



October 21, 2019

Via Electronic Filing: EPA Docket Number EPA-HQ-OPPT-2019-0080

Alexandra Dunn, Assistant Administrator
US Environmental Protection Agency
Office of Chemical Safety and Pollution Prevention
WJC Building - Mail Code 7401
1200 Pennsylvania Avenue, NW
Washington, DC 20460-0001

Re: Proposed Regulation of Persistent, Bioaccumulative, and Toxic Chemicals
Under TSCA Section 6(h)

Dear Assistant Administrator Dunn,

On behalf of iGPS Logistics LLC (“iGPS” and “the Company”), I am writing in support of the recently-proposed TSCA Section 6(h) rule concerning certain substances the US Environmental Protection Agency (“EPA” or “the Agency”) has determined meet the statutory requirements for expedited rulemaking pursuant to Section 6(h) of the amended law (“Proposed PBT Rule”). We appreciate the opportunity to provide these comments and the willingness the Agency has shown to solicit and to consider carefully information provided by the regulated community and interested parties. iGPS is also making certain suggestions with respect to the ways in which the Proposed PBT Rule should be clarified to more effectively articulate what we understand to be the Agency’s intent with regard to certain subjects. These comments relate only to the portions of the rule and preamble that pertain to decabromodiphenyl ether (decaBDE).

Background on iGPS

iGPS is the operator of a multi-use “pool” of plastic shipping pallets leased to manufacturers and retailers for shipping and storing goods. iGPS does not manufacture shipping pallets, but is a purchaser and distributor (lessor) of plastic pallets. Plastic pallets have numerous advantages over wood shipping pallets, many of which make the use of iGPS pallets environmentally preferable to the use of conventional wood pallets. Plastic pallets are lighter and stronger and environmentally more sustainable than wood shipping pallets because they are longer lasting and easier to transport efficiently. iGPS pallets are produced using plastic materials that enable damaged pallets to be reused as recyclable raw materials in replacement pallets. This represents a model of sustainable business practices, and implements a cornerstone of the Agency’s “pollution-prevention”

hierarchy. Consistent with this, an independent life cycle analysis iGPS has provided to the Agency concluded that iGPS pallets have a dramatically lower environmental impact than wood shipping pallets.¹

In order to meet U.S. fire safety standards,² iGPS pallets originally used a highly-specialized, fire-resistant polymeric composite matrix that contains small quantities of decaBDE which, at the time, was understood to be the most widely used fire retardant in the world. DecaBDE was added to first generation iGPS pallets to meet fire safety standards (prior to 2012 and prior to the EPA's phase down agreement with the then-major manufacturers and importers of decaBDE taking full effect). iGPS has repeatedly advised Agency personnel that the Company does not intend to purchase any newly-manufactured pallets to which decaBDE has been added during the original manufacturing or recycling process.

Damaged iGPS pallets are removed from service and disassembled so the plastic can be effectively recycled, melted, and reformed into replacement pallets. Using the recycled remnants of damaged pallets which have been removed from service as a raw material in reformed iGPS pallets reduces waste and the unnecessary environmental loading of plastics. No additional decaBDE (or other halogenated flame retardant) is added during the recycling process.³ Any decaBDE that is present in a recycled iGPS pallet is solely attributable to its recycled content. As a result of this sustainable approach to its fleet, the number of iGPS pallets containing decaBDE will never increase.

iGPS Comments Concerning the Proposed PBT Regulation

iGPS strongly supports the Agency's approach with respect to the regulation of decaBDE reflected in the Proposed PBT Rule. Specifically, iGPS interprets the Proposed PBT Rule to permit the continued use of its current fleet of shipping pallets, and to

¹ The complete life cycle analysis was previously provided to EPA for review. A summary of the key findings can be seen here: <https://igps.net/resources/life-cycle-analysis/>.

² See National Fire Protection Association ("NFPA") 13. The iGPS pallet has been fire-safety certified by Underwriters Laboratories and Factory Mutual, and is the world's only pallet to receive Food Equipment Certification from NSF International.

