

MATERIAL SAFETY DATA SHEET

REVISION DATE: 03-01-2002

SUPERSEDES: None

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION

Global Coatings Division
H.B. Fuller Company
2900 Granada Lane
Oakdale, MN 55128
Phone: 651-236-3700

Medical Emergency Phone Number (24 Hours): 1-888-853-1758
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

PRODUCT INFORMATION

PRODUCT IDENTIFIER: 814645PM
PRODUCT NUMBER: IF9800 42-2-3 PRINCETON WHITE
PRODUCT DESCRIPTION: Powder coating

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Unlisted ingredients are not 'hazardous' per the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for any additional exposure limit guidelines.

Chemical Name	CAS #	PERCENT	OSHA PEL
Titanium dioxide	13463-67-7	10 - 30	TWA (Total dust) 10 MG/M3
Epoxy resin	25036-25-3	10 - 30	Not established
Calcium carbonate	1317-65-3	10 - 30	TWA (Total dust) 15 MG/M3 TWA (Respirable dust) 5 MG/M3
Wax, polyethylene	9002-88-4	1 - 5	TWA * Fume 2 MG/M3

*These exposure limits are for paraffin wax fume, a related material.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Dust clouds in air can be ignited by electric sparks, hot surfaces and open flame.

May cause allergic skin reaction.

HMIS RATING: HEALTH -- 1 FLAMMABILITY -- 1 REACTIVITY -- 0

See SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

MATERIAL SAFETY DATA SHEET

POTENTIAL HEALTH EFFECTS BY ROUTE OF ENTRY

EYE: Can cause minor irritation, tearing and reddening. Can cause mechanical irritation if dusts are generated.

SKIN: Can cause minor skin irritation, defatting, and dermatitis. May cause sensitization.

INHALATION: Can cause minor respiratory irritation. Dust may be slightly irritating to the respiratory tract. Inhalation of dusts produced during cutting, grinding or sanding of this product may cause irritation of the respiratory tract.

INGESTION: Ingestion is not an anticipated route of exposure.

LONG-TERM (CHRONIC) HEALTH EFFECTS

TARGET ORGAN(S): Lungs Skin

REGULATED CARCINOGEN STATUS:

Unless noted below, this product does not contain regulated levels of NTP, IARC, ACGIH, or OSHA listed carcinogens.

EXISTING HEALTH CONDITIONS AFFECTED BY EXPOSURE: Lung disease; Skin disease including eczema and sensitization

SECTION 4: FIRST AID MEASURES

IF IN EYES: Flush eye with water for 20 minutes. Get medical attention.

IF ON SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

IF VAPORS INHALED: Remove to fresh air. Call a physician if symptoms persist.

IF SWALLOWED: No hazard in normal industrial use. Do not induce vomiting. Seek medical attention if symptoms develop. Provide medical care provider with this MSDS.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT:	Not applicable
AUTOIGNITION TEMPERATURE:	Not established
LOWER EXPLOSIVE LIMIT (% in air):	Not established
UPPER EXPLOSIVE LIMIT (% in air):	Not established
EXTINGUISHING MEDIA:	Use water spray, foam, dry chemical or carbon dioxide.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Material will burn in a fire. Normal LEL for powder coatings 0.04 to 0.07 ounces/cubic foot. Strong explosions are not expected below 0.4 to 0.7.
SPECIAL FIRE FIGHTING INSTRUCTIONS:	Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.
HAZARDOUS COMBUSTION PRODUCTS:	Carbon dioxide, Carbon monoxide Nitrogen containing gases

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPECIAL PROTECTION: No health effects expected from the cleanup of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section 8 of this MSDS.

CLEAN-UP: Avoid creating dusts. Eliminate ignition sources. If a vacuum is used, ensure that the material is wetted or otherwise treated so an explosive dust atmosphere is not created within the vacuum.

