



SAFETY DATA SHEET JAM4028 Red Ink

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

1.1. Product identifier

Product name JAM4028 Red Ink
 Product number 71001049
 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 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

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

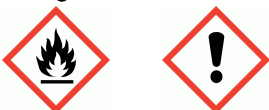
Classification

Physical hazards Flam. Liq. 2 - H225
 Health hazards Eye Irrit. 2 - H319 STOT SE 3 - H336
 Environmental hazards Not Classified

Classification (67/548/EEC or 1999/45/EC) F; R11. Xi; R36. R67

2.2. Label elements

Pictogram



Signal word Danger

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Hazard statements	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.
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. 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 , N-Propanol
Supplementary precautionary statements	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. P261 Avoid breathing vapour/spray. P264 Wash contaminated skin thoroughly after handling. P271 Use only outdoors or in a well-ventilated area. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P337+P313 If eye irritation persists: Get medical advice/attention. P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish. P403+P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.

2.3. Other hazards

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Methyl Ethyl Ketone	60-100%
CAS number: 78-93-3	EC number: 201-159-0
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	Classification (67/548/EEC or 1999/45/EC) F; R11. Xi; R36. R67, R66
N-Propanol	1-5%
CAS number: 71-23-8	EC number: 200-746-9
Classification Flam. Liq. 2 - H225 Eye Dam. 1 - H318 STOT SE 3 - H336	

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2-ethylhexanoic acid	<1%
CAS number: 149-57-5	EC number: 205-743-6
Classification	
Repr. 2 - H361d	

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. Aspiration hazard if swallowed. Do not induce vomiting. 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. Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
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.

4.2. Most important symptoms and effects, both acute and delayed

General information	See Section 11 for additional information on health hazards.
Inhalation	May cause respiratory system irritation. Vapour 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.

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

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

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

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.

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

Methyl Ethyl Ketone

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Long-term exposure limit (8-hour TWA): WEL 100 ppm 295 mg/m³ Austria

Long-term exposure limit (8-hour TWA): WEL 200 ppm 600 mg/m³ Belgium, European Union, France, Germany (AGS), Germany (DFG), Ireland, Italy, Spain, United Kingdom

Long-term exposure limit (8-hour TWA): WEL 50 ppm 150 mg/m³ Denmark, Sweden

Long-term exposure limit (8-hour TWA): WEL 600 mg/m³ Hungary

Long-term exposure limit (8-hour TWA): WEL 67 ppm 200 mg/m³ Latvia

Long-term exposure limit (8-hour TWA): WEL 450 mg/m³ Poland

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

Long-term exposure limit (8-hour TWA): WEL 590 mg/m³ The Netherlands

Short-term exposure limit (15-minute): WEL 200 ppm 590 mg/m³ Austria, Switzerland

Short-term exposure limit (15-minute): WEL 300 ppm 900 mg/m³ Belgium, European Union, France, Ireland, Italy, Latvia, Spain, United Kingdom

Short-term exposure limit (15-minute): WEL 100 ppm 290 mg/m³ Denmark

Short-term exposure limit (15-minute): WEL 100 ppm 300 mg/m³ Finland, Sweden

Short-term exposure limit (15-minute): WEL 200 ppm 600 mg/m³ Germany (AGS), Germany (DFG)

Short-term exposure limit (15-minute): WEL 900 mg/m³ Hungary, Poland, The Netherlands

Sk

N-Propanol

Long-term exposure limit (8-hour TWA): WEL 200 ppm 500 mg/m³ Austria, Denmark, Finland, France, Spain, Switzerland, United Kingdom

Long-term exposure limit (8-hour TWA): WEL 100 ppm 250 mg/m³ Belgium

Long-term exposure limit (8-hour TWA): WEL 10 ppm Ireland

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

Long-term exposure limit (8-hour TWA): WEL 200 mg/m³ Poland

Long-term exposure limit (8-hour TWA): WEL 150 ppm 350 mg/m³ Sweden

Short-term exposure limit (15-minute): WEL 400 ppm 1000 mg/m³ Denmark, Spain

Short-term exposure limit (15-minute): WEL 250 ppm 620 mg/m³ Finland

Short-term exposure limit (15-minute): WEL 600 mg/m³ Poland

Short-term exposure limit (15-minute): WEL 250 ppm 600 mg/m³ Sweden

Short-term exposure limit (15-minute): WEL 250 ppm 625 mg/m³ United Kingdom

Sk

2-ethylhexanoic acid

Long-term exposure limit (8-hour TWA): WEL 5.0 mg/m³

WEL = Workplace Exposure Limit

Sk = Can be absorbed through the skin.

