1. PRODUCT IDENTIFICATION

PRODUCT NAME: 100 NL Yellow Ink

PRODUCT COLOR: Yellow

RECOMMENDED USE: Coding & Marking

Manufacturer/Supplier:
Universal Stenciling & Marking Systems, Inc. 1-727-894-3027
205 15th Avenue S.E.
Saint Petersburg, FL 33701
USA

Emergency Telephone Number: 1-800-535-5053 (North America)

TRANSPORTATION: INFOTRAC:

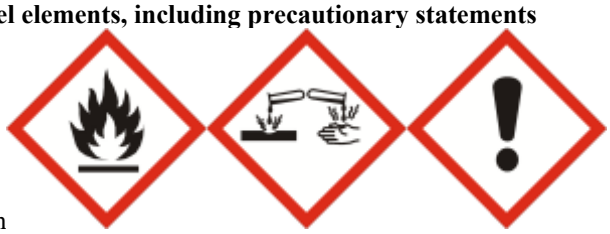
2. HAZARDS IDENTIFICATION

Emergency Overview:

GHS Classification:

Flammable liquids	Category 2
Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3

GHS label elements, including precautionary statements



Pictogram

Signal Word **Danger**

Hazard Statements

H225	Highly flammable liquid and vapor
H302	Harmful if swallowed
H315	Causes skin irritation
H318	Causes serious eye damage
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness

Precautionary Statements

P210	Keep away from heat/sparks/open flames/hot surfaces. — No smoking
P233	Keep container tightly closed
P242	Use only non-sparking tools
P243	Take precautionary measures against static discharge
P261	Avoid breathing dust/fume/gas/mist/vapors/spray
P264	Wash skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P271	Use only outdoors or in a well-ventilated area
P280	Wear protective gloves/protective clothing/eye protection/face protection
P301+P312	IF SWALLOWED: Call a POSION CENTER or doctor/physician if you feel unwell
P302+P352	IF ON SKIN: Wash with plenty of soap and water
P303+P361+P351	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse continuously with water for several minutes.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P305+P351+P338	IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P308+P313	IF exposed or concerned: Get medical advice/attention.
P310	Immediately call a POISON CENTER or doctor/physician
P330	Rinse mouth
P332+P313	If skin irritation occurs: Get medical advice/attention
P370+P378	In case of fire: Use Water spray, CO2, dry chemical, or alcohol resistant foam to extinguish
P362+P364	Take off contaminated clothing and wash it before reuse
P403+P235	Store in a well-ventilated place. Keep cool
P501	Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Name	CAS No	Weight-%
n-Butyl Alcohol	71-36-3	30-40
1-Methoxy-2-propanol	107-98-2	20-30
Ethyl Alcohol	64-17-5	5-15
2-Propanol	67-63-0	5-15
Ethyl Acetate	141-78-6	5-15
Propyl Acetate	109-60-4	0-5

4. FIRST AID MEASURES

First Aid Measures

Ingestion: If swallowed, do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Eyes: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

Skin: Remove contaminated clothing. Wash off with soap and plenty of water. Consult a physician.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

Most important symptoms and effects

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically

5. FIREFIGHTING MEASURES

Suitable extinguishing media:
Water fog, Multipurpose foam, Dry chemical, CO_2

Unsuitable extinguishing media:
Do not use a solid water stream as it may scatter and spread fire.

Specific hazards in case of fire:
Fight as volatile liquid fire
Flashback fires may occur
Vapors are dense and may travel to remote ignition source

Hazardous combustion products:
Carbon oxides, Nitrogen oxides, organic combustion products which may be toxic and/or irritating

Protective equipment and precautions for fire fighters:
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:
Wear chemical goggles, gloves, boots and protective clothing. Wear respirator if necessary. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition and heat.

Environmental precaution:

Prevent additional discharge of material. Prevent material from entering sewers or water courses.

Methods and materials for containment and cleaning up:

Absorb small spills with sand, filter-aid, vermiculite or other inert absorbent material, them place in a chemical waste container. For large spills, contain with sand or earth dikes. Dispose of waste in accordance with applicable government regulations.

7. HANDLING AND STORAGE

Precautions for safe handling:

Avoid contact with eyes. Wash face, hands, and any exposed skin thoroughly after handling. Do not eat, drink of smoke when using this product. Wear protective gloves/protective clothing and eye/face protection. Avoid breathing dust/fume/gas/mist/vapors/spray. Unscrew all caps slowly. Do not unscrew entirely until all pressure has been completely released. Keep away from heat/sparks/open flames/hot surfaces. Emptied containers may retain residues. Precautions apply to emptied containers.

