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|  | **Application Form (Annex 1)** | |  |
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|  | **DE-UZ 237 – Edition July 2024** | Printing inks, inkjet inks and toners for paper and cardboard on professional printing machines |  |
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**Details of the applicant**

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| --- | --- |
| Company name: |  |
| Full address: |  |
|  |  |
|  |  |

**Contact person**

|  |  |
| --- | --- |
| Name: |  |
| Function: |  |
| Telephone number: |  |
| E-Mail: |  |

**Manufacturing site (if different from the company address)**

|  |  |
| --- | --- |
| Company name: |  |
| Full address: |  |
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| Company name: |  |
| Full address: |  |
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**Product details**

|  |  |
| --- | --- |
| Trade name: |  |
| Packaging/ container sizes (kg): |  |

**2. The product can be assigned to the following printing process:**

|  |  |
| --- | --- |
|  | Sheet-fed offset printing |
|  | Web offset printing  Coldset web offset printing  Heatset web offset printing  LED UV web offset printing |
|  | Digital printing  Inks for inkjet printing  Approval for coated paper grades only  Approval for uncoated paper grades only  Approval for coated and uncoated paper grades only  Toners for electrostatic printing |

**3.1 Requirements for recyclability**

|  |  |
| --- | --- |
|  | **We hereby declare**   1. that paper with a grammage of **80 g/m²** or lower (sheet-fed offset printing, digital printing) or **42.5 g/m²** or lower (coldset, heatset, LED-UV web offset printing) was used. 2. that cross-linking UV inks and inkjet inks have been tested on **coated and uncoated** surfaces; for other printing inks and toners at least on **uncoated** surfaces. 3. that the removability of products for the inkjet printing process has been proven on **five coated** and **five uncoated** digital printing papers with a grammage of **80 g/m²** or lower from **different manufacturers.** 4. that the printing pattern approved by RAL gGmbH or the printing pattern provided by the Austrian ecolabel (UZ 24) (sheet-fed offset printing, digital printing) was used on both sides or that an industry-typical print product with high ink coverage was tested (web offset printing process). |
|  | **A test report (Annex 2) from an independent testing institute on deinkability based on INGEDE Method 11 (as of January 2018) or equivalent methods (PTS RHO21/97 Cat I (2012), ISO 21993:2020) is attached to the application.** |
|  | **The test report contains an image of the tested printed product.** |
|  | **The technical data sheet (Annex 3) with reference to the minimum permissible grammage for which the product fulfils the Blue Angel requirements is attached to the application.** |

**3.2 General substance requirements**

|  |  |
| --- | --- |
|  | **We hereby declare**   1. Observance of European and German chemicals law, as well as standard rules for the sector, is a prerequisite (especially REACH-VO Anhang XVII, POP-VO Anhang I, CLP-VO, Biozidprodukte-VO, 31. BImSchV)[[1]](#footnote-1). |
|  | 1. that the product does not contain substances and substances in added mixtures that comply with the following classification rules if their amount exceeds the limits stated in Appendix C, Table 2 of the DE-UZ 237 award criteria (and the substances have to be correspondingly labelled in the safety data sheet because they exceed the associated concentration values): in the safety data sheets:   Substances which are identified as particularly alarming under the European Chemicals Regulation REACH (EC) No 1906/2006 and which have been added to the list drawn up in accordance with Article 59, Paragraph 1 of the REACH Regulation (so-called “list of candidates”)[[2]](#footnote-2).  Substances that according to Regulation (EC) No. 1272/2008 (CLP Regulation) have been classified in the following hazard categories or which fulfil the criteria for such classification[[3]](#footnote-3):   * acutely toxic (poisonous) in categories Acute Tox. 1, Acute Tox. 2 or Acute Tox. 3 * toxic to specific target organs in categories STOT SE 1, STOT SE 2 or STOT RE 1, STOT RE 2, Asp. Tox. 1 * carcinogenic in categories Carc. 1A, Carc. 1B or Carc. 2 * germ cell mutagenic in categories Muta. 1A, Muta. 1B or Muta 2 * reprotoxic (teratogenic) in categories Repr. 1A, Repr. 1B or Repr. 2, Lact. * endocrine disruptors with a negative effect on human health in the categories ED HH 1 or ED HH 2[[4]](#footnote-4) * endocrine disruptors with a negative effect on the environment in the categories ED ENV 1 or ED ENV 24 * persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) characteristics from 01/01/20254 * persistent, mobile and toxic (PMT) or very persistent, very mobile (vPvM) characteristics4 * hazardous to water in the categories Aquatic Acute 1, Aquatic Chronic 1, Aquatic Chronic 2, Aquatic Chronic 3 or Aquatic Chronic 4 * Supplementary hazard criteria and labelling elements in categories EUH029 (Contact with water liberates toxic gas), EUH031 (Contact with acids liberates toxic gas), EUH032 (Contact with acids liberates very toxic gas) or EUH070 (Toxic by eye contact).   Substances classified as carcinogenic, mutagenic or reprotoxic substances in the currently valid version of TRGS 905[[5]](#footnote-5). |
|  | **We make use of the following exceptions for the respective printing process:**  Antioxidants:  Sheet-fed offset printing inks: 2-tert-butylhydroquinone (H400), max. 1 %  Heatset web and sheet-fed offset inks: Butyl hydroxytoluene (H400, H410) max. 0,2 %  Drying agents:  Sheet-fed offset printing inks: Manganese neodecanoate (H373), Manganese tallate (H373), max. 3 %  Solvents:  Heatset web offset printing inks (H304)  Digital printing inks (H304) |
|  | **Current safety data sheets (Annex 4) for the products applied for are attached to the application.** |

