



## SAFETY DATA SHEET DPI-413 Green Ink

### 1. Identification

#### Product identifier

**Product name**                    DPI-413 Green Ink  
**Product number**                71002028, 71002029  
**Container size**                  6 x 1 Liter, 5 Gallon Pail

#### Recommended use of the chemical and restrictions on use

**Application**                      Printing ink.  
**Uses advised against**            Use only for intended applications.

#### Details of the supplier of the safety data sheet

**Supplier**                          Matthews Marking Systems  
    3159 Unionville Road, Suite 500  
    Cranberry Township, PA 16066  
    412.665.2500  
    412.828.4545  
    info@matw.com

**Manufacturer**                  Matthews Marking Systems  
    Zona Franca La Lima  
    Multitenant #8  
    Cartago, Costa Rica 30106  
    (506) 4000-1103

#### Emergency telephone number

**Emergency telephone**        Chemtrec US : 1-800-424-9300 Chemtrec World: 1-703-527-3887

### 2. Hazard(s) identification

#### Classification of the substance or mixture

**OSHA Regulatory Status**        This Product is Hazardous under the OSHA Hazard Communication Standard.  
**Physical hazards**                Flam. Liq. 2 - H225  
**Health hazards**                  Eye Dam. 1 - H318 Skin Sens. 1 - H317 STOT SE 3 - H336  
**Environmental hazards**        Not Classified

#### Label elements

##### Hazard symbols



**Signal word**

Danger

## DPI-413 Green Ink

<b>Hazard statements</b>	H225 Highly flammable liquid and vapor. H318 Causes serious eye damage. H317 May cause an allergic skin reaction. H336 May cause drowsiness or dizziness.
<b>Precautionary statements</b>	P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P312 Call a poison center/ doctor if you feel unwell. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P501 Dispose of contents/ container in accordance with national regulations.
<b>Contains</b>	Ethyl acetate, N-Propanol, Solvent Yellow 21

### 3. Composition/information on ingredients

#### Mixtures

<b>Ethyl acetate</b>	<b>80-&lt;90%</b>
CAS number: 141-78-6	
<b>Classification</b> Flam. Liq. 2 - H225 Eye Irrit. 2A - H319 STOT SE 3 - H336	
<b>N-Propanol</b>	<b>5-&lt;10%</b>
CAS number: 71-23-8	
<b>Classification</b> Flam. Liq. 2 - H225 Eye Dam. 1 - H318 STOT SE 3 - H336	
<b>Solvent Yellow 21</b>	<b>1-&lt;5%</b>
CAS number: Proprietary	
<b>Classification</b> Eye Irrit. 2B - H320 Skin Sens. 1 - H317	

The full text for all hazard statements is displayed in Section 16.

<b>Composition comments</b>	This material does not contain any Hazardous Air Pollutants (HAPS) as defined by the Clean Air Act under the US Environmental Protection Agency (EPA).
<b>Ingredient notes</b>	The exact percentage/concentration is withheld as a trade secret in accordance with 29 CFR 1910.1200. The exact identity is withheld as a trade secret in accordance with 29 CFR 1910.1200.

### 4. First-aid measures

#### Description of first aid measures

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<b>General information</b>	Consult a physician for specific advice. If medical advice is needed, have product container or label at hand. If in doubt, get medical attention promptly. Show this Safety Data Sheet to the medical personnel.
<b>Inhalation</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. Consult a physician for specific advice.
<b>Ingestion</b>	Get medical attention immediately. Do not induce vomiting unless under the direction of medical personnel. Never give anything by mouth to an unconscious person.
<b>Skin Contact</b>	Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Wash skin thoroughly with soap and water. Get medical attention if irritation persists after washing. Wash clothing and clean shoes thoroughly before reuse.
<b>Eye contact</b>	Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.
<b>Protection of first aiders</b>	First aid personnel should wear appropriate protective equipment during any rescue.

