**Technical Enquiry Form**

# *NOTES ON COMPLETION OF THIS TECHNICAL ENQUIRY FORM*

1. Information provided on this form will be treated as strictly confidential by Symphony.
2. This Technical Enquiry Form (TEF) is designed to supply Symphony with the information needed to provide you with the correct additive and Manufacturing Instructions and to minimise the risk of manufacturing issues.
3. The choice of additive depends on several factors such as product application and requirements, proposed lifespan, disposal route, processing and conversion. The additive can be formulated to provide a particular degradation response and it is important that you provide the information requested. **Orders for additive without a completed and signed Technical Enquiry Form cannot be processed.**
4. **A Technical Enquiry Form must be fully completed for each product application under consideration, If more than one application is being considered, involving different product geometry, materials or process routes, then a separate TEF must be completed detailing each application. Multiple applications on one form will not be accepted.**
5. **If there is at any time any change in the base polymer, or in other materials or processes used or the end use of the product, Symphony must be notified and will advise whether a different additive is required.**
6. **d2w Additive will not be warranted for applications, materials or processes not specified in this form and Symphony has no responsibility for components of a finished product other than the d2w additive.**
7. You are advised that the information contained within the additive and all information and know-how disclosed in connection with the additive are proprietary to Symphony and confidential.
8. Please type the information into this form on-screen (the boxes will expand as you type), as handwriting may not be easily read. Then print-out, sign on page 4 and give the Form to your local Symphony Distributor. He/she will check it and keep a copy on file and then e-mail it to the relevant Account Manager at Symphony’s Head Office as a pdf document.

**d2wAGRI Technical Enquiry Form**

January 17

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| **Symphony’s Distributor/Agent:** | **Date:** |
| **Distributor TEF Reference:** | |

1. **PARTICULARS**

**Customer/Factory:**

**Address:**

**Contact Name:**

**Telephone:**

**E-mail:**

**Website:**

**Converter** *(if not the same factory):*

**Contact Name:**

**Telephone:**

**E-mail: Website:**

1. **APPLICATION/CROP INFORMATION**

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| **What type of crops will this application be used for?** |
| **What volume of the above product do you produce per annum?** |
| **Product Description** *(Please provide a detailed description of the finished product including materials, size, product thickness and processing route.)* |
| **Does it require specific/special development conditions in sowing and harvesting?** |
| **­Storage conditions (***Please provide details of the intended storage and transport conditions of the finished product including temperatures, packaging, timescale, etc.)* |
| **When approximately, is the sowing time? Any special/particular conditions in sowing?** |
| **When is approximately, the harvesting time? Any specific requirements during/after harvesting?** |
| **Should the mulch film be already in the degradation process at the harvesting time?** |
| **Will another crop be sown immediately after harvesting?** |

**3. CLIMATIC CONDITIONS APPLIED IN GEOGRAPHICAL AREA DURING SERVICE**

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| **Please provide the average sun irradiance (in W/sq. meter) for the period of time between the sowing time and the harvesting time as per above.** |
| **Please provide the average rain fall for the same period of time as above.** |
| **Please provide the average temperature for day hours and for night hours for the period of time as per above.** |

**4. THE PLASTIC FILM CHARACTERISTICS USED IN THE APPLICATION**

Please detail the composition of the current or intended product. For multilayer products please give individual layer breakdown.

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| **Layer** | **Resin Type (1)**  *(LDPE/LLDPE/HDPE/PP)* | **Resin Grade Reference (2)**  *(Manufacturer/ Grade Reference)* | **Additive(s) (3)**  (Especially UV and heat stabilizers type and concentration) | **MFI** |
| **1** |  |  |  |  |
| **2** |  |  |  |  |
| **3** |  |  |  |  |

**OTHER ADDITIVES**

Give details of any additives added to the product.

|  |  |
| --- | --- |
| **1** |  |
| **2** |  |
| **3** |  |

Notes

1. Please give resin break down e.g. 50% LDPE/50% LLDPE.

2. Please identify the grades/suppliers of the resin used.

3. Please give additive contribution in each layer. e.g. 5% Carbon black masterbatch, 3% UV stabiliser , 2% PIB tackifier masterbatch etc.

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| **What is the film thickness?** |
| **If it is a multi-layer film, please provide the total film thickness, the thickness and composition of each layer including the plastic film additives used in each layer.** |
| **What is the film width and length?** |

**5. MANUFACTURING PROCESS**

*An understanding of the manufacturing process is very important for specifying the correct additive. Process factors such as high temperatures, high shear-rates and output rates or secondary heat-pass operations need to be considered.*

**Process Description (***Please describe the processing route, providing descriptions of equipment, scale of process, output rate etc.)*

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**Primary Process Temperatures** *(Please give typical temperature profile range e.g. 160-220ºC)*

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**Secondary Thermal Operations** *e.g. (Shrink Tunnel, Heat-Sealing, Welding, Printing etc. Please outline process and temperature history/residence time)*

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**6. ADDITIONAL INFORMATION** *(Please provide any additional information that you think useful)*

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**7. HEALTH AND SAFETY**

*The degradation responses of submitted samples are usually tested by accelerated UV and thermal ageing.*

*Please provide information on any component within the product that could be considered hazardous during long term exposure to temperatures in excess of 60ºC. Please provide a Material Data Safety Sheet (MSDS) for the product/component.*

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**This form must be signed by a representative of the customer/factory**

**The information given on this form is correct.**

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| ***Name:*** | |
| ***Position:*** | ***Date:*** |
| ***Signed:*** | |