Conditions for safe storage, including incompatibilities:

Keep container tightly closed and store in a cool, dry and well-ventilated place. Keep storage temperature between 4-32 °C (40-90 °F). Incompatible with strong oxidizing agents, strong acids, strong bases, alkali metals and halogens.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Guidelines:

Chemical Name and CAS#	ACGIH TLV	OSHA PEL	NIOSH IDLH
n-Butyl Alcohol 71-36-3	TWA: 20 ppm	TWA: 100 ppm TWA: 300 mg/m^3	IDLH: 1400 ppm Ceiling: 50 ppm Ceiling: 150 mg/m^3 skin
1-Methoxy-2-propanol 107-98-2	TWA: 100 ppm STEL: 150 ppm	TWA: 100 ppm TWA: 360 mg/m^3 STEL: 150 ppm STEL: 540 mg/m^3	TWA: 100 ppm TWA: 360 mg/m^3 STEL: 150 ppm STEL: 540 mg/m^3
Ethyl Alcohol 64-17-5	TWA: 1000 ppm	TWA: 1000 ppm TWA: 1900 mg/m^3	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m^3
2-Propanol 67-63-0	TWA: 200 ppm STEL: 400 ppm	TWA: 400 ppm TWA: 980 mg/m^3 STEL: 500 ppm STEL: 1225 mg/m^3	IDLH: 2000 ppm TWA: 400 ppm TWA: 980 mg/m^3 STEL: 500 ppm STEL: 1225 mg/m^3
Ethyl Acetate 141-78-6	TWA: 400 ppm	TWA: 400 ppm TWA: 1400 mg/m^3	IDLH: 2000 ppm TWA: 400 ppm TWA: 1400 mg/m^3
Propyl Acetate 109-60-4	TWA: 200 ppm STEL: 250 ppm	TWA: 200 ppm TWA: 840 mg/m^3 STEL: 250 ppm STEL: 1050 mg/m^3	IDLH: 1700 ppm TWA: 200 ppm TWA: 840 mg/m^3 STEL: 250 ppm STEL: 1050 mg/m^3

Appropriate engineering controls

Apply technical measures to comply with the occupational exposure limits. Local exhaust and mechanical ventilations are recommended to be used as engineering controls.

Individual protection measures, such as personal protective equipment:

Eye/Face protection: Safety glasses with side shields or chemical goggles must be worn.

Skin/Body protection: Wear protective gloves. Wear suitable protective clothing and footwear appropriate for the risk of exposure.

Respiratory protection: If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Respiratory protection must be provided in accordance with current local regulations.

General hygiene: Handle in accordance with good industrial hygiene and safety practice.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Property	Values	Remarks-Methods
Physical state:	Liquid	
Odor:	Moderate	
Odor threshold:	Not determined	
pH:	Not determined	
Melting point/freezing point:	Not determined	
Boiling point/Boiling range:	Not determined	
Flash point:	7.8 °C / 46 °F	Tag Closed Cup
Evaporation Rate:	<1	butyl acetate = 1
Flammability (solid, gas):	Not determined	
Upper/lower flammability limits:	Not determined	
Vapor pressure:	Not determined	
Vapor density:	>1	air = 1
Specific gravity:	0.9 - 0.98	water = 1
Water solubility:	Partially soluble	
Solubility in other solvents:	Not determined	
Partition Coefficient:	Not determined	
Auto-ignition Temperature:	Not determined	
Decomposition temperature:	Not determined	
Viscosity:	8-20 cps	
VOC Content (%):	70 %	
VOC Content:	5.6 – 6.2 lbs/gal	

10. STABILITY AND REACTIVITY

Reactivity:
Not reactive under normal conditions.

Chemical Stability:
Stable under recommended storage conditions.

Possibility of hazardous reactions:
None under normal processing.

Conditions to avoid:
Keep out of reach of children. Keep away from heat, sparks and open flame. Keep away from contact with incompatible materials.

Incompatible materials:
Strong oxidizing agents, strong acids, strong bases, alkali metals, halogens

Hazardous decomposition products:

Carbon oxides, nitrogen oxides, thermal decomposition can lead to release of irritating and toxic gases and vapors.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact: Causes serious eye damage

Skin contact: Causes skin irritation

Inhalation: May cause respiratory irritation. May cause drowsiness or dizziness.

Ingestion: Harmful if swallowed

Component Information:

Chemical Name and CAS#	Oral LD50	Dermal LD50	Inhalation LC50
n-Butyl Alcohol 71-36-3	= 790 mg/kg (Rat)	= 5,620 mg/kg (Rabbit)	>17.9 mg/l (Rat) 4 h
1-Methoxy-2-propanol 107-98-2	= 4,016 mg/kg (Rat)	>2,000 mg/kg (Rabbit)	= 25.8 mg/l (Rat) 5h
Ethyl Alcohol 64-17-5	= 7,060 mg/kg (Rat)	No Data	= 20,000 mg/ m^3 (Rat) 10 h
2-Propanol 67-63-0	= 5,045 mg/kg (Rat)	= 12,800 mg/kg (Rabbit)	= 16,000 mg/m^3 (Rat) 8 h
Ethyl Acetate 141-78-6	= 4,934 mg/kg (Rat)	>20,000 mg/kg (Rabbit)	= 22.5 mg/L (Rat) 6h
Propyl Acetate 109-60-4	= 9,370 mg/kg (Rat)	> 17,740 mg/kg	No Data

Information on physical, chemical and toxicological effects:

Symptoms Please see section 4 of this SDS for symptoms

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

Carcinogenicity:

Chemical Name	ACGIH	IARC	NTP	OSHA
None				

Legend

ACGIH (American Conference of Governmental Industrial Hygienists)
A1 – Confirmed human carcinogen
A2 – Suspected human carcinogen
A3 - Confirmed animal carcinogen with unknown relevance to humans
IARC (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2A – Probably Carcinogenic to Humans
Group 2B – Limited evidence of carcinogenicity
NTP (National Toxicology Program)
Known - Known Carcinogen
OSHA (Occupational Safety and Health Administration of the US Department of Labor)
X - Present

Numerical measures of toxicity:

Not determined

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Component Information

Chemical Name and CAS#	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
n-Butyl Alcohol 71-36-3	No data	LC50 - Pimephales promelas – 1,376 mg/L - 96 h	No data	EC50 - Daphnia magna – 1,328 mg/L - 48 h
1-Methoxy-2-propanol 107-98-2		LC50 - Pimephales promelas – 20,800 mg/L – 96h		EC50 - Daphnia magna – 23,300 mg/L – 48h
Ethyl Alcohol 64-17-5	EC50 – Chlorella vulgaris - >100 mg/L – 72h	LC50 - Pimephales promelas – 15,300 mg/L – 96h		EC50 - Daphnia magna - > 100 mg/L – 24h
2-Propanol 67-63-0	EC50 - Desmodesmus subspicatus - 2000 mg/L – 72h	LC50 - Pimephales promelas – 9,640 mg/L – 96h		EC50 - Daphnia magna – 5,102 mg/L – 96h
Ethyl Acetate 141-78-6	EC50 – Algae – 4,300 mg/L – 24h	LC50 – Pimephales promelas – 230 mg/L – 96h		EC50 – Daphnia magna – 165 mg/L – 48h
Propyl Acetate 109-60-4	EC50 - Pseudokirchneriella subcapitata - >100 mg/L – 72h	LC50 - Pimephales promelas – > 10-100 mg/L – 96h		EC50 - Daphnia magna - 318 mg/L – 24h

Persistence/Degradability:
Not determined

Bioaccumulation:
Not determined

Mobility:
Not determined

Other Adverse Effects:
No data available

13. DISPOSAL CONSIDERATIONS

Disposal of Wastes: Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated Packaging: Dispose of as unused product in accordance with applicable regional, national and local laws and regulations.

.

SECTION 14 – TRANSPORTATION INFORMATION

DOT

UN number	1210
Proper shipping name	PRINTING INK
Hazard class	3
Packing group	II
ERG#	129

IATA

UN number	1210
Proper shipping name	PRINTING INK
Hazard class	3
Packing group	II

IMDG

UN number	1210
Proper shipping name	PRINTING INK
Hazard class	3
Packing group	II
Marine pollutant	No

SECTION 15 – REGULATORY INFORMATION

TSCA STATUS: All Components listed

OTHER REGULATORY:

Ingredient(s)	SARA 302	SARA 311/312	SARA 313	RECRA	CERCLA
n-Butyl Alcohol	No	F, A	Yes	U031	No
1-Methoxy-2-propanol	No	F, A	No	No	No
Ethyl Alcohol	No	F, A	No	No	No
2-Propanol	No	F, A, C	Yes	No	No
Ethyl Acetate	No	F, A	No	U112	Yes
Propyl Acetate	No	F, A	No	No	No

SARA 311/312 Codes: R = Reactive Hazard
P = Pressure Hazard
F = Fire Hazard
A = Immediate/Acute
C = Delayed/Chronic

California Prop. 65 Components: Chemicals known to the state of California to cause birth defects or other reproductive harm:

This product does not contain any chemicals known to the state of California to cause cancer, birth defects or any other reproductive harm.

SECTION 16 – OTHER INFORMATION

HMIS:

Health:	3
Chronic Health Hazard	*
Flammability:	3
Reactivity:	0

Revision Date: 06-Sept-2018
Replaces: 18-Nov-2015
Revision Note: Review and update. Changes to Sections 2, 4, 11, 12, 15, 16

Prepared by: Don Wright

DISCLAIMER OF LIABILITY

As the conditions or methods of use are beyond our control, we do not assume any responsibility and expressly disclaim any liability for any use of the material described in this MSDS. Information contained herein is given in good faith and believed to be true and accurate, but all statements or suggestions are made without warranty, expressed or implied, regarding the accuracy of the information, the hazards connected with the use of the material, or results to be obtained from the use thereof. All of the listed ingredients in this product that are considered to present a health hazard as defined in Appendix A of the OSHA “Hazard Communication” standard (29CFR 1910.1200) as listed in Section II. All of the information given, including ingredient identification, CAS Number, and quantity, is proprietary information, which has been provided in order to meet the objective of the “Hazard Communication” standard. Data provided here are typical and not intended for use as product specifications. This formulation information is confidential, and only to be disclosed in accordance with Federal and State safety and health regulations. Permission to disclose any ingredient information for any other purpose is neither given nor implied.