

MATERIAL SAFETY DATA SHEET



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SECTION I CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: Block Out Solution and Block Out Pens

General Use: Designed for use in the photoengraving industry.

Company: UEI® Systems, A UEI Group Company
Address/Phone: 9090 Nieman Road
Overland Park, KS 66214
(800) 221-9059 or (913) 541-0503

Emergency Contact Number: CHEMTREC – Available 24 hrs/day, 7 days/week
Domestic North America: 800-424-9300
International: 703-527-3887

SECTION II HAZARDOUS INGREDIENTS / IDENTITIIY INFORMATION

| <u>Components</u> | <u>Cas No.</u> | <u>%</u> | <u>EINECS/ELINCS</u> |
|-------------------|----------------|----------|----------------------|
| Toluene | 108-88-3 | >70 | 203-625-9 |
| Resins | | | |
| Dyes | | | |

SECTION III HAZARD IDENTIFICATION

Identification: **Warning! Flammable liquid and vapor.** Causes eye, skin, and respiratory tract irritation. Breathing vapors may cause drowsiness and dizziness. May be absorbed through intact skin. Aspiration hazard if swallowed. Can enter lungs and cause damage. Possible risk of harm to the unborn child. May cause central nervous system depression.

Appearance: Dark Blue Liquid

Target Organs: Central nervous system, respiratory system, eyes, skin.

Potential Health Effects

Eye: Causes eye irritation. Vapors may cause eye irritation.

Skin: Causes skin irritation. May be absorbed through the skin. Repeated or prolonged exposure may cause drying and cracking of the skin. Not expected to cause an allergic skin reaction.

Ingestion: May cause effects similar to those for inhalation exposure. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal. May cause central nervous system depression.

Inhalation: Causes respiratory tract irritation. Inhalation of high concentrations (>200 ppm) of toluene are clearly associated with CNS encephalopathy, headache, depression, lassitude (weakness, exhaustion), impaired coordination, transient memory loss, and impaired reaction time.

Chronic: Prolonged or repeated skin contact may cause defatting and dermatitis. Repeated exposure in combination with constant, loud noise can produce hearing loss and dizziness. Chronic hydrocarbon abuse (for example, sniffing glue or light hydrocarbons such as contained in this material) has been associated with irregular heart rhythms and potential cardiac arrest. Toluene abuse has been linked with kidney disease, as evidenced by blood, protein, & pus in the urine, accompanied by elevated serum creatinine, decreased urinary output, & metabolic & renal tubular acidosis. Although kidney toxicity has not been common in cases of occupational toluene exposure, there has been at least one report of renal toxicity following a 40-year occupational toluene exposure. Toluene does not cause the severe injury to the bone marrow that is characteristic of benzene poisoning. Intentional abuse of toluene vapors has been linked to damage of the brain, liver, kidney and to death.

Repeated inhalation exposure of toluene to animals causes histological changes in the brain, degeneration of the heart tissue, and possible immune suppression.

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SECTION IV FIRST AID MEASURES

In all cases call a physician immediately.

Ingestion: Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin Contact: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Notes To Physician: Causes cardiac sensitization to endogenous catecholamines which may lead to cardiac arrhythmias. Do NOT use adrenergic agents such as epinephrine or pseudoepinephrine.

SECTION V FIRE FIGHTING MEASURES

| | | |
|-------------------------------------|--|---|
| Flash Point: 4° C (39.20° F) | Auto-ignition temperature: 480° C (896.00° F) | Explosion Limits: Lower: 1.1 vol. % Upper: 7.1 vol. % |
|-------------------------------------|--|---|

Extinguishing Media: Use water spray, dry chemical, carbon dioxide, or appropriate foam. Solid streams of water may be ineffective and spread material.

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Water runoff can cause environmental damage. Dike and collect water used to fight fire. Use water spray to keep fire-exposed containers cool. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Flammable liquid and vapor. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. This liquid floats on water and may travel to a source of ignition and spread fire. May accumulate static electricity.

NFPA Rating: (estimated) Health: 2; Flammability: 3; Instability: 0

SECTION VI ACCIDENTAL RELEASE MEASURES

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Provide ventilation. Use only non-sparking tools and equipment. Control runoff and isolate discharged material for proper disposal. Use water spray to cool and disperse vapors and protect personnel.

SECTION VII HANDLING AND STORAGE

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Keep away from heat, sparks and flame. Avoid breathing vapor or mist.

Storage: Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Separate from oxidizing materials.

SECTION VIII EXPOSURE CONTROLS AND PERSONAL PROTECTION

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Ventilation fans and other electrical service must be non-sparking and have an explosion-proof design.

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| Chemical Name | ACGIH | NIOSH | OSHA – Final PELs |
|---------------|--|--|------------------------------|
| Toluene | 50 ppm TWA; Skin - potential significant contribution to overall exposure by the cutaneous route | 100 ppm TWA; 375 mg/m ³ TWA 500 ppm IDLH | 200 ppm TWA; 300 ppm Ceiling |

OSHA Vacated PELs: Toluene: 100 ppm TWA; 375 mg/m³ TWA

Personal Protective Equipment

Eyes: Wear chemical splash goggles.
Skin: Wear appropriate gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

SECTION IX PHYSICAL AND CHEMICAL PROPERTIES

| | | | |
|-----------------------------------|--|-----------------------------|-------------------------|
| Physical State: | Liquid | Appearance: | Dark Blue Color |
| Odor: | sweetish odor - pleasant odor - benzene-like | Solubility in Water: | Insoluble |
| pH: | NA | Vapor Pressure: | 28.4 mm Hg @ 25° C |
| Vapor Density: | 3.1 (air = 1) | Boiling Point: | 110.6° C |
| Freezing/Melting Pt: | -95° C | Viscosity: | 0.59 cps @ 20° C |
| Specific Gravity/Density: | 0.86 (Water=1) | Evaporation Rate: | 2.4 (Butyl acetate = 1) |
| Molecular Formula: | C ₇ H ₈ | Molecular Weight: | 92.14 |
| Decomposition Temperature: | NA | | |

