



SAFETY DATA SHEET

DPI-860 Ceramic Marking Temperature Resistant White Ink

1. Identification

Product identifier

Product name DPI-860 Ceramic Marking Temperature Resistant White Ink

Product number 71085642, 71085643, 71085644, 71085648, 71085656

Container size 2 x 4 Liter, 4 x 4 Liter, 5 Gallon Pail, 6 x 1 Liter

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 Irrit. 2A - H319 Carc. 2 - H351 Repr. 2 - H361d STOT SE 3 - H335

Environmental hazards Not Classified

Label elements

Hazard symbols



Signal word

Danger

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Hazard statements	H225 Highly flammable liquid and vapor. H319 Causes serious eye irritation. H351 Suspected of causing cancer. H361d Suspected of damaging the unborn child. H335 May cause respiratory irritation.
Precautionary statements	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.
Contains	Methyl Ethyl Ketone , Titanium Dioxide, Silicone Resin

3. Composition/information on ingredients

Mixtures

Methyl Ethyl Ketone CAS number: 78-93-3	50-<30%
Classification Flam. Liq. 2 - H225 Eye Irrit. 2A - H319 STOT SE 3 - H335	
Titanium Dioxide CAS number: 13463-67-7	10-<30%
Classification Carc. 2 - H351	
Silicone Resin CAS number: 25766-16-9	5-<10%
Classification Repr. 2 - H361d	

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

Composition comments	This material does contain Hazardous Air Pollutants (HAPS) as defined by the Clean Air Act under the US Environmental Protection Agency (EPA). See Sections 9 and 15 for further details.
Ingredient notes	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

General information	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.
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Inhalation	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.
Ingestion	Get medical attention immediately. Never give anything by mouth to an unconscious person. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs.
Skin Contact	Remove contaminated clothing immediately and wash skin with soap and water. Get medical attention if irritation persists after washing. Wash clothing and clean shoes thoroughly before reuse.
Eye contact	Rinse immediately with plenty of water. Continue to rinse for at least 15 minutes and get medical attention.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

Most important symptoms and effects, both acute and delayed

General information	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.
Inhalation	May cause respiratory system irritation. Vapor may affect central nervous system. May cause drowsiness or dizziness.
Ingestion	May cause nausea, headache, dizziness and intoxication. May cause stomach pain or vomiting.
Skin contact	The product is considered to be a low hazard under normal conditions of use. Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.
Eye contact	This product is strongly irritating. Symptoms following overexposure may include the following: Severe irritation, burning, tearing and blurred vision. Prolonged contact causes serious eye and tissue damage.

Indication of immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
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5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
Unsuitable extinguishing media	Water spray.

Special hazards arising from the substance or mixture

Flammability Class	7.1 Flammable Liquid IB.
Specific hazards	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.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Carbon dioxide (CO ₂). Carbon monoxide (CO).
Advice for firefighters	
Protective actions during firefighting	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.
Special protective equipment for firefighters	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.

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

Methyl Ethyl Ketone

Long-term exposure limit (8-hour TWA): ACGIH 200 ppm 590 mg/m³

Short-term exposure limit (15-minute): ACGIH 300 ppm 885 mg/m³

Long-term exposure limit (8-hour TWA): OSHA 200 ppm 590 mg/m³

Titanium Dioxide

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Long-term exposure limit (8-hour TWA): ACGIH 10 mg/m³

A4

Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ total dust

ACGIH = American Conference of Governmental Industrial Hygienists.

A4 = Not Classifiable as a Human Carcinogen.

OSHA = Occupational Safety and Health Administration.

Ingredient comments Data based on literature. Product not tested.

Methyl Ethyl Ketone (CAS: 78-93-3)

Immediate danger to life and health 3000 ppm

Titanium Dioxide (CAS: 13463-67-7)

Immediate danger to life and health 5000 mg/m³

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

Appearance Colored liquid.

Color White.

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Odor	Ketonic.
Melting point	-86°C/-123°F
Initial boiling point and range	79°C/147°F @ 760 mm Hg
Flash point	-9°C/16°F Closed cup.
Evaporation rate	3.7 (butyl acetate = 1)
Upper/lower flammability or explosive limits	Upper flammable/explosive limit: 11.5 % vol Lower flammable/explosive limit: 1.8 % vol
Vapor pressure	71.25 mm Hg @ 20°C/68°F
Vapor density	2.4
Relative density	0.93421 g/mL 934.21 g/L 7.78 lbs/gal
Solubility(ies)	Soluble in the following materials: Ketones. Slightly soluble in water.
Partition coefficient	log Pow: 0.26
Auto-ignition temperature	404°C/759°F
Decomposition Temperature	Not applicable.
Explosive properties	Not applicable.
Oxidizing properties	Not applicable.
Comments	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.
Volatile organic compound	This product contains a maximum VOC content of 747 g/l. This product contains a maximum VOC content of 6.23 lbs/gal.

10. Stability and reactivity

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

Target organs Central nervous system Eyes Gastro-intestinal tract Respiratory system, lungs Skin

Specific target organ toxicity - repeated exposure

Target organs Skin

Toxicological information on ingredients.

