

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 03/05/2012

Reviewed on 03/05/2012






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

- **Product identifier**
- **Trade name:** FX-OP Orange Ink
- **Article number:** M88FX-OP
- **Application of the substance / the preparation** Printing inks
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
Marsh Shipping Supply Co.,LLC
926 McDonough Lake Road - Unit E
Collinsville, IL 62234
USA
- **Information department:** customerservice@mssllc.com
- **Emergency telephone number:**
Infotrac: USA 1 800 535 5053
International 352-323-3500 Call Collect

2 Composition/information on ingredients

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

- **Hazardous components**

71-23-8	propan-1-ol  Xi R41;  F R11 R67 -----  H225;  H318;  H336	52.69%
	Non Hazardous Red Pigment	6.4%
5468-75-7	Yellow AAOT Pigment 14	5.07%
112945-52-5	Amorphous Fumed Silica, Silicon Dioxide, Crystalline Free	0.32%
13463-67-7	titanium dioxide ----- H333	4.995%

- **Additional information:**
For the wording of the listed risk phrases refer to section 16.
This product contains pigments which may become a dust nuisance when removed by abrasive blasting or sanding.
Airborne nuisance particulates have an ACGIH TLV for total dust of 10mg/M3

3 Hazards identification

- **Classification of the substance or mixture**



GHS02 Flame

H226 Flammable liquid and vapour.



GHS05 Corrosion

H318 Causes serious eye damage.

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GHS07

H336 May cause drowsiness or dizziness.

H333 May be harmful if inhaled.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

WARNING! FLAMMABLE LIQUID. HARMFUL. Keep liquid and vapors away from ignition sources, heat, and static discharge. Avoid contact with eyes and skin. Avoid inhalation of mist or vapor.

Read MSDS before using

R10-67: Flammable. Vapours may cause drowsiness and dizziness.

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of international guidelines.

Has a narcotizing effect.

· **Classification system:**

The classification was made according to the latest editions of international substances lists and from component data and msds information

· **Label elements**

· **Labelling according to EU guidelines:**

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

· **Risk phrases:**

10 Flammable.

67 Vapours may cause drowsiness and dizziness.

· **Safety phrases:**

7 Keep container tightly closed.

16 Keep away from sources of ignition - No smoking.

24 Avoid contact with skin.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

39 Wear eye/face protection.

43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

51 Use only in well-ventilated areas.

60 This material and its container must be disposed of as hazardous waste.

· **Information pertaining to particular dangers for man and environment:**

· **Inhalation**

Can cause nasal and respiratory tract irritation. Can cause Central Nervous System effects including fatigue, dizziness, nausea, vomiting, unconsciousness, respiratory failure, headache, possible hearing impairment.

· **Potential Chronic Health Effects**

Prolonged or repeated exposure of vapors, spray, or material may cause diseases of the lungs. Reports have associated repeated overexposure to solvents with brain and nervous system damage. Intentional misuse of this product may be harmful or fatal.

· **Target Organs**

Overexposure to this material or its components has been suggested as a cause of the following effects in laboratory animals and/or humans, and may aggravate preexisting disorders of these organs in humans: Anemia, Blood disorders, Brain damage, Cardiac function, eye, liver, lung, menstrual and fertility, skin, respiratory, Central Nervous System

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- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



- **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = 2
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

4 First aid measures

- **General information:**

Take affected persons out into the fresh air.

Involve doctor immediately.

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:** Immediately rinse with water for 15 minutes. If irritation exists call physician.

- **After eye contact:**

Rinse opened eye for fifteen minutes under running water. If irritation persists, consult a doctor.

- **After swallowing:** Do not induce vomiting; immediately call for medical help.

5 Firefighting measures

- **Suitable extinguishing agents:**

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

CO₂, sand, extinguishing powder. Do not use water.

ABC powder

- **For safety reasons unsuitable extinguishing agents:** Water

- **Special hazards arising from the substance or mixture**

Nitrogen oxides (NO_x)

Carbon monoxide (CO)

- **Protective equipment:**

Wear self-contained respiratory protective device.

Wear fully protective suit.

- **Additional information**

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Particular danger of slipping on leaked/spilled product.

Keep away from ignition sources

Wear protective clothing.

- **Environmental precautions:**

Do not allow product to reach sewage system or any water course.

