

Seite 1 von 1

### 1 Composition PREMOTERM Heatset inks:

pigments and extenders (water insoluble)	10-35%
synthetic hard resins	25-35%
alkyd resins/vegetable oils	5-18%
mineral oils distillates	35-45%
additives	±7%

Typical ink oil contents in Flint-Schmidt heatset ink series:

Premoterm 2000 <sup>*</sup>	37% (average of 4 colours)
Premoterm 4000 <sup>*</sup>	35% (average of 4 colours)
Premoterm 6000	33% (average of 4 colours)
Premoterm 3000	33% (average of 4 colours)

### 2 Legislative background

According to the European Communities Council Directive 1999/13/EC the definition for VOC is: "VOC shall mean any organic compound having at 293.15 K a vapour pressure of 0.01 kPa or more or having a corresponding volatility under the particular conditions of use".

The conditions of use of the heatset inks (read the temperature in the hot air dryer) vary quite much, but will be between about 160°C and 270°C. At these temperatures we consider the ink oils and solvents with boiling range up to 310°C used in the Premoterm ink series to comply to the definition of VOC.

The main part of heatset ink oils are mineral oils (aliphatic cyclo parafinic hydrocarbons) with narrow boiling ranges, lying between 240°C and 290°C. Some inks contain a small percentage of oil with boiling range up to 340°C. These oils are typically very low on aromatic contents and possess a comparatively low volatility and are not subject to the ordinance on hazardous substances (EC-directive 67/548/EEC).

The vapour pressure of these organic solvents at a temperature of 293.15 K (20°C) is below 0.01 kPa and is not officially mentioned as VOC.

### 3 Emission

Regarding emissions, the evaporable components with boiling range up to 310°C need to be considered. They represent 30 - 40% of the total ink mass. Some part of the oils ( 5 - 15% estimated) is absorbed by the paper and/or remains in the dried up ink film. The rest of the mineral oil is evaporated in the hot-air dryer, so about 25% of the ink weight.

The polluted waste gas from the dryer is to be cleaned, using a oxidising combustion process. The thermal and catalytic combustion processes have become the most common way of waste gas cleaning for web offset printing.

The hydrocarbons contained in the solvent vapour carried by the waste gas are burned to produce mainly carbondioxide and water. The mass concentration of organic material will be less than 10 mg/m<sup>3</sup> of total carbon ( without CO and CO<sub>2</sub>), provided that mechanical malfunctions are avoided.

## SAFETY DATA SHEET

according to 91/155 EC

SDS Date:2006-03-06 09:18:07

### 1. IDENTIFICATION OF THE PREPARATION AND THE COMPANY

**Product Number :** HA-2080  
**Product Name:** FS 2080  
**SDS Version number:** 2  
**Version date :** 2004-12-10 05:34:39  
**Intended use :** Refer to technical data sheet

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Listed ingredient(s) are hazardous within the meaning of Directive 67/548/EEC and subsequent amendments and are subject to recognised exposure limit values pursuant to Community provisions.

Chemical Name	Percent	CAS #	EINECS #	Classification
Ethylene glycol	2.5 - 10	107-21-1	203-473-3	R22 Xn
2-Butoxyethanol	2.5 - 10	111-76-2	203-905-0	R36/38 R20/21/22 Xn
Bronopol (INN)	< 1	52-51-7	200-143-0	R50 R41 R37/38 R21/22 Xn N
Mixture, 3(2H)-isothiazolone, 5-chloro-2-methyl- with 2-methyl-3(2H)-isothiazolone	< 1	55965-84-9	No EINECS #	R50/53 R43 R34 R23/24/25 T N

### 3. HAZARDS IDENTIFICATION

The product is classified and labelled for supply in accordance with EC Directive 1999/45/EC and subsequent amendments or modifications:

