1. Product and Company Identification

Product Name: 1411K

Company Name: Hitachi Industrial Equipment & Solutions America, LLC
2730 Greenleaf Avenue
Elk Grove Village, IL 60007

Phone Number: (866)583-0048

Web site address: https://www.hitachi-iesa.com/industrial-marking-and-coding

Emergency Contact: Chemtrec (800)424-9300

Information: Christian Krzykwa (980)500-7144

Intended Use: Printing ink

2. Hazards Identification

Flammable Liquids, Category 2
Serious Eye Damage/Eye Irritation, Category 2
Specific Target Organ Toxicity (single exposure), Category 3 - Respiratory irritation.
Aquatic Toxicity (Chronic), Category 3
Specific Target Organ Toxicity (single exposure), Category 2
Acute Toxicity: Inhalation, Category 5
Skin Corrosion/Irritation, Category 2
Acute Toxicity: Oral, Category 5
Specific Target Organ Toxicity (single exposure), Category 1
Aspiration Toxicity, Category 2
Specific Target Organ Toxicity (repeated exposure), Category 1

GHS Signal Word: **Danger**

GHS Hazard Phrases:
H225 - Highly flammable liquid and vapor.
H303+333 - May be harmful if swallowed or inhaled.
H305 - May be harmful if swallowed and enters airways.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H333 - May be harmful if inhaled.
H335 - May cause respiratory irritation.
H370 - Causes damage to organs :kidneys
H372 - Causes damage to organs :central and peripheral nervous systems through prolonged or repeated exposure.
H412 - Harmful to aquatic life with long lasting effects.

GHS Precautionary Phrases:
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P233 - Keep container tightly closed.
P241 - Use explosion-proof electrical/ventilating/lighting// equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
P264 - Wash hands thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.

P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P235 - Keep cool.

GHS Response Phrases:

P301+310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+352 - IF ON SKIN: Wash with plenty of soap and water.
P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P307+311 - IF exposed: Call a POISON CENTER or doctor/physician.
P309+311 - Call a POISON CENTER or doctor/physician if exposed or you feel unwell.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P314 - Get medical attention/advice if you feel unwell.
P331 - Do NOT induce vomiting.
P332+313 - If skin irritation occurs, get medical advice/attention.
P337+313 - If eye irritation persists, get medical advice/attention.
P362 - Take off contaminated clothing and wash before re-use.

GHS Storage and Disposal Phrases:

P403+233 - Store container tightly closed in a cool and well-ventilated place.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local regulations.

Emergency Overview:

3. Composition/Information on Ingredients

CAS #	Hazardous Components (Chemical Name)	Concentration
78-93-3	Methyl ethyl ketone	70.0 -80.0 %
67-63-0	Isopropyl alcohol	1.0 -5.0 %
9004-70-0	Nitrocellulose	1.0 -5.0 %
141-78-6	Acetic acid, ethyl ester	1.0 -5.0 %
NA	Proprietary Ingredients (Chrome Complex)	1.0 -5.0 %
67-56-1	Methanol	< 1.0 %

4. First Aid Measures

Emergency and First Aid Procedures: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

In Case of Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

In Case of Skin Contact: Wash off with soap and plenty of water. Consult a physician. Flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes.

In Case of Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

In Case of Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician. Wash out mouth with water provided person is conscious.

Signs and Symptoms Of Exposure: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11 Prolonged exposure can cause: Nausea, Headache. Vomiting, To the best of our knowledge, the chemical, physical, and toxicological

properties have not been thoroughly investigated. Narcotic effect.

5. Fire Fighting Measures

Flash Pt: > -10.00 C (14.0 F) Method Used: TAG Closed Cup

Explosive Limits: LEL: No data. UEL: No data.

Autoignition Pt: > 385.00 C (725.0 F)

Suitable Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam. For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Fire Fighting Instructions: Wear self contained breathing apparatus for fire fighting if necessary.
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s): Flammable Liquid. Emits toxic fumes under fire conditions. Specific Method(s) of Fire Fighting: Use water spray to cool fire-exposed containers.

