

DATE: 28 January 1980

IN TURN:	DATE RECEIVED	APPROVED INITIALS	DATE
*F. F. EHRLICH	2/1/80	JE	2/4/80
*J. C. WATTS	2/4	JE	3/12/80
A. M. KAPLAN, CRD - HASKELL LAB	9/4/80	AMK	9/4/80
C. H. MUENDEL, CDP - CHESTNUT RUN	3/11/80	CJM	5/24/80
W. F. STAFFORD, CDP - B-10262		WFS	6/7/80
D. E. GRAGER CDP Newark	JPL Lento for DE Grager	JPL (Grager)	8/11/80 (RWH 9/13/80)
J. S. THACKRAH, CDP - B-17202	8/13/80	JST	8/13/80
J. J. TREXEL, LEGAL, D-7045	8/18/80	JJT	8/22/80
RWH L. P. THOMAS, CDP - CHESTNUT RUN	Corrected sheet attached	RWH	9/8/80
CW Koefman, MCD R. E. BUTTER, ADVERTISING, N-2468			
MCD F. W. WARWICK, ADVERTISING, N-2545	9/10/80	CW	9/10/80

APPROVAL REQUEST

MATERIAL SAFETY DATA SHEET

Please approve the attached material. Any comments may be indicated in the text and initialed.

TITLE OF PIECE: Material Safety Data Sheet for ZINC YELLOW Y-539-D

TYPE (OBJECTIVE): New MSDS

(*) Those whose names follow the asterisk (*) above certify that the product and performance claims contained in subject material are accurate and that the files of the Chemical, Dyes and Pigments Department contain data to support the claims. They further certify that any claims attributed to non-DuPont sources are consistent with our knowledge and experience.

LPT/ilc
9/5/79

MATERIAL SAFETY DATA SHEET

IDENTIFICATION

Name ZINC - POTASSIUM BASIC CHROMATE Y-539-D

Synonyms C.I. Pigment Yellow 36:1 C.I. NO. 77956 Chemical Family Inorganic hexavalent Chromium Salt
Zinc Yellow

CAS Name Chromic Acid, Potassium Zinc Salt CAS Registry No. 1344-37-2

Hydrate (0-2H₂O)
I.D. Nos./Codes NIOSH Access No. GB-3050000

Manufacturer/Distributor

E. I. DU PONT DE NEMOURS CO. INC.
Address WILMINGTON, DE 19898

Product Information and Emergency Phone

302-774-2421
Transportation Emergency Phone
800-424-9300

HAZARDOUS COMPONENTS

Material(s)

Approximate %

~~Zinc-Potassium Basic Chromate (0-2H₂O)~~
Crystalline yellow powder

44.5

PHYSICAL DATA

Boiling Point, 760 mm Hg

Melting Point

Specific Gravity 3.39

Vapor Pressure

Vapor Density

Solubility in H₂O Soluble

% Volatiles by wt. 0.3 - 0.5 (+ 6.5% combined water)
Evaporation Rate (Butyl Acetate = 1)

Form Solid

Appearance Powder

Color Yellow

Odor Odorless

pH Information

5.5 - 6.0

Octanol/Water Partition Coefficient

FIRE AND EXPLOSION DATA

Flash Point Will not burn Method

Autoignition Temperature

Flammable Limits in Air, % by Vol.

heat plus

Lower

Upper

Fire and Explosion Hazards

Burns with smoldering fire; not easily ignited.
Oxidizer - combustible organic matter can cause fire.

Extinguishing Media

Carbon dioxide (CO₂). Water

Special Fire Fighting Instructions

Place in metal drum, add CO₂, and cover tightly.

The data in this Material Safety Data Sheet relates only to the specific material designated herein and does not relate to use in combination with any other material or in any process. The information set forth herein is furnished free of charge and is based on technical data that Du Pont believes to be reliable. It is intended for use by persons having technical skill and at their own discretion and risk. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information. Nothing herein is to be taken as a license to operate under or a recommendation to infringe any patents.

HAZARDOUS REACTIVITY

Instability Stable

Incompatibility

~~Reactive~~ Oxidizes with organic matter

Decomposition

Will not occur.

Polymerization

Will not occur.

— See "Exposure Limits" section above.
JW

HEALTH HAZARD INFORMATION

Exposure Limits OSHA 8-hour time weighted average (TWA) is 100 ug/m³ (as Cr). ACGIH TLV-C-TWA is 50 ug/m³ (as Cr), with a paragraph A2 notation (Industrial Substances

Suspect of Carcinogenic Potential for Man). OSHA/NIOSH SCP Level "Immediately Dangerous to Life or Health" (IDLH) is 300 mg/m³. JW

Harmful if swallowed. May cause skin and eye irritation. May sensitize skin.

May cause cancer based on tests on animals. Symptoms: Nasal and respiratory irritation, leukocytosis, leukopenia, monocytosis, eosinophilia, kidney, liver damage,

First Aid Eye injury or conjunctivitis, skin ulcer, skin sensitization, lung cancer

In case of contact immediately flush eyes with plenty of water for at least 15

minutes. Call a Physician. Flush skin with water. If swallowed, induce vomiting immediately by giving 2 glasses of water and sticking finger down throat. Call a Physician. Never give anything by mouth to an unconscious person.

PROTECTION INFORMATION

Ventilation Use only with adequate ventilation and dust containment to reduce air concentrations to permissible exposure limits.

Personal Protective Equipment

If exposure limits are exceeded, use OSHA-permissible respiratory equipment,

Other such as high efficiency particulate respirator, air supplied respirator, etc.