**Classification for product :** Xi - Irritant  
**Risk Phrases :** R43 May cause sensitisation by skin contact

**Symbol (s):**



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## 4. FIRST AID MEASURES

<b>General Statement:</b>	In all cases of doubt, or where symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.
<b>Inhalation First Aid:</b>	Remove to fresh air, keep the patient warm and at rest. If breathing has stopped, administer artificial respiration. Give nothing by mouth. If unconscious, place in the recovery position and seek medical advice.
<b>Eye Contact First Aid:</b>	Remove contact lenses. Irrigate copiously with clean, fresh water for at least 10 minutes, holding the eyelids apart, and seek medical advice.
<b>Skin Contact First Aid:</b>	Remove contaminated clothing. Wash skin thoroughly with soap and water or use a proprietary skin cleaner. Do NOT use solvent or thinners.
<b>Ingestion First Aid:</b>	If accidentally swallowed obtain immediate medical attention. Keep at rest. Do not induce vomiting. Contact a poison information service for immediate/additional treatment advice

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## 5. FIRE FIGHTING MEASURES

<b>Recommendations:</b>	Combustible. Material may be ignited if preheated to temperatures above the flash point in the presence of a source of ignition. Fire will produce dense black smoke containing hazardous products of combustion (see section 10). Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapours and decomposition products. Cool closed containers exposed to fire with water. Do not allow run-off from fire fighting to enter drains.
<b>Extinguishing media :</b>	Use alcohol resistant foam, carbon dioxide, or dry chemical extinguishing agents. Do not use water jet. Water fog Alcohol foam Carbon dioxide Dry chemical Water spray

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## 6. ACCIDENTAL RELEASE MEASURES

<b>Spill and Clean-up Procedures:</b>	Contain and collect spillage with non-combustible absorbent materials, eg. sand, earth, vermiculite, diatomaceous earth and place into a container for disposal in accordance with local waste regulations (see Section 13). Large spill (an uncontrolled release): Evacuate and summon professional help. If you have a trained spill response team, they should contain the liquids to minimize migration and vapour generation, and ventilate the area.
<b>Personal Precautions and Equipment:</b>	Exclude non-essential personnel. Avoid breathing in product. Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section 8 of this Safety data sheet. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill.

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## 7. HANDLING AND STORAGE

**Environmental exposure controls:** See section 12 for detailed information.

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## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Specific Gravity:** 1.0 - 1.2g/cm<sup>3</sup>  
**Flash Point:** 66 °C  
**Boiling Point:** 195 °C

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## 10. STABILITY AND REACTIVITY

**Stability and Reactivity:** Stable under recommended storage and handling conditions.  
**Incompatible Materials:** Keep away from oxidising agents and strongly alkaline and strongly acidic materials to prevent the possibility of exothermic reaction.  
**Hazardous Decomposition Products:** In fire hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide, and oxides of nitrogen may be produced.

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## 11. TOXICOLOGICAL INFORMATION

**General :** There is no data on the product itself. The product has been assessed using the conventional method and is classified for toxicological hazards accordingly. This takes into account, where known, delayed and immediate effects and also chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact. See sections 3 and 15 for details of the resulting hazard classification. 2-Butoxy ethanol is readily absorbed through the skin and may cause harmful effects on the blood.  
**Sensitisation :** Contains a component or components, which are classified as skin sensitisers. Cases of hypersensitivity may occur, possibly with cross-sensitisation to other materials.

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## 12. ECOLOGICAL INFORMATION

**Ecological Risks:** There is no data on the product itself. This product has been assessed following the conventional method in EC Directive 1999/45/EC and subsequent amendments, and is not classified as dangerous for the environment. Substances classified as dangerous for the environment are listed in Section 2.  
**Ecological Safety Procedures:** Local regulations governing pollution prevention and control may apply to the use of this product.

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## 13. DISPOSAL CONSIDERATIONS

**General:** Do not allow into drains or watercourses or dispose of where ground or surface waters can be affected.  
**Disposal Methods:** Waste, including empty containers, and spent product should be regarded as hazardous waste. Clean up and dispose of waste in accordance with all federal, state, and local environmental regulations.

