Material Safety Data Sheet

Issuing Date 07-Dec-2011 **Revision Date** 17-Aug-2012 **Revision Number** 1

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name **Y2E-5BX-EX THERMOPLASTIC**

Product Code(s) **884990**

Recommended Use Traffic paint

Product Technology Thermo

Supplier Address
Ennis-Flint
5910 North Central Expressway
Suite 1050
Dallas TX 75206
T: 800.331.8118
800.331.8118 (For Technical Inquiries)

Chemical Emergency Phone Number Chemtrec 1-800-424-9300

2. HAZARDS IDENTIFICATION

DANGER!

Emergency Overview

Harmful if swallowed, inhaled, or absorbed through skin
May cause respiratory impairment and lung damage
May adversely affect central nervous system, kidneys, blood and reproductive system
Cancer hazard
Contains Lead. Dried Film of This Paint May be Harmful if Eaten or Chewed
Keep out of the reach of children
WARNING! This product contains a chemical known in the State of California to cause cancer and birth defects or other reproductive harm.

Appearance Yellow **Physical State** Solid. **Odor** Odorless

Potential Health Effects

Acute Toxicity

Eyes May cause slight irritation. The molten product can cause serious burns.

Skin Harmful if absorbed through skin. May cause irritation. The molten product can cause serious burns.

Inhalation Harmful by inhalation. May cause ulceration and perforation of the nasal septum. Excessive inhalation of vapors in molten state can cause nose and throat irritation, may cause nervous system depression characterized by headache, dizziness, nausea, staggering gait, confusion and unconsciousness. In molten state, the material does not give off fumes that are toxic or injurious to persons or property.

Ingestion Harmful if swallowed.

Chronic Effects Lead compounds may be absorbed by ingestion, by inhalation and through the skin. Lead may damage kidney function, the blood forming system and the reproductive system. Inorganic lead compounds can cause developmental damage. Very slowly eliminated from the body, so poisoning can be cumulative. Crystalline silica (quartz) has been classified by the International Agency for Research on Cancer (IARC) as a known human carcinogen (Group 1). Titanium dioxide has been classified by the International Agency for Research on Cancer (IARC) as possibly carcinogenic to humans (Group 2B) by inhalation. Chromium and chromium compounds are currently classified by IARC and National Toxicology Program as known carcinogens.

Main Symptoms Lead poisoning is characterized by a metallic taste in the mouth, loss of appetite indigestion, nausea, vomiting, constipation, sleep disturbances and overall weakness

Aggravated Medical Conditions Pre-existing eye disorders. Skin disorders. Respiratory disorders. Central nervous system. Blood disorders. Reproductive system.

Environmental Hazard Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. See Section 12 for additional Ecological Information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Limestone	1317-65-3	30-60
Chrome yellow (Lead chromate pigment)	1344-37-2	1-5
Quartz	14808-60-7	1-5
Titanium dioxide	13463-67-7	0.1-1
Lead hydroxide	19783-14-3	0.1-1
Molybdate orange (Lead chromate pigment)	12656-85-8	<0.1
Antimony trioxide	1309-64-4	<0.1

4. FIRST AID MEASURES

General Advice Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Eye Contact In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes. Call a physician immediately.

Skin Contact Wash off immediately with plenty of water. In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin. Removal of solidified molten material from skin requires medical assistance. If burned by contact with molten material, remove patient from heat source. Remove smoldering clothing, including shoes, boots and jewelry. Cool the burn with water or saline until the skin returns to normal temperature. Cover patient with dry clean sheet. Do not attempt to remove the molten thermoplastic from the skin. Removal could result in severe tissue damage. Do not use ice. Conduct primary survey. If indicated transport patient to emergency treatment facility.

Inhalation Move victim to fresh air. Apply artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. Call a physician immediately.

Ingestion Call a physician or Poison Control Center immediately. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Drink plenty of water.

Notes to Physician Treat symptomatically.

Protection of First-aiders Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

5. FIRE-FIGHTING MEASURES

Flammable Properties Not flammable.

Flash Point Not applicable.

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Hazardous Combustion Products Lead and chromium compounds.