³ The procedure used for disassembling and recycling the iGPS pallets' plastic contents are described in the recycler's standard Operating Procedure (GEN-PLTSPC-iGPS-16) which is enclosed. The procedure describes in detail the measures taken to protect workers from exposure and to ensure the pallet materials captured and processed for purposes of recycling into remanufactured pallets are segregated and handled in such a manner as to avoid cross contamination with other materials derived from other sources and those intended for other purposes.

permit iGPS to continue to recycle its pallets using plastic from decommissioned iGPS plastic pallets as a raw material in reformed pallets. iGPS encourages EPA to maintain this approach in the final version of the Proposed PBT Rule when promulgated, and we request that the language in the final rule be clarified with respect to certain issues addressed below.

iGPS requests that EPA clarify the final PBT rule to explicitly permit the continued use of existing articles (such as iGPS pallets) manufactured prior to the effective date of the final rule that contain decaBDE, even where the decaBDE in such existing articles is not from recycled plastic. iGPS understands the Proposed PBT Rule would generally prohibit the manufacture (import) and processing for use of decaBDE into newly-manufactured articles. Unfortunately, the language in the proposed rule is unclear with respect to existing plastic articles (i.e., those articles that are currently in commerce) that were not produced from recycled plastic containing decaBDE. iGPS understands EPA did not intend the Proposed PBT Rule, when finalized, to prohibit the continued distribution, use, and processing (including recycling) of *existing* manufactured products and articles that contain decaBDE from non-recycled products. iGPS requests that when final, the Proposed PBT Rule should specifically state that only plastic products manufactured after the effective date of the Proposed PBT Rule to which quantities of decaBDE have been newly added (from sources other than recycled plastic containing decaBDE) would be prohibited, but that already-existing articles containing decaBDE would not be subject to the prohibitions of the proposed Section 751.405. Accordingly, we recommend EPA make the following revisions to the language in Section 751.405(a)(1) and (2) of the proposed rule (inserts and edits are underscored and as strike-through for ease of reference):

- (1) Processing, distribution in commerce, and use of finished plastic products and articles that contain DecaBDE manufactured prior to the effective date of this rule.
- (2) Processing and distribution for recycling of plastic from plastic products or articles containing DecaBDE, where no new DecaBDE is added during the recycling process.
- (3) Processing and distribution in commerce of DecaBDE in finished products or articles made of plastic recycled from products or articles containing DecaBDE, where no new DecaBDE was added during the production of the products or articles

made using recycled plastic.

Proposed §§ 751.405(a)(3) - (5) would not be modified, but would be renumbered as §§ 751.405(a)(4) - (6).

In addition to the change to § 751.405(a) proposed above, iGPS also encourages EPA to preserve the proposed rule's existing exemptions for recycling of plastic from existing articles or plastic products that contain decaBDE (proposed § 751.405(a)(1)); and for the continued use and distribution of any newly-manufactured articles that may contain quantities of decaBDE that are present solely due to the use of recycled plastic as raw materials (proposed § 751.405(a)(2)). iGPS considers EPA's efforts to permit the continued use and recycling of articles that contain decaBDE to be an appropriate exercise of Agency discretion and to suitably recognize EPA's obligations and efforts under the Pollution Prevention Act of 1990,⁴ as articulated in the Agency's "pollution prevention hierarchy", which encourages the reuse and recycling of substances and articles generally.⁵ iGPS has advocated for such an approach because a regulation which might inadvertently promote or explicitly require the disposal of existing articles that contain decaBDE (and discourage recycling of such articles) would lead to the unintended consequence of increasing the environmental loading of decaBDE. EPA should ensure the provisions of the preamble and the final rule both make explicit the rule permits not only recycling of existing decaBDE-containing articles but also the processing and distribution in commerce and use of recycled articles when no new decaBDE is added during the recycling process.

iGPS requests that EPA clarify that no TSCA Section 13 certification is required for import, and no TSCA Section 12(b) notice of export is required, for plastic products and articles that are exempt from 751.405(a). The preamble to the Proposed PBT Rule does not address how the Proposed PBT Rule might affect plastic articles that contain decaBDE and which currently move freely among the countries in the North American trade zone. However, the TSCA Section 12 rule at 40 C.F.R. § 707.60 requires export notification for any chemical substance or mixture subject to *proposed* TSCA Section 6 rules, *See* 40 C.F.R. § 707.60(a)(3). This export notification is not required for articles unless EPA "so requires in the context of individual section 5, 6, or 7 actions." *See* 40 C.F.R. § 707.60(b). Neither the rule text nor the preamble of the Proposed PBT Rule addresses the applicability of the TSCA Section 12 export notification requirements imposed by 40 C.F.R. § 707.60 to articles and products that will be exempt from the restrictions of the proposed § 751.405(a).

A similar issue may apply to entities who may import plastic articles containing decaBDE that are excluded from the prohibitions of the proposed § 751.405(a). TSCA

⁴ The PPA appears at 42 U.S.C. §13101 et seq. (1990).

