SAFETY DATA SHEET
M393 Orange Curable Striping Ink

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

1.1. Product identifier
Product name M393 Orange Curable Striping Ink
Product number 71001394, 71001393
Container size 4 x 4 Liter, 5 Gallon Pail

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses Printing ink.
Uses advised against No specific uses advised against are identified.

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
101 Fairview Ave.
Pittsburgh, PA 15238

1.4. Emergency telephone number

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture
Classification
Physical hazards Flam. Liq. 3 - H226
Health hazards Muta. 1B - H340 Carc. 1B - H350
Environmental hazards Not Classified

Classification (67/548/EEC or 1999/45/EC) Carc. Cat. 2 R45. Muta. Cat. 2 R46. R10

2.2. Label elements
Pictogram

Signal word Danger
M393 Orange Curable Striping Ink

Hazard statements
H226 Flammable liquid and vapour.
H340 May cause genetic defects.
H350 May cause cancer.

Comments
Full list of Hazard Statements is found in Sec. 16

Precautionary statements
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/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.

Contains
HiSol 100

Supplementary precautionary statements
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/bond container and receiving equipment.
P241 Use explosion-proof electrical equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.
P405 Store locked up.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

<table>
<thead>
<tr>
<th>HiSol 100</th>
<th>60-100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 64742-95-6</td>
<td>EC number: 265-199-0</td>
</tr>
</tbody>
</table>

Classification
Muta. 1B - H340
Carc. 1B - H350
Asp. Tox. 1 - H304

Classification (67/548/EEC or 1999/45/EC)
Xn; R65. Carc. Cat. 2 R45. Muta. Cat. 2 R46

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General Information
Consult a physician for specific advice. 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
Get medical attention immediately. Do not induce vomiting. Aspiration hazard if swallowed.

Skin contact
Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing. Wash clothing and clean shoes thoroughly before reuse.
M393 Orange Curable Striping Ink

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
See Section 11 for additional information on health hazards.

Inhalation
Overexposure to organic solvents may depress the central nervous system, causing dizziness and intoxication and, at very high concentrations, unconsciousness and death.

Ingestion
May cause discomfort if swallowed. May cause nausea, headache, dizziness and intoxication. Aspiration hazard if swallowed. May be fatal if swallowed and enters airways. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

Skin contact
Prolonged or repeated contact with skin may cause irritation, redness and dermatitis.

Eye contact
May cause eye irritation.

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
Water spray.

5.2. Special hazards arising from the substance or mixture

Specific hazards
Flammable liquid and vapour. 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.

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
M393 Orange Curable Striping 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
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.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions
Keep only in the original container in a cool, 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

HiSol 100

Long-term exposure limit (8-hour TWA): WEL 350 mg/m³ vapour

WEL = Workplace Exposure Limit

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.

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 repeated or prolonged skin contact.

Hygiene measures
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 vapour 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.
M393 Orange Curable Striping Ink

Environmental exposure controls

Keep container tightly sealed when not in use. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance

Coloured liquid.

Colour

Orange.

Odour

Aromatic hydrocarbons.

Odour threshold

Not available.

pH

pH (concentrated solution): 6.0 - 8.5

Melting point

-14°C/7°F

Initial boiling point and range

161°C/322°F @ 760 mm Hg

Flash point

34°C/94°F CC (Closed cup).

Evaporation rate

0.27 (butyl acetate = 1)

Upper/lower flammability or explosive limits

Upper flammable/explosive limit: 6.2 % vol Lower flammable/explosive limit: 0.9 % vol

Vapour pressure

1.97 mm Hg @ 20°C/68°F

Vapour density

4.2

Relative density

0.94696 g/cc 946.96 g/l 7.89 lbs/gal

Solubility(ies)

Soluble in the following materials: Aromatic solvents. Hydrocarbons. Insoluble in water.

Partition coefficient

Not determined.

Auto-ignition temperature

479°C/894°F

Decomposition Temperature

Not applicable.

Explosive properties

Not applicable.

Oxidising properties

Not applicable.

Comments

Data based on literature. Product not tested. 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 663 g/l. This product contains a maximum VOC content of 5.52 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 acids. Strong oxidising agents.
M393 Orange Curable Striping Ink

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 acids. Strong oxidising agents.

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

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Toxicological effects
Data based on literature. Product not tested.

Specific target organ toxicity - single exposure
Target organs
Central nervous system Eyes Respiratory system, lungs Skin

Specific target organ toxicity - repeated exposure
Target organs
Blood Central nervous system Gastro-intestinal tract Kidneys Liver Respiratory system, lungs Skin

Aspiration hazard
Aspiration hazard
Aspiration hazard if swallowed. May be fatal if swallowed and enters airways. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

SECTION 12: Ecological Information

12.1. Toxicity
12.2. Persistence and degradability
12.3. Bioaccumulative potential
Partition coefficient
Not determined.

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
General information
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. Residues and empty containers should be taken care of as hazardous waste according to local and national provisions. 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
M393 Orange Curable Striping Ink

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
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 (ADR/RID) 30
Tunnel restriction code (D/E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

SECTION 15: Regulatory information
M393 Orange Curable Striping Ink

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

EU legislation

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
The following ingredients are listed or exempt:

- HiSol 100

Japan - MITI
The following ingredients are listed or exempt:

- HiSol 100

Korea - KECI
The following ingredients are listed or exempt:

- HiSol 100

China - IECSC
The following ingredients are listed or exempt:

- HiSol 100

Philippines – PICCS
The following ingredients are listed or exempt:

- HiSol 100

SECTION 16: Other information

General information
Containers of this material may be hazardous when emptied, all hazard precautions given in the data sheet must be observed.

Issued by
Matthews Marking Systems - Chemical Services Department

Revision date
31/12/2015

Revision
2

Supersedes date
01/06/2015

SDS number
5524

SDS status
Approved.
M393 Orange Curable Striping Ink

**Risk phrases in full**
- R10 Flammable.
- R45 May cause cancer.
- R46 May cause heritable genetic damage.
- R65 Harmful: may cause lung damage if swallowed.

**Hazard statements in full**
- H226 Flammable liquid and vapour.
- H304 May be fatal if swallowed and enters airways.
- H340 May cause genetic defects.
- H350 May cause cancer.

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.