

## Mid Solvent Pigment



## Characteristic

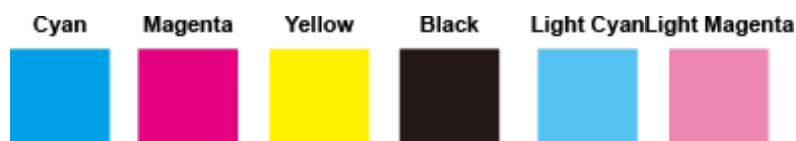
Mild solvent inks are easy to use, fast drying, could be apply on most polymeric material without special coating.

Mild solvent pigment is colorful with high color gamut. Outdoor advertising creative, banners, signs, advertisement canvas and other related supplies are common applications for mild solvent pigment

## Advantages

1. High printing speed
2. Excellent crocking resistance
3. Excellent water resistance
4. Sharp printing quality
5. Good light fastness
6. Wide color gamut
7. Excellent jetting stability
8. Bright and vivid colors
9. Fast drying
10. Slight odor
11. Safety substance

## Mild Solvent colors available



## Ingredients

Methyl ethyl ketone, Acetone, Methanol, Dye (Blue/Red/Yellow/Black)

## Compatible machine:

Da Vinci Color with IUT nozzle



# Material Safety Data Sheet

## **1. Identification of the substance/preparation and of the company/undertaking**

### **1.1 Product identifier**

Trade name: V300S\_CY/MG/YE/BK

### **1.2 Relevant identified uses of the substance or mixture and uses advised against**

Material of Use: Industrial applications: Inkjet ink for thermal-bubble digital printing process.

### **1.3 SDS No.**

### **1.4 Details of the supplier of the safety data sheet**

Company: XYZprinting, Inc.

Address: No.147, Sec. 3, Beishen Rd., Shenkeng Dist., New Taipei City, Taiwan (R.O.C.)

Information Phone No.: 886-2-7705 8001

Emergency Phone No.: 886-2-7705 8001

## **2. Hazards identification**

### **2.1 Classification of the mixture**

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 2), H225

Eye irritation (Category 2), H319

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336

Specific target organ toxicity - single exposure (Category 1), H370

### **2.2 Label elements**

Labeling according Regulation (EC) No 1272/2008

#### **[Hazard pictograms]**



**[Signal word]:** Danger

#### **[Hazard statements]**

H225 Highly flammable liquid and vapor.

H319 Causes serious eye irritation.

H301 + H311 + H331 Toxic if swallowed, in contact with skin or if inhaled

H336 May cause drowsiness or dizziness.

H370 Causes damage to organs.

#### **[Precautionary statements]**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.

No smoking.

P260 Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.

P261 Avoid breathing vapors.

P280 Wear protective gloves/ protective clothing.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P302 + P352 + P312 IF ON SKIN: Wash with plenty of water. Call a POISON CENTER or doctor/physician if you feel unwell.

P304 + P340 + P311 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes.

Remove contact lenses, if present and easy to do. Continue rinsing.

P311 Call a POISON CENTER or doctor/ physician.

P370 + P378 In case of fire: Use dry powder or dry sand to extinguish.

P403 + P235 Store in a well-ventilated place. Keep cool.

#### **[Supplemental label information]**

EUH066: Repeated exposure may cause skin dryness or cracking.

### **2.3 Other hazards**

This mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Flammable vapors can accumulate in headspace of closed systems. This material contains methanol, which, when ingested, may cause acidosis and ocular toxicity ranging from diminished visual capacity to complete blindness, and possible death. Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

### **3. Composition/information on ingredients**

Chemical characterization: Mixture

Ink Jet printing ink in organic solvents.