### Most important symptoms and effects, both acute and delayed

<b>General information</b>	The product is considered to be a low hazard under normal conditions of use. The severity of the symptoms described will vary dependent on the concentration and the length of exposure. See Section 11 for additional information on health hazards.
<b>Inhalation</b>	Gas or vapor in high concentrations may irritate the respiratory system. Vapours may cause drowsiness and dizziness.
<b>Ingestion</b>	Harmful if swallowed. May cause nausea, headache, dizziness and intoxication.
<b>Skin contact</b>	Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.
<b>Eye contact</b>	This product is moderately irritating. Symptoms following overexposure to vapor may include the following: Severe irritation, burning, tearing and blurred vision.

### Indication of immediate medical attention and special treatment needed

<b>Notes for the doctor</b>	Treat symptomatically.
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## 5. Fire-fighting measures

### Extinguishing media

<b>Suitable extinguishing media</b>	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
<b>Unsuitable extinguishing media</b>	None known.

### Special hazards arising from the substance or mixture

<b>Flammability Class</b>	7.1 Flammable Liquid IB.
<b>Specific hazards</b>	Flammable liquid and vapour. Vapors are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back.
<b>Hazardous combustion products</b>	Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide (CO).
<b><u>Advice for firefighters</u></b>	
<b>Protective actions during firefighting</b>	Evacuate area. Stop leak if safe to do so. Use water to keep fire exposed containers cool and disperse vapors. Use water spray to reduce vapors.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

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### 6. Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

**Personal precautions** No smoking, sparks, flames or other sources of ignition near spillage. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapors. Wash thoroughly after dealing with a spillage. Ensure procedures and training for emergency decontamination and disposal are in place.

#### Environmental precautions

**Environmental precautions** Avoid release to the environment. Do not discharge into drains or watercourses or onto the ground. Use appropriate containment to avoid environmental contamination. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

#### Methods and material for containment and cleaning up

**Methods for cleaning up** Eliminate all sources of ignition. Stop leak if safe to do so. Do not touch or walk into spilled material. Take care as floors and other surfaces may become slippery. Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. When handling waste, the safety precautions applying to handling of the product should be considered. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

**Reference to other sections** For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

### 7. Handling and storage

#### Precautions for safe handling

**Usage precautions** Wear protective clothing as described in Section 8 of this safety data sheet.

**Advice on general occupational hygiene** Do not eat, drink or smoke when using this product. Provide eyewash station and safety shower. Good personal hygiene procedures should be implemented. Wash skin thoroughly after handling. Wash contaminated clothing before reuse.

#### Conditions for safe storage, including any incompatibilities

**Storage precautions** Store at temperatures between 4.4°C/40°F and 32.2°C/90°F. Keep only in the original container in a cool, well-ventilated place. Protect from freezing and direct sunlight. Container must be kept tightly closed when not in use. Keep containers upright. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Store in accordance with national regulations.

**Storage class** Flammable liquid storage.

#### Specific end uses(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.

### 8. Exposure controls/Personal protection

#### Control parameters

#### Occupational exposure limits

##### **Ethyl acetate**

Long-term exposure limit (8-hour TWA): ACGIH 400 ppm 1440 mg/m<sup>3</sup>

Long-term exposure limit (8-hour TWA): OSHA 400 ppm 1400 mg/m<sup>3</sup>

##### **N-Propanol**

## DPI-413 Green Ink

Long-term exposure limit (8-hour TWA): ACGIH 100 ppm 246 mg/m<sup>3</sup>  
A4

Long-term exposure limit (8-hour TWA): OSHA 200 ppm 500 mg/m<sup>3</sup>

### Solvent Yellow 21

Long-term exposure limit (8-hour TWA): OSHA 0.5 - Cr(III) mg/m<sup>3</sup> as dust

Long-term exposure limit (8-hour TWA): ACGIH 0.5 - Cr(III) mg/m<sup>3</sup> as dust

ACGIH = American Conference of Governmental Industrial Hygienists.

OSHA = Occupational Safety and Health Administration.

