



**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Printing date 08.04.2009

Revision: 08.04.2009

\* **1 Identification of substance**

- **Trade name:** REFLECTA F10 RL
- **MSDS no.** 5,102
- **Application of the substance / the preparation** Printing inks
- **Manufacturer/Supplier:**  
Stehlin Hostag Ink UK Ltd.  
Unit D4, Linkmel Close  
Queens Drive Industrial Estate  
Nottingham  
NG2 1NA  
phone: 0115 9860477 fax: 0115 9862681
- **Informing department:**  
Product Safety Department:  
phone: 0115 9860477  
fax: 0115 9862681  
E-Mail : sds@stehlin.co.uk
- **Emergency information:** Mo - Fr 24 h

\* **2 Hazards identification**

- **Hazard designation:**  
Not a hazardous substance or preparation according to EC-Directives 67/548/EEC or 1999/45/EC.
- **Information pertaining to particular dangers for man and environment**  
Contains fatty acids, c6-19-branched, cobalt(2+) salts, cobalt bis(2-ethylhexanoate). May produce an allergic reaction.

\* **3 Composition/information on ingredients**

- **Chemical characterization**
- **Description:**  
Preparation of organic and inorganic pigments and/or carbon black, resins, vegetable oils and -derivates and additives.
- **Dangerous components:** not relevant
- **Additional information** For the wording of the listed risk phrases refer to section 16.

**4 First aid measures**

- **General information** In all cases of doubt, or when symptoms persist, seek medical advice.
- **After inhalation** Remove to fresh air.
- **After skin contact**  
Remove contaminated clothing immediately. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.
- **After eye contact**  
Irrigate copiously with clean, fresh water for at least 15 minutes, holding the eyelids apart. Remove contact lenses. Obtain medical attention.

(Contd. on page 2)



**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Printing date 08.04.2009

Revision: 08.04.2009

Trade name: **REFLECTA F10 RL**

(Contd. of page 1)

- **After swallowing** Do NOT induce vomiting. Obtain medical attention.

### 5 Fire fighting measures

- **Suitable extinguishing agents** Alcohol resistant foam, CO<sub>2</sub>, powders, water spray.
- **For safety reasons unsuitable extinguishing agents** Water jet.
- **Special hazards caused by the material, its products of combustion or flue gases:**  
Exposure to hazardous decomposition products may cause a health hazard.  
Appropriate breathing apparatus may be required.  
Fire will produce dense black smoke.  
Cool closed containers exposed to fire with water.
- **Additional information** Collect run-off from fire fighting.

### 6 Accidental release measures

- **Person-related safety precautions:** Ventilate the area.
- **Measures for environmental protection:**  
If the product contaminates rivers and lakes or sewages inform respective authorities.  
Do not allow to enter drains. If the product contaminates rivers and lakes or sewers inform respective authorities.
- **Measures for cleaning/collecting:**  
Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local regulations. Clean preferably with a detergent. Avoid use of solvents.

### 7 Handling and storage

- **Handling**
- **Information for safe handling:**  
Avoid inhalation of vapour. Smoking, eating and drinking should be prohibited in application area. For personal protection see Section 8. Comply with health and safety at work laws. Avoid concentrations higher than the occupational exposure limits (see Section 8), if applicable.
- **Information about protection against explosions and fires:**  
Clothes and rags contaminated with ink, lacquer or oxidatively drying oil may cause selfignition. Keep them in closed and fireproof containers.
- **Storage**
- **Requirements to be met by storerooms and containers:**  
Keep container tightly closed. No smoking.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

(Contd. on page 3)



**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Printing date 08.04.2009

Revision: 08.04.2009

Trade name: REFLECTA F10 RL

(Contd. of page 2)

· **Further information about storage conditions:**

Always keep in containers of the same material as the original one. Store in a dry, well ventilated place. Keep away from heat and direct sunlight. Store in accordance with the particular national regulations concerning water pollution.

## 8 Exposure controls and personal protection

· **Additional information about design of technical systems:**

If relevant apply technical measures to comply with the occupational exposure limits. This can be achieved by a good general extraction and - if practically feasible - by the use of a local exhaust ventilation.

· **Personal protective equipment**

· **Breathing equipment:** Not necessary if room is well ventilated.

· **Protection of hands:**

For prolonged or repeated contact use gloves.

Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves**

Applicable for example are gloves of KCL GmbH, D 36124 Eichenzell, e-mail: vertrieb@kcl.de with following specification (Laboratory test according EN 374)

Recommend protective glove:

Article / Name /Material / Thickness Material / Breakthrough Time Remarks

Nr. 730/ Camatril Velours / Nitril / 0,4 mm Level 6 > 480 min. by full contact

Nr. 743/ Dermatril / Nitril / 0,2 mm Level 2 > 30 min. by splash contact

This recommendation is only for the product delivered by us and its intended purpose.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Use safety eyewear designed to protect against splash of liquids.