MATERIAL SAFETY DATA SHEET

Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

SECTION 7: HANDLING AND STORAGE

Handling: Mildly irritating material. Avoid unnecessary exposure. Avoid creating dusts as an explosive dust air mixture can be created at high concentrations. If dusts are created, ensure no sources of ignition are present. Take precautionary measures to prevent electrostatic discharges.

This product contains a blocked isocyanate polymer. When heated to temperatures greater than 300 F (150 C) isophorone diisocyanate (IPDI) may be released. IPDI is a potential skin and respiratory sensitizer. Persons with existing allergies may be sensitive to IPDI.

Storage: Store in a cool, dry place.

Consult the Technical Data Sheet for specific storage instructions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Wear safety glasses when handling this product.

SKIN PROTECTION: Avoid skin contact by wearing chemically resistant gloves.

GLOVES: Nitrile

RESPIRATORY PROTECTION: Respiratory protection may be required to avoid overexposure when handling this product. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. NIOSH approved air purifying respirator with dust/mist filter. Respirators should be selected by and used following requirements found in OSHA's respirator standard (29 CFR 1910.134).

VENTILATION: Use local exhaust ventilation or other engineering controls to minimize exposures.

EXPOSURE LIMITS:

Chemical Name	ACGIH EXPOSURE LIMITS	AIHA WEEL
Titanium dioxide	TWA (Total dust) 10 MG/M3	Not established
Epoxy resin	Not established	Not established
Calcium carbonate	TWA (Total dust) 10 MG/M3	Not established
Wax, polyethylene	TWA * Fume 2 MG/M3	Not established

*These exposure limits are for paraffin wax fume, a related material.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Solid

COLOR: White

ODOR: Neutral

MATERIAL SAFETY DATA SHEET

ODOR THRESHOLD:	Not established
WEIGHT PER GALLON (lbs.):	14.83
SPECIFIC GRAVITY:	1.78
SOLIDS (% by weight):	100.0
	Not applicable
pH:	Not established
BOILING POINT (deg. C):	Not established
FREEZING/MELTING POINT (deg. C):	Not established
VAPOR PRESSURE (mm Hg):	Not established
VAPOR DENSITY:	Not established
EVAPORATION RATE:	Not established
OCTANOL/WATER COEFFICIENT:	Not established

SECTION 10: STABILITY AND REACTIVITY

STABILITY:	Stable under normal conditions.
CHEMICAL INCOMPATIBILITY:	Not established
HAZARDOUS POLYMERIZATION:	Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS:	Carbon monoxide, carbon dioxide Nitrogen containing gases

SECTION 11: TOXICOLOGICAL INFORMATION

CHEMICAL NAME	LD50/LC50
Titanium dioxide	Not established
Epoxy resin	Oral LD50 Rat > 30 g/kg Inhalation LC50 Rat > 800 mg/cu m/4H Dermal LD50 Rabbit > 3 g/kg
Calcium carbonate	Oral LD50 Rat = 6250 mg/kg
Wax, polyethylene	Inhalation LC50 Mouse =12000 mg/cu m/4H

TOXICOLOGY SUMMARY: No additional health information available.

SECTION 12: ECOLOGICAL INFORMATION

OVERVIEW: No ecological information available

No levels of volatile organic compound emissions are expected at ambient temperatures and pressure. Depending on powder chemistry, however, higher levels of VOC and low molecular weight hydrocarbons may be emitted at cure temperatures. Emissions data are best developed by monitoring actual plant conditions.

SECTION 13: DISPOSAL CONSIDERATIONS

To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Disposal via incineration at an approved facility is recommended. Consult state, local or provincial authorities for more restrictive requirements.

SECTION 14: TRANSPORTATION INFORMATION

Consult Bill of Lading for transportation information.

DOT: NOT REGULATED
IATA: NOT REGULATED

MATERIAL SAFETY DATA SHEET

SECTION 15: REGULATORY INFORMATION

INVENTORY STATUS

- U.S. EPA TSCA: This product is in compliance with the Toxic Substances Control Act's Inventory requirements.
- CANADIAN CEPA DSL: This product is in compliance with the Canadian Domestic Substance List requirements.
- EUROPEAN EINECS: This product is in compliance with the European Inventory of Notified and Existing Chemical Substances requirements.