A4 = Not Classifiable as a Human Carcinogen.

**Ingredient comments** Data based on literature. Product not tested.

### Ethyl acetate (CAS: 141-78-6)

**Immediate danger to life and health** 2000 ppm

### N-Propanol (CAS: 71-23-8)

**Immediate danger to life and health** 800 ppm

### Exposure controls

#### Protective equipment



#### Appropriate engineering controls

As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapor or mist. Use explosion-proof ventilating equipment.

#### Eye/face protection

Wear tight-fitting, chemical splash goggles or face shield.

#### Hand protection

It is recommended that chemical-resistant, impervious gloves are worn. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. It is recommended that gloves are made of the following material: Butyl rubber. Nitrile rubber. Rubber (natural, latex). Frequent changes are recommended.

#### Other skin and body protection

Avoid contact with skin. Wear appropriate clothing to prevent repeated or prolonged skin contact.

#### Hygiene measures

Wash contaminated skin thoroughly after handling. Provide eyewash station and safety shower.

#### Respiratory protection

If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Organic vapor filter.

#### Thermal hazards

If there is a risk of contact with hot product, all protective equipment worn should be suitable for use with high temperatures.

#### Environmental exposure controls

Keep container tightly sealed when not in use.

## 9. Physical and chemical properties

### Information on basic physical and chemical properties

## DPI-413 Green Ink

<b>Appearance</b>	Colored liquid.
<b>Color</b>	Green.
<b>Odor</b>	Ester. Sweetish.
<b>Melting point</b>	-127°C/-196.6°F
<b>Initial boiling point and range</b>	78°C/172°F @ 760 mm Hg
<b>Flash point</b>	-4°C/24°F Closed cup.
<b>Evaporation rate</b>	4.1 (butyl acetate = 1)
<b>Upper/lower flammability or explosive limits</b>	Upper flammable/explosive limit: 11 % vol Lower flammable/explosive limit: 2.2 % vol
<b>Vapor pressure</b>	86 mm Hg @ 20°C/68°F
<b>Vapor density</b>	2.1
<b>Relative density</b>	0.904 g/cc 904 g/l 7.53 lbs/gal
<b>Solubility(ies)</b>	Soluble in the following materials: Alcohols. Esters. Slightly soluble in water.
<b>Partition coefficient</b>	log Pow: 0.73
<b>Auto-ignition temperature</b>	413°C/775°F
<b>Decomposition Temperature</b>	Not applicable.
<b>Explosive properties</b>	Not applicable.
<b>Oxidizing properties</b>	Not applicable.
<b>Comments</b>	Information given is applicable to the product as supplied. Information declared as "Not available" or "Not applicable" is not considered to be relevant to the implementation of the proper control measures.
<b>Volatile organic compound</b>	This product contains a maximum VOC content of 860 g/l. This product contains a maximum VOC content of 7.16 lbs/gal.
<b>HAPS Content</b>	0.00

### 10. Stability and reactivity

<b>Reactivity</b>	There are no known reactivity hazards associated with this product.
<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended.
<b>Conditions to avoid</b>	Avoid the following conditions: Heat, sparks, flames.
<b>Materials to avoid</b>	Avoid contact with the following materials: Strong acids. Strong alkalis. Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Heating may generate the following products: Carbon dioxide (CO <sub>2</sub> ). Carbon monoxide (CO).

