



Material Safety Data Sheet

Product Name: Metal Blackening System

Section I – Company Information

Preparation Date: 1/3/13

Manufactured For :

Supplier Name The Eastwood Company

Address 263 Shoemaker Road

Pottstown PA 19464

Phone Number 610-323-2200

Fax Number 610-323-6268

HMIS Codes: Health 3
 Flammability 3
 Reactivity 0

Section II – Hazardous Ingredients

% by WT	CAS No.	INGREDIENT	UNITS	VAPOR PRESSURE
5-6	1330-20-7	Xylene		
		ACGIH TLV	100 ppm	5.9 mm
		ACGIH TLV	150 ppm STEL	
		OSHA PEL	100 ppm	
		OSHA PEL	150 ppm STEL	
8-10	108-88-3	Toluene		
		ACGIH TLV	50 ppm (skin)	22 mm
		OSHA PEL	100 ppm (skin)	
		OSHA PEL	150 ppm (skin) STEL	
0.2-0.4	100-41-4	Ethylbenzene		
		ACGIH TLV	100 ppm	7.1 mm
		ACGIH TLV	125 ppm STEL	
		OSHA PEL	100 ppm	
		OSHA PEL	125 ppm STEL	
18-19	78-93-3	Methyl Ethyl Ketone		
		ACGIH TLV	200 ppm	70 mm
		ACGIH TLV	300 ppm STEL	
		OSHA PEL	200 ppm	
		OSHA PEL	300 ppm STEL	
0-15	13463-67-7	Titanium Dioxide		
		ACGIH TLV	10 mg/m3 as Dust	
		OSHA PEL	10 mg/m3 Total Dust	
		OSHA PEL	5 mg/m3 Respiratory Fraction	
20-25	123-86-4	n-Butyl Acetate		10 mm
		ACGIH TLV	150 ppm	
		ACGIH TLV	200 ppm STEL	
		OSHA PEL	150 ppm	
		OSHA PEL	200 ppm STEL	
3-5	14807-96-6	Talc		
		ACGIH TLV	2 mg/m3 as Resp. Dust	
		OSHA PEL	2 mg/m3 as Resp. Dust	
10	108-94-1	Cyclohexanone		
		ACGIH TLV	25 ppm (skin)	2mm
		OSHA PEL	25 ppm (skin)	
0-1	1333-86-4	Carbon Black		
		ACGIH TLV	3.5 mg/m3	
		OSHA PEL	3.5 mg/m3	
10	108-21-4	Isopropyl Acetate		
		ACGIH TLV	250 ppm	47.5 mm
		ACGIH TLV	310 ppm STEL	
		OSHA PEL	250 ppm	
		OSHA PEL	310 ppm STEL	

Section III – Physical Data

4.99-5.39 lb/gal 598-646 g/l	Emitted VOC
VAPOR DENSITY	Heavier than air
4.99-5.39 lb/gal 598-646 g/l	Less Water and Federally Exempt Solvents
EVAPORATION RATE	Slower than ether
BOILING POINT	174-320 F 78-160 C
VOLATILE ORGANIC COMPOUNDS	(VOC Theoretical)
MELTING POINT	Not Available
PRODUCT WEIGHT	8.51-10.91 lb/gal 1019-1307 g/l
VOLATILE VOLUME	71-80%
SOLUBILITY IN WATER	N.A.
SPECIFIC GRAVITY	1.02-1.31

Section IV – Health Hazard Data

ROUTES OF EXPOSURE

INHALATION of vapor or spray mist.

EYE or SKIN contact with the product, vapor or mist.

EFFECTS OF OVEREXPOSURE

EYES: Irritation

SKIN: Prolonged or repeated exposure may cause irritation.

INHALATION: Irritation of the upper respiratory system.

May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.

Redness and itching or burning sensation may indicate eye or excessive skin exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

May cause allergic respiratory and/or skin reaction in susceptible persons or sensitization. This effect may be delayed several hours after exposure.

