



Preparation Date 12-Apr-2017

Revision Date 12-Apr-2017

Revision Number 1

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product Identifier

Product Description	170T64990 JM RAL 6019 DK GREEN (MS-2900-3 WO-1 DARK GREEN)
Product Identifier	3.560.3.064990
Product Class	Solvent Based Fluid Ink

Other means of identification

UN number 1210

Recommended use of the chemical and restrictions on use

Intended Use	Printing Ink.
Uses advised against	No information available

Details of the supplier of the safety data sheet

Supplier Address
 Millennium Signatures
 1550-12 Yorkton Crt.
 Burlington, ON L7P 5B7

E-mail address	info@millenniumsignatures.com
Company Phone Number	905-639-0909

Emergency telephone number

For Transportation Emergencies within the U.S. Call CHEMTREC (800) 424-9300
For Canadian Transportation Emergencies Call CANUTEC (613) 996-6666

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory status

Acute Toxicity - Oral	Category 4
Serious eye damage/eye irritation	Category 2
Specific target organ toxicity (single exposure)	Category 2
Flammable liquids	Category 2

Label elements

Emergency Overview

Danger

Hazard Statements

Harmful if swallowed
 Causes serious eye irritation
 May cause damage to organs
 Highly flammable liquid and vapor

**Appearance** Product Specific**Physical state** Liquid**Odor** Characteristic**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not breathe dust/fume/gas/mist/vapors/spray
 Keep away from heat/sparks/open flames/hot surfaces. — No smoking
 Keep container tightly closed
 Ground/bond container and receiving equipment
 Use explosion-proof electrical/ventilating/lighting/equipment
 Use only non-sparking tools
 Take precautionary measures against static discharge
 Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 Rinse mouth

Precautionary Statements - Storage

Store locked up
 Store in a well-ventilated place. Keep cool

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Not applicable

Other information

- May be harmful in contact with skin

3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %	Trade Secret
Propylene Glycol Methyl Ether	107-98-2	1 - 5	*
Propyl Acetate	109-60-4	10 - 25	*
Titanium dioxide	13463-67-7	5 - 10	*
Methanol	67-56-1	5 - 10	*
n-Propyl alcohol	71-23-8	1 - 5	*
Nitrocellulose	9004-70-0	1 - 5	*

* The exact percentage (concentration) of composition has been withheld as a trade secret

4. FIRST AID MEASURES

First Aid Measures

General advice	If symptoms persist, call a physician. Do not get in eyes, on skin, or on clothing. Show this safety data sheet to the doctor in attendance.
Eye contact	If eye irritation persists, consult a specialist. Call a physician immediately. Immediately flush eyes with large quantities of clean water for at least 15 minutes.
Skin contact	Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if symptoms occur.
Inhalation	If breathing is difficult, give oxygen. Move to fresh air in case of accidental inhalation of vapours. Vapours are heavier than air and can cause suffocation by reducing oxygen available for breathing.
Ingestion	Immediate medical attention is required.

Most important symptoms and effects, both acute and delayed

Symptoms	Repeated exposure may cause skin dryness or cracking. If large quantities are ingested, CNS depression will result leading to serious health consequences including possible death. Drowsiness. Dizziness.
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Indication of any immediate medical attention and special treatment needed

Notes to physician	Treat symptomatically.
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5. FIRE-FIGHTING MEASURES**Extinguishing media**

Water spray. Carbon dioxide (CO₂). Dry chemical. If one of the following is listed in Section 3 (Copper, Zinc, or Aluminum) then water, CO₂, foam and ABC powder are not suitable extinguishing media. .

Special hazards arising from the substance or mixture

Extremely flammable. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Thermal decomposition can lead to release of irritating gases and vapors. If product contains nitrocellulose, oxygen may be released resulting in difficulty in fire fighting.

Explosion Data

Sensitivity to mechanical impact No.
Sensitivity to static discharge Yes.

Advice for firefighters

Wear self-contained breathing apparatus and protective suit. Wear fire/flame resistant/retardant clothing.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Take precautionary measures against static discharges. Pay attention to flashback.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Prevent product from entering drains. Sweep up and shovel into suitable containers for disposal. Take precautionary measures against static discharges. Use

non-sparking tools.

7. HANDLING AND STORAGE

Precautions for safe handling

Wear personal protective equipment. Handle in accordance with good industrial hygiene and safety practice. To avoid ignition of vapours by static electricity discharge, all metal parts of the equipment must be grounded. Ensure all equipment is electrically grounded before beginning transfer operations.

Conditions for safe storage, including any incompatibilities

Keep away from open flames, hot surfaces and sources of ignition. Keep in properly labeled containers.

Incompatible materials Incompatible with strong acids and bases.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines

If this product contains any hazardous materials with occupational exposure limits established by the region specific regulatory bodies, the information is shown directly below this statement.

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Propylene Glycol Methyl Ether 107-98-2	TWA: 50 ppm STEL: 100 ppm		
Propyl Acetate 109-60-4	TWA: 200 ppm STEL: 250 ppm	TWA: 200 ppm TWA: 840 mg/m ³	1700 ppm
Methanol 67-56-1	TWA: 200 ppm Skin STEL: 250 ppm	TWA: 200 ppm TWA: 260 mg/m ³	6000 ppm
n-Propyl alcohol 71-23-8	TWA: 100 ppm	TWA: 200 ppm TWA: 500 mg/m ³	800 ppm

Appropriate engineering controls

Engineering controls Ensure adequate ventilation, especially in confined areas. Explosion proof ventilation and electrical systems should be present and in use.

