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MATERIAL SAFETY DATA SHEET (MSDS)

HEALTH:	
FLAMMABILITY:	
REACTIVITY:	

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Trade Name: Codes	Ultraviolet light curing ink TINTA UV MULTIPROPOSITO POLICROMATICA 11024 - 11025 - 11041 - 11054 - 11074 – 11090-11124 11154 – 11174 - 11190
Colours	Yellow - Medium Yellow RL - Colourless - Magenta – Cyan- Black - Extra Yellow - Extra Magenta - Cyan Extra -
Manufacturer name:	Extra Black PINTESINT SAICyF RONDEAU 1200 RAMOS MEJIA (1704) BUENOS AIRES ARGENTINA TELEPHONE: (54-11)4654-0060 FAX: (54-11)4656-1098 info@pintesint.com

2. COMPOSITION / INFORMATION ON INGREDIENTS

Acrylated monomers: Acrylated oligomers: Photoinitiators: Pigments: Inerts: 25% - 35% 44% - 56% 5% - 10% 0% - 5% 4% - 10%

NONE OF THE COLORS OF THIS INK LINE CONTAIN HEAVY METALS

3. HAZARDS IDENTIFICATION

GENERAL HEALTH EFFECTS

The possible health effects of this product are based on the hazards associated with its ingredients. The use of this product in combination with other products may produce cumulative effects on health. Caution labels and material safety data sheets used with this product should be reviewed before use.

EYES

Eye contact with liquid, vapour or mist can cause moderate or severe irritation, including burning, tearing, redness, or swelling.

SKIN

Contact with skin may cause moderate or severe damage including redness and swelling. Repeated and prolonged contact with the skin may cause blisters (burns), dermatitis, allergic reaction and / or sensitization. The effects can be delayed and persist for several days. This material can be absorbed through the skin.



INHALATION

Low volatility at room temperature makes inhalation of vapours unlikely. Vapours that may be generated at elevated temperatures may cause irritation of the respiratory tract. Symptoms include: headache, nausea, dizziness, and intoxication.

INGESTION Ingestion may cause irritation of the gastrointestinal tract.

CHRONIC EFFECTS / ORGANS AFFECTED No data available

ANIMAL STUDIES No data available

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Pregnant women and people with medical conditions should consult their doctor before using this product. Repeated and prolonged overexposure and / or individual sensitivity may increase the risk and level of adverse health effects.

ROUTES OF EXPOSURE

Primary routes of exposure: dermal (contact / absorption) - inhalation - ingestion. Due to the low vapour pressure of this product, volatilization and / or minimal evaporation are anticipated under standard screen printing conditions.

4. FIRST-AID MEASURES OF ASSISTANCE

EYES

After initial rinsing, remove contact lenses and continue to wash the eyes for at least 15 minutes. If irritation persists, obtain medical attention.

SKIN

In case of contact, immediately wash skin with soap and plenty of water for at least 15 minutes while removing contaminated clothing and shoes. It is suggested to use cold water at first to prevent the pores of the skin from opening. This will minimize the area and time of contact with the skin. Then warm water can be used to ensure that all contaminants have been removed. The skin should be controlled for possible redness or chemical burns. It is suggested to use a mild soap so as not to damage the skin and thus prevent the chemicals from penetrating the pores during cleaning. Obtain medical attention if irritation persists or significant contact has occurred. Wash (or throw) clothing and shoes before refusing.

INHALATION

Low volatility at room temperature makes inhalation of vapours unlikely. Move person to fresh air. If not breathing, give artificial respiration or oxygen by trained personnel. Obtain medical attention immediately if there is difficulty breathing.

INGESTION

If swallowed, DO NOT induces vomiting. Call a poison control centre or doctor immediately. Never give anything by mouth to an unconscious person.



5. FIRE FIGHTING MEASURES

FLAMMABLE 3

EXTINGUISHING MEDIA

CO2 or chemical dust for small fires. For large fires use foam or water spray.

FIRE EXTINGUISHING EQUIPMENT

Wear self-contained breathing apparatus and safety goggles to prevent splashes or contact with vapours. Wear gloves, apron and boots.

