

ENVIRONMENTAL REQUIREMENTS - Section 16

Reporting of All Materials and Substances

Powers and Sons, LLC is required by its customers to identify restricted/hazardous substances contained in the materials in parts that are supplied to them. Powers and Sons, LLC must comply with reporting standards of Ford Motor Co., **Stellantis**, General Motors, Volvo as well as many others. Providing this information supports Powers and Sons, LLC and its customer's efforts to comply with the European Union (EU) End of Life Vehicle Directive (2000/53/EC), the Restricted Substance Management Standard (RSMS), and Conflict Minerals reporting obligations.

In addition to meeting this requirement, Powers and Sons, LLC customers are requiring **full disclosure of product content for all parts**. To collect necessary information, Powers and Sons, LLC, its suppliers and customers use the INTERNATIONAL MATERIAL DATA SYSTEM (IMDS). The IMDS website is available at www.mdsystem.com. Any IMDS questions can be directed to the IMDS Administrator. Refer to the Powers and Sons, LLC Key Personnel List, I.M.D.S. Administrator

Part information must be filled out for each part supplied to Powers and Sons, LLC and entered into IMDS per latest instruction 07-36-03 referenced below.

Some Key information required:

- Materials. Define the materials used in making the parts along with the substances comprising those materials
- Steel Source (ie Steel Mill)
- Percentage of recycled material, post-consumer or post-industrial/pre-consumer, used in the part
- Part weight. Includes the saleable part weight along with component weights. Coatings on parts, such as paint or rust preventative, are to be defined as material weights.

Per AIAG Production Part Approval Process (PPAP) Fourth Edition (or latest), section 2.2.18.1:

"...the part weight of the part as shipped, measured and expressed in kilograms (Kg) to four decimal places (0.0000)..."

Powers and Sons, LLC requires that this information be provided a minimum of two weeks prior to PPAP submittal for new parts. This will allow time for any errors to be corrected.

The Part Submission Warrant (PSW) has a line where the IMDS ID / Version number and date accepted is to be populated

An electronic copy of the [Part Submission Warrant](#) can be found in the Supplier Forms section of this manual.

IMDS number must also accompany the Annual Layout. If information has not changed since initial PPAP, the same ID / Version number can be used on an Annual Layout report

Steps 1-29 are used to create a material in IMDS before it can be assigned to the component that is being PPAP'd. Once the material is created it can then be used to create the component in IMDS as described in steps 30-55.

Completely read instructions before attempting

Creating a Material

1. Go to www.mdsystem.com
2. You may have to disable pop-up blockers
3. Register your company or log in

Login

User ID

Password

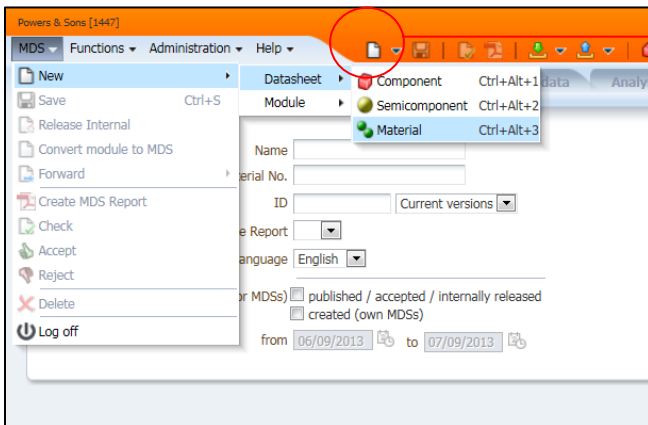
Language English

- User ID forgotten
- Request new password
- Terms of use

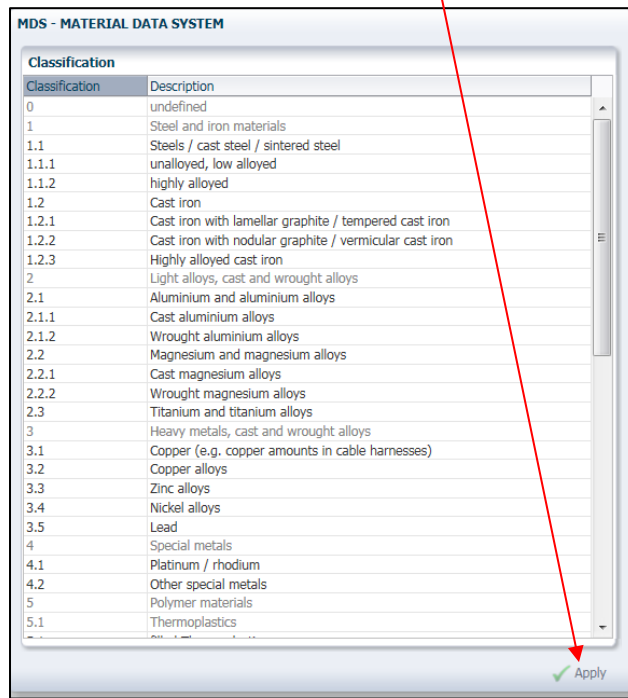
Registration

- Register your company
- Tips for your company registration

4. Once logged-in select MDS/New/Datasheet/Material or use the “New” icon



5. Select proper Material Classification, double-click or select apply



6. Fill in the name of the material

on Information

Type Material (own MDS)