Individual protection measures, such as personal protective equipment

Eye/face protection Safety glasses with side-shields

Skin and body protection Protective gloves.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General industrial hygiene practice Handle in accordance with good industrial hygiene and safety practice. Wear suitable gloves and eye/face protection. Wear appropriate respirator when working with solvents above the exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Product Specific
Odor	Characteristic
Color	No information available
Odor Threshold	No information available
PH	Not applicable

Melting point/freezing point	Not available
Boiling Point/Range	78-121 °C
Flash point	< 22 °C
Method	Calculated
Evaporation rate	No information available
Flammability Limit in Air	
Upper flammability limit:	19
Lower flammability limit:	1.1
Vapor pressure	No information available
Vapor density	Not available
Specific Gravity	0.9043
Water solubility	Insoluble
Solubility in other solvents	No information available
Partition coefficient	Not available
Autoignition temperature	Not available
Decomposition temperature	No data available
Kinematic viscosity	No information available
Dynamic viscosity	Not available
Explosive properties	No information available
Oxidizing Properties	No information available

Other information

Weight % VOC	73.933
Weight % Solids	26.067
Density (lbs/gal) U.S.	7.5466

10. STABILITY AND REACTIVITY**Reactivity**

Stable under normal conditions

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

Incompatible with strong acids and bases.

Hazardous decomposition products

nitrogen oxides (NOx). Carbon dioxide (CO2).

11. TOXICOLOGICAL INFORMATION**Information on likely routes of exposure**

Product Information	The product itself has not been tested.
Inhalation	No data available.
Eye contact	No data available.
Skin contact	No data available.
Ingestion	No data available.

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Propylene Glycol Methyl Ether 107-98-2	5000 mg/kg (Rat)		6 mg/L (Rat)
Propyl Acetate 109-60-4	8700 mg/kg (Rat)		
Titanium dioxide 13463-67-7	10000 mg/kg (Rat)		
Methanol 67-56-1	6200 mg/kg (Rat)		
n-Propyl alcohol 71-23-8	1870 mg/kg (Rat)	4049 mg/kg (Rabbit)	

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Respiratory or skin sensitization No information available.
Germ cell mutagenicity No information available.
Carcinogenicity If any carcinogenic components are present, a table below will indicate which agencies have listed the substance as a carcinogen.
Reproductive toxicity Not available.
STOT - single exposure No information available.
STOT - repeated exposure No information available.
Target Organ Effects Blood, Central nervous system (CNS), Eyes, Gastrointestinal tract (GI), Liver, Reproductive System, Respiratory system, Skin.
Aspiration hazard No information available.

Numerical measures of toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 1034 Mg/kg
ATEmix (dermal) 3199 Mg/kg
ATEmix (inhalation-dust/mist) 5.4 mg/L

12. ECOLOGICAL INFORMATION**Toxicity**

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Propylene Glycol Methyl Ether 107-98-2				EC50 = 23300 mg/L 48 h
n-Propyl alcohol 71-23-8				EC50 = 3642 mg/L 48 h EC50 3339 - 3977 mg/L 48 h

Persistence and degradability

No information available.

Bioaccumulation/ Accumulation

No information available.

Mobility in Environmental Media

Available information on the mobility of specific components is listed below.

Component	log Pow
Propylene Glycol Methyl Ether 107-98-2	-0.437
Methanol 67-56-1	-0.77
n-Propyl alcohol	0.25 - 0.34

71-23-8

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste disposal methods

In accordance with local, state/provincial and national regulations.

Disposal of contaminated packaging

In accordance with local and national regulations. Empty containers should be taken to local recyclers for disposal.

US EPA Waste Number: Consult 40 CFR Part 261

14. TRANSPORT INFORMATION

DOT

UN number	1210
Proper shipping name	Printing ink, flammable
Hazard class	3
Packing group	II

TDG

UN number	1210
Proper shipping name	Printing Ink, flammable
Hazard class	3
Packing group	II

IATA

UN number	1210
Proper shipping name	Printing ink, flammable
Transport hazard class(es):	3
Packing Group:	II

IMDG

UN number	1210
Proper Shipping Name:	Printing ink, flammable
Transport hazard class(es):	3
Packing Group:	II

15. REGULATORY INFORMATION

Inventories

TSCA	Complies
DSL/NDSL	Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
 DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

Federal Regulations

SARA Section 313 Toxic Chemical List

The following components are subject to reporting levels established by SARA Title III, Section 313:

Component	CAS-No	Weight %	SARA 313 - Threshold Values
Methanol - 67-56-1	67-56-1	7.875	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	No
Chronic Health Hazard	Yes
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactivity Hazard	No

Clean Air Act

This product contains the following regulated components:

Component	CAS-No	HAPS data	NC TAPs	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Propylene Glycol Methyl Ether	107-98-2			Group I		
Methanol	67-56-1	Present		Group IV		

CERCLA

Component	RQ	CERCLA EHS RQs	RQ
Methanol 67-56-1	5000 lb		5000 lb 2270 kg

US State Regulations

California Prop. 65

"WARNING" This product contains the following chemical(s) known to the State of California to cause cancer, birth defects or other reproductive harm.

Component	California Prop. 65
Methanol - 67-56-1	Developmental

State Right-to-Know

Component	New Jersey	Massachusetts	Pennsylvania
Methanol 67-56-1	X	X	X

U.S. EPA Label information

EPA Pesticide registration number Not applicable

Canada

All components of this product are included on the DSL or NDSL or are not required to be listed.

This product has been classified according to GHS hazard criteria and the SDS contains all of the information required by the HPA.

16. OTHER INFORMATION

NFPA

Health 1

Flammability 3

Reactivity 0

Prepared by:	Regulatory Department
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Reason for revision:	New/Revised Formula

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage,

transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet