

Material Safety Data Sheet

BASF Wyandotte Corporation

HMIS: H1 F1 R0

BASF
491 Columbia Avenue
Holland, MI 49423
(616) 392-2391

SECTION I

253 581

CHEMICAL NAME See Below(*)

TRADE NAME HELIOGEN^R Blue K 7090

SYNONYMS Pigment Blue 15:3, CI#74160

CHEMICAL FAMILY Phthalocyanine

MOLECULAR WEIGHT 576

FORMULA $C_{32}H_{16}CuN_8$

CAS REGISTRY NO. 147-14-8

SECTION II INGREDIENTS

NAME	%	TLV	TOXICOLOGICAL DATA
HELIOGEN Blue K 7090	100	Not estab.	For similar products: Rat, Oral LD ₅₀ > 6,400 mg/kg Rabbit, skin: not irritating Rabbit, eyes: not irritating
Contains: Copper	<11	1 mg/m ³	dusts and mists as Cu (ACGIH, 1984)
(*)Copper, [29H,31H-phthalocyaninato (2-)-N ₂₉ ,N ₃₀ , N ₃₁ ,N ₃₂]-, (SP-4-1)-			

This BWC product is supplied in compliance with the reporting requirements of TSCA.

SECTION III PHYSICAL DATA

Boiling/Melting Point @ 760 mm Hg	N/A	pH	N/A
Vapor Pressure mm Hg @ 20°C	N/A		
Specific Gravity or Bulk Density	approx 1.5		
Solubility in Water	insoluble		
Appearance	blue powder	Odor	No characteristic Intensity N/A

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (TEST METHOD)		N/A		AUTOIGNITION TEMPERATURE		N/A				
FLAMMABILITY LIMITS IN AIR (% BY VOL.)			LOWER		N/A		UPPER		N/A	
EXTINGUISHING MEDIUM		☐ Water Fog ☒ Foam ☒ CO ₂ ☒ Dry Chemical ☐ Other								
SPECIAL FIREFIGHTING PROCEDURES		Firefighters should be equipped with self-contained breathing apparatus and turnout gear.								
UNUSUAL FIRE AND EXPLOSION HAZARDS		Adequate ventilation and clean-up must be maintained to minimize dust accumulation. May form explosive dust-air mixture.								

EMERGENCY TELEPHONE NUMBER

DO 086195
CONFIDENTIAL

CHEMTREC: 800-424-9300

BASF WYANDOTTE CORPORATION: 616-392-2391

This number is available days, nights, weekends, and holidays.

SECTION V — HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE See Section II

EFFECTS OF OVEREXPOSURE

Contact with eyes may result in irritation. Contact with skin may result in irritation. Ingestion may result in gastric disturbances. Inhalation of dust may irritate respiratory tract.

FIRST AID PROCEDURES

EYES: FLUSH WITH FLOWING WATER AT LEAST 15 MINUTES	Flush eyes with flowing water at least 15 minutes. If irritation develops, consult a physician. Wash affected skin areas thoroughly with soap and water. If irritation develops, consult a physician. Remove and launder contaminated clothing before reuse. If swallowed, dilute with water and induce vomiting. Get immediate medical attention. If inhaled, move to fresh air. Aid in breathing, if necessary, and get medical attention.	NEVER GIVE FLUIDS OR INDUCE VOMITING IF PATIENT IS UNCONSCIOUS OR HAVING CONVULSIONS
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SECTION VI — REACTIVITY DATA

STABILITY	STABLE	X	CONDITIONS TO AVOID: N/A
	UNSTABLE		
CHEMICAL INCOMPATIBILITY Unknown			
HAZARDOUS DECOMPOSITION PRODUCTS Carbon monoxide, carbon dioxide and oxides of nitrogen.			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID: N/A
	DOES NOT OCCUR	X	
CORROSIVE TO METAL ☒ NO ☐ YES, TYPE:			OXIDIZER: ☒ NO ☐ YES

SECTION VII — SPECIAL PROTECTION INFORMATION**RESPIRATORY PROTECTION**

NIOSH/MSHA approved dust respirator as necessary.

VENTILATION

LOCAL EXHAUST: To control dusts.

MECHANICAL (GENERAL):

EYE PROTECTION

Goggles

PROTECTIVE CLOTHING

Gloves, coveralls, apron, boots as necessary to prevent skin contact.

OTHER

N/A

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SECTION VIII ENVIRONMENTAL DATA

253 581

ENVIRONMENTAL TOXICITY DATA

None available

SPILL AND LEAK PROCEDURES

This is a regulated product. Spills should be contained and placed in suitable containers for disposal in a licensed facility.

HAZARDOUS SUBSTANCE "SUPERFUND" ☐ NO ☒ YES → RQ = 1 lb (copper)

WASTE DISPOSAL METHOD

Bury at a licensed facility. Do not discharge into waterways or sewer systems.

HAZARDOUS WASTE 40CFR261 ☒ NO ☐ YES → HAZARDOUS WASTE NUMBER

CONTAINER DISPOSAL

Dispose of in licensed facility. Recommend crushing or other means to prevent unauthorized reuse.

SECTION IX SHIPPING DATA

D.O.T. PROPER SHIPPING NAME (49CFR172.101) None		HAZARDOUS SUBSTANCE (40CFR116) No	
		REPORTABLE QUANTITY (RQ) None	
D.O.T. HAZARD CLASSIFICATION (49CFR172.101)			
PRIMARY None		SECONDARY None	
D.O.T. LABELS REQUIRED (49CFR172.101) None	D.O.T. PLACARDS REQUIRED None	POISON CONSTITUENT (49CFR173.343) None	
BILL OF LADING DESCRIPTION Pigments NOI Dry		CC NO. 618	
		UN/NA CODE None	

DATE PREPARED

4-30-85 J.H. Uind

Page 3 of 4

While BASF Wyandotte Corporation believes the data set forth herein are accurate as of the date hereof, BASF Wyandotte Corporation makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data are offered solely for your consideration, investigation, and verification.

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HELIOGEN^R Blue K 7090**CAUTION:**

CONTACT WITH EYES AND SKIN MAY RESULT IN IRRITATION.
INGESTION MAY RESULT IN GASTRIC DISTURBANCES.
INHALATION OF DUSTS MAY IRRITATE MUCOUS MEMBRANES.

Use with local exhaust. Wear a NIOSH/MSHA approved dust respirator, goggles, gloves, coveralls, apron, boots and other protective clothing as necessary to prevent contact.

FIRST AID:

Eyes - Immediately wash eyes with running water for 15 minutes. If irritation develops get medical attention.

Skin - Wash affected areas with soap and water. Remove and launder contaminated clothing before reuse. If irritation develops get medical attention.

Ingestion - If swallowed, dilute with water and immediately induce vomiting. Never give fluids or induce vomiting if the victim is unconscious or having convulsions. Get immediate medical attention.

Inhalation - Move to fresh air. Aid in breathing if necessary and get medical attention.

IN CASE OF FIRE: Use water fog, foam, CO₂ or dry chemical extinguishing media. Fire fighters should be equipped with self-contained breathing apparatus and turn out gear. Adequate ventilation and cleanup must be maintained to minimize dust accumulation. May form explosive dust-air mixtures.

EMPTY CONTAINERS: All labeled precautions must be observed when handling, storing and transporting empty containers due to product residues. Do not re-use this container unless it is professionally cleaned and reconditioned.

DISPOSAL: Spilled material, unused contents and empty containers must be disposed of in accordance with local, state and federal regulations. Refer to our Material Safety Data Sheet for specific disposal instructions.

IN CASE OF CHEMICAL EMERGENCY: Call CHEMTREC day or night for assistance and information concerning spilled material, fire, exposure and other chemical accidents. 800-424-9300

ATTENTION: This product is sold solely for use by industrial institutions.

Refer to our Technical Bulletin and Material Safety Data Sheet regarding safety, usage, applications, hazards, procedures and disposal of this product. Consult your supervisor for additional information.

CAS No.: 147-14-8

Made in West Germany

Pigments

HMIS: H1 F1 R0

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. 44-R1387

MATERIAL SAFETY DATA SHEET

Required under USDL Safety and Health Regulations for Ship Repairing,
Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME HARWICK CHEMICAL CORPORATION		EMERGENCY TELEPHONE NO. (216) 798-9300
ADDRESS (Number, Street, City, State, and ZIP Code) 60 South Seiberling Street - Akron, Ohio 44305		
CHEMICAL NAME AND SYNONYMS Wood Rosin; colophony		TRADE NAME AND SYNONYMS HARWICK FF WOOD ROSIN
CHEMICAL FAMILY Natural Rosin	FORMULA Not Available	

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS	N/A		BASE METAL	N/A	
CATALYST	N/A		ALLOYS	N/A	
VEHICLE	N/A		METALLIC COATINGS	N/A	
SOLVENTS	N/A		FILLER METAL PLUS COATING OR CORE FLUX	N/A	
ADDITIVES	N/A		OTHERS		
OTHERS					
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES				%	TLV (Units)
N/A					

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	500°	SPECIFIC GRAVITY (H ₂ O=1)	1.02
VAPOR PRESSURE (mm Hg.)	Nil	PERCENT VOLATILE BY VOLUME (%)	Nil
VAPOR DENSITY (AIR=1)	Nil	EVAPORATION RATE (_____ =1)	Nil
SOLUBILITY IN WATER	Negligible	Melting Point, R & B	165°F
APPEARANCE AND ODOR	Pale Yellow Solid; No Odor.		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used) 220°C COC	FLAMMABLE LIMITS	LeI N/A	UeI N/A
EXTINGUISHING MEDIA CO₂, Dry chemical, foam, water fog.			
SPECIAL FIRE FIGHTING PROCEDURES None			
UNUSUAL FIRE AND EXPLOSION HAZARDS None			

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SECTION V - HEALTH HAZARD DATA	
THRESHOLD LIMIT VALUE	None established.
EFFECTS OF OVEREXPOSURE	History of use provides no information showing ill effects; dust may be mildly irritating or abrasive.
EMERGENCY AND FIRST AID PROCEDURES	Ingestion: Induce vomiting and see physician. Skin: Wash with soap and water. Eyes: Flush with water for 15 minutes, see physician.

SECTION VI - REACTIVITY DATA			
STABILITY	UNSTABLE		CONDITIONS TO AVOID None known
	STABLE	XX	
INCOMPATIBILITY (Materials to avoid) None known.			
HAZARDOUS DECOMPOSITION PRODUCTS Normal organic decomposition products.			
HAZARDOUS POLYMERIZATION	MAY OCCUR		CONDITIONS TO AVOID None known
	WILL NOT OCCUR	XX	

SECTION VII - SPILL OR LEAK PROCEDURES	
STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED Sweep and shovel for reuse, if not contaminated.	
WASTE DISPOSAL METHOD May be disposed in landfill in accordance with all regulations; Federal, State and Local.	

SECTION VIII - SPECIAL PROTECTION INFORMATION			
RESPIRATORY PROTECTION (Specify type) Not required.			
VENTILATION	LOCAL EXHAUST To reduce dust.	SPECIAL	None
	MECHANICAL (General) To reduce dust.	OTHER	None
PROTECTIVE GLOVES Optional		EYE PROTECTION Safety glasses.	
OTHER PROTECTIVE EQUIPMENT Not required.			

SECTION IX - SPECIAL PRECAUTIONS	
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING Acrid fumes may be produced upon heating which may irritate the eyes, nose and throat.	
OTHER PRECAUTIONS None known	

H	2*
F	0
R	1
PP	Sec. VIII

HMIS
SYSTEM
NPCA



PRODUCT NAME
HALTHAL

* Also Chronic Effects
See Sec. VII

MATERIAL SAFETY DATA SHEET

SECTION I — MANUFACTURER AND PRODUCT INFORMATION						
MANUFACTURERS NAME <i>HALSTAB DIVISION OF HAMMOND LEAD PRODUCTS</i>				DATE <i>10-28-85</i>		ISSUE # <i>1</i>
STREET ADDRESS <i>3100 MICHIGAN</i>		CITY, STATE, & ZIP <i>HAMMOND, INDIANA 46323</i>		INFORMATION TELEPHONE NUMBER <i>(219) 844-3980</i>		
EMERGENCY TELEPHONE NUMBER <i>(219) 931-9360 ASK FOR ENVIRONMENTAL COORDINATOR</i>				CHEMICAL FAMILY <i>BASIC LEAD CHEMICALS (STABILIZERS)</i>		
TRADE NAME <i>HALTHAL</i>		CAS #		FORMULA		
SECTION II — HAZARDOUS INGREDIENTS						
CHEMICAL NAME	PbO %	TLV-TWA mg/m ³ -8hr.	TLV-STEL mg/m ³	TLV-C	BLV	LEL
DIBASIC LEAD PHTHALATE	78.5 ± .1	0.03 as Pb	0.45 as Pb	NA	LEAD 50 mg/100 g blood	NA
Material is a lead compound. Refer to Federal Register Vol. 43 #220 pp 53007-53014, Nov. 14, 1978. Standard (OSHA) - Occupational Exposure to Lead. Also code of Federal Regulation CFR Title 29 1910.1025.						
SECTION III — PHYSICAL DATA						
SPECIFIC GRAVITY H ₂ O = 1	4.4 ± .1					
MOLECULAR WEIGHT						
SOLUBILITY IN H ₂ O g/l	NIL					
APPEARANCE AND ODOR	WHITE POWDER ODORLESS					
MELTING POINT	DECOMPOSES					
BOILING POINT @ 760 MM Hg	NOT APPLICABLE					
EVAPORATION RATE	NOT APPLICABLE					
VAPOR PRESSURE MM Hg	NOT APPLICABLE					
VAPOR DENSITY	NOT APPLICABLE					
% VOLATILES BY VOLUME	NOT APPLICABLE					
SECTION IV — REACTIVITY DATA						
REACTIVITY		NPCA HMIS RATING = 1				
STABILITY		STABLE				
CONDITIONS TO AVOID		TEMPERATURES IN EXCESS OF 400°F.				
INCOMPATIBILITY (Materials to Avoid)		NONE KNOWN				
HAZARDOUS DECOMPOSITION PRODUCTS		HIGH TEMPERATURES OR FIRE MAY PRODUCE FUME, VAPOR OR DUST				
HAZARDOUS POLYMERIZATION		NOT APPLICABLE				

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SECTION V — FIRE AND EXPLOSION HAZARD DATA		
FLAMMABILITY NPCA HMIS RATING = 0 (HALPHOS = 1)		DOT CATEGORY HALPHOS - FLAMMABLE SOLID — ALL OTHERS - NOT APPLICABLE
FLASH POINT NOT APPLICABLE	AUTO IGNITION TEMPERATURE NOT APPLICABLE	FLAMMABLE LIMITS NOT APPLICABLE
EXTINGUISHING MEDIA WATER FOG OR FLOOD, CO ₂ AND DRY CHEMICAL		
SPECIAL FIRE FIGHTING PROCEDURES <i>Wear full body protective clothing and full face piece, self-contained breathing apparatus operated in positive-pressure mode.</i>		
UNUSUAL FIRE AND EXPLOSION HAZARD <i>Fume, vapor, and/or dust may occur and are considered toxic and respiratory irritants. The product or dust can react vigorously with strong oxidizing agents. Refer to FIRE PROTECTION GUIDE ON HAZARDOUS MATERIALS By N.F.P.A. for specific individual problem combinations.</i>		
SECTION VI — SPILL OR LEAK PROCEDURES		
CLEAN UP METHODS <i>Clean the area of spill, returning all material possible to container. Wear gloves, goggles, respirator. Do not breathe or ingest dust. For a SMALL spill, use a vacuum. Do not broom sweep. Excess material should be stored in dry containers for later disposal. Do not use compressed air for cleaning. Exclude all individuals not wearing protective equipment from the spill area until clean up is completed.</i>		
WASTE DISPOSAL <i>Disposal of waste and hazardous material should be handled in a manner which complies with local, state and federal Environmental Protection Agency regulations. It is preferable to send waste material to a recycling facility which is approved by the state and federal EPA. City, state and federal regulations must be followed at all times.</i>		
NEUTRALIZING CHEMICALS <i>Not Applicable</i>		
SECTION VII — HEALTH HAZARD INFORMATION		
HEALTH HAZARD NPCA HMIS RATING = 2		
ROUTES OF EXPOSURE WHEN HANDLING OR PROCESSING <i>Mode of entry into body:</i> 1. By INHALATION of dust or fumes, the respiratory system may be irritated and both acute and chronic overexposure can result. 2. By INGESTION of lead compounds coming from dust trapped in the upper respiratory tract or introduced into the mouth on food, tobacco, fingers or other objects, both acute and chronic overexposure can result. 3. SKIN CONTACT of dust may cause irritation. 4. SKIN ABSORPTION does not apply, as dusts are not absorbed 5. EYE CONTACT of dust or fume may cause irritation		
EFFECTS OF OVEREXPOSURE ACUTE OVEREXPOSURE: <i>Lead intoxication will occur with accompanying symptoms of constipation, sleep disturbance, fatigue, headache, loss of appetite. Where inhalation is severe from heavy dusting or a large quantity is ingested and left untreated, colic, anemia, vomiting and neuritis will follow as evidenced by intense periodic cramps, aching bones, muscles, uncoordinated body movements. Worst case situations could result in convulsions, stupor, coma, and encephalopathy.</i> CHRONIC OVEREXPOSURE: <i>Normal ingestion of lead from the ambient air, foods and beverages is about 0.25 to 0.35 mg. per day. The normal adult metabolism can eliminate almost one mg. of lead per day. When lead ingested exceeds the body's ability to eliminate it, accumulation can reach the point where symptoms and disability occur. In this context, lead has cumulative toxic effect.</i> <i>Early effects of chronic overexposure to lead are difficult to detect, but symptoms include persistent fatigue, sleep disturbance, headache, aching bones and muscles, constipation, abdominal pains and loss of appetite. Prolonged ingestion may be indicated by intense periodic cramps and constipation, nausea and vomiting. Excessive exposure may affect blood, nervous, digestive systems. Synthesis of hemoglobin is inhibited and will result in anemia. Apathy and depression may be symptoms. If left untreated, neuromuscular dysfunction, possible paralysis and encephalopathy can result. Unusual occurrence of symptoms should prompt immediate contact of a physician.</i> <i>For industrial exposure, a worker's lead accumulation can be detected by an increase in blood lead above the base level established upon the employee's entry to the workplace. Blood lead above the biological limit value requires job removal.</i>		

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EMERGENCY AND FIRST AID PROCEDURES:

INHALATION - Remove from exposure. Get medical attention if experiencing effects of acute overexposure.

INGESTION - Induce vomiting in a conscious individual. Get immediate medical attention. Call a physician.

SKIN - Wash thoroughly with soap and water.

EYES - Flush with copious quantities of water. Get immediate medical attention.

NOTES TO PHYSICIAN: Lead in its inorganic compounds are neurotoxins which may produce peripheral neuropathy. For an overview of the effects of lead exposure, consult Occupational Safety and Health Adm. App. A of Occupational Exposure to Lead (29CFR1910.1025). "A Guide for Physicians, Health Maintenance of Workers Exposed to Inorganic Lead" is available from Lead Industries Association, Inc., 292 Madison Ave., New York, NY 10017.

SECTION VIII — SPECIAL PROTECTION**SPECIFIC PERSONAL PROTECTION EQUIPMENT**

RESPIRATORY: As specified by 29CFR1910.1025(f) of the Federal Occupational Safety and Health Administration Standard for Occupational Exposure to Lead -- When handling, use a dust/fume respirator with NIOSH/MSHA approval. Respirator must be worn if TLV is exceeded.

Refer to Table II as specified in 29CFR1910.1025(f)(2)(i) for various exposure levels.

Other local, state, and federal regulations may also apply.

PROTECTIVE GLOVES: Not required, but recommended.

EYE PROTECTION: Not required, but recommended.

OTHER CLOTHING AND EQUIPMENT: Protective clothing is required if lead exposures exceed PEL or TLV; otherwise, full body clothing should be worn during product use and handling, be left at the work site and be properly laundered after use, with the wash water disposed of in accordance with local, state and federal regulations. Hard hat, safety boots, and other safety equipment should be worn as appropriate for the industrial environment. Personal clothing, including shoes, should be protected from contamination.

VENTILATION REQUIREMENTS

Ventilation as described in the *Industrial Ventilation Manual*, by ACGIH shall be provided where exposures exceed PEL or TLV specified in and in accord with OSHA Standard 29CFR1910.94. Currently 0.050 mg/m³ maximum and 0.030 mg/m³ set as trigger and action levels.

Other local and state regulations may apply.

SECTION IX — DEFINITIONS

TLV-TWA - Threshold Limit Value-Time Weighted Average

BLV - Biological Limit Value

TLV-STEL - Threshold Limit Value-Short Term Exposure Limit

LEL - Lethal Exposure Limit

TLV-C - Threshold Limit Value - Ceiling

PEL - Permissible Exposure Limit

SECTION X — SPECIAL PRECAUTIONS

PRECAUTIONS: There are two major means of lead absorption; namely inhalation and ingestion. Most inhalation problems can be prevented with attention to ventilation and respirator use. Ingestion can be prevented with good hygiene practices. Do not inhale or swallow dust. Wash thoroughly after handling. Use gloves and avoid spilling on hands, face, or body, to prevent secondary contamination by ingestion or inhalation. Do not smoke, eat, or apply cosmetics in work area. Wash thoroughly before entering into eating areas. Do not wear any part of work clothing home. This includes shoes.

Keep lead materials away from feed and food products. Keep away from children. Do not reuse containers. This product is intended for industrial use only.

DO 086203
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SECTION XI — OTHER HANDLING AND STORAGE REQUIREMENTS

Store in dry area where accidental contact with acids or bases is not possible.

When a spill releases material into the environment, it may be necessary to file a report of the discharge. Contact your local environmental authorities to determine what rules apply.

Avoid Skin contact.

Adhere to all personal protection procedures and ventilation requirements when exposure limits exceed PEL or TLV.

Before using this product, be familiar with information contained in:

The Federal Standard For Occupational Exposure To Lead (29CFR1910.1025), first published in the Federal Register on Tuesday, November 14, 1978, by the Occupational Safety and Health Administration, and as also later modified.

**PREPARED BY: TECHNICAL SERVICE DEPARTMENT
HALSTAB DIVISION
HAMMOND LEAD PRODUCTS
3100 MICHIGAN, HAMMOND, INDIANA 46323**

VENDEE AND THIRD PERSONS ASSUME THE RISK OF INJURY PROXIMATELY CAUSED BY THE MATERIAL IF REASONABLE SAFETY PROCEDURES ARE NOT FOLLOWED AS PROVIDED FOR IN THE DATA SHEET, AND VENDOR SHALL NOT BE LIABLE FOR INJURY TO VENDEE OR THIRD PERSONS PROXIMATELY CAUSED BY ABNORMAL USE OF THE MATERIAL EVEN IF REASONABLE SAFETY PROCEDURES ARE FOLLOWED.

ALL PERSONS USING THIS PRODUCT, ALL PERSONS WORKING IN AN AREA WHERE THIS PRODUCT IS USED, AND ALL PERSONS HANDLING THIS PRODUCT SHOULD BE FAMILIAR WITH THE CONTENTS OF THIS DATA SHEET. THIS INFORMATION SHOULD BE EFFECTIVELY COMMUNICATED TO EMPLOYEES AND OTHERS WHO MIGHT COME IN CONTACT WITH THE PRODUCT.

WHILE THE INFORMATION ACCUMULATED AND SET FORTH HEREIN IS BELIEVED TO BE ACCURATE AS OF THE DATE HEREOF, HAMMOND LEAD PRODUCTS, INC. MAKES NO WARRANTY WITH RESPECT THERETO AND DISCLAIMS ALL LIABILITY FROM RELIANCE THEREON. RECIPIENTS ARE ADVISED TO CONFIRM IN ADVANCE OF NEED THAT THE INFORMATION IS CURRENT, APPLICABLE, AND SUITABLE FOR THEIR PARTICULAR CIRCUMSTANCES.

DO 086204
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Product Data Sheet
TYPICAL ANALYSIS



Halstab

A DIVISION OF HAMMOND LEAD PRODUCTS, INC.

<u>PRODUCT</u>	<u>HALSTAB 60</u>	<u>HALSTAB 60-EP</u>
COMPOSITION	Complex Lead Salt	Complex Lead Salt Coated
APPEARANCE	Fine White Powder	Fine White Powder
PERCENT PbO	83.5 ± .6	77.6 ± .6
SIEVE ANALYSIS % THROUGH 325 MESH (WET)	99.5 - 100	99.5 - 100
SPECIFIC GRAVITY	5.4 ± .1	4.4 ± .1
PERCENT MOISTURE	0.0 - 0.3	0.0 - 0.3
SOLUBILITY, WATER	N11	N11

APPLICATIONS: Very versatile heat stabilizers.
Both can be used in all wire and cable applications from 60°C UL to 105°C UL.
Compatible with virtually all plasticizer systems.