ID / Version 446153729 / 0.01

Node ID 446153729

Node count 1

MDS Supplier Powers & Sons

Name *

Trade name

Internal Mat.-No.

Development Sample Report

7. Fill in the Std. Mat.-No., Norms / Standards, and Source of material (i.e. Steel Mill). All three must be filled in.

Material Information

Std. Mat.-No. *

Symbol

Classification 1.1 Steels / cast steel / sintered steel* 🔍

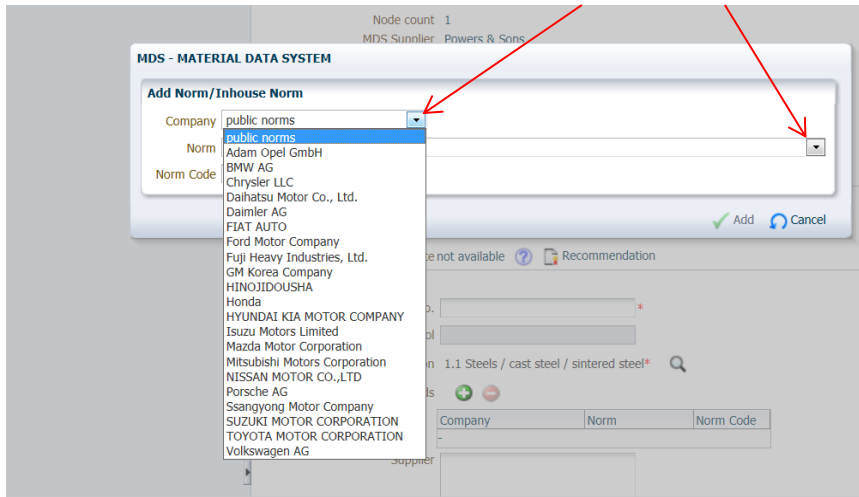
Norms / Standards

Company	Norm	Norm Code
-		

Supplier

To insert Norms / Standards select on green plus button

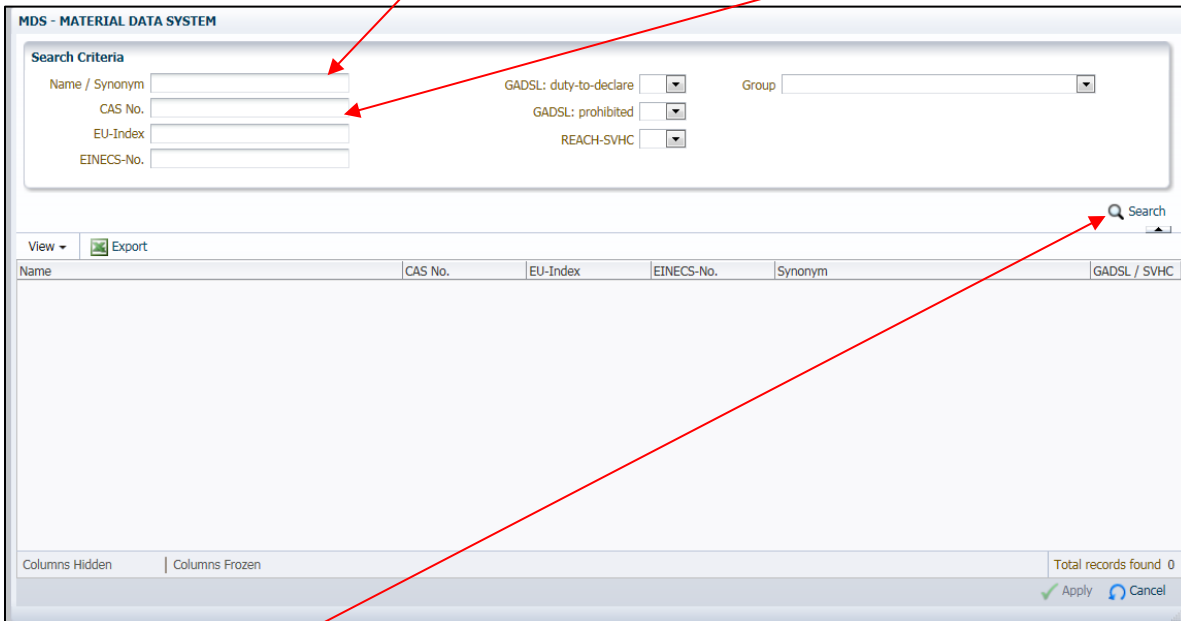
From pop up select correct Standard and Norm from drop down buttons



