izod notched test (ASTM D256) 	<ul style="list-style-type: none"> • Charpy test (ASTM D6110) • Fatigue strength (ASTM D3479) • Rockwell hardness (ASTM D785) • Shore hardness (ASTM D2240) • Barcol hardness (ASTM D2583)
Additional testing details (if any)			

Signature of the User

FOR OFFICE USE ONLY:

Signature of Faculty in-charge

Signature of Director, CCM

DD No. Date, Amount & Bank	
Date of sample analysis	
Operator's signature	

Note:

- DD should be drawn in favor of "The Director, CSRC, Anna University, Chennai-25" payable at Chennai.
- *Use separate forms for each test**



CENTRE FOR COMPOSITE MATERIALS (CCM)
ANNA UNIVERSITY, CHENNAI – 600025



SL.NO:

**REQUISITION FORM
PHYSICAL ANALYSIS**

Name of the User	
Designation	
Name of the Firm/ Industry	
Billing address	
GST No.	
Mobile number	
Email- ID	
Number of sample(s)	
Name of Sample(s)	
Name of test* (Please tick)	<ul style="list-style-type: none">• Density (ASTM D792)• Water/ moisture absorption (ASTM D570)• Water contact angle (ASTM D5946)
Additional testing details (if any)	

Signature of the User

FOR OFFICE USE ONLY:

Signature of Faculty in-charge

Signature of Director, CCM

DD No. Date, Amount & Bank	
Date of sample analysis	
Operator's signature	

Note:

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- *Use separate forms for each tes



CENTRE FOR COMPOSITE MATERIALS (CCM)
ANNA UNIVERSITY, CHENNAI – 600025



SL.NO:

**REQUISITION FORM
THERMAL ANALYSIS**

Name of the User	
Designation	
Name of the Firm/ Industry	
Billing address	
GST No.	
Mobile number	
Email- ID	
Number of sample(s)	
Name of Sample(s)	
Name of test* (Please tick)	<ul style="list-style-type: none">• Coefficient of linear thermal expansion (ASTM D696)• MFI for thermoplastics (ASTM D1238)• HDT/VSP (ASTM D648/ ASTM D1525)• LOI (loss of ignition-ash content) (ASTM D2584)• LOI (ASTM D5630)• Flammability (UL 94)• Matrix/Resin and Filler/Fiber volume/content• Thermogravimetric analysis (TGA)• Differential Scanning Calorimetry (DSC)
Additional testing details (if any)	

Signature of the User

FOR OFFICE USE ONLY:

Signature of Faculty in-charge

Signature of Director, CCM

DD No. Date, Amount & Bank	
Date of sample analysis	
Operator's signature	

Note:

- DD should be drawn in favor of "The Director, CSRC, Anna University, Chennai-25" payable at Chennai.
*Use separate forms for each test



CENTRE FOR COMPOSITE MATERIALS (CCM)
ANNA UNIVERSITY, CHENNAI – 600025



SL.NO:

**REQUISITION FORM
RHEOLOGICAL ANALYSIS**

Name of the User	
Designation	
Name of the Firm/ Industry	
Billing address	
GST No.	
Mobile number	
Email- ID	
Number of sample(s)	
Name of Sample(s)	
Name of test* (Please tick)	<ul style="list-style-type: none">• Viscosity (Brookfield) – ASTM D789• Mooney viscosity (Rubber) – ASTM D1646
Additional testing details (if any)	

Signature of the User

FOR OFFICE USE ONLY:

Signature of Faculty in-charge

Signature of Director, CCM

DD No. Date, Amount & Bank	
Date of sample analysis	
Operator's signature	

Note:

➤ DD should be drawn in favor of "The Director, CSRC, Anna University, Chennai-25" payable at Chennai.

*Use separate forms for each test



CENTRE FOR COMPOSITE MATERIALS (CCM)
ANNA UNIVERSITY, CHENNAI – 600025



SL.NO:

**REQUISITION FORM
CHEMICAL AND SPECTROSCOPY**

Name of the User	
Designation	
Name of the Firm/ Industry	
Billing address	
GST No.	
Mobile number	
Email- ID	
Number of sample(s)	
Name of Sample(s)	
Name of test* (Please tick)	<ul style="list-style-type: none">• FTIR• UV-Visible spectroscopy• ¹H-NMR• XRD
Additional testing details (if any)	

Signature of the User

FOR OFFICE USE ONLY:

Signature of Faculty in-charge

Signature of Director, CCM

DD No. Date, Amount & Bank	
Date of sample analysis	
Operator's signature	

Note:

- DD should be drawn in favor of "The Director, CSRC, Anna University, Chennai-25" payable at Chennai.
- *Use separate forms for each test



**CENTRE FOR COMPOSITE MATERIALS (CCM)
ANNA UNIVERSITY, CHENNAI – 600025**



SL.NO:

**REQUISITION FORM
OTHER TESTS**

Name of the User			
Designation			
Name of the Firm/ Industry			
Billing address			
GST No.			
Mobile number			
Email- ID			
Number of sample(s)			
Name of Sample(s)			
Name of test* (Please tick)	<ul style="list-style-type: none"> • GPC • Limiting oxygen index • Vickers hardness (micro indentation) • Nanoindentation hardness • Densometer & smoothness • Roundness test • Table stiffness • Wear test • Taylor-Hobson's roundness 	<ul style="list-style-type: none"> • Corrosion test (electrochemical) • Tear test • Gas permeability test • Water vapor permeability test • Burst strength • Particle size analysis • Optical microscope • Thermal imaging camera • Fuel analysis (flash & fire point, heating value, density, stability) 	<ul style="list-style-type: none"> • LCR meter (Dielectric constant) • Power quality, power and energy measurements • Physical properties of cement/polymer mixtures and agglomerates • Cobb test • Rancimat oxidation stability • Cyclic voltammetry
Additional testing details (if any)			

Signature of the User

FOR OFFICE USE ONLY:

Signature of Faculty in-charge

Signature of Director, CCM

DD No. Date, Amount & Bank	
Date of sample analysis	
Operator's signature	

Note:

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- *Use separate forms for each test**