Also -

Flexible & Rigid Extruded Profiles
Rigid Molding
Plastisols
Calendering

WE SPECIALIZE IN HIGH QUALITY LEAD CHEMICALS

3100 MICHIGAN STREET - HAMMOND, INDIANA 46323

(219) 844-3980

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H	2*
F	0
R	1
PP	Sec. VIII

HMIS
SYSTEM
NPCA



PRODUCT NAME
HALSTAB 60

* Also Chronic Effects
See Sec. VII

MATERIAL SAFETY DATA SHEET

DATE PREPARED
08/15/1988

SECTION I — MANUFACTURER AND PRODUCT INFORMATION

MANUFACTURER

HALSTAB DIVISION OF HAMMOND LEAD
3100 MICHIGAN
HAMMOND, IN 46323

PRODUCT

TRADE NAME **HALSTAB 60**
CHEMICAL NAME **COMPLEX LEAD SALT**

FOR INFORMATION (219) 844-3980

CHEMICAL FAMILY *Basic Lead Chemicals*

FOR EMERGENCY (219) 931-9360
ASK FOR ENVIRONMENTAL COORDINATOR

CAS # *NA - Mixture*
FORMULA *Proprietary Composition*

SECTION II — HAZARDOUS INGREDIENTS

MATERIAL OR COMPONENT	NOT TO EXCEED %	TLV-TWA mg/m ³ -8hrs.	PEL mg/m ³	TLV-C	BLV	LEL
COMPLEX LEAD SALT (83.5% PbO)	100	0.15 as Pb (ACGIH)	0.05 as Pb (OSHA)	NA	LEAD 50 mmg/100 g blood	NA

Material is a lead compound. Refer to Federal Register Vol. 43 #220 pp 53007-53014, Nov. 14, 1978. Standard (OSHA) - Occupational Exposure to Lead. Also code of Federal Regulation CFR Title 29 1910.1025.

SECTION III — PHYSICAL DATA

SPECIFIC GRAVITY H ₂ O = 1	5.4
MOLECULAR WEIGHT	
SOLUBILITY IN H ₂ O g/l	NTL
APPEARANCE AND ODOR	WHITE POWDER ODORLESS
MELTING POINT	NOT APPLICABLE
BOILING POINT @760 MM Hg	NOT APPLICABLE
EVAPORATION RATE	NOT APPLICABLE
VAPOR PRESSURE MM Hg	NOT APPLICABLE
VAPOR DENSITY	NOT APPLICABLE
% VOLATILES BY VOLUME	NOT APPLICABLE

SECTION IV — REACTIVITY DATA

REACTIVITY	NPCA HMIS RATING = 1
STABILITY	STABLE
CONDITIONS TO AVOID	TEMPERATURES IN EXCESS OF 400°F.
INCOMPATIBILITY (Materials to Avoid)	NONE KNOWN
HAZARDOUS DECOMPOSITION PRODUCTS	HIGH TEMPERATURES OR FIRE MAY PRODUCE LEAD OXIDE FUME, VAPOR OR DUST
HAZARDOUS POLYMERIZATION	NOT APPLICABLE

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SECTION V — FIRE AND EXPLOSION HAZARD DATA

FLAMMABILITY NPCA HMIS RATING = 0 (HALPHOS = 1)	DOT CATEGORY HALPHOS - FLAMMABLE SOLID — ALL OTHERS - NOT APPLICABLE
FLASH POINT NOT APPLICABLE	AUTO IGNITION TEMPERATURE NOT APPLICABLE
EXTINGUISHING MEDIA WATER FOG OR FLOOD, CO ₂ AND DRY CHEMICAL	FLAMMABLE LIMITS NOT APPLICABLE
SPECIAL FIRE FIGHTING PROCEDURES <i>Wear full body protective clothing and full face piece, self-contained breathing apparatus operated in positive-pressure mode.</i>	
UNUSUAL FIRE AND EXPLOSION HAZARD <i>Fume, vapor, and/or dust may occur and are considered toxic and respiratory irritants. The product or dust can react vigorously with strong oxidizing agents. Refer to FIRE PROTECTION GUIDE ON HAZARDOUS MATERIALS by N.F.P.A. for specific individual problem combinations.</i>	

SECTION VI — SPILL OR LEAK PROCEDURES

CLEAN UP METHODS	<i>Clean the area of spill, returning all material possible to container. Wear gloves, goggles, respirator. Do not breathe or ingest dust. For a SMALL spill, use a vacuum. Do not broom sweep. Recovered material should be stored in dry containers for later disposition. Do not use compressed air for cleaning. Exclude all individuals not wearing protective equipment from the spill area until clean up is completed.</i>
WASTE DISPOSAL	<i>Disposal of waste and hazardous material should be handled in a manner which complies with local, state and federal Environmental Protection Agency regulations. It is preferable to send waste material to a recycling facility which is approved by the state and federal EPA. City, state and federal regulations must be followed at all times.</i>
NEUTRALIZING CHEMICALS <i>Not Applicable</i>	