8. Select the Blue Prism to insert a substance that will make up material



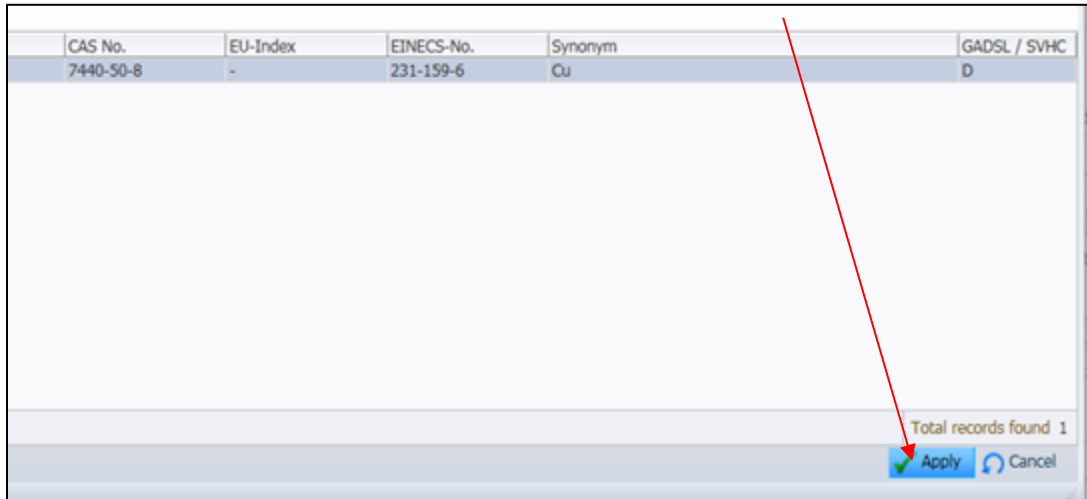
9. Type in substance name in Name / Synonym (i.e. carbon, iron, nickel) or CAS No.



10. Search

NOTE: A general name will produce a large number of found.
If the CAS Number is known using it to search will narrow down the search

11. Select the correct substance and double-click to apply or select Apply

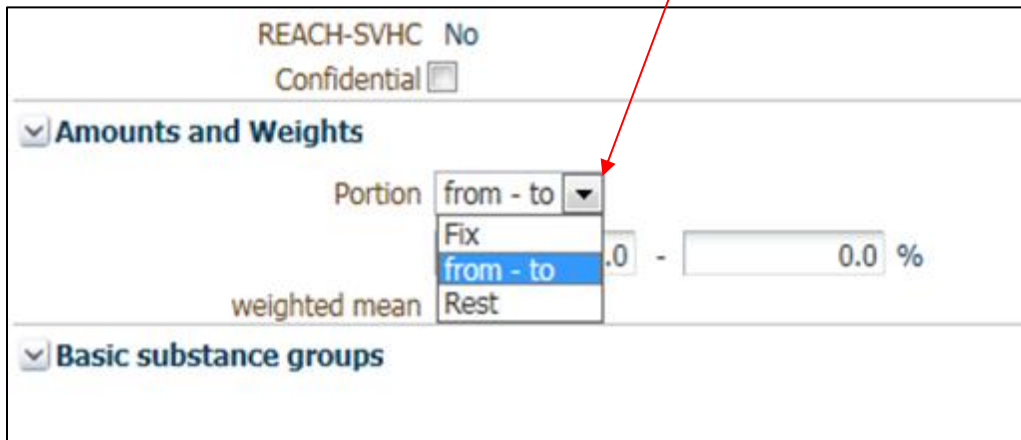


CAS No.	EU-Index	EINECS-No.	Synonym	GADSL / SVHC
7440-50-8	-	231-159-6	Cu	D

Total records found 1

Apply Cancel

12. On the Details pane under Amount and Weights use the drop-down box to determine how much of a substance is being used