· **Body protection:**

All parts of the skin should be washed after contact.

Working clothes must not consist of textiles which show a dangerous melting behaviour in case of fire.

## \* 9 Physical and chemical properties:

· **General Information**

**Form:** pasty  
**Colour:** according to the tradename of the product  
**Smell:** characteristic

(Contd. on page 4)



**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Printing date 08.04.2009

Revision: 08.04.2009

Trade name: **REFLECTA F10 RL**

(Contd. of page 3)

- **Change in condition**
  - **Boiling point/Boiling range:** > 200°C
  - **Flash point:** > 100°C
  - **Ignition temperature:** 200°C
- **Vapour pressure at 20°C:** < 0.1 hPa
- **Density at 20°C** 1.03 g/cm<sup>3</sup>
- **Solubility in / Miscibility with**
  - **Water:** partly or not miscible

### 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**

Stable under recommended storage and handling conditions (see section 7).
- **Materials to be avoided:**

Keep well away from oxidising agents and strongly alkaline or strongly acid materials in order to avoid exothermic reactions.
- **Dangerous products of composition:**

Exposition to high temperatures may produce hazardous decomposition products such as: carbon dioxide, carbon monoxide and smoke.

### 11 Toxicological information

The Preparation is classified according to the conventional method (calculation method of the EC-directive 1999/45/EC). Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in skin dryness. The product may be absorbed through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

### 12 Ecological information:

The Product should not be allowed to enter drains of water courses or soil.

### 13 Disposal considerations

- **Product:**
- **Recommendation** Do not allow to enter drains.
- **European waste catalogue** 08 03 13: waste ink other than those mentioned in 08 03 12
- **Uncleaned packagings:**
- **Recommendation:** Not orderly emptied cans and ink remnants are special waste.

(Contd. on page 5)



**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

Printing date 08.04.2009

Revision: 08.04.2009

Trade name: **REFLECTA F10 RL**

(Contd. of page 4)

#### 14 Transport information

Not classified according to transport regulations for dangerous goods (like ADR/RID, IMDG and ICAO/IATA).

- **Maritime transport IMDG/GGVSea:**
- **Marine pollutant:** No

#### \* 15 Regulatory information

- **Designation according to EC guidelines:**  
Observe the normal safety regulations when handling chemicals  
Not a hazardous substance or preparation according to EC-directives 67/548/EEC or 1999/45/EC.
- **Special designation of certain preparations:**  
Contains fatty acids, c6-19-branched, cobalt(2+) salts, cobalt bis(2-ethylhexanoate). May produce an allergic reaction.
- **National regulations**
- **Technical instructions (air):**
- **VOC-Content (EU):** 0.08 %
- **MaI-Code** 00-1

#### 16 Other information:

The information on this Safety Data Sheet is based on the present state of our knowledge and on current EU and national laws. The user's working conditions are beyond our knowledge and control. It is always the responsibility of the user to take all necessary steps in order to fulfil the demands laid down in the local rules and legislation. The information in this Safety Data Sheet is meant as a description of the safety requirements of our product: it is not to be considered as a guarantee of the product's properties.

INKREDIBLE

## REFLECTA<sup>®</sup>

The high-gloss sheet-fed offset process series based on renewable raw materials - mineral oil-free

INKREDIBLE REFLECTA<sup>®</sup> inks are the high-gloss formulation of the sheet-fed offset series based on INKREDIBLE printing-ink technology.

When the huber group introduced its HIT technology in the mid 1990s, the Group succeeded in generating printing inks that, thanks to the optimum coordination of formulation and production process, set the standard for the sheet-fed offset segment over a period spanning some ten years.

The global expansion undergone by the huber group now allows it to rigorously pursue this path further. The systematic exchange of know-how and the high level of cooperation practised between the Group's chemical and process engineers all around the world, together with innovative ideas on raw-material synthesis and on ink formulation, laid the perfect foundation for the new INKREDIBLE generation of printing inks, which takes full account of the continuous developments on the press side and the increased demands with respect to process standardisation.

Special hard resins, pigments with optimised surface characteristics and new production technology form the basis of the INKREDIBLE ink systems, which guarantee exceptional printing stability and fantastic print results.

INKREDIBLE inks fulfil all the demands of the newest generation of high-speed printing presses, whether for jobs with low ink coverage and high degree of emulsification or jobs with extreme requirements with regard to print contrast. The INKREDIBLE sheet-fed offset series guarantee optimum print results every time, in every situation.