Explosion Data
Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None

Protective Equipment and Precautions for Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA	**Health Hazard** 2	**Flammability** 0	**Instability** 0	**Physical and Chemical Hazards** -
HMIS	**Health Hazard** 2*	**Flammability** 0	**Physical Hazard** 0	**Personal Protection** X

**Indicates a chronic health hazard.*

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Stop leak if you can do it without risk. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Avoid dust formation. Avoid contact with skin, eyes and clothing.

Environmental Precautions Prevent entry into waterways, sewers, basements or confined areas. Do not allow material to contaminate ground water system. Should not be released into the environment.

Methods for Containment Keep blocks and small chunks together. Cover with a tarp to minimize spreading and keep material dry.

Methods for Cleaning Up Use personal protective equipment. Pick up and transfer to properly labeled containers. Do not dry sweep small chunks or dust. Wet dust with water before sweeping or use a vacuum to collect dust.

7. HANDLING AND STORAGE

Handling Wear personal protective equipment. Avoid breathing dust. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing before re-use. Do not eat, drink or smoke when using this product. Avoid dust formation. Wash thoroughly after handling.

Do not heat over 500°F in a closed container. This product when heated to above 500°F can lead to flashing. Appropriate protective equipment must be worn when mixing and applying this product.

The thermoplastic bag can be hazardous when empty, because it can retain product residue. Therefore do not reuse container for food, clothing, or products for human or animal consumption or where skin contact may occur. Always obey hazard warnings and handle containers as if they were full.

The meltable bag is compatible with the thermoplastic allowing them to melt and become part of the hot melt mixture at application temperature.

Storage Keep container tightly closed in a dry and well-ventilated place. Keep out of the reach of children. Do not contaminate food or feed stuffs.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Limestone 1317-65-3	-	TWA: 15 mg/m³ total dust TWA: 5 mg/m³ respirable fraction (vacated) TWA: 15 mg/m³ total dust (vacated) TWA: 5 mg/m³ respirable fraction	TWA: 10 mg/m³ total dust TWA: 5 mg/m³ respirable dust
Chrome yellow (Lead chromate pigment) 1344-37-2	TWA: 0.05 mg/m³ Pb	TWA: 5 µg/m³ TWA: 50 µg/m³ Pb Action Level: 2.5 µg/m³ Cr Action Level: 30 µg/m³ Pb Poison, See 29 CFR 1910.1025	IDLH: 100 mg/m³ Pb TWA: 0.050 mg/m³ Pb
Quartz 14808-60-7	TWA: 0.025 mg/m³ respirable fraction	30/(%SiO2+2) mg/m³ TWA, Total Dust;250/%SiO2+5) mppcf TWA, respirable fraction; 10/(%SiO2+2) mg/m³ TWA, respirable TWA: 0.1 mg/m³ (vacated)	IDLH: 50 mg/m³ respirable dust TWA: 0.05 mg/m³ respirable dust
Titanium dioxide 13463-67-7	TWA: 10 mg/m³	TWA: 15 mg/m³ total dust (vacated) TWA: 10 mg/m³ total dust	IDLH: 5000 mg/m³
Lead hydroxide 19783-14-3	TWA: 0.05 mg/m³ Pb	TWA: 50 µg/m³ Pb Action Level: 30 µg/m³ Pb Poison, See 29 CFR 1910.1025	IDLH: 100 mg/m³ Pb TWA: 0.050 mg/m³ Pb
Molybdate orange (Lead chromate pigment) 12656-85-8	TWA: 0.05 mg/m³ Pb	TWA: 50 µg/m³ Pb Action Level: 30 µg/m³ Pb Poison, See 29 CFR 1910.1025 (vacated) Ceiling: 0.1 mg/m³ Ceiling: 0.1 mg/m³ CrO3 applies to any operations or sectors for which the Hexavalent Chromium standard [29 CFR 1910.1026] is stayed or is otherwise not in effect	IDLH: 100 mg/m³ Pb IDLH: 15 mg/m³ Cr(VI) TWA: 0.050 mg/m³ Pb TWA: 0.001 mg/m³ Cr
Antimony trioxide 1309-64-4	TWA: 0.5 mg/m³ Sb	TWA: 0.5 mg/m³ Sb (vacated) TWA: 0.5 mg/m³ Sb	IDLH: 50 mg/m³ Sb TWA: 0.5 mg/m³ Sb

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

Other Exposure Guidelines Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Engineering Measures Showers
Eyewash stations
Ventilation systems

Personal Protective Equipment

Eye/Face Protection Tightly fitting safety goggles.