CHRONIC HEALTH HAZARDS

Ethylbenzene is classified by IARC as possibly carcinogenic to humans (2B) based on inadequate evidence in humans and sufficient evidence in laboratory animals. Lifetime inhalation exposure of rats and mice to high ethylbenzene concentrations resulted in increases in certain types of cancer, including kidney tumors in rats and lung and liver tumors in mice. These effects were not observed in animals exposed to lower concentrations. There is no evidence that ethylbenzene causes cancer in humans.

Methyl Ethyl Ketone may increase the nervous system effects of other solvents. Prolonged overexposure to solvent ingredients in Section 2 may cause adverse effects to the liver, urinary, blood forming, cardiovascular and reproductive systems.

Persons sensitive to isocyanates will experience increased allergic reaction on repeated exposure.

Rats exposed to titanium dioxide dust at 250 mg/m³ developed lung cancer, however, such exposure levels are not attainable in the workplace.

Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Section V – First Aid Measures

EYES: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

SKIN: Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before re-use.

INHALATION: If any breathing problems occur during use, LEAVE THE AREA and get fresh air. If problems remain or occur later, IMMEDIATELY get medical attention.

INGESTION: Do not induce vomiting. Get medical attention immediately.

Section VI – Fire and Explosion Hazard Data

FLASH POINT	LEL	UEL
41 F PMCC	1.0	10.0
FLAMMABILITY CLASSIFICATION		
RED LABEL – Flammable, Flash below 100 F.		
EXTINGUISH MEDIA		
Carbon Dioxide, Dry Chemical, Foam		
UNUSUAL FIRE AND EXPLOSION HAZARDS		
Closed containers may explode when exposed to extreme heat.		
Application to hot surfaces requires special precautions.		
During emergency conditions overexposure to decomposition products may cause a health hazard.		
Symptoms may not be immediately apparent. Obtain medical attention.		
SPECIAL FIRE FIGHTING PROCEDURES		
Full protective equipment including self-contained breathing apparatus should be used.		
Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.		

Section VII – Spill or Leak Procedures

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED.

- Remove all sources of ignition. Ventilate the area.
- Remove with inert absorbent.

Section VIII – Transport Information / Handling and Storage

SHIPPING INFORMATION

UN Classification: 1263 Paint, Class 3, PGIII

STORAGE CATEGORY

DOL Storage Class IB

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE

Contents are FLAMMABLE. Keep away from heat, sparks, and open flame.

During use and until all vapors are gone: Keep area ventilated – Do not smoke – Extinguish all flames, pilot lights, and heaters – Turns off stoves, electric tools and appliances, and any other source of ignition.

Consult NFPA Code. Use approved Bonding and Grounding procedures.

Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of reach of children.

Section IX – Personal Protection Information

PRECAUTIONS TO BE TAKEN IN USE

NO PERSON SHOULD USE THIS PRODUCT, OR BE IN THE AREA WHERE IT IS BEING USED, IF THEY HAVE CHRONIC (LONG TERM) LUNG OR BREATHING PROBLEMS OR IF THEY EVER HAD A REACTION TO ISOCYANATES.

Use only with adequate ventilation.

Avoid contact with skin and eyes. Avoid breathing vapor and spray mist.

Wash hands after using.

This coating may contain materials classified as nuisance particulates (listed “as Dust” in Section 2), which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in section 2, the applicable limits for nuisance dusts are ACGIH TLV 10 mg/m³ (total dust), 3 mg/m³ (respirable fraction), OSHA PEL 15 mg/m³ (total dust), 5mg/m³ (respirable fraction).

VENTILATION

Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section 2 is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

RESPIRATORY PROTECTION

Where overspray is present, a positive pressure air supplied respirator (TC19C NIOSH/MSHA approved) should be worn. If unavailable, a properly fitted organic vapor/particulate respirator approved by NIOSH/MSHA for protection against materials in Section 2 may be effective. Follow respirator manufacturer’s directions for use. Wear the respirator for the whole time of spraying and until all vapors and mists are gone. NO PERSONS SHOULD BE ALLOWED IN THE AREA WHERE THIS PRODUCT IS BEING USED UNLESS EQUIPPED WITH THE SAME RESPIRATOR PROTECTION RECOMMENDED FOR

THE PAINTERS.

When sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for the dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES

To prevent skin contact, wear gloves which are recommended by glove supplier for protection against materials in Section 2.

EYE PROTECTION

Wear safety spectacles with unperforated sideshields.

OTHER PROTECTIVE EQUIPMENT

Use barrier cream on exposed skin.

OTHER PRECAUTIONS

This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW

WARNING LABELS ON ALL COMPONENTS.

Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

Section X – Stability and Reactivity

STABILITY – Stable

CONDITIONS TO AVOID

None known

INCOMPATIBILITY

None known

HAZARDOUS DECOMPOSITION PRODUCTS

By fire: Carbon Dioxide, Carbon Monoxide

HAZARDOUS POLYMERIZATION

Will not occur

Section XI – Toxicological Information

CAS No.	Ingredient Name				
1330-20-7	Xylene	LC50 LD50	RAT RAT	4 HR	5000 ppm 4300 mg/kg
108-88-3	Toluene	LC50 LD50	RAT RAT	4 HR	4000 ppm 5000 mg/kg
100-41-4	Ethylbenzene	LC50 LD50	RAT RAT	4 HR	Not Available 3500 mg/kg
78-93-3	Methyl Ethyl Ketone	LC50 LD50	RAT RAT	4 HR	Not Available 2740 mg/kg
13463-67-7	Titanium Dioxide	LC50 LD50	RAT RAT	4 HR	Not Available Not Available
123-86-4	n-Butyl Acetate	LC50 LD50	RAT RAT	4 HR	2000 ;;m 13100 mg/kg
14807-96-6	Talc	LC50 LD50	RAT RAT	4 HR	Not Available Not Available
108-94-1	Cyclohexanone	LC50 LD50	RAT RAT	4 HR	8000 ppm 1535 mg/kg
1333-86-4	Carbon Black	LC50 LD50	RAT RAT	4 HR	Not Available Not Available
108-21-4	Isopropyl Acetate	LC 50 LD 50	RAT RAT	4 HR	Not Available 3000 mg/kg

Section XII – Waste Disposal

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261.

Waste must be tested for ignitability to determine the applicable EPA hazardous waste number.

Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with Federal, State/Provincial, and Local regulations regarding pollution.

Section XIII – Regulatory Information

SARA 313 (40 CFR 372.65C) SUPPLIER NOTIFICATION

CAS No.	CHEMICAL COMPOUND	% by WT
108-88-3	Toluene	8-10
100-41-4	Ethylbenzene	0.2-0.4
1330-20-7	Xylene	5-6
78-93-3	Methyl Ethyl Ketone	18-19
108-21-4	Isopropyl Acetate	10

CALIFORNIA PROPOSITION 65

WARNING: This product contains chemicals known to the State of California to cause cancer and birth defects or other reproductive harm.

TSCA CERTIFICATION

All chemicals in this product are listed, or are exempt from listing, on the TSCA Inventory.

Section XIV – Other Information

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products (CPR) and the MSDS contains all of the information required by the CPR.

This MSDS is furnished without charge to responsible persons who use it at their discretion and risk. Although the information and suggestions contained herein have been compiled, as of the issue date above, from sources believed to be reliable, there is no warranty of any kind, expressed or implied, as to the completeness and accuracy thereof.