SECTION VII — HEALTH HAZARD INFORMATION

HEALTH HAZARD NPCA HMIS RATING = 2
ROUTES OF EXPOSURE WHEN HANDLING OR PROCESSING <i>Mode of entry into body:</i> 1. By INHALATION of dust or fumes, the respiratory system may be irritated and both acute and chronic overexposure can result. 2. By INGESTION of lead compounds coming from dust trapped in the upper respiratory tract or introduced into the mouth on food, tobacco, finger or other objects, both acute and chronic overexposure can result. 3. SKIN CONTACT of dust may cause irritation. 4. SKIN ABSORPTION does not apply, as dusts are not absorbed. 5. EYE CONTACT of dust or fume may cause irritation.
EFFECTS OF OVEREXPOSURE ACUTE OVEREXPOSURE: Lead intoxication will occur with accompanying symptoms of constipation, sleep disturbance, fatigue, headache, loss of appetite. Where inhalation is severe from heavy dusting or a large quantity is ingested and left untreated, colic, anemia, vomiting and neuritis will follow as evidenced by intense periodic cramps, aching bones and muscles, uncoordinated body movements. Worst case situations could result in convulsions, stupor, coma, and encephalopathy. CHRONIC OVEREXPOSURE: Normal inhalation and/or ingestion of lead from the ambient air, foods and beverages is about 0.25 to 0.35 mg. per day. The normal adult metabolism can eliminate almost one mg. of lead per day. When lead ingested and/or inhaled exceeds the body's ability to eliminate it, accumulation can reach the point where symptoms and disability occur. In this context, lead has cumulative toxic effect. Early effects of chronic overexposure to lead are difficult to detect, but symptoms include persistent fatigue, sleep disturbance, headache, aching bones and muscles, constipation, abdominal pains and loss of appetite. Prolonged ingestion and/or inhalation may be indicated by intense periodic cramps and constipation, nausea and vomiting. Excessive exposure may affect blood, nervous (brain), digestive (stomach), renal (kidneys), or reproductive systems. Synthesis of hemoglobin is inhibited and will result in anemia. Apathy and depression may be symptoms. If left untreated, neuromuscular dysfunction, possible paralysis and encephalopathy can result. Unusual occurrence of symptoms should prompt immediate contact of a physician. For industrial exposure, a worker's lead accumulation can be detected by an increase in blood lead above the base level established upon the employee's entry to the workplace. Blood lead above the biological limit value requires job removal. THE STATE OF CALIFORNIA has determined that lead compounds cause birth defects. The product of this MSDS is not listed on the National Toxicology Program "Annual Report of Carcinogens".

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EMERGENCY AND FIRST AID PROCEDURES:

INHALATION - Remove from exposure. Get medical attention if experiencing effects of acute overexposure.

INGESTION - Induce vomiting in a conscious individual. Get immediate medical attention. Call a physician.

SKIN - Wash thoroughly with soap and water.

EYES - Flush with copious quantities of water. Get immediate medical attention.

NOTES TO PHYSICIAN: Lead and its inorganic compounds are neurotoxins which may produce peripheral neuropathy. For an overview of the effects of lead exposure, consult Occupational Safety and Health Adm. App. A of Occupational Exposure to Lead (29CFR1910.1025).

"A Guide for Physicians, Health Maintenance of Workers Exposed to Inorganic Lead" is available from Lead Industries Association, Inc., 292 Madison Ave., New York, NY 10017.

SECTION VIII — SPECIAL PROTECTION

SPECIFIC PERSONAL PROTECTION EQUIPMENT

RESPIRATORY: As specified by 29CFR1910.1025(f) of the Federal Occupational Safety and Health Administration Standard for Occupational Exposure to Lead — When handling, use a dust/fume respirator with NIOSH/MSHA approval. Respirator must be worn if TLV is exceeded.

Refer to Table II as specified in 29CFR1910.1025(f)(2)(i) for various exposure levels.

Other local, state, and federal regulations may also apply.

PROTECTIVE GLOVES: Not required, but recommended. **EYE PROTECTION:** Not required, but recommended.

OTHER CLOTHING AND EQUIPMENT: Protective clothing is required if lead exposures exceed PEL or TLV; otherwise full body clothing should be worn during product use and handling, be left at the work site and be properly laundered after use, with the wash water disposed of in accordance with local, state and federal regulations. Hard hat, safety boots, and other safety equipment should be worn as appropriate for the industrial environment. Personal clothing, including shoes, should be protected from contamination.

VENTILATION REQUIREMENTS

Ventilation as described in the Industrial Ventilation Manual, by ACGIH shall be provided where exposures exceed PEL or TLV specified in and in accord with OSHA Standard 29CFR1910.94. Currently 0.050 mg/m³ maximum and 0.030 mg/m³ set as trigger and action levels.

Other local and state regulations may apply.

SECTION IX — DEFINITIONS

TLV-TWA - Threshold Limit Value - Time Weighted Average	TLV-C - Threshold Limit Value - Ceiling
ACGIH - American Conference of Governmental Industrial Hygienists	BLV - Biological Limit Value
PEL - Permissible Exposure Limit	LEL - Lethal Exposure Limit

SECTION X — SPECIAL PRECAUTIONS

PRECAUTIONS: There are two major means of lead absorption; namely inhalation and ingestion. Most inhalation problems can be prevented with attention to ventilation and respirator use. Ingestion can be prevented with good hygiene practices.

Do not inhale or swallow dust. Wash thoroughly after handling. Use gloves and avoid spilling on hands, face, or body, to prevent secondary contamination by ingestion or inhalation. Do not smoke, eat, or apply cosmetics in work area. Wash thoroughly before entering into eating areas. Do not wear any part of work clothing home. This includes shoes.

Keep lead materials away from feed and food products. Keep away from children. Do not reuse containers. This product is intended for industrial use only.

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SECTION XI — OTHER HANDLING AND STORAGE REQUIREMENTS

Store in dry area where accidental contact with acids or bases is not possible.