⁵ *See*: <https://www.epa.gov/trinationalanalysis/pollution-prevention-and-waste-management>.

import rules require an import certification statement for any “shipment of a chemical substance subject to TSCA, imported in bulk or as part of a mixture” *see* 40 C.F.R. § 707.20(c)(1)(i); or for any “TSCA chemical substance in bulk form or as part of a mixture.” *See* 19 C.F.R. § 12.121(a). However, the TSCA Section 13 regulations also state explicitly that the import certification requirements apply to “[a]rticles containing a chemical substance or mixture *if so required by the Administrator by specific rule under TSCA.*” 19 C.F.R. § 12.119(c) (emphasis added).

The exemptions contained in §§ 751.405(a)(1) and (2) of the Proposed PBT Rule (and in paragraphs 751.405(a)(1) - (3) as proposed by iGPS herein) apply to articles and products, and the Proposed PBT Rule does not, by its terms, apply either the export notice requirements of 40 C.F.R. § 707.60 or the import certification requirements of 19 C.F.R. §§ 12.120-12.127 to articles and products. Accordingly, we interpret the Proposed PBT Rule, in conjunction with the TSCA Section 13 regulations at 19 C.F.R. §§ 12.118 - 12.127 and the TSCA Section 12 regulations at 40 C.F.R. § 707.60, to mean that such import certifications and export notice requirements do *not* apply to products and articles that are excluded from the prohibitions of Section 751.405(a) of the Proposed PBT Rule. Accordingly, we request that EPA include language in the preamble to the Final PBT Rule making this point clear, to avoid any ambiguity or confusion regarding the applicability of import certification or export notice requirements for articles and products that are excluded from the prohibitions of Section 751.405(a).

Any potential lack of clarity in the Proposed PBT Rule that plastic articles and products that contain decaBDE and that fall into one or more of the exemptions identified in § 751.405(a) will not be subject to export notification or import certification requirements puts entities such as iGPS (and other operators of rental fleets, including car rental fleets) in potential jeopardy. iGPS encourages EPA to clarify the proposal so that our neighbors to the north and south in the North American trade zone understand that articles and plastic products manufactured prior to the effective date of the Proposed PBT Rule, or recycled plastic articles that contain decaBDE solely due to the presence of recycled raw materials, can move freely across national boundaries, just as other forms of transportation equipment are permitted to, and without concern for TSCA export (or import) notification requirements.

Recordkeeping. iGPS supports the recordkeeping provision in § 751.405(b) of the proposed rule. We request, however, that § 751.405(b) be revised to conform to the edits iGPS has proposed to § 751.405(a), to add the revised proposed subparagraphs (a)(1), (2) and (3) to the list of the activities for which records are not required. The revised § 751.405(b) would thus read:

(2) The recordkeeping requirements in paragraph (b)(1) of this section do not apply to the activities described in paragraphs (a)(1), (2) and (3) of this section.

Comments on Proposed TSCA PBT Rulemaking

October 21, 2019

Page 6



Conclusion

iGPS has appreciated the opportunity to provide background and technical materials to EPA staff during the course of these proceedings thus far. iGPS continues to support this rulemaking and recognizes the efforts EPA has made to propose reasonable and practical approaches to limiting exposures to the identified PBT substances and to certain products that might contain these substances. iGPS would be pleased to confer further with EPA personnel concerning this submission and previously-submitted documents if it would assist with this rulemaking or would clarify or improve the phrasing of the various provisions on which iGPS has commented. We look forward to continuing this ongoing dialogue with the Agency and hope our comments will be taken into account as EPA prepares the final PBT rule.

Sincerely,

A handwritten signature in black ink, appearing to read 'Tod Sizemore'.

Tod Sizemore

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Enclosure

cc: Cindy Wheeler and Doug Parsons, Chemical Control Division, OPPT
Lawrence E. Culleen, Arnold & Porter
Lewis Taffer, iGPS Logistics – iGPS Consultant Representative

			Document No.	GEN-PLTSPC-iGPS-16	
Title: GENERAL iGPS PALLET PROCEDURE OVERVIEW			Authorized By:	R. Schelhaas	
Issue Date:	6/28/2015	Review Date:	6/30/2015	DCR #:	0032
Version #:	04	Previous Version:	02	Page #: 1 of 8	

General iGPS Pallet Procedure Overview

Purpose: Provide a general overview of iGPS Pallet/Raw Material Receiving and Handling; Removal of Metal Pallet-Support Rods; Grinding and Reprocessing/Pelletizing of iGPS Pallet Regrind; Quality Verification during Production; Application of iGPS labels; and Installation of the Pallet Tracking Device. Specific procedures for each stage of iGPS Pallet Production may or may not be referenced.