**3.3.1** **Requirements for biocidal products and biocidal substances**

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| --- | --- | --- | --- | --- | --- | --- |
|  | No biocidal products or biocidal active substances are added to the product. | | | | | |
|  | The following biocidal products or biocidal active substances are added to the product exclusively for in-can preservation (PT6 according to the Biocidal Products Regulation (EU) No. 528/2012), for which an active substance dossier has been submitted for evaluation as an in-can preservative in product type 6 under the Biocidal Products Regulation: | | | | | |
|  |  |  | |  | | |
|  | **IUPAC name of the biocidal active substance** | **CAS no.** | **% by weight in product** | **H410/ H411** | **Log KOW** | **BCF** |
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|  | **Current safety data sheets (Annex 5) for the biocides used in the product applied for are attached to the application.** | | | | | |

**3.3.2 Heavy metals**

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|  | **We hereby declare**   * that the following heavy metals are not added to printing inks, inkjet inks and toners as constituent component (dye, pigment, siccative): * lead, cadmium, chromium VI, cobalt, mercury, nickel and copper compounds (except for copper phthalocyanine) |
|  | Copper phthalocyanine is included. |
|  | Manganese compounds as constitutional components (colourants, pigments, siccatives) are included and the proportion in the ready-to-print mixture is a maximum of 0.5% by weight.  Manganese in the ready-to-print mixture:  % by weight. |

**3.3.3 Dusty ingredients in toners**

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|  | **An analysis report (Annex 6) in accordance DIN EN 15051 is enclosed with the application.** |

**3.3.4 Azo dyes**

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|  | **We hereby declare**   * that no azo dyes or pigments are used in the printing inks, inkjet inks and toners that can break into amines (see Appendix A for an overview). * that the proportion of primary aromatic amines in the azo dye or pigment does not exceed 0.05%. |
|  | **An analysis report in accordance with DIN 55610:1986 or ETAD method 212 (2016) (Annex 7) is enclosed with the application.** |

**3.3.5 Hydrocarbons in printing inks for offset printing**

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|  | Of the aliphatic hydrocarbons used as constitutional components, only substances with a chain length of **C10 to C20** are used. |
|  | Higher molecular weight aliphatic hydrocarbons with a chain length above **C20 are also used**. |
|  | These chain lengths **above C20** originate exclusively from the following hydrocarbon compounds without solvent properties:   * Microcrystalline waxes, Vaseline, polyolefin, kerosene or Fischer-Tropsch waxes. |
|  | The high-molecular aliphatic hydrocarbons have a chain length of **> C35**. |
|  | The proportion with chain lengths from **C20 to C35** is a maximum of 5 %. |
|  | **Sheet-fed offset, coldset web offset, LED UV web offset inks**  The proportion of aromatic hydrocarbons from mineral oil as constitutional constituents is a maximum of 0.1 % by weight.  **Heatset web offset inks**  The content of aromatic hydrocarbons from mineral oil as constitutional components is max. 1 % by weight. |
|  | For the following PAHs, the value of 0.2 mg/kg in the printing ink is not exceeded:   * Benzo[a]pyren, Benzo[e]pyren, Benzo[a]anthracen, Benzo[b]fluoranthen, Benzo[j]fluoranthen, Benzo[k]fluoranthen, Chrysen, Dibenzo[a,h]anthracen, Benzo[ghi]perylen, Indeno[1,2,3-cd]pyren |
|  | The sum of all PAHs mentioned in the printing ink is less than 1 mg/kg. |
|  | **The formulation details (Annex 8) are attached to the application.** |
|  | **An analysis report (Annex 9) in accordance with AfPS GS 2019:01 PAH is enclosed with the application. In addition to the individual quantities and the sum of the PAHs mentioned, the report also sattes the quantity of naphthalene, the sum of phenanthrene, pyrene, anthracene and fluoranthene and the sum of all 15 PAHs determined in the measurement procedure.** |