DISPOSAL PROCEDURES

Aquatic Toxicity

Spill, Leak or Release Do not sweep. Vacuum and wet scrub.

Waste Disposal Comply with federal, state and local regulations. If approved, may be removed to licensed land disposal area or drained to chemical sewer.

SHIPPING PRECAUTIONS

Transportation Not regulated as a hazardous material by Dept. of Transportation.

Shipping Containers

Bags and ~~drums~~

Storage Conditions

Protect packages from breakage.

REFERENCES AND ADDITIONAL INFORMATION

~~Do not breathe dust~~ Avoid breathing dust. JW

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

Change clothes after work if they may be contaminated; wash contaminated clothing before re-use.

DATE:

ZINC YELLOW Y-539-D

HEALTH HAZARD INFORMATION

Statements are not supported by toxicity information and are submitted subject to Haskell Lab approval.

L. P. THOMAS

LPT:DLD

DUP050075144

N42350.02

**CONTAINS ZINC CHROMATE
WARNING! HARMFUL DUST**

MAY IRRITATE SKIN AND EYES.
AVOID BREATHING DUST. USE
ONLY WITHIN DUST CONCENTRA-
TION LIMIT PRESCRIBED BY
OCCUPATIONAL SAFETY AND
HEALTH ADMINISTRATION (29
CFR 1910.1000, AIR CONTAMI-
NANTS). AVOID CONTACT WITH
SKIN, EYES AND CLOTHING.
WASH THOROUGHLY AFTER
HANDLING. IN CASE OF EYE
CONTACT, FLUSH WITH PLENTY
OF WATER FOR AT LEAST 15
MINUTES. CALL A PHYSICIAN.
FLUSH SKIN WITH WATER.

HIS CAN CONTAINS A SAMPLE OF

ZINC YELLOW

K-12988 REV. 1-54



Y-539-D PS-83109

PRINTED IN U. S. A.

E. I. DU PONT DE NEMOURS & Co. (INC.)
Pigments Department
Wilmington, Delaware

*Suggest label change
PRW*

*Warning ! Harmful Dust
May cause irritation*

*Avoid breathing dust
Use with adequate ventilation
Avoid contact with eyes, skin or clothing
Keep container closed
Wash thoroughly after using*

U.S. DEPARTMENT OF LABOR

Occupational Safety & Health Administration

MATERIAL SAFETY DATA SHEET

SECTION I	
MANUFACTURER'S NAME E. I. Du Pont de Nemours & Co.-Pigments Dept.	EMERGENCY TELEPHONE NO. (302) 774-1000
ADDRESS (Number, Street, City, State, and ZIP Code) 1007 Market Street, Wilmington, Delaware 19898	
CHEMICAL NAME AND SYNONYMS Zinc Chromate	TRADE NAME AND SYNONYMS Zinc Yellow Y-539-D
CHEMICAL FAMILY Zinc Chromate	FORMULA C.I. No. 77955 - Pig. Yellow 36

SECTION II HAZARDOUS INGREDIENTS					
PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS			BASE METAL		
Zinc	30.8	See			
Chromium	23.5	Sec.	ALLOYS		
Potassium	9.1	V			
VEHICLE			METALLIC COATINGS		
SOLVENTS			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES			OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)

SECTION III PHYSICAL DATA			
BOILING POINT (°F.)		SPECIFIC GRAVITY (H ₂ O = 1)	3.50
VAPOR PRESSURE (mm Hg.)		PERCENT VOLATILE BY VOLUME (%)	
VAPOR DENSITY (AIR = 1)		EVAPORATION RATE (1 = 1)	
SOLUBILITY IN WATER	~ 2 g./l.		
APPEARANCE AND ODOR Dry powder - None			

SECTION IV FIRE AND EXPLOSION HAZARD DATA			
FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
EXTINGUISHING MEDIA	Water		
SPECIAL FIRE FIGHTING PROCEDURES	None		

NOTICE FROM DU PONT

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DUP050075146

N42350.04

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE OSHA time-weighted average limit for chromate pigments is 1 mg per 10 cubic meters as CrO₃, cited in 29 CFR 1910.1000.

EFFECTS OF OVEREXPOSURE May cause dermatitis - may irritate skin, eyes, nasal passages and respiratory tract. Harmful dust - for recent information on inhalation, see June 13, 1975 letter from Dry Color Manufacturers' Association, attached.

Emergency & First Aid: Avoid breathing dust. Avoid contact with skin eyes and clothing. In case of eye contact, flush with plenty of water for at least 15 min.; call a physician; flush skin with water.

SECTION VI REACTIVITY DATA

STABILITY	UNSTABLE		CONDITIONS TO AVOID
	STABLE	X	
INCOMPATIBILITY (Materials to avoid)			
HAZARDOUS DECOMPOSITION PRODUCTS			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID
	WILL NOT OCCUR	X	

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Avoid breathing dust. Clean up - Use protective equipment - See special protection information (below)

WASTE DISPOSAL METHOD In accordance with Local, State and Federal regulations.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type) Respirators having NIOSH/MESA approval No. TC-21c or TX-23C are suggested.

VENTILATION	LOCAL EXHAUST	Yes	SPECIAL
	MECHANICAL (General)	Yes	OTHER
PROTECTIVE GLOVES	Yes	EYE PROTECTION	Yes - Glasses
OTHER PROTECTIVE EQUIPMENT	Clothing		

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Store in clean, dry area - avoid breathing dust.

OTHER PRECAUTIONS Wash thoroughly before eating. Keep away from food products.