



# Material Safety Data Sheet

Issuing Date 27-Apr-2011

Revision Date 17-Aug-2012

Revision Number 1

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name** Y2E-4GS-AL THERMOPLASTIC

**Product Code(s)** 884925

**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

WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm

WARNING! This product contains a chemical known in the State of California to cause cancer.

**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.

<b>Chronic Effects</b>	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.
<b>Main Symptoms</b>	Lead poisoning is characterized by a metallic taste in the mouth, loss of appetite indigestion, nausea, vomiting, constipation, sleep disturbances and overall weakness
<b>Aggravated Medical Conditions</b>	Pre-existing eye disorders. Skin disorders. Respiratory disorders. Central nervous system. Blood disorders. Reproductive system.
<b>Environmental Hazard</b>	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
Glass, oxide	65997-17-3	15-40
Paraffin	8002-74-2	7-13
Chrome yellow (Lead chromate pigment)	1344-37-2	7-13
Quartz	14808-60-7	1-5
Titanium dioxide	13463-67-7	1-5
Calcium carbonate	471-34-1	1-5
Molybdate orange (Lead chromate pigment)	12656-85-8	0.1-1
Antimony trioxide	1309-64-4	<0.1

### 4. FIRST AID MEASURES

<b>General Advice</b>	Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.
<b>Eye Contact</b>	In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes. Call a physician immediately.
<b>Skin Contact</b>	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.
<b>Inhalation</b>	Move victim to fresh air. Apply artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. Call a physician immediately.
<b>Ingestion</b>	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.
<b>Notes to Physician</b>	Treat symptomatically.
<b>Protection of First-aiders</b>	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**

<b>Flammable Properties</b>	Not flammable.			
<b>Flash Point</b>	Not applicable.			
<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.			
<b>Hazardous Combustion Products</b>	Lead and chromium compounds.			
<b>Explosion Data</b>				
<b>Sensitivity to Mechanical Impact</b>	None.			
<b>Sensitivity to Static Discharge</b>	None			
<b>Protective Equipment and Precautions for Firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.			
<b>NFPA</b>	Health Hazard 2	Flammability 0	Instability 0	<b>Physical and Chemical Hazards -</b>
<b>HMIS</b>	Health Hazard 2*	Flammability 0	Physical Hazard 0	<b>Personal Protection X</b>

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	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.
<b>Environmental Precautions</b>	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.
<b>Methods for Containment</b>	Cover powder spill with plastic sheet or tarp to minimize spreading. Prevent dust cloud.
<b>Methods for Cleaning Up</b>	Use personal protective equipment. Cover powder spill with plastic sheet or tarp to minimize spreading. Take up mechanically and collect in suitable container for disposal.

**7. HANDLING AND STORAGE**

<b>Handling</b>	<p>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.</p> <p>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.</p> <p>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.</p> <p>The meltable bag is compatible with the thermoplastic allowing them to melt and become part of the hot melt mixture at application temperature.</p>
<b>Storage</b>	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/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable fraction (vacated) TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 5 mg/m <sup>3</sup> respirable fraction	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable dust
Paraffin 8002-74-2	TWA: 2 mg/m <sup>3</sup>	(vacated) TWA: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>
Chrome yellow (Lead chromate pigment) 1344-37-2	TWA: 0.05 mg/m <sup>3</sup> Pb	TWA: 5 µg/m <sup>3</sup> TWA: 50 µg/m <sup>3</sup> Pb Action Level: 2.5 µg/m <sup>3</sup> Cr Action Level: 30 µg/m <sup>3</sup> Pb Poison, See 29 CFR 1910.1025	IDLH: 100 mg/m <sup>3</sup> Pb TWA: 0.050 mg/m <sup>3</sup> Pb
Calcium carbonate 471-34-1	-	TWA: 15 mg/m <sup>3</sup> TWA: 5 mg/m <sup>3</sup> (vacated) TWA: 15 mg/m <sup>3</sup> (vacated) TWA: 5 mg/m <sup>3</sup>	TWA: 10 mg/m <sup>3</sup> total dust TWA: 5 mg/m <sup>3</sup> respirable dust
Quartz 14808-60-7	TWA: 0.025 mg/m <sup>3</sup> respirable fraction	30/(%SiO <sub>2</sub> +2) mg/m <sup>3</sup> TWA, Total Dust; 250/(%SiO <sub>2</sub> +5) mppcf TWA, respirable fraction; 10/(%SiO <sub>2</sub> +2) mg/m <sup>3</sup> TWA, respirable TWA: 0.1 mg/m <sup>3</sup> (vacated)	IDLH: 50 mg/m <sup>3</sup> respirable dust TWA: 0.05 mg/m <sup>3</sup> respirable dust
Titanium dioxide 13463-67-7	TWA: 10 mg/m <sup>3</sup>	TWA: 15 mg/m <sup>3</sup> total dust (vacated) TWA: 10 mg/m <sup>3</sup> total dust	IDLH: 5000 mg/m <sup>3</sup>