Scope: This Procedure applies to (but is not limited to) all Personnel involved in iGPS Pallet Production. Its purpose is to identify the General Procedures in iGPS Pallet Production and the specific procedural documents and forms necessary for completion.

References:

- "REPROCESSING CROSS-CONTAMINATION PREVENTION PROCEDURE"—Doc. #: MRPRO-STND-2
- "GRINDER CROSS-CONTAMINATION PREVENTION PROCEDURE"—Doc. #: MGRND-STND-1
- "INJECTION MACHINE CROSS-CONTAMINATION PREVENTION PROCEDURE"—Doc. #: PPRO-STND-4
- "iGPS PALLET IDENTIFICATION AND METAL ROD REMOVAL REPORT"—Doc. #: MHNDL-PLTSPC-iGPS-FORM-2
- "MATERIALS INVENTORY TAG COMPLETION"—Doc. #: GEN-STND-18
- "iGPS REPROCESSING LOG"—Doc #: MPRPRO-iGPS-FORM-1
- "MASTERBATCH BLEND CERTIFICATE"—Form #: MBLND-PLTSPC-iGPS-FORM-1
- "iGPS MFR QURANTINE MANIFEST"—Form #: QA-PLTSPC-iGPS-FORM-3
- "iGPS PALLET PRODUCTION SETTINGS"—Doc. #: PPRO-PLTSPC-iGPS-FORM-2
- "iGPS PALLET MEASUREMENT AND WEIGHT LOG"—Doc. #: QA-PLTSPC-iGPS-FORM-15
- "iGPS MASTER-BATCH BLEND LOG"—Doc. #: MHNDL-PLTSPC-iGPS-FORM-4

Definitions (*encapsulated in quotations*):

Volumetric Additive Feeder: Small auger-driven additive feeder for the addition of small quantities to the Reprocessing or Injection Molding operation

Grinder Input: Each trip of Pallets or Grinding Materials picked and transported to Grinder

Grommet: TPE (Thermoplastic Elastomer) Plug inserted in Pallet for increased Coefficient of Friction of Pallet Deck and Base/Runners

iGPS Label Generation Table: Table or station at which the iGPS Pallet Labels are created

iGPS Master-Batch Blend Certificate: Identifying paperwork utilized to identify Quality Verified iGPS Master-Batch Blends

iGPS Materials Tag: Inventory Tags with unique identifying number that provides information on Material disposition, origination, and quantity

iGPS MFR Quarantine Manifest: Listing of Quarantine or Non-Qualifying iGPS Repro as determined by Melt Flow Indexer Testing

iGPS Pallet Materials Delivery Truck: Grain-Feed Truck specifically utilized for delivery of iGPS Materials to Pallet Production Silos for iGPS Pallet Production

iGPS Pallet Product Name Marking: “BiPP 4840 HR 6R iGPS PoolPallet-SAS” marking on left hand side towards the top portion of the 48 inch side of the iGPS Pallets.

iGPS Pallet Production Silo #1: White Material Holding Silo dedicated for iGPS Pallet Production Materials; located in the 2601 Building

iGPS Pallet Production Silo #2: Silver Material Holding Silo dedicated for iGPS Pallet Production Materials; located in the 2601 Building

iGPS Repro Master-Batch: Homogenized Blend of twenty-eight (28) Quality Verified iGPS Repro Materials Boxes through utilization of the iGPS Repro Master-Batch Silo

iGPS Repro Master-Batch Silo: Mixing Silo dedicated to the Blending or Homogenization of iGPS Repro Materials

iGPS Wagon: Wagon utilized for iGPS Pallet Production Materials during Master-Batch or LOT changeover

IPE: iGPS Protective Equipment (IPE) required for completion of specified jobs, procedures, or processes relating to iGPS Materials; which include, Gloves, Face-Masks, Safety-Glasses, Steel-Toe Boots, Hard-hats, and Hearing-Protection

Master-Batch Composition or LOT #: Listing of Materials and origination of Materials comprising a Master-Batch Blend

Materials Clear-Out: Removed of all Plastics Materials from a Machine

Pi Rod: Rods utilized specifically for the Multiple Variation Pallet Type; which includes the iGPS Pallet

PPE: Personal Protective Equipment required for completion of specified tasks, jobs, procedures, or Processes

Prior-Use Materials: Plastic Materials previously used in a given Process

Quality-Verified iGPS Repro Materials: iGPS Repro Materials that have been Melt-Flow tested and fall within established Quality Limits

Quarantine Sticker: Label applied to Non-Qualifying iGPS Repro Materials for Identification

RFID Verification Table: Table or station setup to Verifying that RFID Tags installed in the iGPS Pallets can be read

