

Safety Data Sheet

acc. to OSHA HCS

Printing date 10/07/2015

Reviewed on 10/07/2015

1 Identification

- **Product identifier**
- **Trade name:** R-Y1 Rolmark Yellow Stencil Ink
- **Article number:** *PRODUCT CODES: 20900,20926,1F153,33567*
- **Relevant identified uses of the substance or mixture and uses advised against**
No further relevant information available.
- **Application of the substance / the mixture** *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@msscllc.com*
- **Emergency telephone number:**
*Infotrac: 1-800-535-5053
International; 352-323-3500 (CALL COLLECT)*

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flam. Liq. 3 H226 Flammable liquid and vapour.



GHS08 Health hazard

Carc. 2 H351 Suspected of causing cancer.



GHS07

Eye Irrit. 2A H319 Causes serious eye irritation.

- **Additional information:**

The pigment Titanium Dioxide CAS# 13463-67-7 is suspected of causing cancer when inhaled as a dust form. This pigment is bound in the ink, and under normal conditions of use the exposure to the dust form is not likely.

- **Label elements**

- **GHS label elements** *The product is classified and labeled according to the Globally Harmonized System (GHS).*
- **Hazard pictograms** *GHS02, GHS07, GHS08*
- **Signal word** *Warning*

- **Hazard-determining components of labeling:**

titanium dioxide

- **Hazard statements**

*Flammable liquid and vapour.
Causes serious eye irritation.
Suspected of causing cancer.*

- **Precautionary statements**

*Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Use explosion-proof electrical/ventilating/lighting/equipment.*

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Wear protective gloves / eye protection / face protection.

Wear eye protection / face protection.

Ground/bond container and receiving equipment.

Keep container tightly closed.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wash thoroughly after handling.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO₂, powder or water spray.

Store locked up.

Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with local/regional/national/international regulations.

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

· **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

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 1

Fire = 2

Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = 1

Fire = 2

Reactivity = 0

· **Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Description:** Mixture of the substances listed below with nonhazardous additions.

· **Hazardous components**

123-42-2	4-hydroxy-4-methylpentan-2-one	65.74%
	⚠ Flam. Liq. 3, H226; ⚠ Eye Irrit. 2, H319	

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5468-75-7	Yellow AAOT Pigment 14	11.0%
	Modified Rosin Ester NJ TSRN 80100080-5097P EINECS polymer exempt - all components listed	3.97%
112945-52-5	Amorphous Fumed Silica, Silicon Dioxide, Crystalline Free	0.22%
13463-67-7	titanium dioxide ☠ Carc. 2, H351	16.488%
7631-86-9	silicon dioxide, chemically prepared	1.099%
	acrylic copolymer -EU Polymer exempted- Not Regulated	0.66%
6448-95-9	Naphthanil Red Pigment C.I. 22	0.09%

Additional information:

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

4 First-aid measures

Description of 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.

Most important symptoms and effects, both acute and delayed

Breathing difficulty

Headache

Dizziness

Thirst

Cramp

Gastric or intestinal disorders

Coughing

Allergic reactions

Nausea

Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5 Fire-fighting measures

Extinguishing media

Suitable extinguishing agents:

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

Special hazards arising from the substance or mixture

Nitrogen oxides (NO_x)

Carbon monoxide (CO)

Advice for firefighters

Protective equipment:

Wear self-contained respiratory protective device.

Wear fully protective suit.

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· **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*
- *Wear protective clothing.*

· **Environmental precautions:**

- *Do not allow product to reach sewage system or any water course.*
- *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).*
- *Dispose contaminated material as waste according to item 13.*
- *Ensure adequate ventilation.*

· **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

· **Precautions for safe handling**

- *Store in cool, dry place in tightly closed receptacles.*
- *Keep away from heat and direct sunlight.*
- *Ensure good ventilation/exhaustion at the workplace.*
- *Prevent formation of aerosols.*

· *Handle with care. Avoid jolting, friction and impact.*

· *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:** *No special measures required.*

· **Conditions for safe storage, including any incompatibilities**

· **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 oxidizing and acidic materials as well as heavy-metal compounds.*
- *Store away from foodstuffs.*

