

Safety Data Sheet

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Manufacturer: NuMark Marker Co., LLC
PO Box 52
Marion, CT 06444
www.NuMarkMarker.com
203-704-7841

Section 1: Product Identification

Trade Name: Permanent marker Ink **Products:** PM2000, PM2000F, MM3000
Color: Various **Chemical Family:** Solution **Formula:** Proprietary

NOTE:

This product contains less than 20ml of liquid. Liquid contents are released in a manner controlled by the user via activation of the flow control valve. No free liquid is present during normal use. Minimal exposure is expected during normal use. Normal use of this product presents only a minimal fire and exposure hazard.

Section 2: Hazard(s) Identifications

Flammable Liquids, Category 2
Serious Eye Damage/Eye Irritation, Category 1
Specific Target Organ Toxicity (single exposure), Category 3



GHS Designations:

Signal Word: **DANGER**

Hazard Phrases: H225 - Highly Flammable liquid and vapor
H302 - Harmful if swallowed
H318 - Causes serious eye damage
H335 - May Cause respiratory irritation

Precaution Phrases: P403+235 - Store in cool/well ventilated place
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking
P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
P262 - Do not get in eyes, on skin, or on clothing.
P271 - Use only outdoors or in a well ventilated area.
P280 - Wear protective gloves/clothing/eye protection/face protection.

Response Phrases: P301 - If Swallowed /
P303+361+353 - If on Skin / Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 - If Inhaled / Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338+310 - If in Eyes / Rinse cautiously with water for several minutes remove contact lenses, if present and easy to do. Continue rinsing. + Immediately call a poison center or doctor/physician.
P309+311 - Call a poison center or doctor/physician if exposed or you feel unwell.

P370+378 - In case of Fire, use Foam, Dry Powder or Carbon Dioxide.
DO NOT USE WATER.

Storage & Disposal P403-235 - Store in cool/well ventilated place.

Phrases: P501 - Dispose of contents/container in accordance with local regulations.

OSHA Regulatory Status: This material is classified as hazardous under OSHA regulations.

Potential Health Effects (acute & Chronic):

EYE: May cause moderate eye irritation. May result in corneal injury.

SKIN: May cause moderate skin irritation.

CHRONIC: Prolonged and/or repeated contact may cause defatting of the skin and dermatitis.
May cause liver damage.

INGESTION: Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse out the mouth with water. Get medical attention immediately. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible Death due to respiratory failure.

INHALATION: of vapor may cause respiratory tract irritation. May cause effects similar to those described for ingestion. Intentional abuse/misuse may be harmful or fatal.

Warning: Reports have associated repeated and prolonged occupational overexposure to solvents with irreversible brain and nervous system damage. Intentional misused by deliberately concentrating or inhaling this product may be harmful or fatal.

Section 3:	Composition information		
CAS#	Hazardous Components (Chem Name)	Concentration (%)	
68239-62-3	1H-Pyrazole-4,5-dione, 1-(2-chlorophenyl)-3-methyl-, 4-[(4-dodecylphenyl)hydrazon]	53.0	
71-23-8	1-Propanol {n-Propyl alcohol; Ethyl carbinol	46.0	
1330-20-7	Xylene		
50-00-0	Formaldehyde	<0.0005	
Proprietary*	Alkylphenol	<	
467-63-0	P,p1, p11-Tris(dimethylamino)trityl alcohol {crystal Violet Base; C.I. Solvent 9}	6.0-10.0	black
N/A	Trade secret	9.0-10.0	Black
111559-76-3	Ferrate(1-), bis[2-[{4-amino- shydrodroxyphenyl}azo]-4-chlorophenolato(2)]-, N,N,N1,N1-tetrakis[mixed 3-butoxy-2- hydroxypropylan	45.0-50.0	Black

*Denotes that a specific chemical identity and/or % has been withheld as a trade secret.

Section 4:**First Aid Measures****Emergency and First Aid Procedures:**

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Skin: Wash with soap and water. Remove contaminated clothing.

Ingestion: Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse out the mouth with water. Get medical attention immediately.

Inhaled vapor: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention immediately. Treat symptomatically and supportively.

Section 5:**Fire-Fighting Measures**

Flash Point: 77°F

Flammable limits (in air): LEL =1 UEL =7

Vapor pressure: 18mmHg

Auto ignition temperature: 405°C

Vapor Density (Air-1): 3.7

Suitable Extinguishing Media: Co2, Dry Chem Foam, DO NOT USE straight streams of water.

Fire Fighting Instructions: Special fire fighting procedures: Wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Combustion generates toxic fumes. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Flammable liquid, Can release vapors that form explosive mixtures at temperatures above the flashpoint. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Flammable Properties and Hazards: No data available

Hazardous Combustion Products: No data available

Section 6:**Accidental Release Measures**

Spill response Procedures: Use proper personal protective equipment as indicated in section 8. Spills/leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Provide ventilation.