Transitional Wagon: Wagon utilized for iGPS Pallet Production Materials during Master-Batch or LOT changeover

iGPS Pallet Receiving and Rod Removal (Materials Personnel)

1. iGPS Pallets are Received and Unloaded to the designated Metal-Installed Pallet Retention Area
 - 1.1. Received Quantity Verified and Pallets Stacked
 - 1.2. Receiving Paperwork for Verification of Delivery is provided to Greystone Manufacturing Receiving Manager
 - 1.2.1. Paperwork is available to iGPS Representative upon request
2. Pallets are pulled from Rod-Installed iGPS Pallet Inventory and transported to Rod Removal Table for Pallet Identification and Steel Rod extraction (Refer to: "iGPS PALLET IDENTIFICATION"—Doc. #: MHNDL-PLTSPC-iGPS-PRO-3)

****CAUTION: Proper PPE/IPE use must be exercised during iGPS Pallet Rod Removal and Handling****

 - 2.1. iGPS Pallets is placed on the Rod Extraction table and the Rod Extraction Team locates the UL Logo and the Product Name marking

****NOTE: See "iGPS PALLET IDENTIFICATION" to ensure proper iGPS Pallet Identification****
 - 2.2. Pallets without both identifying demarcations are set aside and all four corners and painted in order to identify as Non Fire-Rated Pallets (NON-FR)
 - 2.2.1. NON-FR Pallets are segregated from iGPS Pallet Inventory and are utilized as Stacking or Transport Pallets for handling material gaylords of iGPS Materials ONLY
 - 2.3. 5 Steel Rods Removed from iGPS Pallets demarcated with both the UL and Product Name
 - 2.4. Metal-Free UL Approved and Product Name Identified Pallets are moved to designated Grinder Staging Area
 - 2.4.1. Stacking Metal-Free and Identified Pallets to a standard maximum height of 30 FR iGPS Pallets
 - 2.5. Each Shift performing iGPS Pallet Rod Removal will complete an entry on the "iGPS PALLET IDENTIFICATION AND METAL ROD REMOVAL REPORT" (Doc. #: MHNDL-PLTSPC-iGPS-FORM-2) which annotates the quantity

of UL-Approved iGPS Pallets; FM-Approved iGPS Pallets; Non-UL or Non-FM iGPS Pallets; and Non-iGPS Pallets that have been processed through Rod-Removal

iGPS Pallet Grinding (Material-Grinding Personnel)

3. Metal-Free Fire-Rated iGPS Pallets Ground according to Grinder Cross-Contamination Prevention Procedure (Refer to: “GRINDER CROSS-CONTAMINATION PREVENTION PROCEDURE”—Doc. #: MGRND-STND-1)
CAUTION: Proper PPE/IPE use must be exercised during iGPS Pallet Grinding and Handling
Note: Grinder #2 (if operational) is designated for grinding all iGPS Pallets
 - 3.1. Grinder Operator or Grinder Forklift Operator will visually verify iGPS Pallets are designated for Grinding prior to Pallet transport to Grinder
E.g. UL-Approved iGPS Pallets or FM-Approved iGPS Pallets (Refer to: “iGPS PALLET IDENTIFICATION”—Doc. #: MHNDL-PLTSPC-iGPS-FORM-2)
 - 3.2. Grinder Operator or Grinder Forklift Operator will transport 8 Identification Verified iGPS Pallets per Pallet “Grinder Input”
 - 3.3. Regrind iGPS Materials are Tagged with “iGPS Materials Tag”
 - 3.3.1. iGPS Tags will include (listed on Grinder Work Order) Work Order Number; Material Type; and Weights (Refer to: “MATERIALS INVENTORY TAG COMPLETION”—Doc. #: GEN-STND-18)
 - 3.4. iGPS Materials Tags accompany the Work Order as completed and are entered in the iGPS Pallet Materials Inventory Tracking Database; providing on-hand Inventory Reporting and Production Reporting of Raw Material(s) as required
 - 3.5. iGPS Regrind Material Boxes/Units are placed in Inventory Row in Designated iGPS Reprocessing/Pelletizing Area

iGPS Reprocessing/Pelletizing (Material-Reprocessing Personnel)