Ingredients	CAS-No.	EINECS	EU Pre-registration No.	Percent (%)	Classification according to Regulation (EC) No
Blue/Red/Yellow/Black dye	Trade Secret	Trade Secret	Not available for the moment	1~10	
Methyl ethyl ketone	78-93-3	201-159-0	Not available for the moment	1~50	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Acetone	67-64-1	200-662-2	Not available for the moment	1~40	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336
Methanol	67-56-1	200-659-6	Not available for the moment	1~60	Flam. Liq. 2, H225 Acute Tox. 3, H301 Acute Tox. 3, H311 Acute Tox. 3, H331 STOT SE 1, H370

### **4. First aid measures**

#### **[Inhalation]**

When symptoms occur: go into open air and ventilate suspected area. First, take proper precautions to ensure your own safety before attempting rescue, then remove the exposed person to fresh air. Keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

#### **[Skin Contact]**

Remove all contaminated clothing, shoes and socks from the affected areas as quickly as possible. Wash the affected area under running water using a mild soap. If irritation persists, arrange for transport to the nearest medical facility for examination and treatment by a physician as soon as possible.

#### **[Eye Contact]**

Promptly wash affected eyes with plenty of clean water while lifting the eyelids for at least 15 minutes. Remove contact lenses if easily possible, and refer for medical attention.

#### **[Ingestion]**

This material is toxic in small amounts orally, and can cause adverse health effects or death. This material contains methanol, which, when ingested, may cause acidosis and ocular toxicity ranging from diminished visual capacity to complete blindness, and possible death.

## **5. Fire-fighting measures**

### **[Suitable extinguishing media]**

Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO<sub>2</sub>). Water may be ineffective but water should be used to keep fire-exposed container cool.

### **[Fire fighting procedures]**

Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

### **[Specific hazards]**

Hazardous combustion products may include carbon monoxide, carbon dioxide.

### **[Specific method]**

Fight fire from the windward side if possible.

### **[Special protective equipment and precautions for fire fighters]**

Exercise caution when fighting any chemical fire. Under fire conditions, hazardous fumes will be present. Do not enter fire Area without proper protective equipment, including respiratory protection.

## **6. Accidental release measures**

### **[Personal precautions, protective equipment and emergency procedures]**

Do not get in eyes, on skin, or on clothing. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use special care to avoid static electric charges. Do not breathe vapor, mist or spray.

### **[Environmental precautions]**

Do not discharge into drains, watercourses or onto the ground.

### **[Methods and material for containment & clean up]**

Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill. Absorb and/or contain spill with inert material. Do not take up in combustible material such as: saw dust or cellulosic material. Use only non-sparking tools.

## **7. Handling and storage**

### **[Safe handling]**

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Take precautionary measures against static discharge. Use only non-sparking tools. Avoid contact with eyes, skin and clothing. Handle empty containers with care because they may still present a hazard. Do not get in eyes, on skin, or on clothing.

### **[Safe storage]**

Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in a well-ventilated place. Keep container tightly closed. Keep in

fireproof place. Store locked up.

### [Specific end usage]

The identified uses for this product are detailed in Section 1.

## 8. Exposure controls/personal protection

### 8.1 Control parameters

Components	US. ACGIH	US. NIOSH	US. OSHA
Methyl Ethyl Ketone (CAS 78-93-3)	TWA: 200 ppm	STEL: 300 ppm	PEL: 200 ppm
Acetone (CAS 67-64-1)	TWA: 250 ppm	TWA: 250 ppm	PEL: 1,000 ppm

Components	U.K.	France	Spain
Methyl Ethyl Ketone (CAS 78-93-3)	TWA: 200 ppm	VME: 200 ppm	VLA-ED: 200 ppm
Acetone (CAS 67-64-1)	TWA: 500 ppm	VME: 400 ppm	VLA-ED: 500 ppm

Components	Germany	Greece	Belgium
Methyl Ethyl Ketone (CAS 78-93-3)	TRGS: 200 ppm	TWA: 200 ppm	Value: 200 ppm
Acetone (CAS 67-64-1)	TRGS: 500 ppm	TWA: 500 ppm	Value: 500 ppm

### 8.2 Exposure controls

#### [Appropriate engineering controls]

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

#### [Personal protective equipment]



#### [Eye/face protection]

Wear appropriate protective eyeglasses or safety goggles.