REACH-SVHC No
Confidential

Amounts and Weights

Portion from - to

weighted mean .0 - 0.0 %

Basic substance groups

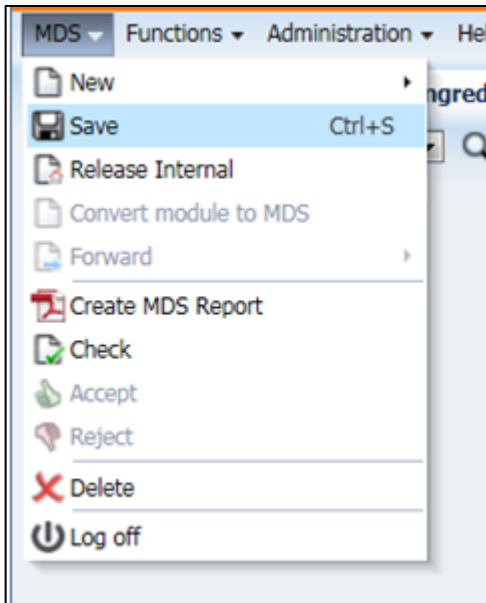
13. Under Amounts and Weights there are three choices for the amount of substance used in the material:

- Fix ___% - A fixed portion not to vary
- From ___% to ___% - This is used for a range. A median will be calculated.
- Rest - The rest to make up a 100%

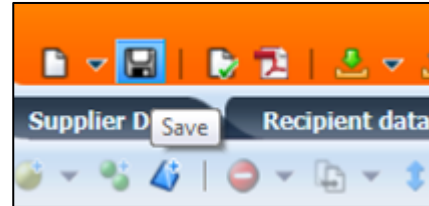
Fill in appropriate amount of substance being used in the material.

14. Select on the Material name on the left side of the screen to add another substance.

15. Save your work frequently



OR



16. Repeat steps 9-14 as needed to complete the material

NOTE: Due to reporting standards as of April 2008, when using the range portion a 10% warning of undeclared substance is likely. The following excerpt is taken from the IMDS website to help explain the new IMDS reporting guidelines:

When calculating the maximum amount of jokers used in a material, IMDS uses "worst case" calculation. The value given as "rest" on the joker substances is not the same as the value used in the warning calculation.

The 10% warning requires a bit of understanding on how the calculations work. For example, if you have a material comprised of substance a, substance b, substance c, and a joker:

Substance a - range from 25 to 29 - weighted average 27
Substance b - range from 36 to 40 - weighted average 38
Substance c - range from 26 to 30 - weighted average 28
Joker - REST - 7%

But

- Even though substance a has a weighted average of 27, it COULD have as little as 25% of substance a
- Even though substance b has a weighted average of 38, it COULD have as little as 36% of substance b
- Even though substance c has a weighted average of 28, it COULD have as little as 26% of substance c

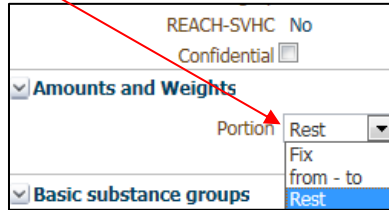
So really, for sure, all we know that the total of substance a, b, and c are 87% so the joker could be 13% which is > 10% and sets off the warning.

Additionally, should you use a range on a joker such as Joker - from 9% to 11%, the maximum value of the range is used in the calculation.

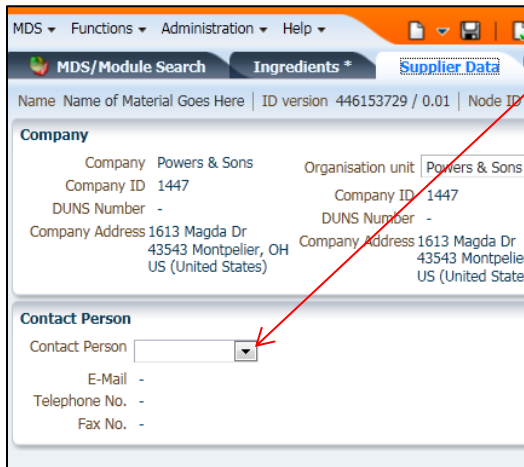
To avoid this warning, do not use "rest" on a joker substance.

17. When added up all the substances must equal 100%. If it does not follow the next 4 steps:

- Click on Blue Prism
- In Name / Synonym type IRON, PPE, MISC, etc. depending on what material is being created
- Apply it
- Under Portion select REST