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. Avoid contact with skin, eyes 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

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

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	Stable under recommended storage conditions.
<b>Incompatible Products</b>	None known based on information supplied.
<b>Conditions to Avoid</b>	Dust formation.
<b>Hazardous Decomposition Products</b>	Lead and chromium compounds.
<b>Hazardous Polymerization</b>	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
Paraffin	> 3750 mg/kg ( Rat )	> 3600 mg/kg ( Rabbit )	-
Chrome yellow (Lead chromate pigment)	> 5000 mg/kg ( Rat )		
Calcium carbonate	= 6450 mg/kg ( Rat )		
Quartz	500 mg/kg ( Rat )		
Phthalate plasticizer	> 9750 mg/kg ( Rat )		>4.4 mg/L ( Rat ) 4 h
Titanium dioxide	> 10000 mg/kg ( Rat )		> 6820 mg/m <sup>3</sup>

### 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
Glass, oxide		Group 3		
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
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

A4 - Not Classifiable as a Human 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

Group 3: Not Classifiable as to its Carcinogenicity 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.

<b>Developmental Toxicity</b>	It is anticipated that lead will affect the developing fetus and has been shown to cause embryo-toxic and fetotoxic effects in animals studies. No teratogenic effects were noted.
<b>Teratogenic</b>	May cause harm to the unborn child.
<b>Target Organ Effects</b>	Eyes. Lungs. Respiratory system. Skin. Central nervous system (CNS). Blood. Reproductive system.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

The environmental impact of this product has not been fully investigated.

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
Molybdate orange (Lead chromate pigment)	Toxic Corrosive Ignitable
Antimony trioxide	Toxic

## 14. TRANSPORT INFORMATION

<b>DOT</b>	Not regulated (Product as shipped)
<b>Proper shipping name</b>	Elevated temperature liquid, n.o.s. (Product in use)
<b>Description</b>	ELEVATED TEMPERATURE MATERIAL, LIQUID, N.O.S.(COMPOUND PAVEMENT MARKING), 9, UN 3257, III. (Product in use)
<b>TDG</b>	Not regulated
<b>MEX</b>	Not regulated
<b>ICAO</b>	Not regulated
<b>IATA</b>	Not regulated
<b>IMDG/IMO</b>	Not regulated

## 15. REGULATORY INFORMATION

### International Inventories

<b>TSCA</b>	All components are listed on the TSCA Inventory.
<b>DSL</b>	All components are listed either on the DSL or NDSL.

### 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	7-13	0.1
Molybdate orange (Lead chromate pigment)	12656-85-8	0.1-1	0.1

### SARA 311/312 Hazard Categories

<b>Acute Health Hazard</b>	Yes
<b>Chronic Health Hazard</b>	Yes
<b>Fire Hazard</b>	No
<b>Sudden Release of Pressure Hazard</b>	No
<b>Reactive Hazard</b>	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		
Molybdate orange (Lead chromate pigment)		X		
Antimony trioxide	1000 lb	X		X

**CERCLA**

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302):

Chemical Name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Antimony trioxide	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

**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

**U.S. State Right-to-Know Regulations**

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Illinois	Rhode Island
Limestone	X	X	X		X
Paraffin	X	X	X	-	X
Chrome yellow (Lead chromate pigment)			X	X	X
Quartz	X	X	X	-	X
Diisononyl phthalate			X		
Titanium dioxide	X	X	X	-	X

**International Regulations**

Chemical Name	Carcinogen Status	Exposure Limits
Limestone		Mexico: TWA 10 mg/m <sup>3</sup> Mexico: STEL 20 mg/m <sup>3</sup>
Paraffin		Mexico: TWA= 2 mg/m <sup>3</sup> Mexico: STEL= 6 mg/m <sup>3</sup>
Chrome yellow (Lead chromate pigment)	A1 A3	Mexico: TWA 0.15 mg/m <sup>3</sup> Mexico: TWA 0.01 mg/m <sup>3</sup>
Quartz		Mexico: TWA= 0.1 mg/m <sup>3</sup>
Titanium dioxide		Mexico: TWA= 10 mg/m <sup>3</sup> Mexico: STEL= 20 mg/m <sup>3</sup>
Molybdate orange (Lead chromate pigment)	A3	Mexico: TWA 0.15 mg/m <sup>3</sup>
Antimony trioxide	A2	Mexico: TWA 0.5 mg/m <sup>3</sup> Mexico: TWA 1 mg/m <sup>3</sup>

**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 ( 7-13 )	X
Molybdate orange (Lead chromate pigment) 12656-85-8 ( 0.1-1 )	X
Antimony trioxide 1309-64-4 ( <0.1 )	X

**Legend**

NPRI - National Pollutant Release Inventory

**16. OTHER INFORMATION**

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

**Issuing Date** 27-Apr-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**