If you need more information about the inventory status of this product call 651-236-5858.

FEDERAL REPORTING

EPA SARA Title III Section 313

Unless listed below, this product does not contain toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 72. EPA has advised that when a percentage range is listed the midpoint may be used to fulfill reporting obligations.

Chemical Name	CAS#	%
---------------	------	---

WHMIS STATUS: Unless listed below, this product is not controlled under the Canadian Workplace Hazardous Materials Information System.

D2B

STATE REPORTING

This MSDS is not prepared for distribution in California.

SECTION 16: ADDITIONAL INFORMATION

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

Prepared by: The Global Regulatory Department

Phone: 651-236-5842

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to the H.B. Fuller Company from its suppliers, and because the H.B. Fuller Company has no control over the conditions of handling and use, the H.B. Fuller Company makes no warranty, expressed or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and the H.B. Fuller Company assumes no responsibility for use or reliance thereon. It is the responsibility of the user of H.B. Fuller Company products to comply with all applicable federal, state and local laws and regulations.

Epoxy Products L.L.C.

500 East 16th Street

Mountain Home, AR 72653

(870) 425-4321 • (800) 424-5254 • (870) 425-0820 Fax



Epoxy Products and the Environment

Epoxy Products manufactures laboratory work surfaces and other epoxy resin components such as sinks, outlets, etc. Epoxy work surfaces are extremely resistant to chemicals and heat and provide years of service with no need for replacement. The finished product has no off gassing of vapors or harmful emissions.

The manufacturing process involves the use of silica and epoxy resin as the primary ingredients along with curatives and colorants. Silica is a naturally occurring material taken from deposits without any detrimental effects on the environment. The product of the reaction is a monolithic thermoset material. Unlike other resin systems, no volatile by-products evolve during the reaction in our process.

Epoxy Products meets the conditions of our air and water permits. The facility is a minor source for the State of Arkansas Department of Environmental Quality Air Permit. The facility Storm Water Pollution Prevention Plan (SWPPP) controls all emissions in the storm water. The SWPPP design is preventing contact of storm water with process materials.

The facility is a small quantity generator of hazardous waste. We actively pursue waste minimization and use recovery where possible, such as fuel blending. We have eliminated the use of ozone depleting chemicals and chlorinated solvents in our process. The facility has gone from a Large Quantity Generator in past years to a Small Quantity Generator through these efforts.

Epoxy Products uses minimal packaging material certified that no heavy metals are added to the packaging material during the manufacture. Any scrap packaging material is compacted and returned to a recycling facility.



Fisher Hamilton L.L.C.
1316 18th St. P.O. Box 137
Two Rivers, WI 54241

Tel: 920-793-1121
Fax: 920-793-3084

June 17, 2002

To all Interested Parties,

Fisher Hamilton LLC purchases cold-rolled furniture grade steel from three suppliers (see Attachment) that adhere to established recycled content policy.

Fisher Hamilton complies with guidelines established by the US Green Building Council, LEED II standards and as defined by "Material & Resources, Recycled Content". The sheet steel that is utilized during the fabrication of chemical fume hoods, laboratory casework adaptable systems and utility distribution products contain a minimum 25% recycled content.

Of this 25%, 60% is purchased scrap (post consumer) and 40% is generated manufacturing fall-off (post industrial).

Fisher Hamilton LLC is a member of the USGBC and adheres to the guidelines established for material sourcing, sustainability and good manufacturing practices.

Should you have any questions regarding this information, please do not hesitate to contact me.

Respectfully submitted,

A handwritten signature in cursive script that reads 'Rick Johnson'.