### 11. Toxicological information

#### Information on toxicological effects

**Toxicological effects** Information given is based on data of the components and of similar products.

#### Specific target organ toxicity - single exposure

## DPI-413 Green Ink

**Target organs** Eyes Respiratory system, lungs

### Specific target organ toxicity - repeated exposure

**Target organs** Skin

### Toxicological information on ingredients.

#### Ethyl acetate

##### Acute toxicity - inhalation

**Acute toxicity inhalation** 58.0  
(LC<sub>50</sub> vapours mg/l)

**ATE inhalation (vapours** 58.0  
**mg/l)**

##### Serious eye damage/irritation

**Serious eye** Causes eye irritation.  
**damage/irritation**

##### Specific target organ toxicity - single exposure

**Target organs** Central nervous system

#### N-Propanol

##### Acute toxicity - inhalation

**Acute toxicity inhalation** 9.9  
(LC<sub>50</sub> dust/mist mg/l)

**ATE inhalation** 9.9  
(dusts/mists mg/l)

##### Serious eye damage/irritation

**Serious eye** Causes serious eye irritation.  
**damage/irritation**

##### Specific target organ toxicity - single exposure

**Target organs** Central nervous system

#### Solvent Yellow 21

##### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub>** 5,000.1  
**mg/kg)**

**Species** Rat

**ATE oral (mg/kg)** 5,000.1

##### Acute toxicity - dermal

**Acute toxicity dermal (LD<sub>50</sub>** 2,000.1  
**mg/kg)**

**Species** Rat

**ATE dermal (mg/kg)** 2,000.1

### 12. Ecological information

## DPI-413 Green Ink

### Ecological information on ingredients.

#### Ethyl acetate

##### Acute aquatic toxicity

<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 48 hours: 270 mg/l, Leuciscus idus (Golden orfe) LC <sub>50</sub> , 96 hours: 230 mg/l, Pimephales promelas (Fat-head Minnow)
<b>Acute toxicity - aquatic invertebrates</b>	EC <sub>50</sub> , 24 hours: 717 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 48 hours: 3300 mg/l, Freshwater algae
<b>Acute toxicity - microorganisms</b>	EC <sub>50</sub> , 5 minutes: 1180 mg/l, Activated sludge EC <sub>50</sub> , 15 minutes: 1500 mg/l, Activated sludge EC <sub>50</sub> , 2 hours: 7400 mg/l, Activated sludge

#### N-Propanol

##### Acute aquatic toxicity

<b>Acute toxicity - fish</b>	LC <sub>50</sub> , 96 hours: > 804 mg/l, Pimephales promelas (Fat-head Minnow)
<b>Acute toxicity - aquatic invertebrates</b>	LC <sub>50</sub> , 96 hours: > 804 mg/l, Daphnia magna
<b>Acute toxicity - aquatic plants</b>	EC <sub>50</sub> , 48 hours: >100 mg/l, Pseudokirchneriella subcapitata
<b>Chronic aquatic toxicity</b>	
<b>Chronic toxicity - aquatic invertebrates</b>	NOEC, 21 days: >100 mg/l, Daphnia magna

### Persistence and degradability

### Ecological information on ingredients.

#### N-Propanol

<b>Persistence and degradability</b>	The product is readily biodegradable.
<b>Biodegradation</b>	Soil - Degradation 75%: 20 days
<b>Biological oxygen demand</b>	<2000 mg O <sub>2</sub> /l
<b>Chemical oxygen demand</b>	0.071 g O <sub>2</sub> /g substance

### Bioaccumulative potential

**Partition coefficient**                      log Pow: 0.73

### Ecological information on ingredients.

#### Ethyl acetate

**Partition coefficient**                      Pow: 5.4 log Pow: 0.73

### 13. Disposal considerations

### Waste treatment methods



## DPI-413 Green Ink

### General information

The generation of waste should be minimized or avoided wherever possible. When handling waste, the safety precautions applying to handling of the product should be considered. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. Dispose of waste product or used containers in accordance with local regulations. Disposal of this product, process solutions, residues and by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any local authority requirements.

### Disposal methods

Dispose of contents/container in accordance with national regulations. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. When handling waste, the safety precautions applying to handling of the product should be considered.

