



B298-224 BLACK TOUCH UP MARKER

MATERIAL SAFETY DATA SHEET

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FOR ALL INTERNATIONAL TRANSPORTATION ACCIDENTS. 1-703-527-3887 (collect)

Health: 2 Flammability: 3 Reactivity 0

PRODUCT NAME: B298-224 BLACK TOUCH UP MARKER

I. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

REVISION DATE: 11/11/03
SUPERCEDES: None
MSDS NO. B298-224

II. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	%	CAS #	PEL
ethanol	51-60	64-17-5	1000 ppm TWA; 1900 mg/m3 TWA
isobutanol	21-30	78-83-1	100 ppm TWA; 300 mg/m3 TWA
polyketone resin	11-20	PROPRIETARY	No PEL established
n-propyl acetate	1-10	109-60-4	200 ppm TWA; 840 mg/m3 TWA
isopropanol	1-10	67-63-0	400 ppm TWA; 980 mg/m3 TWA
Dipropylene glycol monomethyl ether	1-10	34590-94-8	No PEL established
m-xylene	<1	108-38-3	No PEL established
chromium	<1	7440-47-3	Chromium, sol. chromic, chromous salts (as Cr): 0.5 mg/m3 TWA; Chromium, metal and insoluble salts (as Cr): 1 mg/m3 TWA
1,2,4-trimethylbenzene	<1	95-63-6	No PEL established
ethylbenzene	<1	100-41-4	100 ppm TWA; 435 mg/m3 TWA
o-xylene	<1	95-47-6	No PEL established
p-xylene	<1	106-42-3	No PEL established

III. HAZARDS IDENTIFICATION

Routes of Entry: Inhalation., Ingestion., Skin contact., Eye contact., Absorption.
Medical Conditions Aggravated: Eye disease. Liver disease. Skin disease including eczema and sensitization. Respiratory disease including asthma and bronchitis. Digestive tract disease. Kidney disease.

Immediate (Acute) Health Effects

Inhalation: Irritation may be delayed for several hours. Can cause severe respiratory irritation, dizziness, weakness, fatigue, nausea, headache and possible unconsciousness.

Skin Contact: Substance causes moderate skin irritation. Moderately irritating to the skin. Can cause moderate skin irritation, defatting, and dermatitis. Not likely to cause permanent damage. No hazard in normal industrial use.

Eye Contact: Irritating but will not permanently injure eye tissue. Can cause moderate irritation, tearing and reddening, but not likely to permanently injure eye tissue. Contact with the eyes may cause moderate to severe eye injury. Eye contact may result in tearing and reddening, but not likely to permanently injure eye tissue. Temporary vision impairment (cloudy or blurred vision) is possible. No hazard in normal industrial use.

Skin Absorption: Component(s) may be absorbed through intact skin, but it is unlikely that harmful effects will occur unless contact is prolonged, repeated, and extensive. Toxic and may be harmful if absorbed through the skin; may produce target organ damage. Minimal hazard in normal industrial use. May cause gastrointestinal discomfort.

Ingestion: Aspiration of material into the lungs can cause chemical pneumonitis which can be fatal. Irritating to mouth, throat, and stomach. Can cause abdominal discomfort, nausea, vomiting and diarrhea.

Target Organ Acute Toxicity:

Ethyl alcohol	respiratory system, skin, eyes, CNS, liver, blood, reproductive system
Isobutyl alcohol	eyes, skin, respiratory system, CNS
n-Propyl acetate	skin, eyes, CNS, respiratory system
Isopropyl alcohol	eyes, skin, respiratory system
Dipropylene glycol, methyl ether	eyes, respiratory system, CNS
m-Xylene	CNS, eyes, blood, liver, kidneys, skin, GI tract, respiratory system
Chromium metal	respiratory system, skin, eyes
1,2,4-Trimethylbenzene	eyes, skin, respiratory system, CNS, blood
Ethyl benzene	eyes, respiratory system, skin, CNS
o-Xylene	CNS, eyes, blood, liver, kidneys, skin, GI tract, respiratory system
p-Xylene	CNS, eyes, blood, liver, kidneys, skin, GI tract, respiratory system

Long-Term (Chronic) Health Effects:

Carcinogenicity: ACGIH. IARC. NIOSH. NTP. OSHA. Contains a substance that is a probable cancer hazard based on human studies.

Reproductive and Developmental Toxicity: A component in this product has been shown to cause birth defects and reproductive disorders in laboratory animals at doses that could be encountered in the workplace.

Mutagenicity: No data available to indicate product or any components present at greater than 0.1% is mutagenic or genotoxic.

Inhalation: Upon prolonged and/or repeated exposure, can cause severe respiratory irritation, dizziness, weakness, fatigue, nausea, headache and possible unconsciousness.

Skin Contact: May cause lingering effects but not likely to result in permanent damage if the exposure is eliminated. Upon prolonged or repeated contact, can cause moderate skin irritation, defatting, and dermatitis. Not likely to cause permanent damage.

Eye Contact: Upon prolonged or repeated contact, can cause severe irritation. Eye contact may result in corneal injury. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. Temporary vision impairment (cloudy or blurred vision) is possible.

Skin Absorption:	Upon prolonged or repeated exposure, minimal hazard in normal industrial use. May cause gastrointestinal discomfort.
Target Organ Chronic Toxicity:	Eyes. Blood. Liver. Skin. Nervous System. Respiratory Tract. Digestive Tract. Kidneys.
Supplemental Health Hazard Information:	No additional health information available.

IV. FIRST AID

Inhalation:	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get immediate medical attention. Remove to fresh air. Get medical attention. This material does not present a hazard if inhaled. Remove individual to fresh air after an airborne exposure if any symptoms develop, as a precautionary measure.
Eyes:	Flush immediately under running water for 15 minutes. If redness or irritation occurs, seek medical attention. Immediately flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get immediate medical attention and monitor the eye daily as advised by your physician.
Skin Contact:	For hot material, immediately immerse in or flush the affected area with large amounts of cold water to dissipate heat. Cover with clean gauze and do not attempt to remove the material yourself. Get prompt medical attention. Medical personnel: coat with mineral oil to soften material for removal. Wash exposed areas thoroughly with soap and water until chemical is removed. Remove contaminated clothing and launder before reuse. Wash with soap and water. Remove contaminated clothing and launder. Get medical attention if irritation develops or persists.
Ingestion:	Rinse mouth. Seek medical advice. No hazard in normal industrial use. Do not induce vomiting. Seek medical attention if symptoms develop. Provide medical care provider with this MSDS.
Notes to MD:	Treat as thermal burns. No need to remove from skin as it will come off as healing occurs.

V. FIRE FIGHTING MEASURES

Flammability Summary:

Flash Point:	58 (CALC.) °F
Upper Flammable/Explosive Limit, % in air:	3.8 @ 77° F
Lower Flammable/Explosive Limit, % in air:	0.8 @ 77° F

Fire Hazards:	Empty containers that retain product residue (liquid, solid/sludge, or vapor) can be dangerous. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose container to heat, flame, sparks, static electricity, or other sources of ignition. Any of these actions can potentially cause an explosion that may lead to injury or death. Container may explode in heat of fire. Vapors may be ignited by sparks, flames or other sources of ignition if material is above the flash point giving rise to a fire (Class B). Vapors are heavier than air and may travel to a source of ignition and flash back.
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Extinguishing Media: Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material. Dry chemical Water spray Use alcohol resistant foam, carbon dioxide, or dry chemical extinguishing agents. Water may be ineffective but water spray can be used to extinguish a fire if swept across the base of the flames. Water can absorb heat and keep exposed material from being damaged by fire.

Fire Fighting Instructions: Flammable component(s) of this material may be lighter than water and burn while floating on the surface. Do not enter fire area without proper protection including self-contained breathing apparatus and full protective equipment. Fight fire from a safe distance and a protected location due to the potential of hazardous vapors and decomposition products. Flammable component(s) of this material may be lighter than water and burn while floating on the surface. Use water spray/fog for cooling.