Flammable Properties and Hazards: Carbon oxides, Flash back possible over considerable distance. Container explosion may occur under fire conditions. EXPLOSION HAZARDS. Vapor may travel considerable distance to source of ignition and flash back.

Hazardous Combustion Products: No data available.

6. Accidental Release Measures

Protective Precautions, Protective Equipment and Emergency Procedures: For personal protection see section 8.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Steps To Be Taken In Case Material Is Released Or Spilled: Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL. Evacuate area. Shut off all sources of ignition. Use nonsparking tools.

7. Handling and Storage

Precautions To Be Taken in Handling: Avoid contact with eyes, skin, and clothing. Avoid inhalation of vapor or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2. User Exposure: Do not get in eyes, on skin or clothing. Do not breathe vapor. Container explosion may occur under fire conditions.

Precautions To Be Taken in Storing: Keep container tightly closed in a cool, dry, and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. For precautions see section 2.2. Hygroscopic. Keep away from heat, sparks, and open flame. Store away from heat and direct sunlight. Avoid all contact with strong acids and strong bases, User Exposure: Do not breathe vapor. Do not get in eyes, on skin or clothing.

Other Precautions: Apart from the uses mentioned in section 1 no other specific uses are stipulated.

8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
78-93-3	Methyl ethyl ketone	PEL: 200 ppm	TLV: 200 ppm STEL: 300 ppm	No data.
67-63-0	Isopropyl alcohol	PEL: 400 ppm	TLV: 200 ppm STEL: 400 ppm	No data.
9004-70-0	Nitrocellulose	No data.	No data.	No data.
141-78-6	Acetic acid, ethyl ester	PEL: 400 ppm	TLV: 400 ppm	No data.
NA	Proprietary Ingredients (Chrome Complex)	No data.	No data.	No data.
67-56-1	Methanol	PEL: 200 ppm	TLV: 200 ppm STEL: 250 ppm	No data.

Personal Protective Equipment Symbols:

Respiratory Equipment (Specify Type): Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Eye Protection: Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Chemical safety goggles.

Protective Gloves: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. Splash contact: Material: butyl-rubber Minimum layer thickness: 0.3 mm Break through time: 10 min. If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers.

Other Protective Clothing: Impervious clothing. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Engineering Controls (Ventilation etc.): Use nonsparking tools. Safety shower and eye bath. Mechanical exhaust required. General industrial hygiene practice.

Work/Hygienic/Maintenance Practices: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Wash thoroughly after handling.

Environmental Exposure Controls: Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

9. Physical and Chemical Properties

Physical States: [ ] Gas [X] Liquid [ ] Solid

Appearance and Odor: Black.
Ketone odor.

pH: No data.

Melting Point: ~ -86.00 C (-122.8 F)

Boiling Point:	~ 80.00 C (176.0 F)
Flash Pt:	> -10.00 C (14.0 F) Method Used: TAG Closed Cup
Evaporation Rate:	No data.
Flammability (solid, gas):	No data available.
Explosive Limits:	LEL: No data. UEL: No data.
Vapor Pressure (vs. Air or mm Hg):	No data.
Vapor Density (vs. Air = 1):	No data.
Specific Gravity (Water = 1):	0.82 at 25.0 C (77.0 F)
Solubility in Water:	No data.
Saturated Vapor Concentration:	No data.
Octanol/Water Partition Coefficient:	No data.
Autoignition Pt:	> 385.00 C (725.0 F)
Decomposition Temperature:	No data.
Viscosity:	No data.

Information with regard to primary physical hazard:

10. Stability and Reactivity

Stability:	Unstable [ ] Stable [X]
Conditions To Avoid - Instability:	Exposure to moisture. Heat, flames and sparks. Extremes of temperature and direct sunlight. May be shock-sensitive if dry.
Incompatibility - Materials To Avoid:	Oxidizing agents, Acid anhydrides, Aluminum, Halogenated compounds, Acids.
Hazardous Decomposition or Byproducts:	Carbon oxides, nitrogen oxides. Aldehydes.
Possibility of Hazardous Reactions:	Will occur [ ] Will not occur [X]
Conditions To Avoid - Hazardous Reactions:	No data available.

