



SAFETY DATA SHEET M656 White Offset Ink

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name M656 White Offset Ink
 Product number 71002595
 Container size 6 x 1 Liter

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Printing ink.
 Uses advised against Use only for intended applications.

1.3. Details of the supplier of the safety data sheet

Supplier Matthews Marking Systems
 6515 Penn Avenue
 Pittsburgh, PA 15206
 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

1.4. Emergency telephone number

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

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards Flam. Liq. 3 - H226
 Health hazards Acute Tox. 4 - H332 Repr. 1B - H360Fd
 Environmental hazards Aquatic Chronic 3 - H412

Classification (67/548/EEC or 1999/45/EC) Xn; R20. Repr. Cat. 1 R60. Repr. Cat. 3 R63. R52/53, R10

2.2. Label elements

Hazard pictograms



Signal word

Danger

M656 White Offset Ink

Hazard statements	<p>H226 Flammable liquid and vapour. H332 Harmful if inhaled. H360Fd May damage fertility. Suspected of damaging the unborn child. H412 Harmful to aquatic life with long lasting effects. EUH208 Contains Hydroxyphenyl Light Stabilizer, Organotin Heat Stabilizer. May produce an allergic reaction.</p>
Precautionary statements	<p>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P308+P313 IF exposed or concerned: Get medical advice/ attention. P403+P235 Store in a well-ventilated place. Keep cool. P501 Dispose of contents/ container in accordance with national regulations.</p>
Contains	Cyclohexanone, Hydroxyphenyl Light Stabilizer, Organotin Heat Stabilizer
Supplementary precautionary statements	<p>P201 Obtain special instructions before use. P202 Do not handle until all safety precautions have been read and understood. P233 Keep container tightly closed. P240 Ground and bond container and receiving equipment. P241 Use explosion-proof electrical equipment. P242 Use non-sparking tools. P243 Take action to prevent static discharges. P261 Avoid breathing vapour/ spray. P271 Use only outdoors or in a well-ventilated area. P273 Avoid release to the environment. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTRE/doctor if you feel unwell. P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish. P405 Store locked up.</p>

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Cyclohexanone		50-<80%
CAS number: 108-94-1	EC number: 203-631-1	REACH registration number: 05-2118014431-60-0000
Classification Flam. Liq. 3 - H226 Acute Tox. 4 - H332	Classification (67/548/EEC or 1999/45/EC) Xn; R20. R10	
Polyvinyl Resin		5-<10%
CAS number: Proprietary	EC number: Proprietary	REACH registration number: Proprietary
Classification STOT RE 2 - H373		

M656 White Offset Ink

Hydroxyphenyl Light Stabilizer		<1%
CAS number: Proprietary	EC number: Proprietary	REACH registration number: Proprietary
M factor (Chronic) = 1		
Classification	Classification (67/548/EEC or 1999/45/EC)	
Skin Sens. 1B - H317	N; R50/53. R43	
Aquatic Chronic 1 - H410		
Organotin Heat Stabilizer		<1%
CAS number: Proprietary	EC number: Proprietary	REACH registration number: Proprietary
Classification	Classification (67/548/EEC or 1999/45/EC)	
Acute Tox. 4 - H302	T; R48/23/24/25, R39/23/24/25. Xn; R22. Xi; R36/38. Muta.	
Acute Tox. 4 - H312	Cat. 3 R68. Repr. Cat. 1 R60. Repr. Cat. 3 R63. N; R50/53.	
Skin Irrit. 2 - H315	R43	
Eye Irrit. 2 - H319		
Skin Sens. 1 - H317		
Muta. 2 - H341		
STOT SE 1 - H370		

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

Ingredient notes The exact percentage/concentration is withheld as a trade secret in accordance with 29 CFR 1910.1200.

SECTION 4: First aid measures

4.1. 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.
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. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention immediately.
Ingestion	Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth thoroughly with water. Get medical attention immediately.
Skin contact	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.
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.

4.2. 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.
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M656 White Offset Ink

Inhalation	Vapours may irritate throat/respiratory system. May cause coughing and difficulties in breathing. Overexposure to organic solvents may depress the central nervous system, causing dizziness and intoxication and, at very high concentrations, unconsciousness and death.
Ingestion	Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis. May cause irritation. May cause liver and/or renal damage.
Skin contact	May be absorbed through the skin. Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.
Eye contact	This product is strongly irritating. Prolonged contact causes serious eye and tissue damage.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

Unsuitable extinguishing media None known.

5.2. Special hazards arising from the substance or mixture

Specific hazards Combustible liquid. Vapours 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 (CO₂). Carbon monoxide (CO).

5.3. 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 vapours. Use water spray to reduce vapours.

Special protective equipment for firefighters Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. 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 vapours. Wash thoroughly after dealing with a spillage.

6.2. 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.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Eliminate all sources of ignition. Stop leak if safe to do so. Contain and absorb spillage with sand, earth or other non-combustible material. Dilute contained spill with water. Collect and place in suitable waste disposal containers and seal securely.