Hazardous Combustion Products: Carbon monoxide Toxic gases

VI. ACCIDENTAL RELEASE MEASURES

Health Consideration for Spill Response: Exposure to the spilled material may be irritating or harmful. Follow personal protective equipment recommendations found in Section VIII of this MSDS. Additional precautions may be necessary based on special circumstances created by the spill including; the material spilled, the quantity of the spill, the area in which the spill occurred. Also consider the expertise of employees in the area responding to the spill.

Spill Mitigation Procedures General Methods: Prevent the spread of any spill to minimize harm to human health and the environment if safe to do so. Wear complete and proper personal protective equipment following the recommendation of Section VIII at a minimum. Dike with suitable absorbent material like granulated clay. Gather and store in a sealed container pending a waste disposal evaluation.

VII. HANDLING AND STORAGE

Handling: Wash thoroughly after handling. Avoid contact with material. Ground and bond containers when transferring material. Keep in air-tight containers- material is hygroscopic. "Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. Use spark-proof tools and explosion-proof equipment. Remove contaminated clothing and wash before reuse. Follow all MSDS/label precautions even after container is emptied because it may retain product residues. Harmful or irritating material. Avoid contact and avoid breathing the material. Use only in a well ventilated area.

Storage: Do not store near combustible materials. Keep away from sources of ignition. Keep container closed when not in use. Keep away from heat, sparks, and flame. Avoid exposure to sunlight or ultraviolet (UV) light sources. Store in a cool dry ventilated location. Isolate from incompatible materials and conditions. Keep container(s) closed.

VIII. ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT

Engineering Controls: Facilities storing or using this material should be equipped with an eyewash and safety shower. Explosion proof exhaust ventilation should be used. Local exhaust ventilation or other engineering controls are normally required when handling or using this product to avoid overexposure.

Protective Equipment

Respiratory Tract:

Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2-1992). A written respiratory protection program, including provisions for medical certification, training, fit testing, exposure assessments, maintenance, inspection, cleaning, and convenient, sanitary storage should be implemented.

Eyes:

Wear chemically resistant safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Do not wear contact lenses. Have an eye wash station available.

Skin:

Avoid skin contact by wearing chemically resistant gloves, an apron and other protective equipment depending upon conditions of use. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, and when leaving work.

IX. PHYSICAL DATA

Physical State:	COLORED LIQUID
Odor:	STRONG SOLVENT
Solids Vol %:	11.4742
Solids Wt %:	16.6208
Material VOC lbs/gal:	5.9172
Material VOC gms/l:	710.6081
Coatings VOC lbs/gal:	5.9172
Coatings VOC gms/l:	710.6081
Weight per gallon:	7.1129

X. STABILITY AND REACTIVITY

Stability Information:	Stable. Stable under normal conditions.
Conditions to Avoid:	Contact with air. Visible light. Avoid: heat, sparks, flame and oxidizing agents. Contact with water. None known.
Chemical Incompatibility:	Strong acids. Strong alkalis. Strong oxidizing agents. Nitrogen oxides. Water.
Hazardous Polymerization:	Hazardous Polymerization will not occur.

XI. TOXICOLOGICAL INFORMATION

Chemical Name	CAS Number	LD50/LC50
Ethyl alcohol	64-17-5	Inhalation LC50 Rat : 20000 ppm/10H; Inhalation LC50 Mouse : 39 gm/m ³ /4H; Oral LD50 Rat : 7060 mg/kg; Oral LD50 Mouse : 3450 mg/kg
Isobutyl alcohol	78-83-1	Oral LD50 Rat : 2460 mg/kg; Dermal LD50 Rabbit : 3400 mg/kg
Acetic acid, propyl ester	109-60-4	Oral LD50 Rat : 9370 mg/kg; Oral LD50 Mouse : 8300 mg/kg; Dermal LD50 Rabbit : >20 mL/kg
Isopropyl alcohol	67-63-0	Inhalation LC50 Rat : 16000 ppm/8H; Oral LD50 Rat : 5045 mg/kg; Oral LD50 Mouse : 3600 mg/kg; Dermal LD50 Rabbit : 12800 mg/kg
Dipropylene glycol, monomethyl ether	34590-94-8	Oral LD50 Rat : 5400 uL/kg; Dermal LD50 Rabbit : 10 mL/kg
m-Xylene	108-38-3	Oral LD50 Rat : 5 gm/kg; Dermal LD50 Rabbit : 14100 uL/kg
Benzene, 1,2,4-trimethyl-	95-63-6	Inhalation LC50 Rat : 18 gm/m ³ /4H; Oral LD50 Rat : 5 gm/kg
Benzene, ethyl-	100-41-4	Oral LD50 Rat : 3500 mg/kg; Dermal LD50 Rabbit : 17800 uL/kg
p-Xylene	106-42-3	Inhalation LC50 Rat : 4550 ppm/4H; Oral LD50 Rat : 5 gm/kg