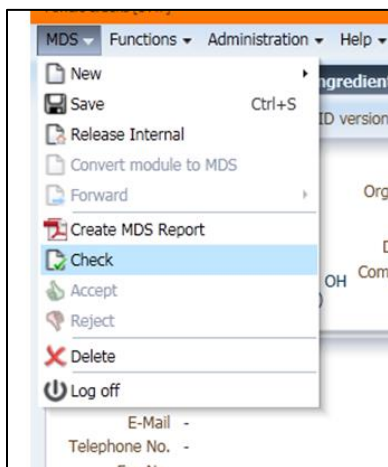


18. Select Supplier Data Tab and populate Contact Person from drop down

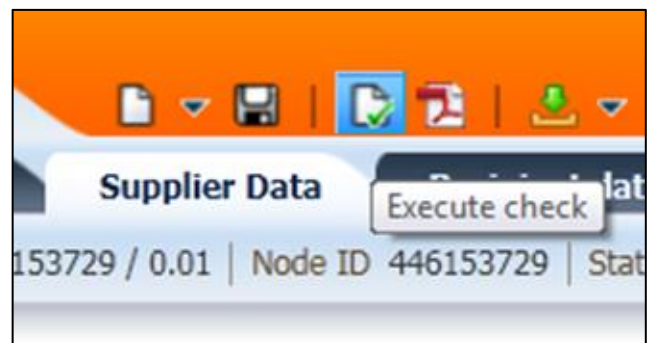


19. Save

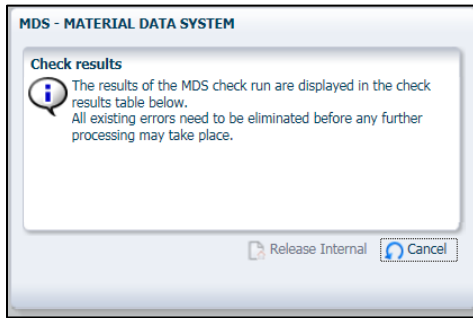
20. Check the data



or

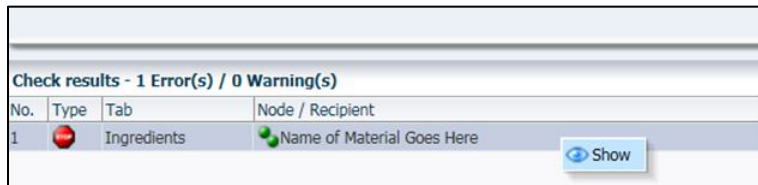


21. Warnings and/or Errors will appear at the bottom of the screen.

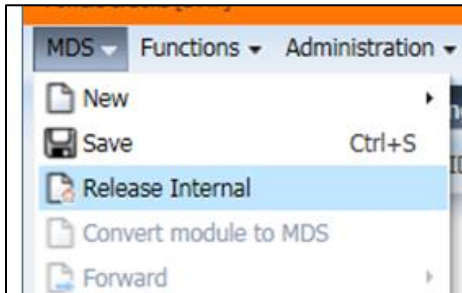


22. **All Errors and/or Warnings must be fixed before proceeding.**

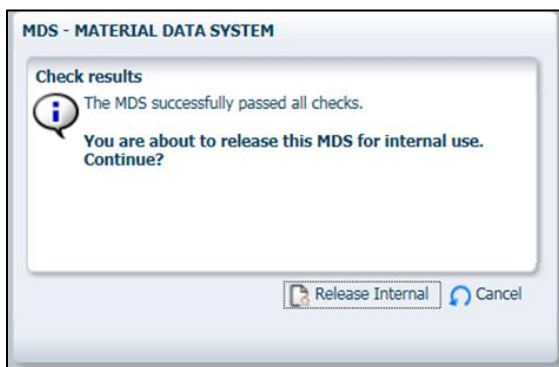
23. Double-click or highlight, right click, show on the Error/Warning. This will return the screen to the Error/Warning to be fixed.



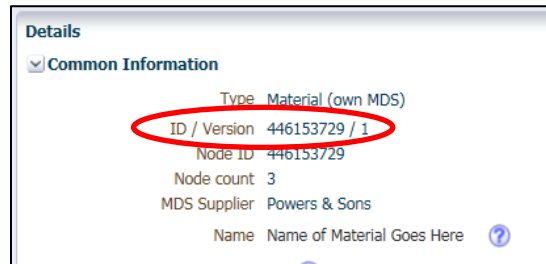
24. If all there are no errors or warnings; From the MDS drop down select Release Internal



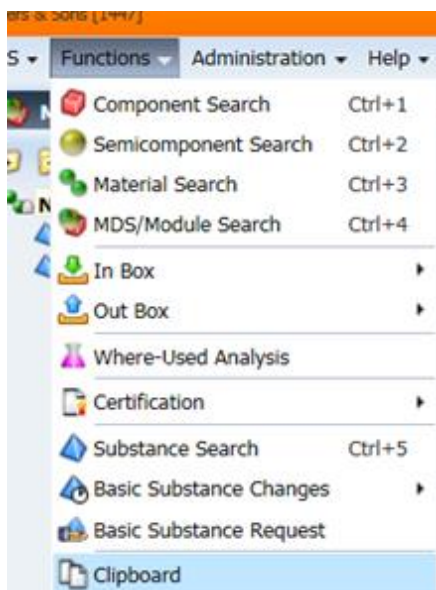
25. Select Release Internal



26. At the top of the Details screen is the ID / Version number and the Name of the material. The ID / Version number or Name will be used to create the component in steps 30-54. It is suggested to use the ID / Version number as it is the only material with that ID number and will expedite the search for the material when placing it in the component.