**3.3.6 Per- and polyfluoroalkyl substances (PFAS) (valid from 01.01.2025)**

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|  | **We hereby declare**   * that no per- and polyfluorinated alkyl substances are used in the printing inks, inkjet inks and toners. | | |
|  | The content of organic fluorine compounds still detected due to impurities is a **maximum of** **50 mg** organically bound fluorine/kg ink. | | |
|  | The content of organic fluorine compounds still detected due to impurities is **50-200 mg** organically bound fluorine/kg ink. | | |
|  | **A declaration stating the reasons for the content of 50-200 mg organically bound fluorine/kg ink and measures for reduction is enclosed with the application.** | | |
|  | The maximum content of 200 mg organically bound fluorine/kg ink is exceeded due to the use of organic fluorine compounds that are not PFAS.  Please state the amount of fluorine used:  mg/kg TOF  **Please name the organic fluorine compounds used that do not belong to the PFAS and state their function:** | | |
|  | **Organic fluorine compound** | **Function** |
|  |  |  |
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|  | **An analysis report (Annex 10) according to DIN EN 14582:2016 or DIN EN 15408:2011, which shows the content of fluorine or Extractable Organic Fluorine (EOF) or Total Organic Fluorine (TOF), is enclosed with the application.** | | |
|  | The maximum value of 200 mg fluorine/kg ink is exceeded due to the use of **inorganic** fluorine compounds. | | |
|  | **The analysis report (Annex 10a) required in this case in addition to EOF or TOF according to method SAA-H-TOF.015:2018-11 or equivalent methods is enclosed with the application.** | | |

**3.4.1 Certified renewable raw materials (valid from 01.01.2025)**

|  |  |  |  |
| --- | --- | --- | --- |
|  | The printing inks, inkjet inks and toners **do not** contain any renewable raw materials or **are** **no**t produced on their basis. | | |
|  | The printing inks, inkjet inks and toners **contain or are based** on renewable raw materials. | | |
|  | **Renewable raw material**  ((modified) vegetable oils and its derivatives, rapeseed oil, linseed oil, colophony, tall oil) | **Amount in the product**  **[%]** | **Certificate number or**  **designation of Annex 11** |
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|  | **Certificate(s) of compliance with recognized sustainability criteria for cultivation (soybean oil, palm oil, palm kernel oil, coconut oil and derivatives thereof) and/or letter from the supplier with information on the cultivation areas of the renewable raw material (all other renewable raw materials) are attached to the application (Annex 11).** | | |

**3.4.2 Raw materials made of non-genetically modified plants**

|  |  |  |  |
| --- | --- | --- | --- |
|  | The printing inks, inkjet inks and toners **do not** contain any raw materials from genetically modified plants. | | |
|  | **A declaration from the manufacturer certifying the absence of genetically modified plants (Annex 12) and a certificate of GMO-free material (Annex 13) are enclosed with the application.**  **If proof cannot yet be provided, this must be clearly justified.** | | |
|  | Explanation, if no proof available**:** | | |
|  | The printing inks, inkjet inks and toners **contain** raw materials from genetically modified plants. | | |
|  | **Genetically modified raw material** | **Amount in the product**  **[%]** |  |
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|  |  |  |  |
|  | **Please give an explanation, why genetically modified material is used:** | | |

**3.6 Requirements for product advertising**

|  |  |
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|  | The printing inks, inkjet inks and toners **do not** contain the words “organic”, “eco” or “natural” in the product name. |
|  | The printing inks, inkjet inks and toners do not **contain** the words “organic”, “eco” or “natu-ral” in the product name. |
|  | The oils used in printing inks, inkjet inks and toners (approx. 30 - 40 % of the total ink) were produced from 100 % renewable raw materials. |
|  | If parts of the name or designations contain “organic”, “eco” or “natural”, the product information sheet will state the reason why the designation was chosen (e.g. use of renewable raw materials). |
|  | We hereby declare that we will refrain from advertising the product with the words “organic”, “eco” or “natural” outside of the product name. |
|  | We hereby declare that advertising claims do not contain any information that trivializes hazards within the meaning of Article 25 (4) of the CLP Regulation (EC) 1272/2008, such as “non-toxic”, “not harmful”, etc. |
|  | **The packaging text (Annex 15) is enclosed with the application.** |