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.

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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.
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	Red.
Odour	Ketonic.
Odour threshold	Not available.
pH	pH (concentrated solution): 6.0 - 8.5
Melting point	-86°C/-123°F
Initial boiling point and range	79°C/147°F @ 760 mm Hg
Flash point	-9°C/16°F CC (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
Vapour pressure	71.25 mm Hg @ 20°C/68°F
Vapour density	2.4
Relative density	0.830 g/cm ³ 830 g/l 6.91 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.
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 777 g/l. This product contains a maximum VOC content of 6.47 lbs/gal.
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SECTION 10: Stability and reactivity

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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: Acids. Alkalis. Strong oxidising agents.

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: Acids. 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 Data based on literature. Product not tested.

Acute toxicity - oral

ATE oral (mg/kg) 8,333.33

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

Aspiration hazard

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

Toxicological information on ingredients.

Methyl Ethyl Ketone

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 2,600.0

Species Rat

ATE oral (mg/kg) 2,600.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 6,400.0

Species Rabbit

ATE dermal (mg/kg) 6,400.0

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Acute toxicity - inhalation

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

Species Mouse

ATE inhalation (vapours mg/l) 32,000.0

N-Propanol

Acute toxicity - oral

Notes (oral LD₅₀) LD₅₀ 3830 mg/kg, Oral, Rat

Acute toxicity - dermal

Notes (dermal LD₅₀) LD₅₀ > 10,000 mg/kg, Dermal, Rabbit

Acute toxicity - inhalation

Notes (inhalation LC₅₀) LD₅₀ > 9.8 mg/l, Inhalation, Rat

Skin corrosion/irritation

Animal data Slightly irritating.

SECTION 12: Ecological Information

Ecotoxicity Data based on literature. Product not tested.

12.1. Toxicity

Ecological information on ingredients.

Methyl Ethyl Ketone

Acute toxicity - fish LC₅₀, : 1690 mg/l, Lepomis macrochirus (Bluegill)
LC₅₀, : 3220 mg/l, Pimephales promelas (Fat-head Minnow)

N-Propanol

Acute toxicity - fish LC₅₀, 96 hours: > 804 mg/l, Pimephales promelas (Fat-head Minnow)

Acute toxicity - aquatic invertebrates LC₅₀, 96 hours: > 804 mg/l, Daphnia magna

12.2. Persistence and degradability

12.3. Bioaccumulative potential

Partition coefficient log Pow: 0.26

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

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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
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	II
IMDG packing group	II
ICAO packing group	II
ADN packing group	II

14.5. Environmental hazards

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Environmentally hazardous substance/marine pollutant

No.

14.6. Special precautions for user

EmS	F-E, S-D
ADR transport category	2
Emergency Action Code	•3YE
Hazard Identification Number (ADR/RID)	33
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

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).
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15.2. Chemical safety assessment

US Federal Regulations

Hazardous Air Pollutants (HAPS) - Clean Air Act	methyl ethyl ketone - MEK
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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:

N-Propanol

Methyl Ethyl Ketone

Japan - MITI

The following ingredients are listed or exempt:

N-Propanol

Methyl Ethyl Ketone

Korea - KECI

The following ingredients are listed or exempt:

N-Propanol

Methyl Ethyl Ketone

China - IECSC

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The following ingredients are listed or exempt:

N-Propanol

Methyl Ethyl Ketone

Philippines – PICCS

The following ingredients are listed or exempt:

N-Propanol

Methyl Ethyl Ketone

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	5465
SDS status	Approved.
Risk phrases in full	R10 Flammable. R11 Highly flammable. R20 Harmful by inhalation. R20/21 Harmful by inhalation and in contact with skin. R36 Irritating to eyes. R38 Irritating to skin. R41 Risk of serious damage to eyes. R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation. R63 Possible risk of harm to the unborn child. R65 Harmful: may cause lung damage if swallowed. R66 Repeated exposure may cause skin dryness or cracking. R67 Vapours may cause drowsiness and dizziness.
Hazard statements in full	H225 Highly flammable liquid and vapour. H318 Causes serious eye damage. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness. H361d Suspected of damaging the unborn child.

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.