27. As of release 8.0 IMDS has a function that allows frequently used materials (or components) to be placed on a clipboard for easy retrieval. Select Function / Clipboard to open the clipboard

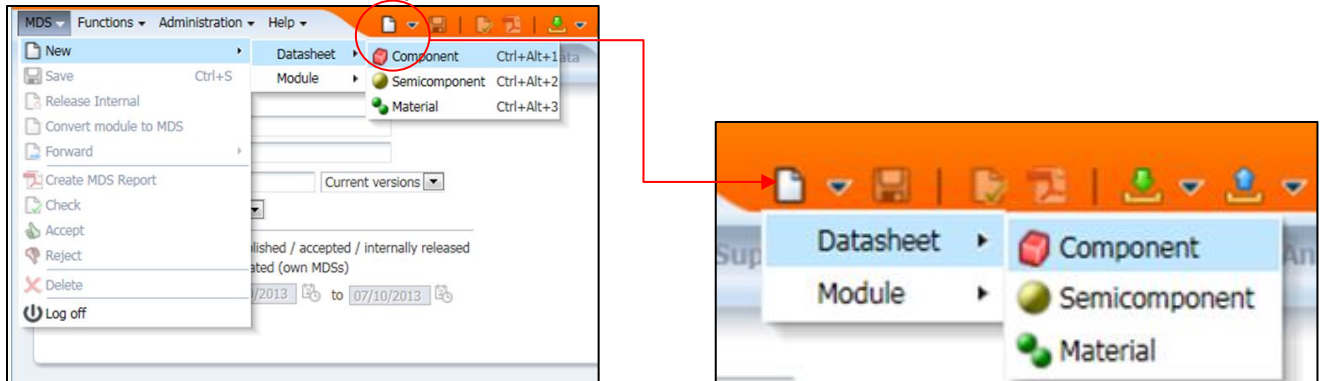


28. Once clipboard is open the material may be added by selecting on the just created material and using the “drag and drop” method or add to the clipboard via the add buttons at the top of the clipboard.



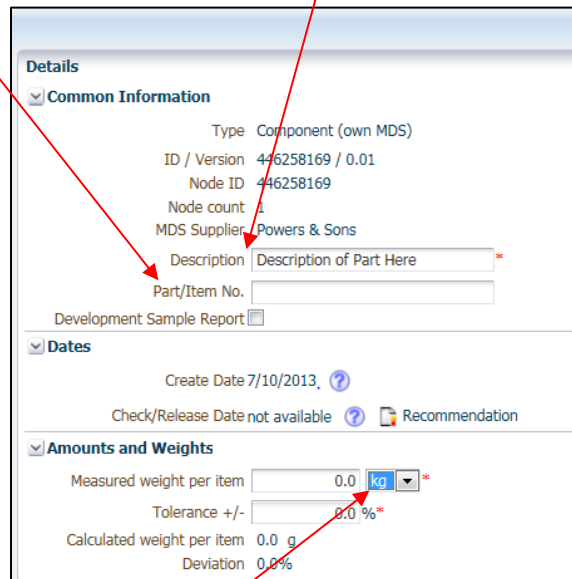
Creating Component

29. Select MDS/New/Datasheet/Component or use the “New” icon



30. In the Details pane, under Common Information type in a Description, use the description found in title block of Powers and Sons, LLC print. *NOTE for Coating suppliers – in the description field please fill in as: Coating for (Powers and Sons, LLC Part number)

31. Fill in Part/Item NO. (Powers and Sons, LLC part number)



32. Use Drop down to switch weight to Kg

Per AIAG Production Part Approval Process (PPAP) Fourth Edition (or latest), section 2.2.18.1:

“...the part weight of the part as shipped, measured and expressed in kilograms (Kg) to four decimal places (0.0000)...”

Powers and Sons, LLC will reject any IMDS that is not in Kg’s

33. Tolerance is calculated as followed:

MDS - MATERIAL DATA SYSTEM

Deviation
 The deviation may not exceed a certain value. Exceeding this threshold will result in a warning in the MDS Check. The threshold depends on the component's measured weight:

Measured weight per item	Allowed max. deviation
< 1g	100%
< 100g	10%
< 1kg	5%
< 10kg	2%
< 100kg	1%
≥ 100kg	0.5%

✔ Close

There are two methods which material may be added refer to step 39 for alternate method.