4. iGPS Materials are given a Work Order by the “iGPS Pallet Materials Inventory and Reporting Database” and are Reprocessed/Pelletized according to the Reprocessing Cross-Contamination Prevention Procedure (Refer to: “REPROCESSING/PELLETIZING CROSS-CONTAMINATION PROCEDURE”—Doc. #: MPRO-STND-2)
CAUTION: Proper PPE/IPE use must be exercised during iGPS Pallet Materials Reprocessing or Pelletizing
Note: Reprocessing Line #2 (if operational) is designated for Reprocessing/Pelletizing of iGPS Pallet Materials
 - 4.1. An “iGPS Reprocessing Work Order” is generated for 14 Boxes/Units of iGPS FR Repro Materials
 - 4.1.1. An “iGPS REPROCESSING LOG”—Doc. #: MPRO-iGPS-FORM-1; will accompany all iGPS Reprocessing Work Orders and must be completed with each Work Order Reprocessed
 - 4.2. Boxes/Units of iGPS Fire-Rated Regrind Material are loaded into the Reprocessing Silo
 - 4.2.1. Verify that only iGPS FR Regrind (“iGPS-FM”) are pulled for Reprocessing utilizing iGPS Materials Tag
 - 4.2.2. iGPS Materials Tags are removed
 - 4.3. The Reprocessing/Pelletizing Silo is set to continuous Blending to ensure homogenization of iGPS Regrind Materials for consistency during Reprocessing

- 4.4. Ensure that the Volumetric Feeder hopper is filled with Aromatic Additive
- 4.5. The Volumetric Feeder for the Aromatic Additive must be set and remain at 17% of maximum motor speed
 - 4.5.1. Set point will read “017” on rotary set dial
- 4.6. Reprocessing or Pelletizing of Blended iGPS Materials implemented as directed by Work Order
 - 4.6.1. Quality Samples are retained from each Box/Unit of finished Reprocessed iGPS Material for Quality Verification
 - 4.6.1.1. Sample bags are labeled with: Work Order Number and Materials Tag Number (E.g. iGPS-1-0021)
- 4.7. Reprocessed iGPS Materials are Tagged with “iGPS Materials Tag”
 - 4.7.1. iGPS Tags will include (listed on Grinder Work Order) Work Order Number; Material Type; and Weights (Refer to: “MATERIALS TAG COMPLETION”—Doc. #: GEN-STND-18)
- 4.8. Reprocessed iGPS Materials are staged in iGPS Inventory Row(s)
- 4.9. All Documentation related to the Reprocessing Work Order is turned in to the Inventory Clerk
 - 4.9.1. iGPS Materials Tags accompany the Work Order as completed
 - 4.9.1.1. Tags entered in the iGPS Pallet Materials Inventory Tracking Database; providing on-hand Inventory Reporting and Production Reporting of Raw Material(s) as required
 - 4.9.2. “iGPS Reprocessing Log” will accompany Work Orders when completed
 - 4.9.2.1. Log is filed by the Materials Inventory Clerk

iGPS Repro-Material Testing and Quality Verification (Material-Testing Personnel)

****CAUTION:** Proper PPE use must be exercised during Materials Testing**

- 5. Each Unit or Box of Finished Repro Material is tested by qualified Materials Technician to confirm the required MFR between 0.60 and 0.99 is attained (See Step 6.4.1)
 - 5.1. All iGPS Repro Materials are Tested according to ASTM D1238 (Standard Test Method for Melt Flow Rates of Thermoplastics by Extrusion Plastometer)
 - 5.1.1. An MFR Result/Manifest (“iGPS MFR QUARANTINE MANIFEST”) corresponding to “Reprocessing Work Orders” are provided to Materials Or Blending Personnel
 - 5.1.1.1. Non-Qualifying Materials are identified as “Quarantine” on the “iGPS MFR WORK-ORDER MANIFEST”; which will identify Work-Order Number and Tag Number
 - 5.1.1.2. Material Categorization is changed to “Quarantine in the: “iGPS Pallet Materials Tracking Database”

iGPS Pallet “Repro-Masterbatch” Blending/Completion (Material Handling & OR Blending Personnel)

- 6. A Masterbatch Blend-Code will be generated by the “iGPS Pallet Materials Inventory and Reporting Database” providing a unique Identifier for each Masterbatch produced
 - 6.1. Utilizing the “iGPS MFR QUARANTINE MANIFEST” (Form #: QA-PLTSPC-iGPS-FORM-3); Personnel completing iGPS Repro-Masterbatch Blend(s) will identify the Non-Qualifying or Quarantine Material boxes as units are moved

