

Technical Approval Testing of Washing Agents for Offset Printing Machines



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Why is such approval testing necessary or useful?

Low emission washing agents have been marketed since DRUPA 1990. They consist of low volatile hydrocarbon mixtures, vegetable oils, esters of these oils or mixtures of these three substances. Technical problems arose with regard to the compatibility of these washing agents with some components of printing machines, such as: rubber rollers; machine paints; pipes and seals, etc., when these products were introduced to the market at the beginning of the 90s.

In order to reduce the emission of high volatile washing agents used in offset printing and at the same time limit the risk of damage to machines, a voluntary agreement was initiated: the „Industry initiative for the reduction of solvent emissions in offset printing“. This agreement was initiated by the printing machine manufacturers in collaboration with Fogra, the "Berufsgenossenschaft Druck und Papierverarbeitung", the "Bundesverband Druck und Medien" and the trade union "IG Medien" [since 2001 part of ver.de].

What are the key points of this agreement?

1. Details of the compositions must be supplied to the "Berufsgenossenschaft Druck und Papierverarbeitung" [Institution for statutory accident insurance and prevention in the printing and paper processing industry] [www.bgdp.de] to enable the health risks to be assessed. This information is obviously treated as highly confidential. The address is given below.
2. Those involved in this industry sector initiative have, taking into account the current state of the art of safety engineering and of environmental protection, agreed to issue the following recommendations with regard to the use of washing agents:
 - Flash point above 55 °C
 - Benzene content less than 0.1 %
 - Toluene and xylene content less than 1 %
 - Aromatic content less than 1 %
3. They must not contain the following substances:
 - Halogenated hydrocarbons
 - Terpene
 - n-Hexane
 - Secondary amines or amides
 - Nonylphenol and its derivatives
 - Constituents whose use, in the current state of toxicological knowledge in the field of occupational medicine, involves unacceptable risks to health
4. All washing agents recommended for new machines must, as a minimum, have successfully undergone technical approval testing by Fogra. Technical approval testing is the prerequisite for warranty claims for possible damage to machines during the guarantee period.

At the present time this test is carried out by Fogra for the following machine manufacturers and washing installation manufacturers:

Heidelberger Druckmaschinen AG [sheet-fed offset]

Koenig & Bauer AG [sheet-fed offset and weboffset]

manroland AG [sheet-fed offset and weboffset]

RYOBI LIMITED [R750 sheet-fed offset press]

Baldwin Germany GmbH

Baldwin Oxy-Dry GmbH

technotrans AG

Imprint

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For which printing machines can the technical approval testing be carried out?

At the present time this test is carried out by Fogra on behalf of the following machine manufacturers and washing installation manufacturers:

- Heidelberger Druckmaschinen AG [sheet-fed offset]
- Koenig & Bauer AG [sheet-fed offset and weboffset]
- manroland AG [sheet-fed offset and weboffset]
- RYOBI LIMITED [R750 sheet-fed offset press]
- Baldwin Germany GmbH
- Baldwin Oxy-Dry GmbH
- technotrans AG

What steps are necessary to arrange for the testing of a washing agent?

First of all the "Berufsgenossenschaft Druck und Papierverarbeitung" requires details of the composition in order to assess risks to health. It goes without saying, that this information is treated as highly confidential. Fogra requires a written order, the safety data sheet for the product and a certain quantity of the washing agent. The quantity depends on the type of printing machine for which the test is to be carried out. Furthermore, it is advisable to contact the manufacturer of the printing machine or the washing system in question since some manufacturers also require a practical test to check the washing performance of the washing agent.

What happens when the work has been commissioned?

When the order has been received, Fogra sends you a confirmation of the order which contains all the information concerning the time required for the test, the person in charge and the price. The time required for testing is, as a rule, about 8 to 10 weeks. The test criteria depend on the machine manufacturer's

requirements and are specifically agreed with the relevant manufacturer.

Although the machine manufacturers co-operate in activities whose aim is to reduce emissions, they are still competitors with regard to the sale of new machines. Therefore it has been agreed between the machine manufacturers and Fogra that, detailed information with regard to specific test materials must not be revealed to third parties by Fogra.

When the tests have been completed, Fogra sends all the results to the machine manufacture concerned in the form of a final report. On the basis of the test results, the manufacturer then decides whether or not the product can be recommended for application to its printing press or washing system. If the test is successful, Fogra will be authorised by the relevant machine manufacturer to issue the approval certificate.

Fogra also helps with the marketing!

All products which have been tested and approved are included in a list which is continuously updated by Fogra. The most up to date form of the list is given on the Fogra home page.

Furthermore:

The testing carried out by Fogra is not only established in Germany. At the end of 2006 no less than 441 products from 120 international manufacturers were certified. As a result, these certified products are now more and more available worldwide since many manufacturers also sell their washing agents through foreign subsidiaries.

Everything has its price!

We have summarised the costs to suppliers of washing agents in order to provide a rapid overview of current prices for the testing of washing agents.

If you are interested in having your product tested for more than one press manufacturer, we will be glad to submit our quotation. Please do not hesitate to direct your inquiry to us.

Members of Fogra generally receive a 30 % discount on expert reports and advice – it pays to be a member of Fogra!

And if the product does not satisfy the requirements?

If it becomes evident during a test that the product does not satisfy a specified condition or meet a specified limit, then the manufacturer is immediately informed in detail and testing is temporarily halted. The manufacture is also told which limit or condition has not been met. This should enable the manufacturer to modify the product to satisfy the required conditions.

Should you require further help, the following people can be contacted:

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Graphic Technology Research
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