34. Select the Add a Material reference icon

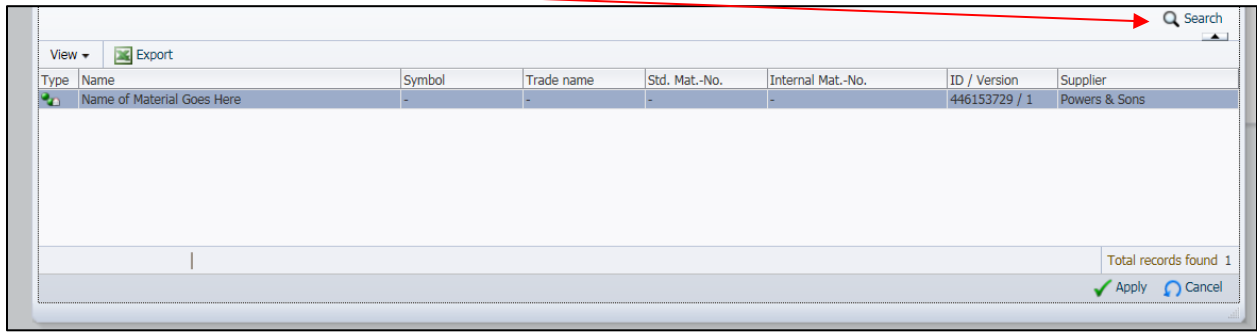
The screenshot shows the MDS software interface with the 'Supplier Data' tab selected. A red arrow points to the 'Add a Material reference' icon in the toolbar, which is a globe with a plus sign. Below the toolbar, there is a button labeled 'Add a Material reference'.

35. Enter the material name in the Name field or the ID / Version number in the ID field

The screenshot shows the 'Name, ID, Version, Date' form in the MDS system. A red arrow points to the 'Name' field, which is currently empty. Other fields include 'Internal Mat.-No.', 'ID', 'Current versions', 'Development Sample Report', 'Language', and 'Date'.

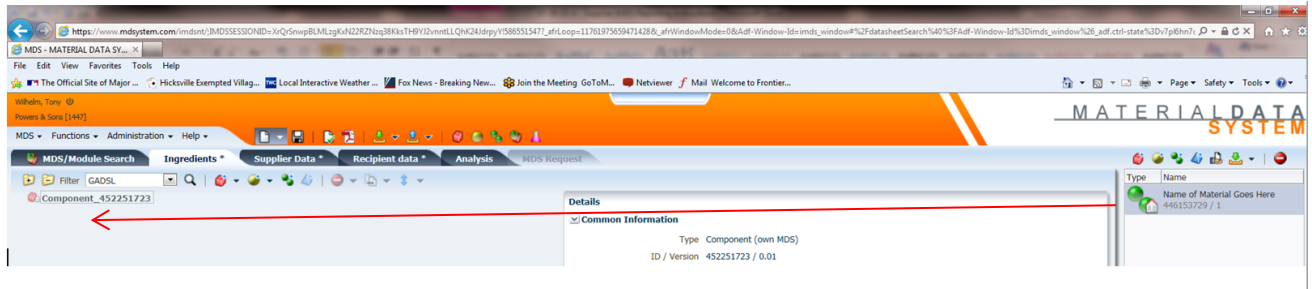
The screenshot shows the 'Name, ID, Version, Date' form in the MDS system. A red arrow points to the 'ID' field, which is currently empty. Other fields include 'Name', 'Internal Mat.-No.', 'Current versions', 'Development Sample Report', 'Language', and 'Date'.

36. Search

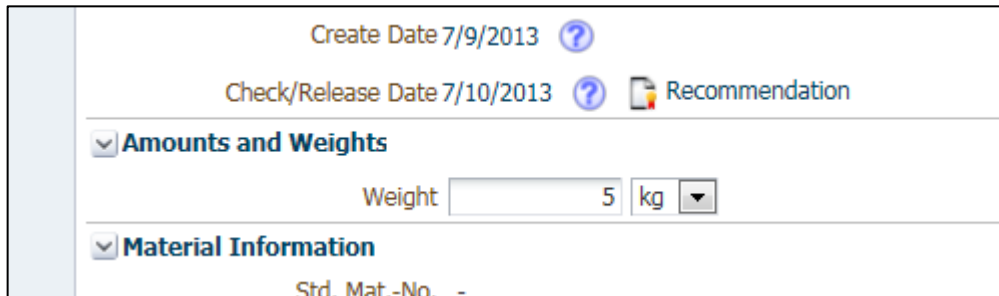


37. Select the material and apply (double-click or Apply button)

38. Alternately, the material may be added to the component from the clipboard by using the “drag and drop” method. Dropping the material under the component.



39. Fill in the weight of the material in Kg's, refer to step 33



40. Repeat steps 35-40 until all material, coatings, etc. that make up the part are included.

41. If the part contains any recycled material indicate how much under Recyclate



42. On the Detail pane under Amounts and Weights the Measured Weight per item and Calculated weight per item must match to four decimal places, refer to step 33.