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- Do not allow to enter sewers/ surface or ground water.*
- Prevent from spreading (e.g. by damming-in or oil barriers).*
- **Methods and material for containment and cleaning up:**
 - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).*
 - Do not flush with water or aqueous cleansing agents*
 - Dispose of the collected material according to regulations.*
- **Reference to other sections**
 - See Section 7 for information on safe handling.*
 - See Section 8 for information on personal protection equipment.*
 - See Section 13 for disposal information.*

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
 - Store in cool, dry place in tightly closed receptacles.*
 - Keep away from heat and direct sunlight.*
 - Handle with care. Avoid jolting, friction and impact.*
 - Use solvent-proof equipment.*
 - Hydrocarbon solvents are basically non-conductors of electricity and can become electrostatically charged during mixing or moving, observe grounding/grounding of containers and other equipment when handling.*
- **Information about protection against explosions and fires:**
 - Keep ignition sources away - Do not smoke.*
 - Protect from heat.*
 - Protect against electrostatic charges.*
 - Prevent impact and friction.*
 - Use explosion-proof apparatus / fittings and spark-proof tools.*
 - Fumes can combine with air to form an explosive mixture.*
 - Flammable gas-air mixtures may be formed in empty receptacles.*
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
 - Store only in the original receptacle.*
 - Prevent any seepage into the ground.*
- **Information about storage in one common storage facility:**
 - Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.*
 - Do not store together with oxidizing and acidic materials as well as heavy-metal compounds.*
 - Store away from foodstuffs.*
- **Further information about storage conditions:**
 - Keep receptacle tightly sealed.*
 - Protect from heat and direct sunlight.*
 - Protect from humidity and water.*
 - Protect from exposure to the light.*
- **Specific end use(s)** *No further relevant information available.*

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8 Exposure controls/personal protection

· **Components with limit values that require monitoring at the workplace:**

71-23-8 propan-1-ol

PEL	500 mg/m ³ , 200 ppm
REL	Short-term value: 625 mg/m ³ , 250 ppm Long-term value: 500 mg/m ³ , 200 ppm
	Skin
TLV	Short-term value: 984 mg/m ³ , 400 ppm Long-term value: 492 mg/m ³ , 200 ppm

Non Hazardous Red Pigment

TLV	10 mg/m ³
-----	----------------------

5468-75-7 Yellow AAOT Pigment 14

TLV	Short-term value: 10 as nuisance mg/m ³
-----	--

112945-52-5 Amorphous Fumed Silica, Silicon Dioxide, Crystalline Free

TLV	3.5 mg/m ³
-----	-----------------------

13463-67-7 titanium dioxide (4.9%)

PEL	15* mg/m ³ *Total dust
REL	Lowest feasible conc.; (LOQ 0.2 mg/m ³)
TLV	10 mg/m ³

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Personal protective equipment:**

· **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the skin.

Avoid contact with the eyes and skin.

Pregnant women should strictly avoid inhalation or skin contact.

Do not eat, drink, smoke or sniff while working.

· **Breathing equipment:**

Use suitable respiratory protective device in case of insufficient ventilation.

Do not breath vapors, spray mists, or sanding dusts. Use air purifying respirators fitted with organic vapor/HEPA cartridges only if air monitoring demonstrates solvent/particulate levels do not exceed the respirator maximum use concentration. Use properly fitted NIOSH approved respirators. Local and general exhaust should minimize any exposure.

· **Protection of hands:**



Protective gloves

· **Material of gloves**

Nitrile rubber, NBR

Nitrile or natural rubber gloves are typically used to protect from minor contact. Butyl type are best for prolonged contact.

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· **Eye protection:**

Vapor proof safety goggles or full face respirator

· **Body protection:**

Tyvek(R) coveralls to protect from light overspray protection or Saranex 23-P(R) for moderate exposure.

9 Physical and chemical properties

· **General Information**· **Appearance:**

Form:	Fluid
Color:	Orange
Odor:	Alcohol-like

· **Change in condition**

Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	96°C (205 °F)

· **Flash point:** 23°C (73 °F)· **Ignition temperature:** 360°C (680 °F)· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
In use, may form flammable/explosive vapour-air mixture.

· **Explosion limits:**

Lower:	2.1 Vol %
Upper:	13.5 Vol %

· **Vapor pressure at 20°C (68 °F):** 19 hPa (14 mm Hg)· **Density at 20°C (68 °F):** 0.98 g/cm³ (8.178 lbs/gal)· **Solubility in / Miscibility with**

Water: Not miscible or difficult to mix.

· **Solvent content:**

Organic solvents:	52.7 %
VOC content:	52.7 %
	518.0 g/l / 4.32 lb/gl

Solids content: 47.3 %

· **Other information** No further relevant information available.