Rick Johnson
Product Director
Steel & Systems Products



Fisher Hamilton Inc.
1316 18th Street
P.O. Box 137
Two Rivers, WI 54241

Tel: 920-793-1121
Fax: 920-793-3084



Steel Products and the Environment

Fisher Hamilton manufactures steel laboratory cabinets, fumehoods and systems products from sheet steel. The sheet steel that we purchase uses around 20 to 25% scrap steel economic reasons and productivity of the steel itself. Of this 20 to 25%, about 60% is purchased scrap (old cars, refrigerators, etc.) and 40% is generated in-house scrap (manufacturing fall-off).

Steel mills need to use scrap in order to keep up with the production demands, otherwise they would be forced to build additional blast furnaces (the last one was built in the mid-60's). They also add scrap metal to the molten iron to increase the performance and physical characteristics of the steel.

Fisher Hamilton also employs over 40 CNC machine centers in our manufacturing process, which utilizes optimization programs to increase material yield. The "fall-off" from the manufacturing process, in turn, is sold to a recycler that delivers the material to point of origin – the steel mill.

In addition, Fisher Hamilton was the first company in the laboratory furniture industry to use powder paint exclusively as a steel finish. Powder paint is sprayed on dry with zero VOC emissions. The dry powder coated product is then baked in a oven to fuse the particles together into a uniform nonporous surface coating. Our highest volume color is applied in a reclaim booth where overspray particles are recaptured and reapplied. This increases the net transfer efficiency of the reclaim process to almost 100%. The conversion to the powder paint process eliminated annual offsite shipments of 39,000 pounds of hazardous waste generated by the former solvent reducible wet paint system. The minimal by-products, that are not reclaimed, are sold to asphalt companies as a bonding agent for highway asphalt.

SECTION 12345

Steel Laboratory Furniture Systems

QUALITY ASSURANCE

Environmental Compliance

1. Recycled Steel Content for Laboratory Casework

All steel used in the product fabrication shall comply with the LEED II (Leadership in Energy and Environmental Design) Green Building Rating System. The manufacturer must submit documentation (i.e. "Source of Materials", Invoices, Third Party Validation, etc.) for steel purchased for this project providing recycled content. Such documentation shall be submitted to the Owner Representative/Architect for approval - prior to award of contract.

A. Sheet Steel: All "Cold Rolled" sheet steel used in the fabrication of laboratory cabinets, fumehoods and modular laboratory systems shall have a minimal of 20% recycled steel content.

B. Recycled Steel Content: Of this 20% recycled content, 60% shall be purchased scrap (i.e. old cars, appliances) with the remaining 40% from generated in-house scrap and manufacturing fall-off.

C. Fabricators Scrap: Fabricators shall provide documentation that manufacturing fall-off is recycled to respective steel mills and does not enter the solid waste system and/or become a product of landfill space.

2. Finish for Steel Laboratory Products

All Steel Laboratory Products shall utilize a dry powder coat paint process by means of electrostatically spray, providing high-transfer efficiency low waste generation. Any liquid-applied coatings **shall not** be acceptable. Manufacturer shall supply documentation that waste generated during the painting process, is a solid, non-hazardous material.

A. Pretreatment: Finish process shall incorporate a phosphate conversion coating during the pretreatment/cleaning operation. Electrostatic application of dry powder shall follow. Coated parts shall pass through curing ovens, which shall cause the powder to melt, flow, gel, cure and bond onto the phosphatized steel substrate.

B. Chemically Resistance Finish: Only highly chemically resistant, dry powder coated finishes that passes the SEFA 8 casework specifications for chemical and durability resistance , will be acceptable. A letter from a third-party validator,

verifying independent test results, shall be submitted to the Owner Representative/ Architect for approval - at time of bid submittal.

C. Operator Protection: The application is convenient and easily mastered through robotic application plus manual detailing. The painting process is cleanly contained and has no solvent odor and is performed in an air-conditioned room.

D. Overspray Powder Paint: Shall be captured and resprayed. Efficiency shall be 99% effective in coating usage, reducing waste generation. A closed collection system shall be utilized for overspray that is not reused. Powder overspray, which can not escape the facility, is collected in bulk, eliminating the need for daily replacement/disposal of filter media.

