Appendix 2

DLC Raw Materials Specification Form

SUBJECT: Material Specifications

PURPOSE: To document the procedure to develop and update Material Specifications for Essential Materials to be purchased

EXPLANATION OF CHANGE: ORIGINAL ISSUE

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* Electronic EO signatures on file in the TPN Fileserver; paper EO signatures on file with the EO Coordinator

Material Specifications

1. SCOPE

1.1 Purpose

1.1.1 This document establishes the content and administration of Material Specifications for Du Pont Lanxide Composites Inc. (DLC).

1.2 Applicability

1.2.1 This procedure applies to all goods and services that are Essential Materials for DLC products sold to customers. This SOP **does not** apply to materials bought for internally-funded experiments and conceptual development.

1.3 Terminology

1.3.1 An Essential Material is any material (including tooling) that directly impacts product quality and that cannot be changed without affecting plant performance, customer-use requirements, or product quality.

1.3.2 Quality Manual Section 3.0 (Terms and Definitions) contains definitions of other terms used in this document.

1.4 Auditing

1.4.1 The Management Representative will audit this SOP at least once a year.

2. REFERENCES

2.1 Quality Manual Sections 3.0 (Terms and Definitions) and 8.0 (Quality in Procurement),
2.2 SOP DLC-7.1, Document Control
2.3 SOP DLC-8.1, Purchase of Goods and Services
2.4 SOP DLC-11.1, Material Receiving Inspection

3. RESPONSIBILITIES

3.1 The **Project Engineer** (or equivalent responsibility) is responsible to develop a Material Specification (MS) for each new Essential Material to be bought and used to make a product sold to a customer.

3.2 The **Project Engineer** is also responsible to make sure the MS is kept up-to-date during the production life of the product. As part of the set-up for a new or revised material, the **Project Engineer** also completes a new Material Receipt Inspection Log in the TPN Fileserver (SOP DLC-11.1, Material Receiving Inspection).

3.3 The **requisitioner** of an Essential Material will:

- print and attach a copy of the MS to each "Purchase Requisition/Blanket Order Release" form submitted to Lanxide Purchasing to buy the respective Essential
- attach a copy of the Material Safety Data Sheet (MSDS) to a Purchase Order whenever the MS references an MSDS (if DLC does not have an MSDS on file, the **requisitioner** requests one from the supplier)
- list such items as Certificates of Analysis or Conformance as deliverable items on the Purchase Requisition.

4. PROCEDURE

4.1 Attachment 1 is a template for the contents of each MS. The MS will be generated and kept in the "Material Specification" database on the TPN Fileserver.

4.2 Attachment 2 lists the Quality Assurance Codes which print their respective statements on a printed MS when specified in the database.

4.3 The Engineering Order (E.O.) form is the mechanism to approve new or revised MSs (ref.: SOP DLC-7.1, Document Control)

4.4 The Quality Plan for each Control Level 1 product will specify Essential Materials and will reference the MS numbers.

Attachment 1

Material Specification (MS) Content

1. Material
   Application
   Chemical Formula: (if applicable)
   MS Number and Revision No.
   DLC Part No
   DuPont MS replaced (if applicable)

2. Approved Supplier(s)
   Addresses
   Supplier's phone number
   Supplier's Part No:
3. Physical Specifications:

   Dimensions:
   Weights:
   Workmanship Standards:
   Materials:
   Material Lot Numbers:
   Drawing Numbers
   Other (Thermal specifications, Conductivity, etc.):
4. Yarn/Fabric/Prepreg Specifications

   Property Units Aim Lower Limit Upper Limit
   Other Specifications
5. Chemical Specifications: (if applicable)

   Property Units Aim Lower Limit Upper Limit Test Method
   Appearance:
   Chemical Identification Method:
   Other:
6. Packaging:

   Container Type:
   Container Material:
   Container Size:
   Container Labeling:
   Other Packaging Info:

7. Acceptance/Rejection

   Lot Size:
   Inspection/Test
   Inspection/Test Method
   Decision Criteria ("Accept If"):

8. Safety, Health, and Environmental Information:

   Hazardous Material: Yes ____ No ____
   MSDS No.___Rev Date: _____
   Is this, or does this contain, an ozone-depleting substance: Yes_No_____
   DOT Reg.: (if applicable)

9. Handling, Storage, Preservation and Disposal Information:

   Expiration Date, if any
   Handling Requirements:
   Storage Requirements:
   Disposal Requirements:
   Shipping Requirements:

10. Quality Assurance Requirements: ____, ____, ____, ____
    (Inserts appropriate paragraph to match QA codes entered. Nothing will be printed if Code "00"" is entered—a "required entry" field))
    Key Characteristics (if any - to accompany Code #15)
    Other Quality Requirements

11. Pertinent Information

    Applicable Documentation

12. Other Information: (e.g., minimum order quantity...)
13. Revision History

    Revision Date:
    MS Change
    EO Number:
    Author:

Attachment 2
Quality Assurance Codes

Code	Description
00	No Extra Quality Systems Requirements (None printed—the "default" required entry)
01	Certificate of Conformance The supplier shall submit a Certificate of Conformance with each shipment that is signed by an authorized supplier's representative and states that the materials supplied to Du Pont Lanxide Composites are in conformance with applicable requirements of the contract, drawings, and specifications and that supporting documentation is on file and will be made available to Du Pont Lanxide Composites, Du Pont Lanxide Composites' Customer, or Government representatives upon request. The Certificate of Conformance must include: Du Pont Lanxide Composites part number, purchase order number, revision level, quantity, and any exceptions to specification or purchase requisition requirements.
02	Certificate of Analysis The supplier shall submit a Certificate of Analysis with each supplier's material lot in each shipment that is signed by an authorized supplier's representative and states that each property value contained was the result of a valid laboratory test or analysis. The Certificate of Analysis must include: Du Pont Lanxide Composites' part number, purchase order number revision level, manufacturer's lot number, manufacturer's lot production date, analyses and test values, corresponding analysis or test method number (including reference to ASTM or equivalent standard method).
03	Receiving Inspection at Du Pont Lanxide Composites Items purchased under this purchase order are subject to incoming inspection and final acceptance at the Du Pont Lanxide Composites facility named on the purchase order.
04	Du Pont Lanxide Composites Inspection at the Supplier's Facility Du Pont Lanxide Composites source inspection is required before shipment of items from your facility. Notify Lanxide Corporation buyer (agent for Du Pont Lanxide Composites) at least three (3) working days before the scheduled date of shipment from your facility.
05	Government Inspection at the Supplier's Facility Government inspection is required before the shipment of this item. Upon receipt of this purchase order, promptly notify the Government Representative who normally services your plant to plan appropriately for Government inspection. If not, notify the nearest Defense Supply Agency Inspection office in your area.
06	Customer Inspection at the Supplier's Facility Inspection by Du Pont Lanxide Composites' is required before the shipment of this item. Notify Lanxide Corporation buyer (agent for Du Pont Lanxide Composites) at least five (5) working days before the scheduled date of shipment from your facility.
07	Dimensional Inspection Report Dimensional inspection data for all drawing attributes shall be included in an Inspection Report on all items delivered under this purchase order. This report shall reference part number, revision level, serial number (if applicable) and the purchase order number. This report will be shipped with the material, else the material will be rejected by receiving inspection and may be returned at the supplier's expense.
08	Special Process Certification

The supplier shall have records of any special process(es) he is qualified/certified to perform available for review by Du Pont Lanxide Composites personnel. Examples of special processes are: cleaning, welding, plating, soldering, and non-destructive testing. The supplier shall identify any sub-tier suppliers that perform special processes and supply this information to Du Pont Lanxide Composites with each shipment.

09 Approval of Inspection Procedures

The supplier shall provide a detailed inspection procedure that describes the inspections to be performed, where they occur in the manufacturing cycle, and the equipment to be used. These procedures are subject to Du Pont Lanxide Composites' approval before starting actual work.

10 Approval of Test Procedures

The supplier shall provide a detailed test procedure that describes the tests to be performed, test methods, test equipment and environment, and the sequence of testing and test data requirements. These procedures are subject to Du Pont Lanxide Composites' approval before starting actual work.

11 Customer Witness

A representative of Du Pont Lanxide Composites' customer may witness any inspection or test without affecting Du Pont Lanxide Composites' exclusive right to give direction to the supplier or to accept or reject any procedure, test data, or item.

12 Government Witness

A Government representative may witness any inspection or test without affecting Du Pont Lanxide Composites' exclusive right to give direction to the supplier or to accept or reject any procedure, test data, or item.

13 Written Approval for Changes

The supplier shall notify Du Pont Lanxide Composites of any changes in design, fabrication methods, or processes and obtain Du Pont Lanxide Composites' written approval before making the changes.

14 Reporting of Test Data

All test data shall be reported in the correct format: either 1) "variables" format when the test method produces data on a continuous numeric scale, or 2) "attribute" format for such counted data and defects or "pass/fail". In addition to the lot average data, the sample standard deviation(s) and Sample size are to be reported for each characteristic. If multiple test replicates are run on product samples from the same lot, portion average will be used for the lot average (use as single data point) and not each individual replicate.

15 Key Characteristics

Key Characteristics (those specified in the Purchase Order or Material Specifications) of product supplied must have a minimum process capability, Cpk, of 1.0 with a 90% confidence level (this translates into Cpk of 1.30 minimum for a sample size of 20 data points to a Cpk of 1.07 for sample sizes of 250 data points). This process capability shall be substantiated by process capability calculations on the certifications supplied with the shipment.

16 Material Safety Data Sheet to be Provided

The supplier shall include a copy of the latest Material Safety Data Sheet (MSDS) with the first shipment of each item in this purchase order.

17 Proof of Statistical Control

Supplier shall provide proof of statistical control of key properties. The proof will be in the form of property histograms and control charts for the lot(s) shipped.