Skin and Body Protection Protective gloves. Long sleeved clothing. Protective shoes or boots

Respiratory Protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene Measures When using, do not eat, drink or smoke. Provide regular cleaning of equipment, work area and clothing. Wash hands before breaks and immediately after handling the product. Keep away from food, drink and animal feeding stuffs.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Yellow.	**Odor**	Odorless.
Odor Threshold	Not applicable	**Physical State**	Solid
pH	Not applicable		
Flash Point	Not applicable.	**Autoignition Temperature**	Not applicable
Decomposition Temperature	Not applicable	**Boiling Point/Boiling Range**	Not applicable
Melting Point/Range	95-120 °C / 203-248 °F		
		Flammability Limits in Air	Not applicable
Explosion Limits	Not applicable		
Specific Gravity	1.7-2.3	**Water Solubility**	Insoluble
Solubility	Not applicable	**Evaporation Rate**	Not applicable
Vapor Pressure	Not applicable	**Vapor Density**	Not applicable
VOC (g/l)	0 g/l		

10. STABILITY AND REACTIVITY

Stability Stable under recommended storage conditions.

Incompatible Products None known based on information supplied.

Conditions to Avoid Dust formation.

Hazardous Decomposition Products Lead and chromium compounds.

Hazardous Polymerization Hazardous polymerization does not occur.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information Harmful if swallowed, inhaled, or absorbed through skin.

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Chrome yellow (Lead chromate pigment)	> 5000 mg/kg (Rat)		
Quartz	500 mg/kg (Rat)		

Chronic Toxicity

Chronic Toxicity Lead compounds may be absorbed by ingestion, by inhalation and through the skin. Lead may damage kidney function, the blood forming system and the reproductive system. Inorganic lead compounds can cause developmental damage. Very slowly eliminated from the body, so poisoning can be cumulative. Crystalline silica (quartz) has been classified by the International Agency for Research on Cancer (IARC) as a known human carcinogen (Group 1). Titanium dioxide has been classified by the International Agency for Research on Cancer (IARC) as possibly carcinogenic to humans (Group 2B) by inhalation. Chromium and chromium compounds are currently classified by IARC and National Toxicology Program as known carcinogens.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name	ACGIH	IARC	NTP	OSHA
Chrome yellow (Lead chromate pigment)	A3	Group 2A Group 1	Known Reasonably Anticipated	X
Quartz	A2	Group 1	Known	X
Titanium dioxide		Group 2B		X
Lead hydroxide	A3	Group 2A	Reasonably Anticipated	X
Molybdate orange (Lead chromate pigment)	A3	Group 2A Group 1	Reasonably Anticipated	X
Antimony trioxide	A2	Group 2B		X

ACGIH: (American Conference of Governmental Industrial Hygienists)
A2 - Suspected Human Carcinogen
A3 - Animal Carcinogen
IARC: (International Agency for Research on Cancer)
Group 1 - Carcinogenic to Humans
Group 2A - Probably Carcinogenic to Humans
Group 2B - Possibly Carcinogenic to Humans
NTP: (National Toxicity Program)
Known - Known Carcinogen
Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen
OSHA: (Occupational Safety & Health Administration)
X - Present

Reproductive Toxicity Reproductive effects of lead have been shown on the male reproductive system and on fertility in humans exposed to lead.

Developmental Toxicity It is anticipated that lead will affect the developing fetus and has been shown to cause embryo-toxic and fetototoxic effects in animals studies. No teratogenic effects were noted.

Teratogenic May cause harm to the unborn child.

Target Organ Effects Respiratory system. Central nervous system (CNS). Blood. Reproductive system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Chemical Name	Toxicity to Algae	Toxicity to Fish	Toxicity to Microorganisms	Daphnia Magna (Water Flea)
Chrome yellow (Lead chromate pigment)		LC50 96 h: > 10000 mg/L static (Leuciscus idus)	EC50 > 10000 mg/L 30 min	
Molybdate orange (Lead chromate pigment)		LC50 96 h: = 2500 mg/L static (Leuciscus idus)		
Antimony trioxide	EC50 72 h: 0.63 - 0.8 mg/L (Pseudokirchneriella subcapitata) EC50 96 h: 0.65 - 0.81 mg/L (Pseudokirchneriella subcapitata)	LC50 96 h: > 1000 mg/L static (Brachydanio rerio) LC50 96 h: > 80 mg/L static (Pimephales promelas)	EC50 > 3.5 mg/L 7 h	EC50 48 h: 361.5 - 496.0 mg/L Static (Daphnia magna) EC50 48 h: > 1000 mg/L (Daphnia magna)

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated Packaging Do not re-use empty containers.