E. VOC Emissions: Powder paint shall be sprayed and baked with a near zero (.29 lbs per gallon maximum) VOC (Volatile Organic Compounds) emissions.

F. Offgasing: After all steel powder coated parts have cooled from the curing ovens, the coating shall be firm and stable. **No further emissions** or "Offgasing/Decomposition" vapors shall occur at room temperature.



MID-AMERICA FLAT ROLLED GROUP

June 17, 2002

Mrs. Wendy Nemetz
Senior Buyer
Fisher Hamilton L.L.C.
1316 18th Street
Two Rivers, WI 54241

Dear Wendy,

The following information is pursuant to your inquiry regarding recycled steel content in the products that we supply to Fisher Hamilton.

Depending on the steelmaking method used, the post-consumer and post-industrial recycled scrap content of the sheet steel is between 25 and 100%.

Should you have any questions regarding this inquiry or need additional information, please contact me.

Thank you for your business.

Very truly yours,

A handwritten signature in black ink, appearing to read "C. Schmidt".

Chad Schmidt
General Manager of Sales
Metals USA, Inc.

cc: M. Conney, R. Hollander, A. Nelson, G. Roalfs, M. Summers



Material Safety/Health Data Sheet

LTV Steel Company
200 Public Square
Cleveland, Ohio 44114
Telephone (216) 822-5000

For additional information contact:
LTV Steel Company
Manager Safety & Environmental Health Services
Telephone (216) 822-5242

Number 1011C

Revised: 04-01-97 Reviewed: 06-01-00

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME
CARBON STEEL - NONRESULFURIZED

GRADE(S)
AISI 1005-1095; CQ, DQ, SQ, DQSK; EDDQ; DDQ;
ASTM A283; A366; A424; A568; A569; A618; A620;
A621; A622; A635; A658; A794,
INCLUDING BLACK PLATE

SECTION II - INGREDIENTS

Ingredients	CAS#	%wt.	Exposure Limits	OSHA		
				PEL mg/M3	ACGIH TLV mg/M3	ACGIH STEL mg/M3
Iron	1309-37-1	97-99	PEL as Iron Oxide Fume	10	5	
Carbon	7440-44-0	.001-1.08	PEL as P.N.O.R. (*) (+)	15	10	
Manganese	7439-96-6	.15-.99	PEL as Manganese	5 (c)	.2	
Phosphorous	8049-19-2	.001-.040	PEL as P.N.O.R. (*) (+)	15	10	
Sulfur	7704-34-9	.001-.050	PEL as P.N.O.R. (*) (+)	15	10	
Silicon	7440-21-3	.01-.40	PEL as P.N.O.R. (*) (+)	15	10	
Aluminum (1) (3) (4)	7429-90-5	.02-.09	PEL as Metal Dust (+)	15	10	
Antimony (2)	7440-38-0	.005-.04	PEL as Antimony	.5	.5	
Columbium (3)	7440-08-1	.01-.15	PEL as P.N.O.R. (*) (+)	15	10	
Titanium (3)	7440-32-6	.01-.15	PEL as P.N.O.R. (*) (+)	15	10	
Boron (4)	7440-42-8	.005-.01	PEL as P.N.O.R. (*) (+)	15	10	
Copper (5)	7440-50-8	.01-.20	PEL as Copper Fume	.1	.2	

1. If specified aluminum-killed or fine grain.
2. If antimony specified.
3. If columbium-titanium stabilized.
4. If boron stabilized.
5. If specified.

(*) P.N.O.R. - Particulates Not Otherwise Regulated
(+) PEL as Respirable Fraction - 5 mg/M3
(c) Denotes Ceiling Limit

The above chemistries are provided for industrial hygiene and environmental purposes and are not intended to represent product specifications. This information has been compiled from data believed to be reliable. Elements such as aluminum, arsenic, boron, calcium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, tin, titanium, vanadium and zirconium may be present in trace amounts. Steel products may be coated with petroleum oils to meet customer specifications. Information relative to specific coatings may be obtained from LTV Steel. Steel products as shipped do not present an exposure hazard.

