

MATERIAL SAFETY DATA SHEET

MSDS Name: Color Edging Pen Standard Colors
MSDS Number: 241000
MSDS Date: 9/18/2002



1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME AND CODE Color Edging Pen Standard Colors 241000
COMPANY NAME AND ADDRESS Heinrich König & Co.
An der Rosenhelle 5
D-61138 Niederdorfelden
Germany
EMERGENCY CONTACT 49 / 6101 / 53 60 50 (R & D)
TELEPHONE/FAX 49 / 6101 / 53 60 – 0 (General)
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DATE PREPARED 02/01/02

2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	CAS NUMBER	WT. %	OSHA		ACGIH		UNITS
			TWA	STEL	TWA	STEL	
n-Butyl Alcohol	71-36-3	2.8	N/E	CL 50	N/E	CL 50	ppm
Methyl Ethyl Ketone	78-93-3	5.3	200	300	200	300	ppm
Xylene	1330-20-7	2.1	100	150	100	150	ppm
Gasoline	8006-61-9	1.2	300	500	300	500	ppm
Methyl Isobutyl Ketone	108-10-1	17.8	50	75	50	75	ppm
n-Butyl Acetate	123-86-4	16.2	150	200	150	200	ppm
2-methoxy-1-methylethyl acetate	108-65-6	2.9	N/E	N/E	N/E	N/E	ppm
Light Aromatic Naphtha	64742-95-6	9.9	N/E	N/E	N/E	N/E	ppm

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER!
FLAMMABLE LIQUID AND VAPOR
VAPOR MAY CAUSE FLASH FIRE
VAPOR HARMFUL
CAUSES EYE AND SKIN IRRITATION
HARMFUL OR FATAL IF SWALLOWED

POTENTIAL HEALTH EFFECTS

INHALATION

Harmful if inhaled. High vapor concentrations may cause drowsiness or unconsciousness. May cause headaches and dizziness.

EYE CONTACT

Causes eye irritation.

SKIN

May cause skin irritation. May be harmful if absorbed through the skin.

INGESTION

Harmful or fatal if swallowed. Pulmonary aspiration hazard. Product may enter lungs and cause damage.

CHRONIC

Prolonged or repeated overexposure may cause liver and kidney damage. The following components are listed by OSHA, IARC or NTP as a potential carcinogen: None

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4. FIRST AID MEASURES

INHALATION	Remove to fresh air. Keep patient calm and warm. If not breathing, give mouth-to-mouth resuscitation. If unconscious, place in recovery position and seek medical attention.
EYE CONTACT	Flush continuously with fresh water for at least 15 minutes, holding the eyelids apart. Seek medical attention.
SKIN	Remove contaminated clothing. Wash skin thoroughly with soap and water. Do NOT use solvents or thinner. Remove contaminated clothing or shoes. Obtain medical attention if irritation persists.
INGESTION	If accidentally swallowed, obtain immediate medical attention. Keep at rest. Do NOT induce vomiting. If possible, do not leave individual unattended.

5. FIRE FIGHTING MEASURES

FLASH POINT	18 °C
METHOD USED	CC
LOWER EXPLOSION LIMIT	1.4 Vol. %
UPPER EXPLOSION LIMIT	11.5 Vol. %
EXTINGUISHING MEDIA	Use alcohol-resistant foam, carbon dioxide (CO ₂) or dry powder fire extinguisher.
UNSUITABLE MEDIA	Water spray may not be effective.
FIRE-FIGHTING EQUIPMENT	Wear full fire-fighting bunker gear and respiratory protection (SCBA).
DANGER IN CASE OF ACCIDENT	Fire will produce dense black smoke. Exposure to decomposition-products may cause danger to health. Wear appropriate equipment. Cool closed containers exposed to fire with water. If possible, remove from dangerous area. Do NOT allow runoff from water (caused from fire-fighting) to enter drains or water streams.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS	Immediately contact emergency personnel. Eliminate all sources of ignition. Use suitable protective equipment (Section 8). Use explosion-proof equipment. The very fine particles can cause fire or explosion.
CLEAN-UP MEASURES	If emergency personnel are unavailable, contain spilled liquid with non-combustible absorbent materials e.g. sand, earth, and vermiculite. Use a non-sparking or explosion proof means to transfer material to a sealed, appropriate container for disposal. Obey all local, state and federal laws regarding chemical spills. Do NOT allow entering drains or water streams.

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7. HANDLING AND STORAGE

HANDLING

Vapors are heavier than air and may spread along floors. Vapors may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapor in air and avoid vapor concentration higher than the occupational exposure limits.