· **Further information about storage conditions:**

- *Keep receptacle tightly sealed.*
- *Store in cool, dry conditions in well sealed receptacles.*
- *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

- **Control parameters**

· Components with limit values that require monitoring at the workplace:	
123-42-2 4-hydroxy-4-methylpentan-2-one	
PEL	Long-term value: 240 mg/m ³ , 50 ppm
REL	Long-term value: 240 mg/m ³ , 50 ppm
TLV	Long-term value: 238 mg/m ³ , 50 ppm
5468-75-7 Yellow AAOT Pigment 14	
TLV	Short-term value: 10 as nuisance mg/m ³
Modified Rosin Ester NJ TSRN 80100080-5097P	
EINECS polymer exempt - all components listed	
PEL	Long-term value: 5*15** mg/m ³ , 15*50** ppm
	*Respirable Fraction, **Total Dust
112945-52-5 Amorphous Fumed Silica, Silicon Dioxide, Crystalline Free	
TLV	Long-term value: 3.5 mg/m ³

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

- **Exposure controls**

- **Personal protective equipment:**

- **General protective and hygienic measures:**

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

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

Nitrile rubber, NBR

- **Eye protection:**



Vapor proof safety goggles or full face respirator

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· **Body protection:**

Solvent resistant protective clothing

Impervious protective clothing

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

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Fluid
Color: Yellow

· **Odor:** Alcohol-like

· **Odour threshold:** Not determined.

· **pH-value:** Not determined.

· **Change in condition**

Melting point/Melting range: Undetermined.
Boiling point/Boiling range: 150 °C (302 °F)

· **Flash point:** 58 °C (136 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:** 620 °C (1148 °F)

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Not determined.

· **Explosion limits:**

Lower: 1.4 Vol %
Upper: 8.1 Vol %

· **Vapor pressure at 20 °C (68 °F):** 1.1 hPa (1 mm Hg)

· **Density at 20 °C (68 °F):** 1.13614 g/cm³ (9.481 lbs/gal)

· **Relative density** Not determined.

· **Vapour density** Not determined.

· **Evaporation rate** Not determined.

· **Solubility in / Miscibility with**

Water: Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

· **Viscosity:**

Dynamic: Not determined.
Kinematic: Not determined.

· **Solvent content:**

Organic solvents: 65.7 %
VOC content: 65.7 %
746.9 g/l / 6.23 lb/gl

Solids content: 34.3 %

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

10 Stability and reactivity

- **Reactivity**
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** Reacts with acids, alkalis and oxidizing agents.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
 - Nitrogen oxides
 - Carbon monoxide and carbon dioxide

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

· **LD/LC50 values that are relevant for classification:**

123-42-2 4-hydroxy-4-methylpentan-2-one

Oral	LD50	4000 mg/kg (rat)
Dermal	LD50	13630 mg/kg (rab)

- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritating effect.
- **Sensitization:**
 - Sensitizing effect through inhalation is possible with prolonged exposure.
 - Sensitizing effect by skin contact is possible with prolonged exposure.
- **Additional toxicological information:**
 - The product shows the following dangers according to internally approved calculation methods for preparations:
 - Irritant
 - Danger through skin absorption.

· **Carcinogenic categories**

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

13463-67-7	titanium dioxide	2B	16.488%
7631-86-9	silicon dioxide, chemically prepared	3	1.099%

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.

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- **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.
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **Other adverse effects** No further relevant information available.

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, ADR, IMDG, IATA | UN1210 |
| · UN proper shipping name | |
| · DOT | Printing ink |
| · ADR | 1210 Printing ink |
| · IMDG, IATA | PRINTING INK |
| · Transport hazard class(es) | |
| · DOT | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| | |
| · ADR, IMDG, IATA | |
|  | |
| · Class | 3 Flammable liquids |
| · Label | 3 |
| · Packing group | |
| · DOT, ADR, IMDG, IATA | III |
| · Environmental hazards: | |
| · Marine pollutant: | No |
| · Special precautions for user | Warning: Flammable liquids |
| · Danger code (Kemler): | 30 |

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· EMS Number:	F-E,S-D
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN1210, Printing ink, 3, III

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

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

13463-67-7	titanium dioxide	16.488%
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- TSCA (Toxic Substances Control Act):
All ingredients are listed or exempt.