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

#### [Skin/hand protection]

Wear lightweight plastic or rubber gloves for routine industrial use.

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### [Body Protection]

Complete suit protecting against chemicals, the type of protective equipment must be selected

according to the concentration and amount of the dangerous substance at the specific workplace.

**[Other Protection]**

Wear appropriate clothing to prevent any possibility of skin contact.

**[Hygiene measures]**

Do not smoke in work area. Promptly remove any clothing that becomes wet or contaminated. Wash promptly if skin becomes wet or contaminated. When using product, do not eat, drink or smoke. Wash hands at the end of each work shift and before eating, smoking and using the toilet.

**[Respiratory equipment]**

If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

**[Respiratory protection]**

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**9. Physical and chemical properties**

	Color	Cyan/Magenta/Yellow/Black
	Physical state	Liquid
	Boiling point/boiling	No data available
	Melting Point/Melting	No data available
	Flash point of ink	> 17 °C
	Auto-Ignition	No data available
	Flammability (solid,	Not applicable
	Explosive Properties	Upper limit: 36%(V); Lower limit: 6%(V)
	Vapor Pressure	No data available
	Specific Gravity	0.8 ± 0.1 (25°C)
	Solubility	No data available
	Water solubility	Slightly soluble
	Viscosity	1.5 ± 1.0 cps
	pH	Not applicable
	Oxidizing properties	No data available
	Vapor Density	Not applicable
	VOCs	No data available

The Physical and chemical data given in Section 9 are typical values for this product and are not intended to be product specifications.

## **10. Stability and reactivity**

### **10.1 Reactivity**

Reacts violently with strong oxidizers. Increased risk of fire or explosion.

### **10.2 Chemical stability**

Highly flammable liquid and vapor. May form flammable or explosive vapor-air mixture.

### **10.3 Possibility of hazardous reactions**

Hazardous polymerization will not occur.

### **10.4 Conditions to avoid**

Conditions and materials to avoid: Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.

### **10.5 Incompatible materials**

Strong oxidizing agents, Strong bases, Strong acids

### **10.6 Hazardous decomposition products**

Thermal decomposition generates: Carbon Monoxide, Carbon Dioxide and Oxides of Nitrogen (NO<sub>x</sub>).

## **11. Toxicological information**

**11.1 Routes of Overexposure:** Eye, skin, inhalation, and oral ingestion

### **11.2 Health Hazards:**

Acute Health Hazards: Overexposure of the eye surface to ink may be mildly irritating.

Overexposure of ink contact with the skin may cause irritation and in some people, swelling and redness. Intentional inhalation to ink vapors may result in respiratory tract irritation. Intentional or accidental oral ingestion may cause an upset stomach.

Chronic Health Hazards: No information available   Mugtagenicity:   No information available

Carcinogenicity:   No information available

### **11.3 Toxicity:**

Acute Toxicity Data:

#### **[Methyl Ethyl Ketone]:**

LD50 Oral, rat: 2,054 mg/kg

#### **[Acetone]:**

LD50 Oral, rat: 5,800mg/kg

LD50 Dermal, Guinea pig: 7,426 mg/kg   LC50 Inhalation, Rat: 8 h, 50,100 mg/m<sup>3</sup>

#### **[Methanol]:**

LDLO Oral, Human: 143 mg/kg (Remarks: Lungs, Thorax, or Respiration: Dyspnea. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea.)

LD50 Oral, Rat: 1,187~2,769 mg/kg

LD50 Dermal, Rabbit: 17,100 mg/kg



LC50 Inhalation, Rat: 4 h, 128,2 mg/L

LC50 Inhalation, Rat: 6 h, 87,6 mg/L

### **Inhalation:**

High concentrations may cause central nervous system depression such as dizziness, vomiting, numbness, drowsiness, headache, and similar narcotic symptoms. Inhalation of this material can cause serious health effects in small amounts, leading to unconsciousness and death.