SPECIAL METHODS FOR FIRE EXTINGUISHING

Water may be ineffective but may be used to cool containers. Vapours emitted during incineration can be toxic and hazardous.

6. ACCIDENTAL RELEASE MEASURES

Remove all sources of ignition (flames, hot surfaces and electrical, static, or frictional sparks). Avoid contact with the product and inhalation of vapours. Ventilate the area.

Contain spill and dispose of with an inert absorbent. Use non-sparking tools to put the material in a suitable container to dispose of. Isolate the risk area and deny entry to unnecessary and unprotected personnel.

7. HANDLING AND STORAGE

Use adequate ventilation, if possible in combination with good extraction. Do not eat or drink during use. Keep away from oxidizing agents; Store in environments below 35 ° C and with very good supply of air as a reaction inhibitor. Stack in areas refrigerated, dry and protected from sunlight.

Keep away from sources of ignition - no smoking. Keep containers tightly closed in a well-ventilated place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Wear eye and face protection. Protective clothing and appropriate gloves (neoprene or nitrile rubber). Use adequate ventilation, combined with good extraction. Be exposed as little time as possible. Wash hands before taking a break or leave work. Put on separate work clothes.

OTHER PROTECTION

Notes on UV equipment: UV ovens used in the curing of this product produce ultraviolet radiation which may cause adverse biological effects. Typical symptoms are similar to sunburn (redness and dryness of the skin, <u>inflammation</u> of the eyes, pain, tearing, temporary blindness, etc.). Personal protective equipment should minimize this risk.

The ozone produced by the equipment lamp should not be inhaled, it should be ventilated outdoors.



9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Viscosity (25 °C): Solid %: Specific weight: Solubility: Flash Point: Vapour pressure: Paste with acrylate odour with or without colour 4500 - 5500 cps (Brookfield) $99 \pm 1 \text{ \% P/P}$ $1.05 \pm 0.05 \text{ Kg/dm}^3$ Soluble in organic solvents INSOLUBLE IN WATER No data °C < 0.01 mm Hg.

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY Stable: under recommended storage and handling conditions.

CONDITIONS TO AVOID High temperatures, direct sunlight, UV and EB.

INCOMPATIBILITY WITH OTHER MATERIALS Strong acids / bases, oxidizing / reducing agents and reactive chemicals.

HAZARDOUS DECOMPOSITION PRODUCTS May produce hazardous vapours when heated to decomposition; CO, CO2 and other harmful gases.

HAZARDOUS POLYMERIZATION Very unlikely under normal printing and storage conditions. It can occur if the product is exposed to abnormally high temperatures (> 95 $^{\circ}$ C).

11. TOXICOLOGICAL INFORMATION

Frequent or continuous contact with the skin, causes irritation and possible dermatitis.

12. ECOLOGICAL INFORMATION

No experimental data available on this product. Keep product away from sources or watercourses.

13. DISPOSAL CONSIDERATIONS

Follow municipal, provincial and national legal regulations for the elimination of by-products and waste. Recommendation: Incinerate. Contaminated containers may be used after cleaning.

14. TRANSPORT INFORMATION

Transport Classification:	CLASSE 3
United Nations Number:	1210
N° IMO:	3



15. LEGAL INFORMATION

Hazard Symbol: Risk and safety phrases: F, Xi, R20/21/22 R36/37/38 S20/21 S24/25

16. OTHER INFORMATION

No additional information

This information only refers to the product mentioned above and should not be valid for other product (s) or for any process. The information is, according to our best correct and complete knowledge. It is provided in good faith but without guarantee. It remains the responsibility of the user that this information is appropriate and complete for the special use of this product.

IMPORTANT NOTE

- I. The inks formulated by Pintesint SAICyF must be used exclusively with the solvents and the complementary products that it manufactures for that purpose. Due to the diversity of products in the market, the company is not responsible for the use of the same from another source.
- II. The suggestions and data of this literature were elaborated in good faith, to guide the user. We recall the importance of checking the adaptability of inks and complementary products by testing before starting production. Due to the fact that the conditions of use of the products are not under our control, the present does not constitute a guarantee on the work to be done.