- 6.1.1.A “Quarantine Sticker” will be affixed next to the “iGPS Materials Tag” and will be moved to an “iGPS Quarantine Inventory” row
 - 6.1.1.1. Quarantine iGPS Repro Materials will be warehoused in a designated row number located in the north-east corner of the 2600 Building
- 6.1.2. “Quality-Verified iGPS Repro Materials” are staged next to the “iGPS Repro Master-Batch Silo”
- 6.2. Twenty-Eight (28) Boxes of Quality Verified iGPS Repro Materials are loaded in the “iGPS Repro Master-Batch Silo”
- 6.3. A minimum of 5 hours blending time will be completed in order to ensure homogenization of Materials before discharge to the iGPS Pallet Materials Delivery Truck
 - 6.3.1. Sample of Master-Batch Materials retained from bottom of Silo upon blending completion, or prior to discharge of Materials
 - 6.3.1.1. Materials tested according to (See: step 7)
 - 6.3.1.2. MFR Testing Results are entered in the iGPS database
- 6.4. “iGPS Materials Tag(s)” are entered in the “iGPS Pallet Materials Inventory and Reporting Database”
 - 6.4.1. Box/Units of iGPS Materials are removed from “iGPS Pallet Materials Tracking Database” Inventory Listing
 - 6.4.1.1. Records are NOT deleted
 - 6.4.1.2. As identified; any Non-Qualifying Material(s) are re-categorized as “Quarantine”
 - 6.4.2. An “iGPS MASTERBATCH BLEND CERTIFICATE”—Form # MBLND-PLTSPC-iGPS-FORM-1: is generated for “iGPS Pallet Production Materials”
 - 6.4.2.1. Form inserted in holding folder on the “iGPS Repro Master-Batch Silo”
 - 6.4.3. Corresponding “iGPS Master-Batch Composition”—Form # MBLND-PLTSPC-iGPS-FORM-3: is filed by Materials Inventory Clerk

iGPS Pallet “Repro Master-Batch” Delivery (Material Handling & OR Blending Personnel)

****CAUTION:** Proper PPE/IPE use must be exercised during iGPS Pallet Materials Reprocessing or Pelletizing**

****NOTE:** Delivery of iGPS Pallet Production Materials must **NOT** be accomplished until the iGPS Pallet Production Silo is emptied and the Injection Machine is utilizing the “Transitional Wagon”**

- 7. Silo-Blended iGPS Master-Batch Blend are discharged to the iGPS Master-Batch Materials utilizing the “iGPS Pallet Materials Delivery Truck” as required
 - 7.1. First delivery of iGPS Pallet Materials is made to the “Transitional Wagon”
 - 7.1.1. Transitional Wagon must empty before any new Materials (Lot #s) are loaded in Silo(s)
 - 7.2. All remaining deliveries are delivered to the Silo
 - 7.2.1. Silo must be empty prior to loading Materials
 - 7.2.2. Remaining Materials are loaded into corresponding “iGPS Pallet Production Silo”
 - 7.3. “iGPS Pallet Materials Delivery Truck” is visually checked for any remaining materials in order to ensure all Materials have been discharged
 - 7.4. Place corresponding “MASTERBATCH BLEND CERTIFICATE”—Form #: MBLND-PLTSPC-iGPS-FORM-1 at the corresponding delivery location(s)

iGPS Pallet Production (Pallet Production Personnel)

****CAUTION:** Proper PPE use must be exercised during iGPS Pallet Production**

8. Initial Start-Up of iGPS Pallet Production requires “Material Clear-Out” of “Prior-Use Materials”
 - 8.1. Purge-Out “Prior-Use Materials” until Materials are no longer discharged from the Mold Injection Points (specific Procedure may follow)
 - 8.1.1. This Procedural Step is also performed during Mold Removal
9. iGPS Pallet Assembly is completed according to:
“GENERAL PALLET QUALITY VERIFICATION”—Doc. #: GEN-STND-1 and “iGPS PALLET LABEL APPLICATION PROCEDURE”—Doc. #: PPRO-PLTSPC-PRO-iGPS-5
 - 9.1. Pallet Components/Parts Produced
 - 9.1.1. Initial Part Quality Verification completed
 - 9.1.2. Pallet Deck is placed on hot-stamping guide
 - 9.1.2.1. iGPS stamp is embossed on opposite cup of the 48” length
 - 9.1.3. Simultaneously; another assembler installs the 5 “Pi Rod(s)” into the Pallet Bottom Part Component
 - 9.2. Pallet Deck Component is placed on the Build Table and the Injection Points and Flash are removed
 - 9.2.1. IBC Grommet/Plugs are installed in all required Plug Locations of the Deck Component
****NOTE:** plug installation may change according to Purchase Orders**
 - 9.2.1.1. New bin or container of Grommets is used; Quality Personnel must complete a “Durometer Verification” of the Grommets (Specific Procedure to follow)
 - 9.2.1.2. Only Grommets that have passed Durometer Verification Testing installed will be utilized
 - 9.3. Pallet Bottom Component is placed on the scan table
 - 9.3.1. Four RFID Tags are inserted in the Four (4) Outer-Cups of the Pallet Part
 - 9.3.2. RFID Reading Verification is completed
 - 9.3.2.1. Employee presses the Reset Button; followed-by “1” and “Enter”
 - 9.3.2.2. If all Tags are read; the screen will display four green dots at the corresponding corners of its Pallet Diagram
****NOTE:** ALL (4) RFID TAGS MUST BE READ BY THE READING TABLE**
 - 9.3.2.2.1. If all Tags are NOT read: the RFID Tags must be repositioned and the Reading Verification attempted again (Repeat Step 9.3.2)
 - 9.4. Once both Pallet Parts are ready; the Deck Pallet Component is placed on top of the Runner Pallet Component
 - 9.4.1. Assembly Personnel with assure all Pallet Locking Tabs are aligned inside of the Pallet Posts/Cups
 - 9.4.2. Pallet Assembly is guided in and centered in the Pallet Assembly Press
 - 9.5. iGPS Pallet Components are assembled utilizing the Pallet Assembly Press
 - 9.6. iGPS Labeled Pallets are again visually Inspected for Quality Deficiencies by Production or Assembly Personnel
 - 9.7. Assembly Inspection Verified Pallets are placed in a holding stack (9 or 10 Pallets) to cool before being labeled