Material Safety Data Sheet

Product Name: Metal Blackening Systems Hardener

Section I – Company Information

Preparation Date: 4/1/11

Manufactured For:

Supplier Name The Eastwood Company

Address 263 Shoemaker Road

Pottstown PA 19464

Phone Number 610-323-2200

Fax Number 610-323-6268

Emergency Number:

1-800-424-9300 Chemtrec

Section II – Hazardous Ingredients

Cas No.	Hazardous Ingredient (percent by weight)	ACGIH TLV <STEL>	OSHA PEL <STEL>	Units	Vapor Pressure (mm Hg)	% by volume
100-41-4 &	Ethylbenzene	100 <125>	100 <125>	PPM	7.1	1%
1330-20-7 &	Xylene	100 <150>	100 <150>	PPM	5.9	3%
108-65-6	1-Methoxy-2-Propanol Acetate	Not Estab.	Not Estab.	Not Estab.	1.8	38%
	Toluene Diisocyanate Polymer	Not Estab.	Not Estab.	Not Estab.	Not Estab.	57%
584-84-9	Toluene-2, 4-Diisocyanate (max)	0.005 <0.020>		PPM		1%
&	Lead Compound (max) (% Lead)					
&	Chromium compound (max) (% chromium)					
	Weight per gallon (lbs.)					9.57
	Solids by Weight (%)					60.0
	Solids by Volume (%)					52.3
	Volatile Organic Compounds (VOC – lbs./gal.)					3.83
	Photochemically Reactive					No
	Flash Point (degrees F) / Flammability Classification (Flammable – Combustible)					108 / Comb 42 Degrees Celcius
	HMIS (NFPA) Rating (health – fire – reactivity) / DOL Storage Category					3 2 1/2

& Ingredient subject to the reporting requirements of the Superfund Amendments and Reauthorization Act (SARA) Section 313, 40 CFR 372.65 C

Section III – Physical Data

Product Weight: See Table
Specific Gravity: 0.85 – 1.40
Boiling Range: 174 – 395 F
Volatile Volume: 30 – 100%

Evaporation Rate: Slower than Ether
Vapor Density: Heavier than air
Melting Point: N/A
Solubility in water: N/A

Section IV – Hazard Data

UN1263 Paint Related Material, Class 3, PGIII

Flammability Classification Flash Point LEL 0.7 UEL 13.1
See Table

Extinguishing Media: Carbon Dioxide, dry chemical, foam

Unusual Fire and Explosion Hazards: Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, and open flame. Closed containers may explode when exposed to extreme heat. Application to hot surfaces requires special precautions. Symptoms may not be immediately apparent. Obtain medical attention.

Special Fire Fighting Procedures: Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build up and possible auto ignition or explosion when exposed to extreme heat.

Section V – Health Hazard Data

Routes of Exposure:

Exposure may be by inhalation and/or skin or eye contact, depending on conditions of use. Alcohols and acetates can be absorbed through the skin. Follow recommendations for proper use, ventilation, and personal protective equipment to minimize exposure.

Acute Health Hazards:

Effects of Overexposure:

Irritation of eyes, skin and respiratory system. May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.

Signs and Symptoms of Overexposure:

Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists. Redness and itching or burning sensation may indicate eye or excessive skin exposure.

Medical Conditions Aggravated by Exposure:

May cause allergic respiratory and/or skin reaction in susceptible persons. This affect may be delayed several hours after exposure.

Emergency and First Aid Procedures:

If inhaled: If any breathing problems occur during use, leave the area and get fresh air. If problems remain or occur later, get medical attention.

If on skin: Wash affected area thoroughly with soap and water. Remove contaminated clothing and launder before re-use.

If in eyes: Flush eyes with large amounts of water for 15 minutes. Get medical attention.

If swallowed: Get medical attention.

Chronic Health Hazards:

Toluene Diisocyanate (TDI), Listed by MTP, has been shown to cause cancer in laboratory animals when administered directly into the stomach. No evidence of cancer from exposure to TDI by inhalation has been reported. Prolonged overexposure to solvent ingredients in Section II may cause adverse affects to the liver, urinary, blood forming, cardiovascular, and reproductive systems. Persons sensitive to Isocyanates will experience increased allergic reaction on repeated exposure. Methyl Ethyl Ketone may increase the nervous system effects of other solvents. Rats exposed to titanium dioxide dust at 250 mg/m³ developed lung cancer, however, such exposure levels are not attainable in the workplace. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage.

