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1 Identification of substance:

- **Product details:**
- **Trade name:** **Marker, Assortment Pack (All Colors)**
- **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
618-997-3321
618-997-1766 Fax*
- **Information Department:** *msds@diagraphmsp.com*
- **Emergency information:**
*Contact Infotrac: (800) 535 5053 (US only)
International: +1 352 323 3500*

2 Composition/Data on components:

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

· **Dangerous components:**

107-98-2	<i>1-methoxy-2-propanol</i>	<i>40-60%</i>
1330-20-7	<i>xylene (mix)</i>	<i>5-20%</i>
100-41-4	<i>ethylbenzene</i>	<i>0-5%</i>
1589-47-5	<i>2-methoxypropanol</i>	<i><1%</i>

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

3 Hazards identification

- **Hazard description:**



Toxic

- **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.
May cause cancer.
May cause heritable genetic damage.
Flammable.
Also harmful by inhalation and in contact with 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*

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· **HMIS Rating (scale 0-4)**

HEALTH	2	Health - 2
FIRE	3	Flammability - 3
REACTIVITY	0	Reactivity - 0

· **Routes of Entry**

Skin

Ingestion

Inhalation

· **Target Organs** Eyes

· **Irritancy**

Eyes

Respiratory Tract

Skin

· **Sensitizing Capability** None known

· **Reproductive Effects** May cause heritable genetic damage.

· **Cancer Information** May cause cancer.

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.

· **After skin contact** Immediately rinse with water.

· **After eye contact** Rinse opened eye for several minutes under running water. Then consult a doctor.

· **After swallowing**

If swallowed, do not induce vomiting; seek medical advice immediately and show this container or label

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

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7 Handling and storage

- **Handling**
- **Information for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Open and handle receptacle with care.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
Keep respiratory protective device available.
- **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)

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:**

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

1330-20-7 xylene (mix)

REL	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
TLV	Short-term value: 651 mg/m ³ , 150 ppm Long-term value: 434 mg/m ³ , 100 ppm BEI

100-41-4 ethylbenzene

REL	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

8052-41-3 Mineral spirits

REL	2900 mg/m ³ , 500 ppm
REL	Short-term value: C 1800* mg/m ³ Long-term value: 350 mg/m ³ *15-min
TLV	525 mg/m ³ , 100 ppm

- **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.
Store protective clothing separately.
Avoid contact with the eyes and skin.

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· **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.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **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: Black
Odor: Characteristic

· **Change in condition**

Melting point/Melting range: undetermined
Boiling point/Boiling range: 120°C (248°F)

· **Flash point:** 21°C (70°F)

· **Ignition temperature:** 270°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: 1.1 Vol %
Upper: 7.0 Vol %

· **Vapor pressure at 20°C (68°F):** 12 hPa (9 mm Hg)

· **Density:** Not determined

· **Solubility in / Miscibility with**

Water: Not miscible or difficult to mix

· **Solvent content:**

Organic solvents: 67.6 %

· **Solids content:** 32.4 %

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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:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Carcinogenic
The product can cause inheritable damage.

12 Ecological information:

- **General notes:**
Water danger class 3 (Self-assessment): extremely hazardous for water.
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even extremely 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.
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.

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14 Transport information

· **DOT regulations:**



- **Hazard class:** 3
- **Identification number:** UN1210
- **Packing group:** II
- **ERG #** 129
- **Proper shipping name (technical name):** PRINTING INK
- **Label** 3
- **Remarks:** Note: For Ground shipments, this product is classified as "Consumer Commodity" ORM-D.

This product should not be shipped by air for US shipments at this time.

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



- **ADR/RID class:** 3 Flammable liquids
- **Danger code (Kemler):** 33
- **UN-Number:** 1210
- **Packaging group:** II
- **Description of goods:** 1210 PRINTING INK (vapor pressure at 50°C at most 110 kPa)

· **Maritime transport IMDG:**



- **IMDG Class:** 3
- **UN Number:** 1210
- **Label** 3
- **Packaging group:** II
- **EMS Number:** F-E,S-D
- **Marine pollutant:** No
- **Propper shipping name:** PRINTING INK

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



- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1210
- **Label** 3
- **Packaging group:** II
- **Propper shipping name:** PRINTING INK

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15 Regulations

· **Carcinogenicity categories**

· EPA (Environmental Protection Agency)		
1330-20-7	xylene (mix)	I
100-41-4	ethylbenzene	D
108-88-3	toluene	II
71-43-2	benzene	K
· IARC (International Agency for Research on Cancer)		
1330-20-7	xylene (mix)	3
1333-86-4	Carbon black	2B
100-41-4	ethylbenzene	2B
108-88-3	toluene	3
71-43-2	benzene	I
· NTP (National Toxicology Program)		
71-43-2	benzene	K
· TLV (Threshold Limit Value established by ACGIH)		
1330-20-7	xylene (mix)	A4
1333-86-4	Carbon black	A4
100-41-4	ethylbenzene	A3
108-88-3	toluene	A4
71-43-2	benzene	A1
· MAK (German Maximum Workplace Concentration)		
1333-86-4	Carbon black	3B
100-41-4	ethylbenzene	3A
71-43-2	benzene	I
· NIOSH-Ca (National Institute for Occupational Safety and Health)		
1333-86-4	Carbon black	
71-43-2	benzene	
· OSHA-Ca (Occupational Safety & Health Administration)		
71-43-2	benzene	

· **Product related hazard information:**

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

· **Hazard symbols:**

Toxic

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

Mineral spirits

xylene (mix)

· **Risk phrases:**

May cause cancer.

May cause heritable genetic damage.

Flammable.

Also harmful by inhalation and in contact with skin.

· **Safety phrases:**

Avoid exposure - obtain special instructions before use.

Keep locked up and out of the reach of children.

Keep container in a well-ventilated place.

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

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*Wear suitable protective clothing, gloves and eye/face protection.
In case of accident or if you feel unwell, seek medical advice immediately.*

· **National regulations**

· **Water hazard class:** Water danger class 3 (Self-assessment): extremely 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)
100-41-4	ethylbenzene

· **CONEG:**

This product meets CONEG and RoHS legislation for low levels of Lead, Cadmium, Mercury, Hexavalent Chrome, and Brominated flame retardants.

· **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):**

100-41-4	ethylbenzene
71-43-2	benzene

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

108-88-3	toluene
71-43-2	benzene

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.

· **Department issuing MSDS:** Chemistry

· **MSDS Created By:** Jacqueline Cullum

· **Revision Information (All previous revisions obsolete):**

4/28/2009 Updated flashpoint and shipping

1/16/2009 New SDS issued. All other versions are obsolete.

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