123-42-2	4-hydroxy-4-methylpentan-2-one
13463-67-7	titanium dioxide
5468-75-7	Yellow AAOT Pigment 14
	Modified Rosin Ester NJ TSRN 80100080-5097P EINECS polymer exempt - all components listed
7631-86-9	silicon dioxide, chemically prepared
21645-51-2	aluminium hydroxide
	acrylic copolymer -EU Polymer exempted- Not Regulated
112945-52-5	Amorphous Fumed Silica, Silicon Dioxide, Crystalline Free
6448-95-9	Naphthanil Red Pigment C.I. 22

· Proposition 65 /Chemicals known to cause cancer:

13463-67-7	titanium dioxide	16.488%
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· ACGIH Carcinogen

13463-67-7	titanium dioxide	A4	16.488%
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· Cancerogenity categories

· TLV (Threshold Limit Value established by ACGIH)

13463-67-7	titanium dioxide	A4	16.488%
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· NIOSH (National Institute for Occupational Safety and Health)

123-42-2	4-hydroxy-4-methylpentan-2-one	Guidelines 89-104	65.74%
13463-67-7	titanium dioxide	*	16.488%

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· **State regulations**

· **New Jersey Right-to-know**

Modified Rosin Ester NJ TSRN 80100080-5097P EINECS polymer exempt - all components listed	TSRN 80100080-5097P	3.97%
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· **Massachusetts Right-to-know / Hazardous Substance Codes**

123-42-2	4-hydroxy-4-methylpentan-2-one	2,4	65.74%
13463-67-7	titanium dioxide	4	16.488%
7631-86-9	silicon dioxide, chemically prepared	2,4,5 F5	1.099%

· **Florida Hazardous / Toxic Substance Lists**

123-42-2	4-hydroxy-4-methylpentan-2-one	Toxic	65.74%
7631-86-9	silicon dioxide, chemically prepared	Toxic	1.099%

· **Pennsylvania Hazardous Substances**

123-42-2	4-hydroxy-4-methylpentan-2-one	--	65.74%
13463-67-7	titanium dioxide	Listed	16.488%
7631-86-9	silicon dioxide, chemically prepared	Listed	1.099%

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

123-42-2	4-hydroxy-4-methylpentan-2-one	ANO	65.74%
13463-67-7	titanium dioxide	A	16.488%
7631-86-9	silicon dioxide, chemically prepared	Codes ANOR, Carcinogen	1.099%

· **Illinois Right To Know**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms** GHS02, GHS07, GHS08

· **Signal word** Warning

· **Hazard-determining components of labeling:**

titanium dioxide

· **Hazard statements**

Flammable liquid and vapour.

Causes serious eye irritation.

Suspected of causing cancer.

· **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Use explosion-proof electrical/ventilating/lighting/equipment.

Wear protective gloves / eye protection / face protection.

Wear eye protection / face protection.

Ground/bond container and receiving equipment.

Keep container tightly closed.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Wash thoroughly after handling.

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

If eye irritation persists: Get medical advice/attention.

In case of fire: Use for extinction: CO2, powder or water spray.

Store locked up.

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Store in a well-ventilated place. Keep cool.

Dispose of contents/container in accordance with local/regional/national/international regulations.

· **National regulations:**

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

Immediate (acute) health hazard

Delayed (chronic) Health Hazard

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

· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

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**

H226 Flammable liquid and vapour.

H319 Causes serious eye irritation.

H351 Suspected of causing cancer.

· **Contact:** *Compliance Department*

· **Date of preparation / last revision** *10/07/2015 / -*

· **Abbreviations and acronyms:**

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

ICAO: International Civil Aviation Organisation

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

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

Flam. Liq. 3: Flammable liquids, Hazard Category 3

Eye Irrit. 2: Serious eye damage/eye irritation, Hazard Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation, Hazard Category 2A

Carc. 2: Carcinogenicity, Hazard Category 2