XII. ECOLOGICAL INFORMATION

Overview (for ingredients): No data available. Slight ecological hazard. In high concentrations, this product may be dangerous to plants and/or wildlife.

XIII. DISPOSAL CONSIDERATIONS

Waste Description for Spent Product: Spent or discarded material is a hazardous waste.

Disposal Methods: Comply with all Local, State, Federal, and Provincial Environmental Regulations. Dispose of by incineration following Federal, State, Local, or Provincial regulations.

Potential EPA Waste Codes: If discarded, this product is considered a RCRA ignitable waste, D001.

Components Subject to USEPA Land Disposal Restrictions:

Isobutyl alcohol	78-83-1	21.4 %
Chromium (total)	7440-47-3	0.2 %
Ethyl benzene	100-41-4	0.11 %

XIV. TRANSPORTATION INFORMATION

DOT Paint, 3, UN 1263, II

XV. REGULATORY INFORMATION

Chemical Name	Regulation	CASRN	%
Isopropyl alcohol	SARA 313 Reportable:	67-63-0	2.69
m-Xylene	SARA 313 Reportable:	108-38-3	0.25
Chromium	SARA 313 Reportable:	7440-47-3	0.2
1,2,4-Trimethylbenzene	SARA 313 Reportable:	95-63-6	0.13
Ethyl benzene	SARA 313 Reportable:	100-41-4	0.11
o-Xylene	SARA 313 Reportable:	95-47-6	0.1
p-Xylene	SARA 313 Reportable:	106-42-3	0.06
Ethyl alcohol	California Proposition 65 Developmental Toxicity:	64-17-5	53.71
ethanol	New Jersey Right To Know:	64-17-5	53.71
isobutanol	New Jersey Right To Know:	78-83-1	21.4
polyketone resin	New Jersey Right To Know:	PROPRIETARY	11.51
n-propyl acetate	New Jersey Right To Know:	109-60-4	3.35
isopropanol	New Jersey Right To Know:	67-63-0	2.69

XVI. ADDITIONAL INFORMATION

Other Information: IMPORTANT: WHILE THE DESCRIPTIONS, DATA AND INFORMATION CONTAINED HEREIN ARE PRESENTED IN GOOD FAITH AND BELIEVED TO BE ACCURATE, IT IS PROVIDED FOR YOUR GUIDANCE ONLY. BECAUSE MANY FACTORS MAY AFFECT PROCESSING OR APPLICATION/USE, WE RECOMMEND THAT YOU PERFORM AN ASSESSMENT TO DETERMINE THE SUITABILITY OF A PRODUCT FOR YOUR PARTICULAR PURPOSE PRIOR TO USE. NO WARRANTIES OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING FITNESS FOR A PARTICULAR PURPOSE, ARE MADE REGARDING PRODUCTS DESCRIBED, DATA OR INFORMATION SET FORTH. IN NO CASE SHALL THE DESCRIPTIONS, INFORMATION, OR DATA PROVIDED BE CONSIDERED A PART OF OUR TERMS AND CONDITIONS OF SALE. FURTHER, THE DESCRIPTIONS, DATA AND INFORMATION FURNISHED HEREUNDER ARE GIVEN GRATIS. NO OBLIGATION OR LIABILITY FOR THE DESCRIPTION, DATA AND INFORMATION GIVEN ARE ASSUMED. ALL SUCH BEING GIVEN AND ACCEPTED AT YOUR RISK.

MSDS glossary.