11. Toxicological Information

Toxicological Information:

Acute toxicity.
Serious eye damage/eye irritation:
Specific target organ toxicity -single exposure: May cause respiratory irritation.
Specific target organ toxicity -single exposure (Globally Harmonized System)
Skin Absorption: May be harmful if absorbed through the skin.
Eye irritation .
Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract
Ingestion:May be harmful if swallowed

CAS# 78-93-3:
1. Acute toxicity, TCLo, Inhalation, Human, 100.0 PPM, 5 M.
Result:
Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Olfaction:Other changes.
Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Conjunctive irritation.
Lungs, Thorax, or Respiration:Other changes.
- Journal of Industrial Hygiene and Toxicology, Vol/p/yr: 25,282, 1943

2. Acute toxicity, LD50, Oral, Mouse, 4050. MG/KG.
Result:
Behavioral: Sleep.
Behavioral: Headache.
Gastrointestinal:Nausea or vomiting.
- Toxicology Letters., Elsevier Science Pub. B.V., POB 211, 1000 AE, Amsterdam 1000 AE Netherlands, Vol/p/yr: 30,13, 1986

3. Acute toxicity, LC50, Inhalation, Mouse, 32.00 GM/M3, 4 H.
Result:
Gastrointestinal: Alteration in gastric secretion.
Gastrointestinal:Other changes.
- Current Toxicology, Nova Science Publishers, Inc., 6080 Jericho Turnpike, Suite 207, Commack, NY 11725, Vol/p/yr: 1,47, 1993

4. Acute toxicity, LD50, Intraperitoneal, Mouse, 616.0 MG/KG.
Result:
Behavioral: Change in motor activity (specific assay).
Behavioral: Ataxia.
Behavioral: Antipsychotic.
- Shell Chemical Company. Unpublished Report., Vol/p/yr: -,6, 1961

5. Acute toxicity, LD50, Skin, Species: Rabbit, 6480. MG/KG.
Result:
Behavioral: Hallucinations, distorted perceptions.
Endocrine:Effect on menstrual cycle.
- Shell Chemical Company., Vol/p/yr: MSDS-5390-,

6. Acute toxicity, TCLo, Inhalation, Human, 10.00 ppm.
Result:
Cardiac: Pulse rate decreased with fall in BP.

Lungs, Thorax, or Respiration:Other changes.
- Neurotoxicology., Intox Press, Inc., POB 34075, Little Rock, AR 72203, Vol/p/yr: 24,179, 2003

7. Acute toxicity, LC50, Inhalation, Mouse, 32.00 mg/m3.
Result:
Liver: Fatty liver degeneration.

8. Standard Draize Test, Eyes, Human, 350.0 PPM.
Result:
Tumorigenic: Equivocal tumorigenic agent by RTECS criteria.
Gastrointestinal:Tumors.
Liver: Tumors.
- Journal of Industrial Hygiene and Toxicology, Vol/p/yr: 25,282, 1943

9. Standard Draize Test, Skin, Species: Rabbit, 500.0 MG, 24 H.
Result:
Behavioral: Ataxia.
Lungs, Thorax, or Respiration:Dyspnea.
Gastrointestinal:Hypermotility, diarrhea.
- Journal of Industrial Hygiene and Toxicology, Vol/p/yr: 25,282, 1943

CAS# 67-63-0:
1. Acute toxicity, TDLo, Oral, Human, 14432. MG/KG.
Result:
Behavioral: Coma.
Vascular: BP lowering not charactertized in autonomic section.
Lungs, Thorax, or Respiration:Dyspnea.
- New England Journal of Medicine., Massachusetts Medical Soc., 10 Shattuck St., Boston, MA 02115, Vol/p/yr: 277,699, 1967

2. Acute toxicity, TDLo, Oral, Human, 223.0 MG/KG.
Result:
Behavioral: Hallucinations, distorted perceptions.
Cardiac:Pulse rate.
Vascular: BP lowering not charactertized in autonomic section.
- Journal of Laboratory and Clinical Medicine., C.V. Mosby Co., 11830 Westline Industrial Dr., St. Louis, MO 63146, Vol/p/yr: 12,326, 1927