10 Stability and reactivity

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.· **Incompatible materials:** No further relevant information available.· **Hazardous decomposition products:**

Nitrogen oxides

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Carbon monoxide and carbon dioxide

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11 Toxicological information

- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:** Danger through skin absorption.

12 Ecological information

- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (Self-assessment): slightly hazardous for water
This statement was deduced from the properties of the single components.

13 Disposal considerations

- **Waste treatment methods**
- **Recommendation:**
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Hand over to hazardous waste disposers.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- | | |
|----------------------------------|----------------------------|
| · UN-Number | |
| · DOT | UN1210 |
| · ADR, IMDG, IATA | 1210 |
| · UN proper shipping name | |
| · DOT, IMDG, IATA | 1210 PRINTING INK, mixture |
| · ADR | 1210 PRINTING INK |

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· **Transport hazard class(es)**· **DOT**· **Class**

3 Flammable liquids.
D.O.T. - Ground only
ORM-D material
Ink, not regulated by Title 49 Part 173.150 Exceptions for class 3 (flammable) liquids (c).

· **Label**

3

· **ADR**· **Class**

3 Flammable liquids

· **Label**

3

· **IMDG, IATA**· **Class**

3 Flammable liquids.

· **Label**

3

· **Packing group**· **DOT, ADR, IMDG, IATA**

III

· **Special precautions for user**

Warning: Flammable liquids

· **Danger code (Kemler):**

30

· **EMS Number:**

F-E,S-D

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **UN "Model Regulation":**

UN1274, PROPANOL (PROPYL ALCOHOL, NORMAL), mixture, 3, III

15 Regulatory information

· **Sara**· **SARA Title III Section 311/312 - Hazard Communication Standard (40 CFR 370)**

71-23-8	propan-1-ol	52.69%
13463-67-7	titanium dioxide	4.995%

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed or exempt.

71-23-8	propan-1-ol	
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	Non Hazardous Red Pigment	
5468-75-7	Yellow AAOT Pigment 14	
13463-67-7	titanium dioxide	
7631-86-9	silicon dioxide, chemically prepared	
112945-52-5	Amorphous Fumed Silica, Silicon Dioxide, Crystalline Free	
21645-51-2	aluminium hydroxide	

· **ACGIH Carcinogen**

13463-67-7	titanium dioxide	A4	4.995%
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· **Cancerogenity categories**

· **IARC (International Agency for Research on Cancer)**

13463-67-7	titanium dioxide	2B	4.995%
7631-86-9	silicon dioxide, chemically prepared	3	0.333%

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

71-23-8	propan-1-ol	A4	52.69%
13463-67-7	titanium dioxide	A4	4.995%

· **NIOSH (National Institute for Occupational Safety and Health)**

13463-67-7	titanium dioxide	*	4.995%
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· **State regulations**

· **Massachussets Right-to-know / Hazardous Substance Codes**

13463-67-7	titanium dioxide	4	4.995%
7631-86-9	silicon dioxide, chemically prepared	2,4,5 F5	0.333%

· **Florida Hazardous / Toxic Substance Lists**

7631-86-9	silicon dioxide, chemically prepared	Toxic	0.333%
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· **Pennsylvania Hazardous Substances**

13463-67-7	titanium dioxide	Listed	4.995%
7631-86-9	silicon dioxide, chemically prepared	Listed	0.333%

· **Minnesota Right To Know / Hazardous Substances**

13463-67-7	titanium dioxide	A	4.995%
7631-86-9	silicon dioxide, chemically prepared	Codes ANOR, Carcinogen	0.333%

· **Illinois Right To Know**

None of the ingredients is listed.

· **Product related hazard informations:**

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

· **Risk phrases:**

- 10 Flammable.
- 67 Vapours may cause drowsiness and dizziness.

· **Safety phrases:**

- 7 Keep container tightly closed.
- 16 Keep away from sources of ignition - No smoking.
- 24 Avoid contact with skin.
- 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- 39 Wear eye/face protection.

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43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

51 Use only in well-ventilated areas.

60 This material and its container must be disposed of as hazardous waste.

· **National regulations:**

· **Occupational Safety and Health Act (OSHA)**

Immediate (acute) health hazard

Delayed (chronic) Health Hazard

Fire Hazard

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

· **Relevant phrases**

H225 Highly flammable liquid and vapour.

H318 Causes serious eye damage.

H333 May be harmful if inhaled.

H336 May cause drowsiness or dizziness.

R11 Highly flammable.

R41 Risk of serious damage to eyes.

R67 Vapours may cause drowsiness and dizziness.

· **Contact:** Mike Rickert

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

ICAO: International Civil Aviation Organization

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)