6.4. Reference to other sections

M656 White Offset Ink

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.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Avoid contact with eyes and prolonged skin contact. Avoid breathing vapours. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. 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.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Store in tightly-closed, original container in a dry, cool and well-ventilated place.

Storage class Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s) The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

Cyclohexanone

Long-term exposure limit (8-hour TWA): WEL 10 ppm 41 mg/m³

Short-term exposure limit (15-minute): WEL 20 ppm 82 mg/m³

Sk

Polyvinyl Resin

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ inhalable dust

Long-term exposure limit (8-hour TWA): WEL 4 mg/m³ respirable dust

Organotin Heat Stabilizer

Long-term exposure limit (8-hour TWA): WEL 0.1 mg/m³ vapour

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

Ingredient comments Data based on literature. Product not tested.

8.2. 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, vapour or mist. Use explosion-proof ventilating equipment.

Eye/face protection

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

M656 White Offset Ink

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	Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour 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. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Respirator selection must be based on exposure levels, the hazards of the product and the safe working limits of the selected respirator. Organic vapour filter. Gas and combination filter cartridges should comply with European Standard EN14387. Check that the respirator fits tightly and the filter is changed regularly.
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.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Coloured liquid.
Colour	White.
Odour	Ketonic.
Melting point	-47°C/-53°F
Initial boiling point and range	155°C/311°F @ 760 mm Hg
Flash point	44°C/111°F Closed cup.
Evaporation rate	0.38 (butyl acetate = 1)
Upper/lower flammability or explosive limits	Upper flammable/explosive limit: 9.4 % vol Lower flammable/explosive limit: 1.1 % vol
Vapour pressure	3.4 mm Hg @ 20°C/68°F
Vapour density	3.39
Relative density	1.28752 g/cc 1287.52 g/l 10.73 lbs/gal
Solubility(ies)	Miscible with the following materials: Ketones. Slightly soluble in water.
Partition coefficient	log Pow: 0.81
Auto-ignition temperature	420°C/788°F
Decomposition Temperature	Not applicable.
Explosive properties	Not applicable.
Oxidising properties	Not applicable.

M656 White Offset Ink

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.

9.2. Other information

Volatile organic compound This product contains a maximum VOC content of 761 g/l. This product contains a maximum VOC content of 6.34 lbs/gal.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions The following materials may react with the product: Strong alkalis.

10.4. Conditions to avoid

Conditions to avoid Avoid the following conditions: Heat, sparks, flames.

10.5. Incompatible materials

Materials to avoid Avoid contact with the following materials: Strong alkalis. Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Heating may generate the following products: Carbon dioxide (CO₂). Carbon monoxide (CO).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 18.6

ATE inhalation (dusts/mists mg/l) 103.51

Specific target organ toxicity - single exposure

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

Specific target organ toxicity - repeated exposure

Target organs Gastro-intestinal tract Reproductive organs

Aspiration hazard

Aspiration hazard Aspiration hazard if swallowed. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

Toxicological information on ingredients.

Cyclohexanone

Acute toxicity - inhalation

M656 White Offset Ink

Acute toxicity inhalation (LC₅₀ vapours mg/l) 15.0

ATE inhalation (vapours mg/l) 15.0

Skin corrosion/irritation

Skin corrosion/irritation Irritating to skin.

Serious eye damage/irritation

Serious eye damage/irritation Causes serious eye damage.

Carcinogenicity

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Polyvinyl Resin

Carcinogenicity

IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Prolonged or repeated exposure may cause the following adverse effects: Chronic inflammation of nose, throat and bronchial tubes.

Hydroxyphenyl Light Stabilizer

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 10,000.0

Species Rat

ATE oral (mg/kg) 10,000.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 2,000.1

Species Rat

ATE dermal (mg/kg) 2,000.1

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ dust/mist mg/l) 7.59

Species Rat

ATE inhalation (dusts/mists mg/l) 7.59

Skin sensitisation

Skin sensitisation Guinea pig maximization test (GPMT) - Guinea pig: Sensitising.

Organotin Heat Stabilizer

Acute toxicity - oral

M656 White Offset Ink

Acute toxicity oral (LD₅₀ mg/kg)	510.0
Species	Rat
ATE oral (mg/kg)	510.0
<u>Acute toxicity - dermal</u>	
Acute toxicity dermal (LD₅₀ mg/kg)	1,516.0
Species	Rat
ATE dermal (mg/kg)	1,516.0
<u>Skin corrosion/irritation</u>	
Skin corrosion/irritation	Severe skin irritation.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Causes serious eye irritation.
<u>Skin sensitisation</u>	
Skin sensitisation	May cause sensitisation or allergic reactions in sensitive individuals.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	May induce heritable mutations in the germ cells of humans.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Suspected of damaging fertility.
<u>Specific target organ toxicity - single exposure</u>	
Target organs	Thymus
<u>Specific target organ toxicity - repeated exposure</u>	
Target organs	Blood, thymus

SECTION 12: Ecological information

12.1. Toxicity

Ecological information on ingredients.