3. Acute toxicity, LDLO, Oral, Human, 3570. MG/KG.
Result:
Behavioral: Coma.
Lungs, Thorax, or Respiration:Respiratory depression.
Gastrointestinal:Nausea or vomiting.
- "Toxicology of Drugs and Chemicals", Deichmann, W.B., Academic Press, Inc., New York, Vol/p/yr: -,339, 1969

4. Acute toxicity, LDLO, Route of Application: Unreported., Human, 2770. MG/KG.
Result:
Biochemical:Enzyme inhibition, induction, or change in blood or tissue levels: Cytochrome oxidases (including oxidative phosphorylation).
- Poisoning; Toxicology, Symptoms, Treatments, 2nd ed., Arena, J.M., C.C. Thomas, Springfield, IL, Vol/p/yr: 2,73, 1970

5. Acute toxicity, LD50, Oral, Mouse, 3600. MG/KG.
Result:
Behavioral: Altered sleep time (including change in righting reflex).
Behavioral: Somnolence (general depressed activity).
- Gigiena i Sanitariya, Mezhdunarodnaya Kniga, ul. B. Yakimanka, 39, 113095, Moscow 113095 Russia, Vol/p/yr: 43(1),8, 1978

6. Acute toxicity, LCLO, Inhalation, Mouse, 12800. PPM, 3 H.
Result:
Maternal Effects: Other effects.
- Interagency Collaborative Group on Environmental Carcinogenesis, National Cancer Institute, Memorandum, June 1, Vol/p/yr: 17JU, 1974

7. Acute toxicity, LD50, Intraperitoneal, Mouse, 4477. MG/KG.
Result:
Skin and Appendages: Skin: After topical exposure: Dermatitis, allergic.
- EHP, Environmental Health Perspectives., U.S. Government Printing Office, Supt of Documents, Washington, DC 20402, Vol/p/yr: 61,321, 1985

8. Acute toxicity, LD50, Intravenous, Mouse, 1509. MG/KG.
Result:
Lungs, Thorax, or Respiration:Fibrosis, focal (pneumoconiosis).
Lungs, Thorax, or Respiration:Acute pulmonary edema.
- EHP, Environmental Health Perspectives., U.S. Government Printing Office, Supt of Documents, Washington, DC 20402, Vol/p/yr: 61,321, 1985

9. Acute toxicity, LD50, Oral, Species: Rabbit, 6410. MG/KG.
Result:
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).
Effects on Newborn: Biochemical and metabolic.
- FAO Nutrition Meetings Report Series., Vol/p/yr: 48A,114, 1970

10. Acute toxicity, LD50, Skin, Species: Rabbit, 12800. MG/KG.
Result:
Specific Developmental Abnormalities: Respiratory system.
- Raw Material Data Handbook, Vol.1: Organic Solvents, 1974., National Assoc. of Printing Ink Research Institute, Francis McDonald Sinclair Memorial Labor, Lehigh Univ., Bethlehem, PA 18015, Vol/p/yr: 1,100, 1974

11. Acute toxicity, LD50, Intraperitoneal, Species: Rabbit, 667.0 MG/KG.
Result:
Specific Developmental Abnormalities: Craniofacial (including nose and tongue).
- EHP, Environmental Health Perspectives., U.S. Government Printing Office, Supt of Documents, Washington, DC 20402, Vol/p/yr: 61,321, 1985

12. Acute toxicity, TCLo, Inhalation, Human, 35.00 ppm.
Result:
Cardiac: Pulse rate decreased with fall in BP.
Lungs, Thorax, or Respiration:Other changes.
- Neurotoxicology., Intox Press, Inc., POB 34075, Little Rock, AR 72203, Vol/p/yr: 24,179, 2003

13. Acute toxicity, LDLO, Route of Application: Unreported., Human, 2.000 mL/kg.
Result:
Specific Developmental Abnormalities: Central nervous system.
Specific Developmental Abnormalities: Craniofacial (including nose and tongue).
Specific Developmental Abnormalities: Other developmental abnormalities.
- Japanese Journal of Toxicology, Yakugyo Jihosha, Hokushin Bldg., 2-36 Jinbo-cho, Kanda, Chiyoda, Tokyo 101 Japan, Vol/p/yr: 12,341, 1999