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## Handling:

Prevent air-borne concentrations higher than the occupational exposure limit values. Keep the container tightly closed. Exclude sources of heat, sparks and open flame. Avoid skin and eye contact. Avoid the inhalation of vapour and (spray) mist. Smoking, eating and drinking should be prohibited in storage and use areas. For exposure controls see section 8. Unless the container is specifically designed, never use pressure to empty. Good house keeping standards are essential to avoid the exposure of personnel to unreacted materials.

## Storage:

Store in a cool dry place. Observe label precautions. Store between 5°C and 25°C in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorised access. Containers which are opened should be properly resealed and kept upright to prevent leakage. Store separately from oxidising agents and strongly alkaline and strongly acidic materials.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure controls :

Provide adequate ventilation. This should be achieved where practicable by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of solvent vapours and/or particulates below the relevant occupational exposure limit values, suitable respiratory protective equipment should be worn (see- Occupational Exposure controls below).

### Exposure Limit values:

Chemical Name	Cas number	OES LTEL (8-hour)	OES STEL (15 min)	MEL LTEL (8-hour)	MEL STEL (15 min)
Ethane-1,2-diol	107-21-1	10 mg/m <sup>3</sup> TWA (particulate); 52 mg/m <sup>3</sup> TWA (vapour)	104 mg/m <sup>3</sup> STEL (vapour)		
2-Butoxyethanol	111-76-2	25 ppm TWA	50 ppm STEL	25 ppm TWA; 120 mg/m <sup>3</sup> TWA	

Occupational Exposure Limits are taken from the current local regulations except those marked as SUP, which are assigned by the supplier of the substance.

**Occupational exposure controls:** All personal protective equipment, including respiratory protective equipment, used to control exposure to hazardous substances must be selected to meet the requirements of local regulations.

**Respiratory Protection :** Respiratory protection may be required to avoid overexposure when handling this material. General or local exhaust ventilation is the preferred means of protection. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. Conduct air monitoring to determine if airborne concentrations exceed any applicable exposure limit.

**Eye Protection :** Moderate eye irritant. Wear safety glasses with side shields

**Skin Protection :** Cotton or cotton/synthetic overalls or coveralls are normally suitable. Grossly contaminated clothing should be removed and the skin washed with soap and water or a proprietary skin cleaner. Do not use solvents or thinners as skin cleaning agents.

**Hand Protection ;** When skin exposure may occur, advice should be sought from glove suppliers on appropriate types and usage times for this product. Prevent skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work. Barrier creams may help to protect exposed areas of skin, but they should not be applied once exposure has occurred.

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## 14. TRANSPORT INFORMATION

UN NUMBER

The product is not classified as hazardous for transport.

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## 15. REGULATORY INFORMATION

The product is classified and labelled for supply in accordance with EC Directive 1999/45/EC and subsequent amendments or modifications:

**Classification for product :**

Xi - Irritant

**Risk Phrases :**

R43 May cause sensitisation by skin contact

**Symbol (s):**



**P Phrase(s):**

**Safety Phrase(s):**

S24 - Avoid contact with the skin

S37 - Wear suitable gloves

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks as required under other health and safety legislation.

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## 16. OTHER INFORMATION

The information in this safety data sheet is provided in accordance with the requirements of the Chemicals (Hazard Information and Packaging) Regulations. The product should not be used for purposes other than those shown in Section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the supplier's control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. The information contained in this safety data sheet is based on the present state of knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

**Revised version, changes have been made in Section(s) :** Activated by MSDS Formulation Generation

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**Risk Phrases in section 2:**

- R22 - Harmful if swallowed.
- R36/38 - Irritating to eyes and skin.
- R20/21/22 - Harmful by inhalation, in contact with skin and if swallowed.
- R50 - Very toxic to aquatic organisms
- R41 - Risk of serious damage to eyes.
- R37/38 - Irritating to respiratory system and skin.
- R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- R43 May cause sensitisation by skin contact
- R34 Causes burns
- R23/24/25 - Toxic by inhalation, in contact with skin and if swallowed.

This MSDS has been produced electronically on behalf of FLINT-SCHMIDT