Cyclohexanone

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: >100 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: >100 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: >100 mg/l, Desmodemus subspicatus
Acute toxicity - microorganisms	EC ₅₀ , 30 minutes: >1000 mg/l, Activated sludge

Hydroxyphenyl Light Stabilizer

M656 White Offset Ink

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: >0.17 mg/l, Oncorhynchus mykiss (Rainbow trout)

Acute toxicity - aquatic invertebrates EC₅₀, 24 hours: > 1000 mg/l, Daphnia magna

Chronic aquatic toxicity

M factor (Chronic) 1

Chronic toxicity - aquatic invertebrates NOEC, 21 days: 0.013 mg/l, Daphnia magna

Organotin Heat Stabilizer

Acute aquatic toxicity

Acute toxicity - fish LC₅₀, 96 hours: 11.7 mg/l, Brachydanio rerio (Zebra Fish)

Acute toxicity - aquatic invertebrates EC₅₀, 48 hours: 0.035 mg/l, Daphnia magna

Acute toxicity - aquatic plants EC₅₀, 72 hours: 0.56 mg/l, Scenedesmus subspicatus

Chronic aquatic toxicity

Chronic toxicity - aquatic invertebrates EC₅₀, 21 days: 0.640 mg/l, Daphnia magna

12.2. Persistence and degradability

Ecological information on ingredients.

Cyclohexanone

Biodegradation Soil - Degradation 90 - 100: 28 days

12.3. Bioaccumulative potential

Partition coefficient log Pow: 0.81

Ecological information on ingredients.

Cyclohexanone

Partition coefficient log Pow: 0.81

Hydroxyphenyl Light Stabilizer

Bioaccumulative potential BCF: 44-220, Cyprinus carpio (Common carp)

12.4. Mobility in soil

12.5. Results of PBT and vPvB assessment

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

M656 White Offset Ink

General information	The generation of waste should be minimised 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.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	1210
UN No. (IMDG)	1210
UN No. (ICAO)	1210
UN No. (ADN)	1210

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	PRINTING INK
Proper shipping name (IMDG)	PRINTING INK
Proper shipping name (ICAO)	PRINTING INK
Proper shipping name (ADN)	PRINTING INK

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3
ADN class	3

Transport labels



14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III
ADN packing group	III

14.5. Environmental hazards

M656 White Offset Ink

Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS F-E, S-D

ADR transport category 3

Emergency Action Code •3Y

Hazard Identification Number 30
(ADR/RID)

Tunnel restriction code (D/E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).
Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).

15.2. Chemical safety assessment

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

Cyclohexanone

Organotin Heat Stabilizer

Japan - ENCS

Cyclohexanone

Organotin Heat Stabilizer

Korea - KECI

Cyclohexanone

Organotin Heat Stabilizer

China - IECSC

Cyclohexanone

Organotin Heat Stabilizer

M656 White Offset Ink

Philippines – PICCS

Cyclohexanone

Organotin Heat Stabilizer

SECTION 16: Other information

Issued by	Matthews Marking Systems - Chemical Services Department
Revision	2
Supersedes date	01/06/2015
SDS number	5201
SDS status	Approved.
Risk phrases in full	<p>R10 Flammable.</p> <p>R20 Harmful by inhalation.</p> <p>R22 Harmful if swallowed.</p> <p>R36/38 Irritating to eyes and skin.</p> <p>R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.</p> <p>R43 May cause sensitisation by skin contact.</p> <p>R48/23/24/25 Toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.</p> <p>R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</p> <p>R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.</p> <p>R60 May impair fertility.</p> <p>R63 Possible risk of harm to the unborn child.</p> <p>R68 Possible risk of irreversible effects.</p>
Hazard statements in full	<p>H226 Flammable liquid and vapour.</p> <p>H302 Harmful if swallowed.</p> <p>H311 Toxic in contact with skin.</p> <p>H312 Harmful in contact with skin.</p> <p>H315 Causes skin irritation.</p> <p>H317 May cause an allergic skin reaction.</p> <p>H318 Causes serious eye damage.</p> <p>H319 Causes serious eye irritation.</p> <p>H332 Harmful if inhaled.</p> <p>H341 Suspected of causing genetic defects.</p> <p>H360Fd May damage fertility. Suspected of damaging the unborn child.</p> <p>H370 Causes damage to organs (Blood, thymus).</p> <p>H373 May cause damage to organs (Respiratory system, lungs) through prolonged or repeated exposure.</p> <p>H410 Very toxic to aquatic life with long lasting effects.</p> <p>H412 Harmful to aquatic life with long lasting effects.</p> <p>EUH208 Contains Hydroxyphenyl Light Stabilizer, Organotin Heat Stabilizer. May produce an allergic reaction.</p>

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.