14. Standard Draize Test, Skin, Species: Rabbit, 500.0 MG.
Result:
Tumorigenic: Carcinogenic by RTECS criteria.
Liver: Tumors.
Blood: Leukemia.
- National Technical Information Service, Vol/p/yr: AD-A106-94,

15. Standard Draize Test, Eyes, Species: Rabbit, 100.0 MG.
Result:
Tumorigenic: Carcinogenic by RTECS criteria.
Liver: Tumors.
Blood: Leukemia.
- American Journal of Ophthalmology., Ophthalmic Pub. Co., 435 N. Michigan Ave., Suite 1415, Chicago, IL 60611, Vol/p/yr: 29,1363, 1946

CAS# 9004-70-0:
1. Acute toxicity, LD50, Oral, Rat, > 5.000 GM/KG.
Result:
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).
- Toxicology and Applied Pharmacology, Academic Press, Inc., 1 E. First St., Duluth, MN 55802, Vol/p/yr: 33,159, 1975

2. Acute toxicity, LD50, Oral, Mouse, > 5.000 GM/KG.
Result:
Paternal Effects: Spermatogenesis (including genetic material, sperm morphology,motility, and count).
- Toxicology and Applied Pharmacology, Academic Press, Inc., 1 E. First St., Duluth, MN 55802, Vol/p/yr: 33,159, 1975

CAS# 141-78-6:
1. Other Studies:, TCLo, Inhalation, Rat, 1500. ppm.
Result:
Sense Organs and Special Senses (Nose, Eye, Ear, and Taste): Olfaction: Change in sensation of smell.
Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Olfaction:Other changes.
- Toxicologic Pathology., Dr. F.A. de la Iglesia, Warner-Lambert Co., Pharmaceutical Research Div., POB 1047, Ann Arbor, MI 48106, Vol/p/yr: 27,618, 1999

2. Acute toxicity, TCLo, Inhalation, Human, 400.0 PPM.
Result:
Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Olfaction:Other changes.
Sense Organs and Special Senses (Nose, Eye, Ear, and Taste):Eye:Conjunctive irritation.

Lungs, Thorax, or Respiration:Other changes.
- Journal of Industrial Hygiene and Toxicology, Vol/p/yr: 25,282, 1943

3. Acute toxicity, LD50, Oral, Mouse, 4100. MG/KG.
Result:
Behavioral: Somnolence (general depressed activity).
Behavioral: Change in motor activity (specific assay).
Behavioral: Coma.
- Gigiena i Sanitariya, Mezhdunarodnaya Kniga, ul. B. Yakimanka, 39, 113095, Moscow 113095 Russia, Vol/p/yr: 48(4),66, 1983

4. Acute toxicity, LC50, Inhalation, Mouse, 45.00 GM/M3, 2 H.
Result:
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).
- Toxicometric Parameters of Industrial Toxic Chemicals Under Single Exposure, Izmerov, N.F., et al., Centre of International Projects, GKNT, Moscow Russia, Vol/p/yr: -,65, 1982

5. Acute toxicity, LD50, Intraperitoneal, Mouse, 709.0 MG/KG.
Result:
Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).
Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).
Effects on Embryo or Fetus: Fetal death.
- Shell Chemical Company. Unpublished Report., Vol/p/yr: -,5, 1961

6. Acute toxicity, LD50, Oral, Species: Rabbit, 4935. MG/KG.
Result:
Skin and Appendages: Skin: After topical exposure: Dermatitis, allergic.
- Industrial Medicine and Surgery., For publisher information, see IOHSA5, Northbrook, IL, Vol/p/yr: 41,31, 1972

7. Acute toxicity, LD50, Skin, Species: Rabbit, > 20.00 ML/KG.
Result:
Cardiac: Pulse rate decreased with fall in BP.
Lungs, Thorax, or Respiration:Other changes.
- Union Carbide Data Sheet, Union Carbide Corp., 39 Old Ridgebury Rd., Danbury, CT 06817, Vol/p/yr: 10/4, 1968

8. Acute toxicity, LC50, Inhalation, Rat, 6000. ppm.
Result:
Reproductive: Other effects on female.
Effects on Newborn: Other neonatal measures or effects.
Effects on Embryo or Fetus: Other effects to embryo.