**If you have different comments on a criterion, please state them here:**

|  |
| --- |
|  |

|  |  |  |  |
| --- | --- | --- | --- |
| **Place:** |  |  |  |
|  |  |  |
| **Date:** |  |  |
|  |  |  |

**Legally binding signature / Company stamp**

**Appendix A**

Tabelle 1: Abspaltbare Amine

|  |  |
| --- | --- |
| Stoffname | CAS-Nummer |
| Benzidin | 92-87-5 |
| 4-Chlor-o-toluidin | 95-69-2 |
| 2-Naphthylamin | 91-59-8 |
| o-Aminoazotoluol / 4-Amino-2',3-dimethylazobenzol / 4-o-Tolylazo-o-toluidin | 97-56-3 |
| 5-Nitro-o-toluidin | 99-55-8 |
| 4-Chloranilin | 106-47-8 |
| 4-Methoxy-m-phenylendiamin | 615-05-4 |
| 4,4'-Methylendianilin / 4,4'-Diaminodiphenylmethan | 101-77-9 |
| 3,3'-Dichlorbenzidin / 3,3'-Dichlorbiphenyl-4,4'-ylendiamin | 91-94-1 |
| 3,3'-Dimethoxybenzidin / o-Dianisidin | 119-90-4 |
| 3,3'-Dimethylbenzidin / 4,4'-Bi-o-Toluidin | 119-93-7 |
| 4,4'-Methylendi-o-toluidin | 838-88-0 |
| 6-Methoxy-m-toluidin / p-Cresidin | 120-71-8 |
| 4,4'-Methylen-bis-(2-chloranilin) /2,2'-Dichlor-4,4'-methylendianilin | 101-14-4 |
| 4,4'-Oxydianilin | 101-80-4 |
| 4,4'-Thiodianilin | 139-65-1 |
| o-Toluidin / 2-Aminotoluol | 95-53-4 |
| 4-Methyl-m-phenylendiamin | 95-80-7 |
| 2,4,5-Trimethylanilin | 137-17-7 |
| o-Anisidin / 2-Methoxyanilin | 90-04-0 |
| 4-Amino-azobenzol | 60-09-3 |
| 4-Amino-3-fluorphenol \* | 399-95-1 |
| 6-Amino-2-ethoxynaphthalin \* | - |
| \* Azofarbstoffe, die dieses Amin abspalten, sind nicht bekannt. Auf den analytischen   Nachweis kann verzichtet werden. | |

1. If substance restrictions from other regulations also apply to the specific product, these also need to be

   observed. [↑](#footnote-ref-1)
2. List of candidates from the REACH Regulation (EC) No. 1907/2006: <https://www.echa.europa.eu/de/candidate-list-table>. The version of the list of candidates at the time of application is valid. The label holder is obligated to take current developments on the list of candidates into account. If an ingredient is newly added to the list of candidates during the term of the Basic Award Criteria, the label holder must submit an informal notification stating the name of the substance and its CAS or EC number. Deadlines for substituting this ingredient will then be agreed with the label holder. [↑](#footnote-ref-2)
3. The version of the CLP Regulation (EG) No 1272/2008 at the time of application is valid: <https://www.reach-clp-biozid-helpdesk.de/DE/CLP/Rechtstexte/Rechtstexte_node.html>. The label holder is obligated to take current developments in the CLP Regulation into account. If an ingredient in the printing ink, inkjet ink or toner is classified with one of the named hazard categories during the term of the Basic Award Criteria, the label holder must submit an informal notification stating the name of the substance and its CAS or EC number, as well as the new hazard category. Deadlines for substituting this ingredient will then be agreed with the label holder. [↑](#footnote-ref-3)
4. New hazard categories according to the CLP Regulation that are legally binding for substances newly placed onto the market from 1 May 2025. For existing substances on the market, a later deadline applies (except for categories ED HH 1 and ED HH 2): legally binding by 1 November 2026 at the latest. [↑](#footnote-ref-4)
5. <http://www.baua.de/de/Themen-von-A-Z/Gefahrstoffe/TRGS/pdf/TRGS-905.pdf>: [↑](#footnote-ref-5)