Section 7:**Handling and Storage**

Precautions while Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Use spark proof tools and explosion proof equipment. Empty containers retain product residue, (liquid, and or vapor, and solids) and can be

dangerous. Do not get on skin or in eyes. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind or expose empty containers to heat, sparks or open flames.

Precautions for Storage:

Keep away from heat, sparks and flame. Do not store near combustible materials. Store in a cool, dry place. Store in a tightly closed container. Keep from contact with oxidizing materials.

Section 8: Exposure Controls / Personal Protection

OSHA specifically regulated substances (29 CFR 1910.1001-1050)

CAS#	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
68239-62-3	1H-Pyrazole-4,5-dione, 1-(2-chlorophenyl)-3-methyl-, 4-[(4-dodecylphenyl)hydrazon]	53.0		No Data
71-23-8	1-Propanol {n-Propyl alcohol; Ethyl carbinol	PEL: 200ppm	TLV: 200 ppm STEL: (250 ppm)	No Data
1330-20-7	Xylene	100 ppm	100 ppm	No Data
	Toluene	100 ppm	50 ppm	
	Ethylbenzene	100 ppm	100 ppm	
50-00-0	Formaldehyde	STEL 2 ppm TWA 0.75 ppm		No Data
		100 ppm	100 ppm	
Proprietary*	Alkylphenol	<		No Data
467-63-0	P,p1, p11-Tris(dimethylamino)trityl alcohol {crystal Violet Base; C.I. Solvent 9}	No Data	No Data	No Data
N/A	Trade secret	9.0-10.0		
111559-76-3	Ferrate(1-), bis[2-[(4-amino-hydroxyphenyl)azo]-4-chlorophenolato(2)-, N,N,N1,N1-tetrakis[mixed 3-butoxy-2-hydroxypropylan	No Data	No Data	No Data

*Denotes that a specific chemical identity and/or % has been withheld as a trade secret.

- Respiratory Equipment:** A respiratory program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.
- Eye Protection:** Wear chemical splash goggles
- Protective Gloves:** Wear appropriate protective glove to prevent skin exposure
- Other Protective Clothing:** Wear appropriate protective clothing to minimize contact with skin.
- Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Section 9:		Physical and Chemical Properties	
Physical state:	Colored liquid with aromatic odor.		
Lower Flammability Limit:	1	Upper Flammability Limit:	7
Boiling Point:	279°F	Flash point:	77°F
Auto-ignition temperature:	405°C	Decomposition temperature:	
Melting Point:	<32°F	Freezing point:	n/a
Evaporation Rate	(water=1): no data available:		
Vapor Pressure:	18mmHg	Vapor Density (air-1):	3.7
Water Solubility:	no data available		
Viscosity:		pH:	n/a

Section 10:		Stability and Reactivity	
Stability:	stable under normal use and temperature conditions.		
Conditions to avoid:	keep away from heat, flame and other potential ignition sources.		
Incompatibility - Materials to avoid:	strong acids, Acid Chlorides, Acid Anhydrides, Oxidizing Agents, Potassium tert-butoxide.		
Hazardous Decomposition Products	(including combustion products): when combusted, oxides of carbon and various hydrocarbons.		
Hazardous Polymerization:	Will not occur		
Conditions to avoid:	Vapor is flammable		

Section 11:		Toxicological Information	
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Typical routes of exposure:

- Inhalation:** minor exposure with normal use
- Ingestion:** not likely with normal use
- Skin contact:** minimal with proper use
- Eye contact:** unlikely with proper use

Symptoms of overexposure:

- Inhalation:** excessive inhalation of high concentrations may be harmful. Mist or vapor can irritate the throat and lungs.
- Ingestion:** if swallowed this material may irritate the mucous membranes of the mouth, throat and esophagus. Aspiration of this material into the lungs may result in damage or death
- Skin:** contact can cause redness and irritation. Severity depends on the amount and duration of exposure.
- Eye contact:** Vapors are irritating to the eyes. Liquid will cause stinging and tearing.

Immediate and Chronic effects:

- Inhalation:** of vapor may cause respiratory tract irritation with throat discomfort, coughing or difficulty breathing.. May cause effects similar to those described for ingestion. Intentional abuse/misuse may be harmful or fatal.
- Ingestion:** Never give anything by mouth to an unconscious person. Do not induce vomiting. Rinse out the mouth with water. Get medical attention immediately. May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible Death due to respiratory failure.
- Skin:** May cause moderate skin irritation.
- Eye:** May cause moderate eye irritation. Symptoms may include stinging, tearing, redness, swelling and blurred vision. May result in corneal injury.
- Chronic:** Prolonged and/or repeated contact may cause defatting of the skin and dermatitis. May cause liver damage. Reports have associated repeated and prolonged occupational overexposure to solvents with irreversible brain and nervous system damage. Intentional misused by deliberately concentrating or inhaling this product may be harmful or fatal.

