

1 Identification of substance:

- **Product details:**
- **Trade name:** **MARKERS, 2018 BLUE, GREEN, LT. GREEN, ORANGE, PINK, RED**
- **Application of the substance / the preparation:** Printing inks
- **Manufacturer/Supplier:**
 Diagraph MSP, an ITW Company
 Marking & Stenciling Products Division
 5307 Meadowland Parkway
 Marion, IL 62959
- **Customer Sales & Service:**
 800-521-3047 USA
 618-997-3321
 618-997-1766 Fax

email: msds@diagraphms.com

2 Composition/Data on components:

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:		
1330-20-7	xylene (mix)	20-40%
107-98-2	1-methoxy-2-propanol	5-20%
100-41-4	ethylbenzene	5-20%

- **Additional information:** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

- **Hazard description:**


 Harmful

- **Information pertaining to particular dangers for man and environment:**
 The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

Flammable.
 Harmful by inhalation and in contact with skin.
 Irritating to skin.

- **Classification system**
 The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **NFPA Ratings (scale 0-4)**

 Health = 2
 Fire = 3
 Reactivity = 0

- **HMIS Rating (scale 0-4)**

 Health - 2
 Flammability - 3
 Reactivity - 0

- **Routes of Entry**

Skin
 Ingestion
 Inhalation

- **Target Organs:** Eyes

- **Irritancy**

Eyes
 Respiratory Tract
 Skin

- **Sensitizing Capability:** None known

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- **Reproductive Effects** None known
- **Cancer Information** Not known to be carcinogenic.

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4 First aid measures

- **General information**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness place patient stably in side position for transportation. Consult doctor if symptoms persist.
In case of unconsciousness, place patient stably in side position for transportation.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact**
Rinse opened eye for 15 minutes under running water.
Remove contact lenses if necessary.
Seek immediate medical attention.
REMOVE CONTACTS IF NECESSARY.
SEEK IMMEDIATE MEDICAL ATTENTION.
- **After swallowing**
Drink plenty of water. Do not induce vomiting, if person is conscious. Get immediate medical attention.

5 Fire fighting measures

- **Suitable extinguishing agents** CO₂, sand, extinguishing powder. Do not use water.
- **For safety reasons unsuitable extinguishing agents**
Water.
Water with full jet.
- **Protective equipment:** Mount respiratory protective device.

6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
- **Measures for environmental protection:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
- **Measures for cleaning/collecting:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents

7 Handling and storage

- **Handling**
- **Information for safe handling:** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Storage**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Maximum storage temperature:** 120 F (49 C)
- **Minimum storage temperature** 35 F (2 C)

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8 Exposure controls and personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **Components with limit values that require monitoring at the workplace:**

1330-20-7 xylene (mix)	
PEL	435 mg/m ³ , 100 ppm
REL	Short-term value: 655 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm (o-, m-, & p-isomers)
TLV	Short-term value: 651 mg/m ³ , 150 ppm Long-term value: 434 mg/m ³ , 100 ppm
BEI	
107-98-2 1-methoxy-2-propanol	
REL	Short-term value: 540 mg/m ³ , 150 ppm Long-term value: 360 mg/m ³ , 100 ppm
TLV	Short-term value: 553 mg/m ³ , 150 ppm Long-term value: 369 mg/m ³ , 100 ppm
100-41-4 ethylbenzene	
PEL	435 mg/m ³ , 100 ppm
REL	Short-term value: 545 mg/m ³ , 125 ppm Long-term value: 435 mg/m ³ , 100 ppm
TLV	Short-term value: 543 mg/m ³ , 125 ppm Long-term value: 434 mg/m ³ , 100 ppm
BEI	

· **Personal protective equipment**

· **General protective and hygienic measures**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles.