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste
Chrome yellow (Lead chromate pigment)	Toxic Corrosive Ignitable
Lead hydroxide	Toxic
Molybdate orange (Lead chromate pigment)	Toxic Corrosive Ignitable
Antimony trioxide	Toxic

14. TRANSPORT INFORMATION

DOT Not regulated (Product as shipped)

Proper shipping name Elevated temperature liquid, n.o.s. (Product in use)

Description ELEVATED TEMPERATURE MATERIAL, LIQUID, N.O.S.(COMPOUND PAVEMENT MARKING), 9, UN 3257, III. (Product in use)

TDG Not regulated

MEX Not regulated

ICAO Not regulated

IATA Not regulated

IMDG/IMO Not regulated

15. REGULATORY INFORMATION

International Inventories

TSCA Complies
DSL Complies

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

U.S. Federal Regulations

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372:

Chemical Name	CAS-No	Weight %	SARA 313 - Threshold Values %
Chrome yellow (Lead chromate pigment)	1344-37-2	3.2	0.1
Lead hydroxide	19783-14-3	0.4	0.1

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):

Chemical Name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Chrome yellow (Lead chromate pigment)		X		
Lead hydroxide		X		
Molybdate orange (Lead chromate pigment)		X		

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations

California Proposition 65
This product contains the following Proposition 65 chemicals:

Chemical Name	CAS-No	California Prop. 65
Chrome yellow (Lead chromate pigment)	1344-37-2	Carcinogen Developmental Female Reproductive Male Reproductive
Quartz	14808-60-7	Carcinogen
Titanium dioxide	13463-67-7	Carcinogen
Lead hydroxide	19783-14-3	Carcinogen Developmental
Molybdate orange (Lead chromate pigment)	12656-85-8	Carcinogen Developmental
Antimony trioxide	1309-64-4	Carcinogen

U.S. State Right-to-Know Regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Limestone	X	X	X		X
Chrome yellow (Lead chromate pigment)			X	X	X
Quartz	X	X	X	-	X
Lead hydroxide		X	X	X	X

International Regulations

Chemical Name	Carcinogen Status	Exposure Limits
Limestone		Mexico: TWA 10 mg/m³ Mexico: STEL 20 mg/m³
Chrome yellow (Lead chromate pigment)	A1 A3	Mexico: TWA 0.15 mg/m³ Mexico: TWA 0.01 mg/m³
Quartz		Mexico: TWA= 0.1 mg/m³
Titanium dioxide		Mexico: TWA= 10 mg/m³ Mexico: STEL= 20 mg/m³
Lead hydroxide	A3	Mexico: TWA 0.15 mg/m³
Molybdate orange (Lead chromate pigment)	A3	Mexico: TWA 0.15 mg/m³

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

WHMIS Hazard Class
D2A Very toxic materials

Canadian National Pollutant Release Inventory (NPRI)

Component	NPRI
Chrome yellow (Lead chromate pigment) 1344-37-2 (1-5)	X
Molybdate orange (Lead chromate pigment) 12656-85-8 (<0.1)	X
Antimony trioxide 1309-64-4 (<0.1)	X

Legend
X - Listed

16. OTHER INFORMATION

Prepared By
Product Stewardship
23 British American Blvd.
Latham, NY 12110
1-800-572-6501

Issuing Date 07-Dec-2011
Revision Date 17-Aug-2012
Revision Note (M)SDS sections updated: 1, 2, 4, 7, 9

General Disclaimer

The information provided on this MSDS is correct to the best of our knowledge, information and belief at the date of its publication and it does not purport to be all inclusive and shall be used only as a guide. We urge each customer or recipient of this MSDS to study it carefully to become aware of and understand the potential hazards associated with the product. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text. Any use of the product not in conformance with this MSDS or in combination with any other product or process is the responsibility of the user. Customary precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Wash hands before breaks and at the end of work. Remove all soiled and contaminated clothing immediately.

End of Safety Data Sheet