



**EMSL ANALYTICAL, INC.**  
TESTING LABS • PRODUCTS • TRAINING

# Materials Science Chain of Custody

EMSL Order Number / Lab Use Only

EMSL Analytical, Inc.

200 Route 130 North

Cinnaminson, NJ 08077

PHONE: (800) 220-3675

EMAIL: materialslab@emsl.com

If Bill-To is the same as Report-To, leave this section blank. Third-party billing requires written authorization.

|                                                                                                                                                                                             |                   |                                   |                            |                                                                                                                                                                                                                                                                      |          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------|-----------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| <b>Customer Information</b>                                                                                                                                                                 | EMSL Customer ID: |                                   | <b>Billing Information</b> | Billing ID:                                                                                                                                                                                                                                                          |          |
|                                                                                                                                                                                             | Company Name:     |                                   |                            | Company Name:                                                                                                                                                                                                                                                        |          |
|                                                                                                                                                                                             | Contact Name:     |                                   |                            | Billing Contact:                                                                                                                                                                                                                                                     |          |
|                                                                                                                                                                                             | Street Address:   |                                   |                            | Street Address:                                                                                                                                                                                                                                                      |          |
|                                                                                                                                                                                             | City, State, Zip: | Country:                          |                            | City, State, Zip:                                                                                                                                                                                                                                                    | Country: |
|                                                                                                                                                                                             | Phone:            |                                   |                            | Phone:                                                                                                                                                                                                                                                               |          |
| Email(s) for Report:                                                                                                                                                                        |                   | Email(s) for Invoice:             |                            |                                                                                                                                                                                                                                                                      |          |
| <b>Project Information</b>                                                                                                                                                                  |                   | Project Name/Number:              |                            | Purchase Order:                                                                                                                                                                                                                                                      |          |
| EMSL LIMS Project ID:<br>(If applicable, EMSL will provide)                                                                                                                                 |                   | US State where samples collected: |                            | State of Connecticut (CT) must select project location:<br><input type="checkbox"/> Commercial (Taxable) <input type="checkbox"/> Residential (Non-Taxable)                                                                                                          |          |
| Sampled By Name:                                                                                                                                                                            |                   | Sampled By Signature:             |                            | No. of Samples in Shipment                                                                                                                                                                                                                                           |          |