10. iGPS Pallet RFID Verification and Label application (Refer to: "iGPS PALLET LABEL APPLICATION PROCEDURE" — Doc. #: PPRO-PLTSPC-iGPS-5)
 - 10.1. The Top Pallet from the first-completed stack of Pallets is removed to the RFID Verification Table
 - 10.2. Pallet Corners are placed over the 4 sensors of the Verification Table
 - 10.2.1. The "Reset" button is pressed on the Computer Unit
 - 10.2.2. Bar Code "111111111 bar code" is scanned using Bar-Code Scanning Gun
 - 10.2.3. "READ AND PRINT LABELS" button is selected on the Computer Screen using interface
 - 10.2.3.1. If all RFID Tags have been read and verified; the screen will display four green dots; and a Message Pop-Up will appear indicating the quantity of labels to be printed
 - 10.2.3.2. "Ok" command is selected on the "Pop-Up" Window and labels are printed
 - 10.2.3.2.1. 4 small Bar-Code labels
 - 10.2.3.2.2. 2 Large Bar-Code Labels
 - 10.2.4. After Labels are printed; Bar-Code Scanner is used to scan both sets of labels
 - 10.2.5. Labels are removed from Label Printer and applied to Pallet
 - 10.2.5.1. 2 Large Labels are placed on 48" side of opposite Pallet Corners that do not have the Hot-Stamp applied
 - 10.2.5.2. 4 Small Labels are placed on 40" side of perimeter Pallet Cups/Posts
 - 10.3. Pallets are stacked (9) in staging area for review by the Quality Department

iGPS Pallet Quality Verification and Inventory Placement (Quality Personnel)

11. Pre-Assembly iGPS Pallet Quality Assignment(s)
 - 11.1. Pallet Component(s) weight will be verified and recorded
 - 11.2. Grommet Durometer reading will be taken and recorded
 - 11.2.1. Both results are recorded on "iGPS PALLET MEASUREMENT AND WEIGHT LOG"—Doc. #: QA-PLTSPC-iGPS-FORM-15; in two-hour intervals
12. Post-Production iGPS Pallet Quality Verification (Refer to: "GENERAL PALLET QUALITY VERIFICATION"—Doc. #: GEN-STND-1)
 - 12.1. Pallets will be inspected for Quality deficiencies as noted in referenced procedure
13. Post-Production iGPS Pallet Measurement Verification
 - 13.1. Quality Personnel will verify iGPS Pallet measurements are a minimum of 47 7/8" (47.875 in.) and do not exceed 48 3/8" (48.375 in.)
 - 13.1.1. Measurement(s) is logged in "iGPS PALLET MEASUREMENT AND WEIGHT LOG"—Doc. #: QA-PLTSPC-iGPS-FORM-15
 - 13.1.2. Pallets with measurements greater than 48 3/8 inches or less than 47 7/8 inches are labeled with "QAULTY VERIFICATION LABEL(S)" AND "QUARANTINE" sticker to identify; Production Date, Production Shift, and Lot #

13.1.2.1. Pallets are moved to QA HOLD for further review and determination of disposition by the Plant Manager

14. Pallets are placed in Inventory according to Lot # or Masterbatch # utilized for iGPS Pallet Production