When a spill releases material into the environment, it may be necessary to file a report of the discharge. Contact your local environmental authorities to determine what rules apply.

Avoid Skin contact.

Before using this product, be familiar with information contained in:

The Federal Standard For Occupational Exposure To Lead (29CFR1910.1025), first published in the Federal Register on Tuesday, November 14, 1978, by the Occupational Safety and Health Administration, and as also later modified.

Section 313 Supplier Notification: This product contains chemicals subject to the reporting requirements of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372. Refer to Sections I and II for reporting information.

**PREPARED BY: TECHNICAL SERVICE DEPARTMENT
HALSTAB DIVISION
HAMMOND LEAD PRODUCTS
3100 MICHIGAN, HAMMOND, INDIANA 46323**

VENDEE AND THIRD PERSONS ASSUME THE RISK OF INJURY PROXIMATELY CAUSED BY THE MATERIAL IF REASONABLE SAFETY PROCEDURES ARE NOT FOLLOWED AS PROVIDED FOR IN THE DATA SHEET, AND VENDOR SHALL NOT BE LIABLE FOR INJURY TO VENDEE OR THIRD PERSONS PROXIMATELY CAUSED BY ABNORMAL USE OF THE MATERIAL EVEN IF REASONABLE PROCEDURES ARE FOLLOWED.

ALL PERSONS USING THIS PRODUCT, ALL PERSONS WORKING IN AN AREA WHERE THIS PRODUCT IS USED, AND ALL PERSONS HANDLING THIS PRODUCT SHOULD BE FAMILIAR WITH THE CONTENTS OF THIS DATA SHEET. THIS INFORMATION SHOULD BE EFFECTIVELY COMMUNICATED TO EMPLOYEES AND OTHERS WHO MIGHT COME IN CONTACT WITH THE PRODUCT.

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(ESSENTIALLY SIMILAR TO FORM OSHA 20 — U.S. DEPARTMENT OF LABOR)

0389HAL98

MATERIAL SAFETY DATA SHEET

The C.P. Hall Company
7300 S. Central Avenue, Chicago, IL 60638
Emergency Telephone No: 312/767-4605

SECTION I

Chemical Name: Fatty acid soaps

Product Name: HALLCOO LUBE

Chemical Family: Liquid Postash Soaps

Formula: $\text{CH}_3(\text{CH}_2)_n\text{COOK}$ n=8-16

HMIS Number: 100
Gloves & Safety
Goggles

SECTION II - HAZARDOUS INGREDIENTS

None

SECTION III - PHYSICAL DATA

Boiling Point (°F):	212	Specific Gravity:	1.015
Vapor Pressure @ 212°F:	760	(H ₂ O=1)	
Vapor Density:	N/A	% Volatile by Vol:	70
Solubility in Water:	complete	Evaporation Rate:	approx. 1
		(H ₂ O=1)	

Appearance & Odor: Green liquid, soapy odor

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method used): NONE

Extinguishing Media: CO₂, Dry Chemical, Water Fog

Flammability Limits: Not Available

Special Fire Fighting Procedures: Wear MESA/NIOSH approved self-contained breathing apparatus (Sch. 13). Use water spray to cool fire-exposed containers.

Unusual Fire and Explosion Hazards: Water may cause frothing.

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value: Not determined by the ACGIH.

Effects of Overexposure: Liquid may cause mild eye irritation.
Repeated or prolonged skin contact may cause irritation.

Emergency & First Aid Procedures:

Inhalation: Move subject to fresh air.

Eye and Skin Contact: Flush eyes with large amounts of water for at least 15 minutes; consult a physician if irritation persists. Wash affected skin areas with soap and water.

N/A = NOT AVAILABLE

Product Name: HALLCOO LUBE

SECTION VI - REACTIVITY DATA

Stability

Unstable:

Conditions to Avoid: Not Available

Stable: X

Incompatibility (Materials to Avoid): Strong oxidizing agents

Hazardous Decomposition Products: None under normal use conditions;
oxides of carbon when burned.

Hazardous Polymerization

May Occur:

Conditions to Avoid: Not Available

Will Not Occur: X

SECTION VII - SPILL OR LEAK PROCEDURES

Steps To Be Taken In Case Material Is Released or Spilled: Dike and contain spill with inert material (sand, earth, fuller's earth, etc.) and transfer liquid and solid diking material to separate containers for recovery or disposal. Wash floor area with hot water solution of OAKITE or equivalent. Remove contaminated clothing and wash before reuse. Wash affected skin areas with soap and water. Keep spill out of all sewers and open bodies of water.

Waste Disposal Method: Incinerate liquid in approved equipment.
Landfill contaminated diking material according to current local, state and federal regulation.

SECTION VIII - SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type): None required for normal operations.

Ventilation

Local Exhaust: Normal room ventilation Special:

Mechanical (General): Other:

Protective Gloves: Impervious

Eye Protection: Splash Goggles

Other Protective Equipment: Eyewash facility (ANSI Z87.1, 1968)
and Impervious Apron

SECTION IX - SPECIAL PRECAUTIONS

Precautions To Be Taken In Handling And Storing: Avoid open flames and excessive heat.

Other Precautions: Do not freeze. If frozen, thaw gradually.

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2300

Supersedes: 11/85 JTH

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