SECTION X STABILITY AND REACTIVITY

Stability: Stable under normal temperatures and pressures
Conditions To Avoid: Ignition sources, excess heat, confined spaces.
Incompatibility: Strong oxidizing agents, nitric acid, sulfuric acid.
Hazardous Decomposition/By-Products: Carbon monoxide, carbon dioxide.
Hazardous Polymerization: Has not been reported

SECTION XI TOXICOLOGICAL INFORMATION

RTECS#:

CAS# 108-88-3: XS5250000

LD50/LC50:

CAS# 108-88-3:

Draize test, rabbit, eye: 870 ug Mild
Draize test, rabbit, eye: 2 mg/24H Severe
Draize test, rabbit, skin: 435 mg Mild
Draize test, rabbit, skin: 500 mg Moderate
Draize test, rabbit, skin: 20 mg/24H Moderate
Inhalation, mouse: LC50 =400 ppm/24H
Inhalation, mouse: LC50 =30000 mg/m³/2H
Inhalation, mouse: LC50 =19900 mg/m³/7H
Inhalation, mouse: LC50 =10000 mg/m³
Inhalation, rat: LC50 =49 gm/m³/4H
Oral, rat: LD50 = 636 mg/kg
Skin, rabbit: LD50 = 14100

Carcinogenicity: CAS# 108-88-3: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.

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Teratogenicity: In an epidemiologic study of toluene and pregnancy, occupational exposures to toluene were said to be associated with an increased incidence of renal, urinary, gastrointestinal, and cardiac anomalies. Fetotoxicity (reduced fetal weight), behavioral effects (effects on learning and memory) and hearing loss (in males) were observed in the offspring of rats exposed by inhalation to toluene, in the absence of maternal toxicity.

Reproductive Effects: Many reports of reproductive effects of toluene abuse or heavy occupational exposure are confounded by mixed solvent exposure or fetal alcohol syndrome. Women exposed to toluene in lab work had a 4.7-fold increased risk of spontaneous abortions.

Mutagenicity: No information available.

Neurotoxicity: No information available.

Other Studies: No information available.

SECTION XII ECOLOGICAL INFORMATION

Ecotoxicity: No data available.
Bluegill LC50=17 mg/L/24H
Shrimp LC50=4.3 ppm/96H
Fathead minnow LC50=36.2 mg/L/96H
Sunfish (fresh water) TLm=1180 mg/L/96H

Environmental: From soil, substance evaporates and is microbially biodegraded.
In water, substance volatilizes and biodegrades.

Physical: Photochemically produced hydroxyl radicals degrade substance.

Other: No information available.

SECTION XIII DISPOSAL INFORMATION

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None Listed

RCRA U-Series:

CAS # 108-88-3: Waste Number U220.

SECTION XIV TRANSPORT INFORMATION

| | <u>US DOT</u> | <u>IATA</u> |
|-------------------------|----------------|----------------------------|
| Shipping Name: | Resin Solution | Resin Solution |
| Hazard Class: | 3 | 3 |
| UN Number: | UN1866 | UN1866 |
| Packing Group: | II | II |
| Additional Info: | | Flashpoint 4° C (39.20° F) |

SECTION XV REGULATORY INFORMATION

US FEDERAL

TSCA

CAS# 108-88-3 is listed on the TSCA inventory.

Health & Safety Reporting List

CAS# 108-88-3: Effective 10/4/82, Sunset 10/4/92

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

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TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

CERCLA Hazardous Substances and corresponding RQs

CAS# 108-88-3: 1000 lb. final RQ; 454 kg final RQ

SARA Section 302 Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes

CAS # 108-88-3: immediate, fire.

Section 313

This material contains Toluene (CAS# 108-88-3, >99%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

Clean Air Act:

CAS# 108-88-3 is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depleters.

This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

CAS# 108-88-3 is listed as a Hazardous Substance under the CWA.

CAS# 108-88-3 is listed as a Priority Pollutant under the Clean Water Act.

CAS# 108-88-3 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 108-88-3 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

WARNING: This product contains Toluene, a chemical known to the state of California to cause developmental reproductive toxicity.

California No Significant Risk Level: None of the chemicals in this product are listed.

EUROPEAN / INTERNATIONAL REGULATIONS

European Labeling in Accordance with EC Directives

Hazard Symbols:

XN F

Risk Phrases:

R 11 Highly flammable.

R 38 Irritating to skin.

R 48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R 63 Possible risk of harm to the unborn child.

R 65 Harmful: may cause lung damage if swallowed.

R 67 Vapors may cause drowsiness and dizziness.

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Safety Phrases:

S 36/37 Wear suitable protective clothing and gloves.

S 46 If swallowed, seek medical advice immediately and show this container or label.

S 62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

WGK (Water Danger / Protection):

CAS# 108-88-3: 2

Canada – DSL / NDSL:

CAS# 108-88-3 is listed on Canada's DSL List.

Canada - WHMIS:

This product has a WHMIS classification of B2, D2A, D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

Canadian Ingredient Disclosure List:

CAS# 108-88-3 is listed on the Canadian Ingredient Disclosure List.

SECTION XVI OTHER INFORMATION

UEI™ Systems provides the information contained herein in good faith. The information is believed to be correct. However it is not all inclusive and should be used only as a guide. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose. UEI™ Systems shall not be held liable for any damage resulting from handling or from contact with the product listed herein.