9 Physical and chemical properties:

· **General Information**

Form: Liquid
Color: According to product specification
Odor: LIKE AROMATIC SOLVENTS

· **Change in condition**

Melting point/Melting range: undetermined

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Boiling point/Boiling range:	138°C (280°F)
· Flash point:	24°C (75°F)
· Ignition temperature:	270.0°C (518°F)
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	1.0 Vol %
Upper:	7.8 Vol %
· Vapor pressure at 20°C (68°F):	12.0 hPa (9 mm Hg)
· Density:	Not determined
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix
· Solvent content:	
Organic solvents:	55.0 %
· Solids content:	45.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** No dangerous reactions known
- **Dangerous products of decomposition:** No dangerous decomposition products known

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

1330-20-7 xylene (mix)

Oral	LD50	8700 mg/kg (rat)
Dermal	LD50	2000 mg/kg (rbt)
Inhalative	LC50/4 h	6350 mg/l (rat)

- **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating to eyes.

- **Sensitization:** No sensitizing effects known.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

12 Ecological information:

- **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water.
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.

13 Disposal considerations

- **Product:**

- **Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

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Comply with all Federal, State, and Local regulations regarding disposal.

· **Uncleaned packagings:**

· **Recommendation:**

Disposal must be made according to official regulations.

Comply with all Federal, State, and Local regulations regarding disposal.

14 Transport information

· **DOT regulations:**



· **Hazard class:** 3

· **Identification number:** UN1210

· **Packing group:** III

· **Proper shipping name (technical name):** PRINTING INK

· **Label:** 3

· **Remarks:** Note: For US Ground shipments, this product is classified as "Consumer Commodity" ORM-D.

· **Land transport ADR/RID (cross-border)**



· **ADR/RID class:** 3 Flammable liquids

· **Danger code (Kemler):** 30

· **UN-Number:** 1210

· **Packaging group:** III

· **Description of goods:** 1210 PRINTING INK

· **Maritime transport IMDG:**



· **IMDG Class:** 3

· **UN Number:** 1210

· **Label:** 3

· **Packaging group:** III

· **EMS Number:** F-E,S-E

· **Marine pollutant:** No

· **Proper shipping name:** PRINTING INK

· **Air transport ICAO-TI and IATA-DGR:**



· **ICAO/IATA Class:** 3

· **UN/ID Number:** 1210

· **Label:** 3

· **Packaging group:** III

· **Proper shipping name:** PRINTING INK

15 Regulations

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

1330-20-7	xylene (mix)	D
100-41-4	ethylbenzene	D

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· **IARC (International Agency for Research on Cancer)**

1330-20-7	xylene (mix)	3
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· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

1330-20-7	xylene (mix)	A4
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· **MAK (German Maximum Workplace Concentration)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

· **Product related hazard information:**

The product has been classified and marked in accordance with directives on hazardous materials.

· **Hazard symbols:**

Harmful

· **Hazard-determining components of labelling:**

xylene (mix)

· **Risk phrases:**

Flammable.

Harmful by inhalation and in contact with skin.

Irritating to skin.

· **Safety phrases:**

Keep out of the reach of children.

Keep container in a well-ventilated place.

Keep away from food, drink and animal feedingstuffs.

Do not empty into drains, dispose of this material and its container at hazardous or special waste collection point

Wear suitable protective clothing and gloves.

If swallowed, seek medical advice immediately and show this container or label.

· **National regulations**

· **Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water.**

· **Other regulations, limitations and prohibitive regulations**

· **OSHA Regulations**

Air Contaminant (29 CFR 1910.1000, Table Z-1, Z-1-A): Not listed

OSHA Specifically Regulated Substance (29 CFR 1910.): Not listed

· **Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III, Section 313:**

1330-20-7	xylene (mix)
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100-41-4	ethylbenzene
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· **CONEG:**

This product has not been tested for heavy metals covered under the various CONEG laws. However, raw materials used to make this product do not contain mercury, lead, cadmium, or hexavalent chromium and none are added during manufacture.

· **Toxic Substances Control Act TSCA Status:**

All components of this product are listed in the EPA's Inventory of Chemical Substances as required under the Toxic Substances Control Act (TSCA).

· **California Proposition 65 (Chemicals known to cause cancer):**

71-43-2	benzene
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100-41-4	ethylbenzene
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· **California Proposition 65 (Chemicals known to cause reproductive toxicity):**

71-43-2	benzene
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108-88-3	toluene
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16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **MSDS Created By:** P. GIMSE
- **File:** 446
- **Revision Information (All previous revisions obsolete):** CREATED: 3-23-2005

USA