

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

HJ 2542-2016

Replacing HJ/T 370-2007

**Technical requirement for environmental labeling products
Offset printing ink**

环境标志产品技术要求 胶印油墨

(English Translation)

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Foreword

For the implementation of the "People's Republic of China Environmental Protection Law" to reduce offset printing ink in the production and use of the environment and human health Ring, protect the environment, the development of this standard.

This standard on offset printing ink production process, the product of toxic and hazardous substances limited and packaging and description of the requirements.

This standard has revised the technical requirements for "environmental labeling products" (HJ/T 370-2007). The main changes are as follows.

- Adjusted scope, terms and definitions;
- Increased restrictions on hazardous substances in the production process;
- Adjusted the limited requirements of hazardous substances in the product;
- Added packaging and description requirements.

This standard is organized by the Ministry of Environmental Protection Science and Technology Standards Division.

The main drafting of this standard. Environmental Development Department of Environmental Protection, China Daily Chemical Industry Association of ink, Beijing Green Business Development Center, Hanghua Ink and Chemical Co., Ltd., Tianjin Toyo Ink Co., Ltd., Xinxiang City, Germany and Germany Cheung Chuan Ink Co., Ltd., Suzhou Koswood

Ink Co., Ltd.

This standard is approved by the Ministry of Environmental Protection on October 17, 2016.

This standard has been implemented since January 1, 2017, and is replaced by HJ/T 370-2007 since the date of implementation.

This standard is explained by the Ministry of Environmental Protection.

This standard replaced the previous version of the standard release.

- HJ/T 370-2007.

Environmental labeling products Technical requirements Offset printing ink

1 Scope of application

This standard specifies the terms and definitions, basic requirements, technical contents and inspection methods of offset printing ink environmental labeling products.

This standard applies to offset printing inks.

2 Normative reference documents

The contents of this standard refer to the terms of the following documents. For undated references, the valid version applies to this standard.

Materials for interior decoration - Limits of hazardous substances in solvent - borne wood coatings GB/T 15962 ink terminology GB/T 16483 SAFETY DATA SHEET Contents AND PROJECT STATE Paints and varnishes - Determination of volatile organic compounds (VOC) content - Gas chromatographic method GB/T 23986-2009 GB/T 23986-2009 QB 2930.1 Limits and methods for the determination of certain harmful elements in inks Part 1 Soluble elements QB 2930.2 Limits and methods for the determination of certain harmful elements in inks - Part 2. Lead, mercury, cadmium, hexavalent chromium

3 Terms and definitions

GB/T 15962 and the following terms and definitions are applicable to this standard.

3.1 Offset printing ink

Applicable to all kinds of lithographic printing ink in general.

3.2 Volatile organic compounds volatile organic compounds (VOC)

At any standard pressure of 101.3 kpa, any organic compound having an initial boiling point of less than or equal to 250 ° C.

4 Basic requirements

4.1

product quality, safety performance should meet the requirements of the corresponding standards.

4.2

The pollutant discharge of the product manufacturer shall conform to the pollutant discharge standard stipulated by the state or local.

4.3

production enterprises in the production process should strengthen the clean production.

5.1 Requirements for the production process

5.1.1

No addition of halogenated hydrocarbons, isophorone, hydroquinone, p-methoxyphenol and phthalate esters listed in Appendix A.

5.1.2

Do not use asphalt as raw material.

5.1.3

Energy-curable inks do not add benzophenone (BP), isopropyl thioxanthone (ITX), 2-methyl-1- (4-methylthiophenyl) -2-1-propanone (907) as a photoinitiator.

5.2 Product requirements

5.2.1

The limits of vegetable oil in the product shall meet the requirements of Table 1.

Table 1 Limits of Vegetable Oil in Products

Category	Vegetable Oil Limit Requirement,%
Cold-set rotary offset printing ink	≥ 30
Sheetfed offset printing ink	≥ 20
Hot stamping offset printing ink	≥ 7

5.2.2

The mass fraction of aromatic hydrocarbons used in the mineral oil used in the product shall be less than 1%.

5.2.3

The volatile organic compounds (VOC), benzene, toluene, xylene and ethylbenzene in the product shall meet the requirements of Table 2, heavy metals and Other hazardous substances should meet the requirements of QB 2930.1 and QB 2930.2.

Table 2 Hazardous substances in products limit requirements

project

Limited requirements Heat solid rotation Offset printing ink Sheetlet Offset Ink Cold rotation
Offset printing ink Energy curing glue Printing ink Volatile organic compounds (VOC),% ≤
10 3 3 2 Benzene, toluene, xylene and ethylbenzene, mg/kg ≤ 100

5.3.1 Plastic packaging containers do not add PBBs, PBDEs and chlorinated paraffins (chain carbon

The number of 10-13, containing chlorine concentration of 50% or more).

5.3.2 plastic packaging containers do not add lead, cadmium, mercury plastic additives.

5.3.3 The enterprise shall provide the user with a proposal to reduce the use conditions for the release of the harmful substances.

5.3.4 The enterprise shall provide the user with the product safety technical specification in accordance with GB/T 16483.

6 Test method

6.1

Technical contents 5.2.3 The detection of volatile organic compounds (VOCs) in Table 2 was carried out in accordance with the method specified in GB/T 23986-2009 Intermediate reagent selection and sample preparation were carried out as described in Appendix B.

6.2

Technical contents 5.2.3 The detection of benzene, toluene, xylene and ethylbenzene in Table 2 is carried out according to the method specified in GB 18581-2009.

Option selection and sample preparation were carried out as described in Appendix C.

6.3

Other requirements in the technical content are verified by means of document review and on-site inspection.

Appendix A

(Normative appendix) Phthalate esters Chinese name English name Di-iso-nonylphthalate (DINP) phthalate Di-iso-nonylphthalate (DINP) Di-n-octylphthalate (DNOP) Di-n-octyl phthalate (2-ethylhexyl) phthalate Di- (2-ethylhexyl) -phthalate (DEHP) Diisodecylphthalate (DIDP) phthalate Di-isodecylphthalate (DIDP) Butylbenzylphthalate (BBP) Butylbenzylphthalate (BBP) Dibutylphthalate Dibutylphthalate (DBP) Appendix B
(Normative appendix) Analysis of Volatile Organic Compounds in Offset Inks by Gas Chromatography this note describes the following test steps based on the method of GB/T