Acute Toxicity: Expected to be a low hazard for usual industrial or commercial handling by trained personnel.

Measure of toxicity [LD50]

	Acute oral	Acute inhalation	Acute dermal
Propanol	LD50 rat: 1870mg/kg		
	Result: Gastrointestinal: Other changes. Blood: Hemorrhage		
C.I. Solvent 9	LD50 rat: 770mg/kg		
	LD50 Rabbit 180mg/kg		
	Result: Lungs, Thorax, or Respiration: Acute pulmonary edema.		
Xylene	LD50 rat: 4300mg/kg	LD50 rat: 5000ppm 4hr	LD50 rabbit >1700mg/kg
Ethylbenzene	LD50 rat: 3500mg/kg	LD50 rat: no data ava	LD50 rabbit 15433mg/kg
Toluene	LD50 rat:>5580mg/kg	LD50 rat: 12500-28800mg/m3	LD50 rabbit 12196mg/kg
Aquatic Toxicity: LC50 -	Oncorhynchus mykiss (rainbow trout) - 7.63mg/l -96h		
	NOEC - Pimephales promelas (fathead minnow) - 5.44mg/l - 7d		

Section 12: Ecological Information

General Ecological Information: Environmental: Expected to rapidly volatilize.
Physical: No information available.
Other: No information available.
CAS# 71-23-8: LC50 water flea (daphnia magna) 6700000. UG/L, 48H, mortality
LC50 bleak (alburnus alburnus) 3800000. UG/L, 96H, mortality

Section 13: Disposal Consideration

Waste Disposal Method: Check with local authorities for any special instructions.
Special disposal considerations: Spills/leaks: Liquid ink should be absorbed with inert material (e.g. vermiculite, sand or earth), allowed to dry in an area of adequate ventilation then place in suitable container. Dry ink is readily disposed of in trash. Empty pens can be disposed of trash.
DO NOT dispose of liquid in drain or allow to be introduced into sewer system or waterways.

Section 14: Transport Information

U.S. Hazardous Materials Regulation: (DOT 49CFR) Not regulated, this product conforms to small quantity exception of DOT 49CFR173.4

UN/NA #	UN shipping name	Transport hazard class(es)
UN# 1307	Xylene	3 Flammable Liquid
UN# 1274	N-Propanol	3 Flammable Liquid

Ground transportation: No special considerations in typical use quantity.
Air transportation: Special packaging may be required to prevent accidental leakage, seek advice from appropriate authorities.

Section 15: Regulatory Information

Toxic Substance Control Act (TSCA): all components of this product are listed on the TSCA inventory list.

Comprehensive Environmental Response and Liability Act (CERCLA) reportable materials:
Xylene: CAS# 1330-20-7:
N-Propanol CAS#
Ethyl Benzene CAS# 100-41-4

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title II, section 302. The reportable quantity (RQ) for chemicals contained in this material is 100 pounds.

SARA 311/312 (40 CFR 370) Fire hazard, acute health hazard, chronic health hazard.

SARA 313 (40 CFR 372) This product contains the following toxic chemical subject to reporting requirements:
Xylene, Formaldehyde

Clean Water Act: This product contains Xylene a chemical listed under the CWA.

Clean Air Act: This product contains no chemicals that are listed under the CAA.

California Prop. 65: This product contains no chemicals known by the State of California to cause cancer, birth defects or reproductive harm: Xylene, Formaldehyde

Section 16:

Other Information.

All information, recommendations and suggestions appearing herein concerning this product are based upon data obtained from the manufacturer(s), and/or recognized technical sources for all of the components contained herein as of the date of writing 9/1/2017. NuMark Marker Co., LLC makes no warranty, representation or guarantee as to the accuracy, sufficiency or completeness of the material contained herein.

It is the users responsibility to safety, toxicity and suitability of his or her own use, handling and disposal of this product. Since actual use by others is beyond the control of NuMark Marker Co., LLC, Neither warranty, express or implied, is made by NuMark Marker Co., LLC as to the effects of such use, the results to be obtained or the safety and toxicity of the product nor does NuMark Marker Co., LLC, assume any liability arising out of the use(s), or misuse, by others of the product referred to herein.

The data contained in this SDS relates only to the specific material designated herein and do not relate to use in combination with any other material(s) or in a process.

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