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Methyl Ethyl Ketone

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 32,000.0

ATE inhalation (vapours mg/l) 32,000.0

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye irritation.

Titanium Dioxide

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,001.0

Species Rat

ATE oral (mg/kg) 5,001.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 10,001.0

Species Rabbit

ATE dermal (mg/kg) 10,001.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 7.0

Species Rat

ATE inhalation (dusts/mists mg/l) 7.0

Carcinogenicity

IARC carcinogenicity IARC Group 2B Possibly carcinogenic to humans.

Silicone Resin

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,000.01

Species Rat

ATE oral (mg/kg) 5,000.01

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 5,000.01

Species Rabbit

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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

EmS F-E, S-D

15. Regulatory information

Regulatory References OSHA Hazard Communication Standard, 29 CFR 1910.1200

US Federal Regulations

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

Methyl Ethyl Ketone

Silicone Resin

Isobutanol

Ethylbenzene

Xylene

SARA 313 Emission Reporting

Ethylbenzene

Xylene

Roy Wax 1458C

SARA (311/312) Hazard Categories

Titanium Dioxide

Methyl Ethyl Ketone

Silicone Resin

Isobutanol

Ethylbenzene

Xylene

Roy Wax 1458C

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US State Regulations

California Proposition 65 Carcinogens and Reproductive Toxins

Titanium Dioxide

Carcinogen.

Silicone Resin

Yes

Ethylbenzene

Carcinogen.

Xylene

Carcinogen.

Roy Wax 1458C

Does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

California Air Toxics "Hot Spots" (A-I)

Methyl Ethyl Ketone

Ethylbenzene

Xylene

California Directors List of Hazardous Substances

The following ingredients are listed:

Methyl Ethyl Ketone

Isobutanol

Ethylbenzene

Xylene

Roy Wax 1458C

Massachusetts "Right To Know" List

The following ingredients are listed:

Titanium Dioxide

Methyl Ethyl Ketone

Isobutanol

Ethylbenzene

Xylene

Roy Wax 1458C

Rhode Island "Right To Know" List

The following ingredients are listed:

Titanium Dioxide

Methyl Ethyl Ketone

Isobutanol

Ethylbenzene

Xylene

Roy Wax 1458C

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Minnesota "Right To Know" List

The following ingredients are listed:

Titanium Dioxide

Methyl Ethyl Ketone

Isobutanol

Ethylbenzene

Xylene

Roy Wax 1458C

New Jersey "Right To Know" List

The following ingredients are listed:

Titanium Dioxide

Methyl Ethyl Ketone

Isobutanol

Ethylbenzene

Xylene

Roy Wax 1458C

Pennsylvania "Right To Know" List

The following ingredients are listed:

Titanium Dioxide

Methyl Ethyl Ketone

Silicone Resin

Isobutanol

Ethylbenzene

Xylene

Roy Wax 1458C

Inventories

EU - EINECS/ELINCS

All the ingredients are listed or exempt.

Canada - DSL/NDSL

All the ingredients are listed or exempt.

US - TSCA

All the ingredients are listed or exempt.

Australia - AICS

Titanium Dioxide

Methyl Ethyl Ketone

Silicone Resin

Isobutanol

Ethylbenzene

Xylene

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Japan - ENCS

Titanium Dioxide
Methyl Ethyl Ketone
Silicone Resin
Isobutanol
Ethylbenzene
Xylene

Korea - KECI

Titanium Dioxide
Methyl Ethyl Ketone
Silicone Resin
Isobutanol
Ethylbenzene
Xylene

China - IECSC

Titanium Dioxide
Methyl Ethyl Ketone
Silicone Resin
Isobutanol
Ethylbenzene
Xylene

Philippines - PICCS

The following ingredients are listed:

Titanium Dioxide
Methyl Ethyl Ketone
Silicone Resin
Isobutanol
Ethylbenzene
Xylene

New Zealand - NZIOC

Titanium Dioxide
Methyl Ethyl Ketone
Silicone Resin
Isobutanol
Ethylbenzene
Xylene

Taiwan - TCSI

The following ingredients are listed:

Titanium Dioxide

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Methyl Ethyl Ketone

Silicone Resin

Isobutanol

Ethylbenzene

Xylene

16. Other information

Issued by	Matthews Marking Systems - Chemical Services Department
Revision date	3/23/2021
Revision	4
Supersedes date	4/15/2020
SDS No.	5858
SDS status	Approved.
Hazard statements in full	H225 Highly flammable liquid and vapor. H319 Causes serious eye irritation. H335 May cause respiratory irritation. H351 Suspected of causing cancer. H351 Suspected of causing cancer by inhalation. H361d Suspected of damaging the unborn child.
NFPA - health hazard	Irritation, minor residual injury. (1)
NFPA - flammability hazard	Ignites easily. (3)
NFPA - instability hazard	Normally stable. (0)
ACA HMIS Health rating.	Slight hazard. (1)
ACA HMIS Flammability rating.	Ignites easily. (3)
ACA HMIS Physical hazard rating.	Normally stable. (0)
ACA HMIS Personal protection rating.	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.