9. Acute toxicity, LD50, Oral, Species: Guinea pig, 5.500 gm/kg.
Result:
Reproductive: Other effects on female.
Specific Developmental Abnormalities: Central nervous system.
Effects on Newborn: Physical.

10. Acute toxicity, LD50, Oral, Mouse, 4.100 gm/kg.

Result:
Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

11. Standard Draize Test, Eyes, Human, 400.0 PPM.
Result:
Brain and Coverings: Changes in brain weight.
Kidney, Ureter, Bladder: Changes in liver weight.
Kidney, Ureter, Bladder:Changes in tubules (including acute renal failure, acute tubular necrosis).
- Journal of Industrial Hygiene and Toxicology, Vol/p/yr: 25,282, 1943

Irritation or Corrosion: Skin corrosion/irritation.
Irritating to eyes, respiratory system and skin.

CAS #	Hazardous Components (Chemical Name)	NTP	IARC	ACGIH	OSHA
78-93-3	Methyl ethyl ketone	n.a.	n.a.	n.a.	n.a.
67-63-0	Isopropyl alcohol	n.a.	3	Unknown	n.a.
9004-70-0	Nitrocellulose	n.a.	n.a.	n.a.	n.a.
141-78-6	Acetic acid, ethyl ester	n.a.	n.a.	n.a.	n.a.
NA	Proprietary Ingredients (Chrome Complex)	n.a.	n.a.	n.a.	n.a.
67-56-1	Methanol	n.a.	n.a.	n.a.	n.a.

12. Ecological Information

No data available.

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

13. Disposal Considerations

Waste Disposal Method: Product: Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Observe all federal, state, and local environmental regulations. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Contaminated packaging: APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION.

14. Transport Information

LAND TRANSPORT (US DOT):

DOT Proper Shipping Name: Printing ink.
DOT Hazard Class: 3 FLAMMABLE LIQUID
UN/NA Number: UN1210 **Packing Group:** II

LAND TRANSPORT (Canadian TDG):

TDG Shipping Name: Printing ink.
UN Number: UN1210 **Packing Group:** II
Hazard Class: 3 - FLAMMABLE LIQUID **TDG Classification:**

LAND TRANSPORT (European ADR/RID):

ADR/RID Shipping Name:	Printing ink.		
UN Number:	UN1210	**Packing Group:**	II
Hazard Class:	3 - FLAMMABLE LIQUID		

MARINE TRANSPORT (IMDG/IMO):

IMDG/IMO Shipping Name:	Printing ink.		
UN Number:	UN1210	**Packing Group:**	II
Hazard Class:	3 - FLAMMABLE LIQUID		

AIR TRANSPORT (ICAO/IATA):

ICAO/IATA Shipping Name:	Printing ink.		
UN Number:	UN1210	**Packing Group:**	II
Hazard Class:	3 - FLAMMABLE LIQUID		

15. Regulatory Information

EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
78-93-3	Methyl ethyl ketone	No	Yes NA	No
67-63-0	Isopropyl alcohol	No	No	Yes
9004-70-0	Nitrocellulose	No	No	No
141-78-6	Acetic acid, ethyl ester	No	Yes NA	No
NA	Proprietary Ingredients (Chrome Complex)	No	No	Yes-Cat. N090
67-56-1	Methanol	No	Yes NA	Yes

This material meets the EPA 'Hazard Categories' defined for SARA Title III Sections 311/312 as indicated:

[ ] Yes [X] No	Explosive	[X] Yes [ ] No	Acute toxicity (any route of exposure)
[X] Yes [ ] No	Flammable (gases, aerosols, liquid, or solid)	[X] Yes [ ] No	Skin Corrosion or Irritation
[ ] Yes [X] No	Oxidizer (liquid, solid or gas)	[X] Yes [ ] No	Serious eye damage or eye irritation
[ ] Yes [X] No	Self-reactive	[ ] Yes [X] No	Respiratory or Skin Sensitization
[ ] Yes [X] No	Pyrophoric (liquid or solid)	[ ] Yes [X] No	Germ cell mutagenicity
[ ] Yes [X] No	Pyrophoric gas	[ ] Yes [X] No	Carcinogenicity
[ ] Yes [X] No	Self-heating	[ ] Yes [X] No	Reproductive toxicity
[ ] Yes [X] No	Organic peroxide	[X] Yes [ ] No	Specific target organ toxicity (single or repeated exposure)
[ ] Yes [X] No	Corrosive to metal	[X] Yes [ ] No	Aspiration Hazard
[ ] Yes [X] No	Gas under pressure (compressed gas)	[ ] Yes [X] No	Simple Asphyxiant
[ ] Yes [X] No	In contact with water emits flammable gas	[X] Yes [ ] No	(Health) Hazard Not Otherwise Classified (HNOC)
[ ] Yes [X] No	Combustible Dust		
[ ] Yes [X] No	(Physical) Hazard Not Otherwise Classified (HNOC)		

California Proposition 65

WARNING

This product can expose you to chemicals including .alpha.-Methyl styrene, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov. This product can expose you to chemicals including Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
78-93-3	Methyl ethyl ketone	TSCA: Inventory CA TAC, Title 8: TAC: Cat. IIa, Title 8 NC TAP: Yes: NC TAP
67-63-0	Isopropyl alcohol	TSCA: Inventory CA TAC, Title 8: TAC: Cat. IIb, Title 8
9004-70-0	Nitrocellulose	TSCA: Inventory
141-78-6	Acetic acid, ethyl ester	TSCA: Inventory CA TAC, Title 8: Title 8

		NC TAP: Yes: NC TAP
NA	Proprietary Ingredients (Chrome Complex)	TSCA: Inventory CA TAC, Title 8: Yes - Cat., Yes - Cat. NC TAP: Yes - Cat.
67-56-1	Methanol	TSCA: Inventory CA PROP.65: Yes: RDTox. CA TAC, Title 8: TAC: Cat. IIa, Title 8 NC TAP: Yes: US HAP

CAS #	Hazardous Components (Chemical Name)	International Regulatory Lists
78-93-3	Methyl ethyl ketone	Mexico INSQ: 1193 Japan ENCS: 2-542 Germany WHCS: 150: WGK 1 Switzerland Giftliste 1: G-2429 REACH: 01-2119457290-43: Full, (P)
67-63-0	Isopropyl alcohol	Mexico INSQ: 1219 Japan ENCS: 2-207 Japan ISHL: 2-(8)-319 Israel HSL: Cat. Germany WHCS: 135: WGK 1 Switzerland Giftliste 1: G-1712 REACH: 01-2119457558-25: Full, (P)
9004-70-0	Nitrocellulose	Japan ENCS: 8-176 Switzerland Giftliste 1: G-8365 REACH: (P)
141-78-6	Acetic acid, ethyl ester	Mexico INSQ: 1173 Japan ENCS: 2-726 Germany WHCS: 95: WGK 1 Switzerland Giftliste 1: G-1157 REACH: 01-2119475103-46: Full, (P)
NA	Proprietary Ingredients (Chrome Complex)	Israel HSL: Cat. Germany WHCS: : WGK 2 REACH: (R): Full, (P)
67-56-1	Methanol	Japan ENCS: 7-322 Israel HSL: Cat. Germany WHCS: 145: WGK 1 Switzerland Giftliste 1: G-2063 REACH: 01-2119433307-44: Full, (P)

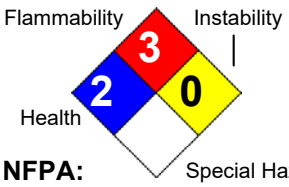
16. Other Information

Revision Date: 03/07/2023 **Previous revision:** 06/13/2022

Hazard Rating System:

HMIS:

NFPA:



Additional Information About This Product: 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 presented in this document. Final determination of suitability of any material is the sole responsibility of the user to follow local, state and federal laws and regulations in regards to handling of hazardous materials. Although certain hazards are described herein, unknown hazards may exist and caution should always be exercised.

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