### 14. Transport information

#### UN Number

UN No. (TDG)	1210
UN No. (IMDG)	1210
UN No. (ICAO)	1210
UN No. (DOT)	1210

#### UN proper shipping name

Proper shipping name (TDG)	PRINTING INK
Proper shipping name (IMDG)	PRINTING INK
Proper shipping name (ICAO)	PRINTING INK
Proper shipping name (DOT)	PRINTING INK

#### Transport hazard class(es)

TDG class	3
TDG label(s)	3
IMDG Class	3
ICAO class/division	3

#### Transport labels



#### Packing group

TDG Packing Group	II
IMDG packing group	II
ICAO packing group	II
DOT packing group	II

#### Environmental hazards

**Environmentally Hazardous Substance**  
No.

#### Special precautions for user

## DPI-413 Green Ink

EmS

F-E, S-D

### 15. Regulatory information

**Regulatory Status** Hazardous Chemical

**Regulatory References** OSHA Hazard Communication Standard, 29 CFR 1910.1200

#### US Federal Regulations

##### **CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)**

*Ethyl acetate*

Final CERCLA RQ: 5000(2270) pounds (Kilograms)

##### **SARA (311/312) Hazard Categories**

*Ethyl acetate*

Acute  
Chronic  
Fire

*N-Propanol*

Fire  
Acute

*Solvent Yellow 21*

Acute

##### **OSHA Highly Hazardous Chemicals**

*N-Propanol*

#### US State Regulations

##### **California Directors List of Hazardous Substances**

The following ingredients are listed:

*Ethyl acetate*

*N-Propanol*

##### **Massachusetts "Right To Know" List**

The following ingredients are listed:

*Ethyl acetate*

*N-Propanol*

*Joncryl 682*

##### **Rhode Island "Right To Know" List**

The following ingredients are listed:

*Ethyl acetate*

*N-Propanol*

##### **Minnesota "Right To Know" List**

The following ingredients are listed:

*Ethyl acetate*

*N-Propanol*

##### **New Jersey "Right To Know" List**

The following ingredients are listed:

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*Ethyl acetate*

*N-Propanol*

*Joncryl 682*

### **Pennsylvania "Right To Know" List**

The following ingredients are listed:

*Ethyl acetate*

*N-Propanol*

*Joncryl 682*

### **Inventories**

#### **EU - EINECS/ELINCS**

All the ingredients are listed or exempt.

#### **Canada - DSL/NDL**

All the ingredients are listed or exempt.

#### **US - TSCA**

All the ingredients are listed or exempt.

#### **Australia - AICS**

*Ethyl acetate*

*N-Propanol*

#### **Japan - ENCS**

*Ethyl acetate*

*N-Propanol*

#### **Korea - KECI**

*Ethyl acetate*

*N-Propanol*

#### **China - IECSC**

*Ethyl acetate*

*N-Propanol*

#### **Philippines - PICCS**

The following ingredients are listed:

*Ethyl acetate*

*N-Propanol*

#### **New Zealand - NZIOC**

*Ethyl acetate*

*N-Propanol*

#### **Taiwan - TCSI**

The following ingredients are listed:

*Ethyl acetate*

## DPI-413 Green Ink

*N-Propanol*

### 16. Other information

<b>Issued by</b>	Matthews Marking Systems - Chemical Services Department
<b>Revision date</b>	3/2/2020
<b>Revision</b>	4
<b>Supersedes date</b>	6/1/2017
<b>SDS No.</b>	4790
<b>SDS status</b>	Approved.
<b>Hazard statements in full</b>	H225 Highly flammable liquid and vapor. H317 May cause an allergic skin reaction. H318 Causes serious eye damage. H319 Causes serious eye irritation. H320 Causes eye irritation. H336 May cause drowsiness or dizziness.
<b>NFPA - health hazard</b>	Irritation, minor residual injury. (1)
<b>NFPA - flammability hazard</b>	Ignites easily. (3)
<b>NFPA - instability hazard</b>	Normally stable. (0)
<b>ACA HMIS Health rating.</b>	Slight hazard. (1)
<b>ACA HMIS Flammability rating.</b>	Ignites easily. (3)
<b>ACA HMIS Physical hazard rating.</b>	Normally stable. (0)
<b>ACA HMIS Personal protection rating.</b>	B

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.