Highly transparent and pure pigments enable to satisfy the specifications of DIN ISO 2846-1 and/ or 12 647-2, as too the low degree of variation in dot gain between the four process colours, which guarantees a neutral grey balance without dot loss in the production run.

REFLECTA<sup>®</sup> is the high-gloss, standard-setting sheet-fed offset series designed specifically for perfecting. The inks' high degree of gloss, in combination with colour-intensive, pure hues and ideal trapping characteristics, guarantees fantastic and highly impressive levels of contrast.

REFLECTA<sup>®</sup> Fastness properties ISO 2836 / 12 040

		Light BWS	Alcohol	Solvent mixture	Alkali
Yellow	41 F 10 RL	5	+	+	+
Magenta	42 F 10 RL	5	+	+	- *
Cyan	43 F 10 RL	8	+	+	+
Black varnish-solvent fast	49 F 10 RL	8	+	+	+

F = duct-fresh formulation

\* not suitable for posters

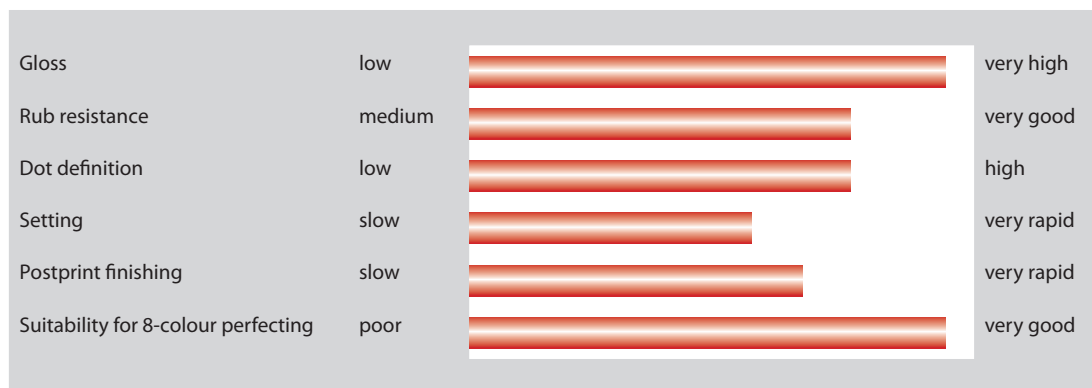
## Special properties

- Average setting speed
- Ideally suited to perfecting presses and laser compatible (see separate information sheet)
- Good stackability with minimal powder spraying
- Fantastic gloss
- Good rub resistance
- Color shades in compliance with DIN ISO 2846-1 and 12647-2
- Neutral grey balance
- High fountain solution tolerance
- Immediate adjustment of a stable ink/water balance
- Excellent stability in the production run
- Ideally suited to IPA-free printing

## Range of applications

The REFLECTA<sup>®</sup> process series is particularly suitable for exceedingly high-gloss print jobs on coated and on absorbent and less glossy stocks. It stands out thanks to its outstanding print contrast, low level of dot gain and high fountain solution tolerance. Its good rub resistance and average setting speed mean it can be deployed as a true all-rounder. The series is also ideally suited to printing on 8- and 10-colour perfecting presses.

## Properties



## Printing auxiliaries

REFLECTA<sup>®</sup> process inks are supplied ready to use. Should it become necessary, under exceptional circumstances, to adapt the process inks to special printing conditions, auxiliaries should be used which are compatible with the highly developed vehicle system:

- for reducing tack with substrates that are susceptible to picking Linseed Oil 1405/1
- for accelerating oxidative drying Cobalt Drier 40B5000.

## Classification

Safety Data Sheet available on request.

## How supplied

2,5-kg vacuum-sealed cans

Containers

2,0-kg cartridges

## Instructions for printing food packaging

This sheetfed process series is not suitable for printing of food packaging where the substrate is in direct contact with the food and/or there are insufficient barrier properties. In this case we recommend our specially formulated low migration MGA<sup>®</sup> to be used. More information regarding packaging for food and beverage is available on the leaflet "printing inks for food packaging", published by the Association of Ink Manufacturers or our "information on using standard sheet-fed offset printing inks for the manufacture of food packaging" and our website [www.futurepack.de](http://www.futurepack.de).

---

Contact addresses for advice and further information can be found under [www.hubergroup.de](http://www.hubergroup.de)

This Technical information sheet reflects the current state of our knowledge. It is designed to inform and advise. We assume no liability for correctness. Modifications may be made in the interest of technical improvement.