**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.

**d2w 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**

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| --- | --- | --- |
| **What is the product to be used for? (garbage bags, shopping bags etc)** | | |
| **Product Description** *(Please provide a detailed description of the finished product including materials, size, product thickness and processing route.)* | | |
| **What volume of the above product do you produce per annum?** | | |
| **What is the required storage-life (protected from ultra-violet light and heat)?** | | |
| **­Storage conditions (***Please provide details of the intended storage and transport conditions of the finished product including temperatures, packaging, timescale, etc.)* | | |
| **What is the require service-life of the product after unpacking?** | | |
| **Is clarity/transparency important in the final product?** *(for unfilled and non-coloured products)* | | |
| **Is food contact approval a requirement?** *(please outline any specific requirement or legislation that the product needs to comply with)* | | |
| **Does the product need to meet other recognised Standards? (***please give details)* | | |
| **What information is required from the evaluation trials/tests to be conducted with the additive?** | | |
| **Probable Disposal Method(s)** *(please tick all that apply)* | | |
| **Landfill [ ]** | **Compost [ ]** | **Incineration [ ]** |
| **Recycling [ ]** | **Don’t know [ ]** | **Other (Please Specify) [ ]** |

**3. PRODUCT CONSTRUCTION**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Overall thickness (μm or mm)** | | | | |
| **Single layer [ ]** | | **Multilayer [ ]**  **No. of layers:** | | |
| **For multilayer products please describe structure and thickness of individual layers** | | | | |
|  | **Layer 1** | | **Layer 2** | **Layer 3** |
| **Thickness (μm/mm)** |  | |  |  |

**4. MATERIALS**

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)** |
| **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.

**Does the product contain or is anticipated to contain recycled material.**

|  |  |  |  |
| --- | --- | --- | --- |
| **Layer** | **Recycled Material Resin Type** | **Source/Origin**  (*Internal, post-industrial etc.)* | **Layer Content (%)** |
| **1** |  |  |  |
| **2** |  |  |  |
| **3** |  |  |  |

**5. OTHER ADDITIVES**

Give details of any additives added to the product.

|  |  |  |  |
| --- | --- | --- | --- |
| **Additive** | **Supplier/Grade Reference** | **Addition (%)** | **Layer** |
| **Carbon black** |  |  |  |
| **Calcium carbonate** |  |  |  |
| **Titanium dioxide** |  |  |  |
| **Colour pigment** |  |  |  |
| **UV Absorber/Stabiliser (e.g. HALS)** |  |  |  |
| **Antioxidants** |  |  |  |
| **Other effect additives**  **(lubricants, plasticers, tackifiers etc.)** |  |  |  |

**6. 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:*** | |