Section VI – Reactivity Data

Stability: Stable

Conditions to Avoid: None known

Incompatibility: Contamination of catalyst with water, alcohols, amines, and other compounds which react with isocyanates, may result in dangerous pressure in and possible bursting of closed containers.

Hazardous Decomposition Products: By fire: Carbon Dioxide, Carbon Monoxide. Oxides of Metals in Section II.

Oxides of Nitrogen, possibility of Hydrogen Cyanide.

Hazardous Polymerization: Will not occur.

Section VII – Spill or Leak Procedures

Steps to be taken in case material is released or spilled:

Remove all sources of ignition. Ventilate the area. All personnel in the area should be protected as in Section VIII. Cover spill with absorbent material. Deactivate spilled material with a 10% ammonium hydroxide solution (household ammonia). After ten minutes, collect in open containers and add more ammonia. Cover loosely. Wash spill area with soap and water.

Waste Disposal Method:

Waste from these products may be hazardous as defined under the Resource Conservation and Recovery Act (RCRA) 40 CFR 261. Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers. Waste from these products containing lead, chromium, or Methyl Ethyl Ketone must also be tested for extractability. Incinerate in approved facility. Do not incinerate closed container. Dispose of in accordance with federal, state, and local regulations regarding pollution.

Section VIII – Protection Information

Precautions to be taken in use:

No persons should use these products or be in the area where these products are being used if they have chronic lung or breathing problems or if they ever had a reaction to isocyanates. Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using. These coatings may contain materials classified as nuisance particulates (listed “as dust” in Section II) which may be present at hazardous levels only during sanding or abrading of the dried film. If no specific dusts are listed in Section II, the applicable limits for dusts are ACGIH TLV 10 mg/m³ (total dust), OSHA PEL mg/m³ (total dust), 5 mg/m³ (respirable fraction).

Ventilation: Local exhaust is preferable. General exhaust acceptable if the exposure to materials in Section II is maintained below applicable exposure limits. Refer to OSHA Standards 1910.94, 1910.107, 1910.108.

Respiratory Protection: Where overspray is present, a positive pressure air supplied respirator (TC19C MIOSN/MSMA approved) should be worn. If unavailable, a properly fitted organic vapor/particulate respirator approved by MIOSN/MSMA for protection against materials in Section II may be effective. Follow respirator manufacturer’s directions for use. Wear the respirator for the whole time of spraying and until all vapors and mists are gone. No persons should be allowed in the area where these products are being used unless equipped with the same respirator protection recommended for the painters. When sanding, wire brushing, abrading, burning or welding the dried film, wear a particulate respirator approved by MIOSH/MSMS for protection against non-volatile materials in Section II.

Protective Gloves: Wear gloves which are recommended by glove supplier for protection against materials in Section II.

Eye Protection: Wear safety spectacles with unperforated sideshields.

Other Protective Equipment: Use barrier cream on exposed skin.

Section IX – Precautions

DOL Storage Category – see table

Precautions to be taken in handling and storing:

Keep away from heat, sparks, and open flame. During use and until all vapors are gone, keep area ventilated – do not smoke – extinguish all flames, pilot lights, and heaters – turn off stoves, electric tools, appliances, and any other sources of ignition. Consult NFPA Code. Use approved Bonding and Grounding procedures. Keep container closed when not in use. Transfer only to approved containers with complete and appropriate labeling. Do not take internally. Keep out of the reach of children.

Section X – Other Regulatory Information

California Proposition 65

Warning: This product contains chemicals known to the state of California to cause birth defects, cancer, and other reproductive harm.

The above information pertains to these products as currently formulated and is based on the information available at the time. Addition of additives or other coatings materials to these products may substantially alter the composition and hazards of the products. Since conditions of use are outside our control, we make no warranties express or implied, and assume no liability in connection with any of this information.