| <input type="checkbox"/> 1 Day <input type="checkbox"/> 2 Day <input type="checkbox"/> 3 Day <input type="checkbox"/> 4 Day <input type="checkbox"/> 1 Week <input type="checkbox"/> 2 Week |                   | <b>Turn-Around-Time (TAT)</b>     |                            | <i>Call Lab to confirm before shipping samples faster than 1 Week (EOD) TAT. All sample results issued End of Business Day (EOD). Days include Mon-Fri only. Weekends or Holidays not included. If no TAT selected, samples will be processed on a 2 Week (EOD).</i> |          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Particle Sizing</b><br><input type="checkbox"/> Dynamic Light Scattering<br><input type="checkbox"/> Filter Pore Size Analysis<br><input type="checkbox"/> Isoelectric Point<br><input type="checkbox"/> Microscopy (MS029)<br><input type="checkbox"/> Mechanical Sieve / ASTM D6913 (MS028)<br><input type="checkbox"/> Mechanical Sieve w/ Hydrometry / ASTM D6913<br><input type="checkbox"/> Sonic Sieve (MS030)<br><input type="checkbox"/> Zeta Potential                                                                                             | <b>Materials Identification:</b><br><input type="checkbox"/> Advanced Material ID (MS003)<br><input type="checkbox"/> Basic Material ID (MS024)<br><input type="checkbox"/> Common Particle ID (MS022)<br><input type="checkbox"/> Full Particle ID (MS023)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <b>Other Methods/Applications:</b><br><input type="checkbox"/> BET Surface Area / ASTM B922 (MS083)<br><input type="checkbox"/> Colorimetry (MS070)<br><input type="checkbox"/> Condoms Compatibility / ASTM D-7661-18 (MS048)<br><input type="checkbox"/> Explosive Residue / EPA 8330A/B<br><input type="checkbox"/> Failure Analysis (MS019)<br><input type="checkbox"/> Flash Point / ASTM D56 / ASTM D93 (MS020)<br><input type="checkbox"/> Heat Value / ASTM E711/D240 (MS066)<br><input type="checkbox"/> Gunshot Residue SEM (MS080)<br><input type="checkbox"/> Gunshot Residue ICP (MS081)<br><input type="checkbox"/> Magnetic Properties / B-H Hysteresis (MS049/MS050/MS042)<br><input type="checkbox"/> Microplastics (MS084)<br><input type="checkbox"/> Paint ID (MS068)<br><input type="checkbox"/> Paint ID Multiple Layers w/ Mil Spec (MS069)<br><input type="checkbox"/> Raman Microscopy<br><input type="checkbox"/> RoHS<br><input type="checkbox"/> SEM Imaging (MS082)<br><input type="checkbox"/> Stain Identification<br><input type="checkbox"/> Surface Tension / ASTM D1331<br><input type="checkbox"/> Total Carbon (C) / Combustion<br><input type="checkbox"/> Total Organic Carbon/Water (TOC)/SM-5301C (MS039)<br><input type="checkbox"/> Total Organic Carbon/Soil (TOC)/SM-846/9060 (MS050)<br><input type="checkbox"/> Total Sulfur (S) / Combustion<br><input type="checkbox"/> Viscosity (Brookfield) (MS067)<br><input type="checkbox"/> Zinc Whiskers |
| <b>Chemical Testing:</b><br><input type="checkbox"/> Anions / Ion Chromatography (MS054)<br><input type="checkbox"/> Fourier Transform Infrared Spectroscopy (FTIR)<br><input type="checkbox"/> GD-OES (MS043)<br><input type="checkbox"/> Metals / ICP-OES (MS041)<br><input type="checkbox"/> Metals / ICP-MS (MS041)<br><input type="checkbox"/> Urine Stain/Urea (MS085)<br><input type="checkbox"/> X-Ray Diffractometry (XRD) (MS079)<br><input type="checkbox"/> X-Ray Fluorescence (XRF) (MS044)                                                        | <b>Combustion By-Products:</b><br><input type="checkbox"/> Combustion By-Products Level 1 / ASTM D6602 (MS031)<br><input type="checkbox"/> Combustion By-Products Level 2 / ASTM D6602 (MS032)<br><input type="checkbox"/> Combustion By-Products Level 3 / ASTM D6602 (MS033)<br><input type="checkbox"/> Combustion By-Products Level 4 / ASTM D6602 (MS034)<br><input type="checkbox"/> ISO/RIA / Standard 6001 (MS047)<br><input type="checkbox"/> NIOSH 5000/Carbon Black (MS002)<br><input type="checkbox"/> NIOSH 5000/Carbon Black w/ Confirmation (MS051)<br><input type="checkbox"/> Screening / ASTM D6602 (MS036)<br><input type="checkbox"/> Source Confirmation / Soot Source ID (MS053)                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Physical Testing</b><br><input type="checkbox"/> Abrasion<br><input type="checkbox"/> Coefficient of Friction / ASTM C1028<br><input type="checkbox"/> Compression / ASTM D695/D395 (MS014)<br><input type="checkbox"/> Flexure (MS016)<br><input type="checkbox"/> Hardness / ASTM E18<br><input type="checkbox"/> Oxygen Transmission Rate (OTR) (MS072)<br><input type="checkbox"/> Tension/Tensile / ASTM E8/D628/D882/D412 (MS013)<br><input type="checkbox"/> Torsion (MS017)<br><input type="checkbox"/> Water Vapor Transmission Rate (WVTR) (MS027) | <b>MMVF's (Fibrous Glass, Etc.):</b><br><input type="checkbox"/> MMVF Total Count / NIOSH 7400 (MS025/MSM201)<br><input type="checkbox"/> MMVF with Asbestos / NIOSH 7400 Modified (MS026)<br><input type="checkbox"/> German VDI-3491 / VDI 3492 (MS056)<br><input type="checkbox"/> German VDI-3866 Part 5 / VDI 3491 (MS057)<br><input type="checkbox"/> ISO 14966 (MS058)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Petrographic Testing</b><br><input type="checkbox"/> Full Petrographic Analysis (MS004)<br><input type="checkbox"/> Soil Classification / ASTM D2487 (Mod) / OSHA ID-194 (MS061)<br><input type="checkbox"/> Soil Density / ASTM D4189<br><input type="checkbox"/> Soil Grain Size / ASTM D422 (Mod)<br><input type="checkbox"/> Soil Grain Size w/ Hygrometry / ASTM D422<br><input type="checkbox"/> Soil Liquid & Plastic Limits / ASTM D4318                                                                                                             | <b>Combustible Dust Testing</b><br><input type="checkbox"/> Class II Dust Analysis (Kst, Pmax, (dP/dT)max, MEC, MIT, MIE, IS, ES) / OSHA ID201SG (MS012)<br><input type="checkbox"/> Explosion Severity (Kst, Pmax, dP/dTmax)/ASTM E1226 (MS006)<br><input type="checkbox"/> Go/No Go Testing / ASTM E1226 (MS005)<br><input type="checkbox"/> Ignitability / EPA 1030 (MS077)<br><input type="checkbox"/> Initial Analysis/Sample Characterization / ASTM E1226 (MS087)<br><input type="checkbox"/> Layer Ignition Temperature (LIT) / ASTM E2021 (MS076)<br><input type="checkbox"/> Minimum Explosion Concentration (MEC) / ASTM E1515 (MS010)<br><input type="checkbox"/> Minimum Ignition Energy (MIE) / ASTM E2019 (MS009)<br><input type="checkbox"/> Minimum Ignition Temperature (MIT) / ASTM E1419 (MS008)<br><input type="checkbox"/> Resistivity (MS011) | <b>Thermal Analysis</b><br><input type="checkbox"/> Thermo-Gravimetric Analysis (TGA) (MS073)<br><input type="checkbox"/> Differential Scanning Calorimetry (DSC) (MS074)<br><input type="checkbox"/> Dynamic Mechanical Analysis (DMA) (MS075)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