### **Irritating:**

#### **[Acetone]:**

Skin corrosion/irritation (Rabbit): Mild skin irritation - 24 h

Serious eye damage/eye irritation (Rabbit): Eye irritation - 24 h

#### **[Methanol]:**

Skin corrosion/irritation (Rabbit): No skin irritation

Serious eye damage/eye irritation (Rabbit): No eye irritation

### **Sensitization:**

Not available

### **Ingestion:**

This material is toxic in small amounts orally, and can cause adverse health effects or death. This material contains methanol, which, when ingested, may cause acidosis and ocular toxicity ranging from diminished visual capacity to complete blindness, and possible death.

### **Route of entry:**

Ingestion. Skin absorption. Inhalation

### **Medical symptoms:**

Nervous system. Drowsiness, dizziness, disorientation, vertigo. Mild intoxication (including fatigue, lassitude, irritability, headache, and nausea).

### **Reproductive toxicity:**

The information shown in SECTION 3, Hazards identification, is based on toxicity profiles of similar materials or on the components present in this material.

## **12. Ecological information**

### **12.1 Toxicity**

#### **[Methyl Ethyl Ketone]:**

Toxicity to fish No data available

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 520 mg/l - 48 h

Toxicity to algae No data available

#### **[Acetone]:**

Toxicity to fish LC50 - Oncorhynchus mykiss (rainbow trout) - 5,540 mg/l - 96 h

Toxicity to daphnia and other

aquatic invertebrates	LC50 - Daphnia magna (Water flea) – 8,800 mg/l - 48 h
Toxicity to algae	No data available
<b>[Methanol]:</b>	
Toxicity to fish	mortality LC50 - Lepomis macrochirus (Bluegill)- 15,400 mg/l - 96 h NOEC - Oryzias latipes -7,900 mg/l - 200 h
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - > 10,000 mg/l - 48 h
Toxicity to algae	Growth inhibition EC50 - Scenedesmus capricornutum (fresh water algae) -22,000 mg/l - 96 h

**12.2 Persistence and degradability:** May cause long-term adverse effects in the environment.

**12.3 Bioaccumulative potential:** There are no data available on bioaccumulation for this product.

**12.4 Mobility in soil:** No further relevant information available.

#### **12.5 Results of PBT and vPvB assessment**

This product is not classified as PBT/vPvB by current EU criteria. Other adverse effects: Not determined.

**12.6 Other adverse effects:** No further relevant information available.

### **13. Disposal considerations**

#### **13.1 Wastetreatment methods**

##### **General information:**

Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.

##### **Waste treatment methods:**

Dispose waste and residues in accordance with local authority requirements.

##### **Additional information:**

Avoid release to the environment. This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

### **14. Transport information**

#### **14.1 UN Number**

UN No. (ADR/RID/ADN): 1210

UN No. (IMDG): 1210

UN No. (ICAO): 1210

UN No. (IATA): 1210

#### **14.2 UN proper shipping name**

Proper Shipping Name: Printing Ink

#### **14.3 Transport hazard classes**

ADR/RID/AND Class: 3" Flammable liquids

ADR Label No.: 3

IMDG Class: 3

ICAO Class/Division: 3

IATA Class/Division: 3

Transport Label:



#### **14.4 Packing group**

ADR/RID/AND Packing group: II

IMDG Packing group: II

ICAO Packing group: II

IATA Packing group: II

#### **14.5 Environmental hazards**

Environmentally Hazardous Substance/Marine Pollutant: No

#### **14.6 Special precautions for user:**

Transport and storage of the product in accordance with general precautions and instructions mentioned in this SDS.

**14.7** Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: N/A

### **15. Regulatory information**

**15.1** Safety, health and environmental regulations/legislation specific for the substance or mixture

EU Regulation (EC) No. 1272/2008 (CLP Regulations)

REACH Status: In compliance.

Pre-registration status: All components are listed or exempted. Annex XIV - List of substances subject to authorization Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Not applicable.

#### **15.2 Chemical Safety Assessment**

No Chemical Safety Assessment has been carried out.

### **16. Other information**

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process.

This information is based upon technical information believed to be reliable. It is subject to revision as additional knowledge and experience is gained.