Amounts and Weights

Measured weight per item 5.1234 kg *

Tolerance +/- 5.0% *

Calculated weight per item 5.1234 kg

Deviation 0.0%

43. Under Parts Marking, if applicable, populate the Polymeric part(s) marked. If yes or no do not apply select Not Applicable.

Parts Marking

Polymeric part(s) marked

Yes (Parts marked as required by law.)
No (Parts not marked as required.)
Not Applicable (Parts do not require marking due to specifications of weight, geometric restriction or surface requirements.)

44. Select the Supplier Data Tab and populate Contact Person from the drop down

Supplier Data

Name Description of Part | ID version 446259486 / 0.01 | Node ID 446259486

Company

Company Powers & Sons Organisation unit Powers & Sons

Company ID 1447 Company ID 1447

DUNS Number - DUNS Number

Company Address 1613 Magda Dr Company Address 1613 Magda Dr
43543 Montpelier, OH 43543 Montpelier, O
US (United States) US (United States)

Contact Person

Contact Person

E-Mail

45. Select the Recipient Data tab and select the Add recipient button

MDS Functions Administration Help

Recipient data *

Name Description of Part | ID version 446259486 / 0.01 | Node ID 446259486 | Status Edit mode

Send Propose Release Internal

There are no recipients assigned to this MDS yet.

Add recipient

46. Type in Powers & Sons (the "&" must be used) in the company name **OR** use Powers and Sons, LLC Company ID 1447 and Search

47. Highlight and Apply or double-click search results

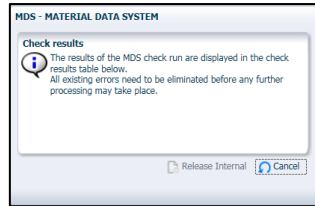
48. In Details pane fill in (required by Powers and Sons, LLC) Supplier Code: Your Supplier code to Powers and Sons, LLC

Part/Item No.

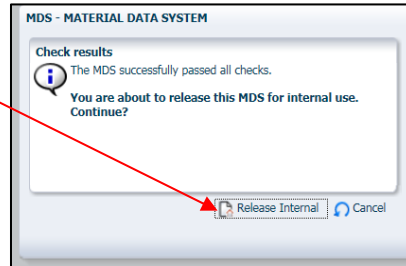
Date of Report

49. Release Internal: the ID version number must be a "whole" number i.e. 1, 2, 3, etc.

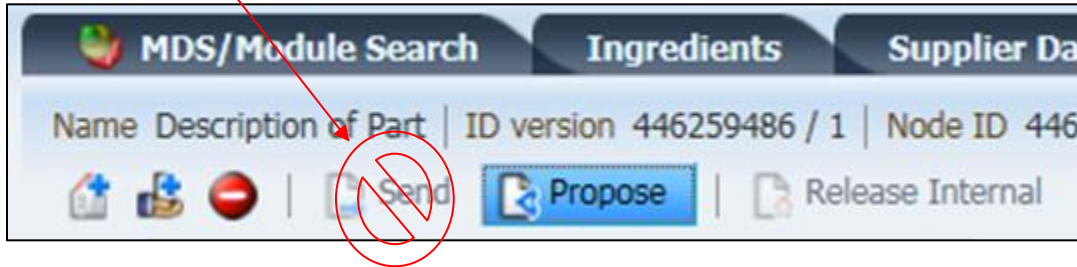
50. Fix any warnings and errors



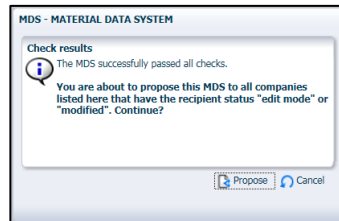
51. Select Release Internal



52. Select Propose (Do not select send)



53. Select Propose on pop-up



54. The ID Version number and date accepted is needed on the PSW submitted to Powers and Sons, LLC.

Powers and Sons, LLC MUST ACCEPT the IMDS for it to be valid. DO NOT assume that it is correct. The IMDS website is checked once per business day. If the matter is urgent the supplier may contact Powers and Sons, LLC and arrangements can be made to expedite the approval of the IMDS. Refer to the Powers and Sons, LLC Key Personnel List, I.M.D.S. Administrator

- **DISCLAIMER:** THIS DOCUMENT IS NOT INTENDED TO REPLACE THE IMDS WEBSITE, ITS RECOMMENDATIONS OR REPORTING REQUIREMENTS. REPORTING STANDARDS CHANGE FREQUENTLY. THE IMDS WEBSITE IS THE ULTIMATE AND FINAL WORD REGARDING ALL IMDS QUESTIONS AND REQUIREMENTS.