Other Test/Method (Please specify below):

## Enter Sample Information on Page 2

Special Instructions and/or Regulatory Requirements (Method, LOD, etc.)

|                     |  |            |  |                                |  |           |  |
|---------------------|--|------------|--|--------------------------------|--|-----------|--|
| Method of Shipment: |  |            |  | Sample Condition Upon Receipt: |  |           |  |
| Relinquished by:    |  | Date/Time: |  | Received by:                   |  | Date/Time |  |
| Relinquished by:    |  | Date/Time: |  | Received by:                   |  | Date/Time |  |

Controlled Document - COC-30 Materials Science R8 2/26/2021



AGREE TO ELECTRONIC SIGNATURE (By checking, I consent to signing this Chain of Custody document by electronic signature.)

EMSL Analytical, Inc.'s Laboratory Terms and Conditions are incorporated into this Chain of Custody by reference in their entirety.  
Submission of samples to EMSL Analytical, Inc. constitutes acceptance and acknowledgment of all terms and conditions by Customer.



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EMAIL: [materials@emsl.com](mailto:materials@emsl.com)

|                                                                         |
|-------------------------------------------------------------------------|
| Special Instructions and/or Regulatory Requirements (Method, LOD, etc.) |
|-------------------------------------------------------------------------|

[illegible]

|                     |            |                                |           |
|---------------------|------------|--------------------------------|-----------|
| Method of Shipment: |            | Sample Condition Upon Receipt: |           |
| Relinquished by:    | Date/Time: | Received by:                   | Date/Time |
| Relinquished by:    | Date/Time: | Received by:                   | Date/Time |

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