Additionally, the product should only be used in areas from which all exposed lights and other sources of ignition have been excluded. Electrical equipment should represent the appropriate safety-standard.

Preparation may charge electro-statically: always use ground-wires when transferring from one container to another. Operators should wear antistatic footwear and clothing. The floors should be in connection with electrical ground. Only use spark-free tools.

Avoid skin and eye contact. Avoid inhalation of vapor and spray-mist. Smoking, eating and drinking should be prohibited in application-area.

STORAGE

Keep container tightly closed. Store between 15 and 30 °C in a dry and well-ventilated area away from heat, sparks and direct sunlight. Keep away from oxidizing agents, from strongly alkaline and strongly acidic materials. Empty containers may retain hazardous properties. Do not cut, puncture or weld on or near the container. Store large quantities only in buildings designed to comply with OSHA 1910.106.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

Use exhaust ventilation to keep airborne concentrations below exposure limits

PERSONAL PROTECTIVE EQUIPMENT

EYES

Chemical splash goggles in compliance with OSHA are advised.

SKIN

Wear resistant gloves such as Buna-N (nitrile rubber). Personnel should wear antistatic clothing made of natural fiber or of high temperature resistant synthetic fiber. All parts of the body should be washed after contact.

RESPIRATORY

When respiratory protection is required, or concentrations are unknown use a NIOSH/MSHA approved air-purifying respirator equipped with organic vapor cartridges or canisters. For emergency and other conditions where exposure limit may be greatly exceeded, use an approved positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply.

EXPOSURE GUIDLINES

See Section 2 for ingredient exposure limits.

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9. PHYSICAL AND CHEMICAL PROPERTIES

	TYPICAL VALUE	UNITS
PHYSICAL STATE	Liquid	
COLOR	Typical	
ODOR	Typical	
pH	Not Available	
VAPOR PRESSURE	233	mbar
VAPOR DENSITY	Heavier than air	
BOILING POINT	80	°C
MELTING POINT	Not Available	°C
SOLUBILITY IN WATER	Not Soluble	
SPECIFIC GRAVITY	1.09	g/cm ³
PERCENTAGE OF VOC	57	%
SOLIDS WEIGHT CONTENT	42.58	%
SOLIDS VOLUME CONTENT	27.26	liters/100kg
WATER CONTENT	0	%

10. STABILITY AND REACTIVITY

STABILITY Stable under recommended storage and handling conditions.

CONDITIONS TO AVOID Avoid static discharge. Avoid heat, sparks and open flame.

INCOMPATIBILITY Keep away from strong oxidizers, alkaline and acidic materials.

HAZARDOUS DECOMPOSITION PRODUCTS Combustion may produce carbon monoxide, carbon dioxide, oxides of nitrogen, smoke and other asphyxiants.

HAZARDOUS POLYMERIZATION Will not polymerize.

11. TOXICOLOGICAL INFORMATION

There are no data available on the preparation itself. Exposure to component solvents vapors concentration in excess of the stated occupational exposure limit may result in adverse health effect such as mucous membrane and respiratory system irritation and adverse effect on kidney, liver and central nerve-system.

Symptoms and signs include headache; dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. The liquid splashed in the eyes may cause irritation and reversible damage.

12. ECOLOGICAL INFORMATION

There are no data available on the preparation itself.
The product should not be allowed to enter drains or watercourses.

13. DISPOSAL CONSIDERATIONS

Do not allow the product to enter drains or watercourses. Empty containers should not be used for other purposes and are to be handled as industrial waste according to local, state and federal regulations.

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14. TRANSPORT INFORMATION

SHIPPING NAME PAINT
HAZARD CLASS 3
PACKING GROUP II
UN NUMBER UN1263

15. REGULATORY INFORMATION

TSCA Components of this product are listed on the Toxic Substance Control Act inventory.

OSHA Hazardous by definition of Hazardous Communication Standard (29 CFR 1910.1200).

REPORTABLE INGREDIENTS	CAS NUMBER	WT%	SARA TITLE III (313)	Proposition 65 (CALIFORNIA)
n-Butyl Alcohol	71-36-3	2.8	Y	N
Methyl Ethyl Ketone	78-93-3	5.3	Y	N
Xylene	1330-20-7	2.1	Y	N
Methyl Isobutyl Ketone	108-10-1	17.8	Y	N

16. OTHER INFORMATION

The information in this MSDS is meant as a description of the safety requirements for our product; it is not to be considered a guarantee of the products' properties.

To the best of our knowledge, the information contained herein is accurate. However, neither Coating Development Group, Inc. nor Heinrich König and Company 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 which exists.