SECTION III - PHYSICAL DATA

BOILING PT.: NA
MELTING PT.: 2400 to 2800 F
SPECIFIC GRAVITY: 7.5 to 8.5
VAPOR PRESSURE: NA
VAPOR DENSITY: NA
SOLUBILITY IN WATER: INSOLUBLE
APPEARANCE AND ODOR:
SOLID GRAY ODORLESS METAL

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

STEEL PRODUCTS IN THE SOLID STATE PRESENT NO FIRE OR EXPLOSION HAZARD; HOWEVER, THE PARTICULATES GENERATED MAY PRESENT A DUST EXPLOSION HAZARD.

SECTION V - REACTIVITY

STABILITY: STABLE
INCOMPATIBLE MATERIALS: NONE
HAZARDOUS DECOMPOSITIONS: NONE
POLYMERIZATION: WILL NOT OCCUR

SECTION VI - SPILL OR LEAK PROCEDURES

PRODUCT IS A SOLID MATERIAL AS SHIPPED. NO POTENTIAL FOR SPILL OR LEAK.

SECTION VII - SPECIAL PROTECTION INFORMATION

VENTILATION:
IF YOUR OPERATION GENERATES PARTICULATES WHEN PROCESSING THIS PRODUCT, LOCAL AND GENERAL VENTILATION MAY BE NECESSARY TO CONTROL EMPLOYEES EXPOSURES TO WITHIN APPLICABLE LIMITS.

RESPIRATORY PROTECTION:
IF THE EXPOSURE LIMITS INDICATED ARE EXCEEDED, RESPIRATORS CERTIFIED UNDER 42 CFR 84 SHOULD BE WORN IN ACCORDANCE WITH 29 CFR 1910.134 AND USE LIMITATIONS UNDER 42 CFR 84.

PROTECTIVE EQUIPMENT:
APPROPRIATE PROTECTIVE EQUIPMENT SHOULD BE WORN WHEN BURNING OR WELDING THIS PRODUCT. GLOVES SHOULD BE CONSIDERED WHEN HANDLING MATERIAL TO PREVENT CUTS AND SKIN IRRITATION. APPROVED EYE PROTECTION IS RECOMMENDED FOR OPERATIONS INVOLVING BURNING, GRINDING, BRAZING, WELDING, OR MACHINING.

MSDS Id #: 1011C

SECTION VIII - HEALTH HAZARD DATA

Steel products as shipped do not present an inhalation, ingestion or contact hazard. However, operations such as burning, welding, sawing, brazing, and grinding may result in the following effects if exposures exceed permissible limits as listed in Section II.

MAJOR EXPOSURE ROUTES

- INHALATION SKIN CONTACT SKIN ABSORPTION EYE CONTACT INGESTION

Iron Oxide

Prolonged or repeated exposures to high concentrations may cause lung changes considered to be a benign pneumoconiosis (siderosis). Inhalation of iron oxide may cause irritation of eyes, nose, and throat, and metal fume fever.

Manganese

Exposure may cause irritation of eyes, nose, and throat, metallic taste in mouth and metal fume fever. Advanced exposure symptoms may include weakness, sleepiness, nervousness, lack of coordination, uncontrollable laughter, mental confusion, speech disturbances, and aggressiveness. Manganese may cause bronchitis, pneumonitis and central nervous system disturbances.

Aluminum

Generally considered to be a nuisance particulate. May cause irritation of the upper respiratory tract, skin, and eyes. Inhalation of fine particles may cause a pulmonary fibrosis known as Shaver's disease. Symptoms may include dyspnea, cough and fatigue. May be implicated in Alzheimer's disease.

Antimony

Irritation and inflammation of the skin and respiratory tract. Various nervous system effects including sleeplessness, fatigue, dizziness, irritability, muscular and neuralgic pains have been reported. Signs and symptoms may also include metallic taste, intestinal upsets, diarrhea, vomiting, and abdominal cramps. High fume exposure may adversely affect the heart and circulatory systems. Pneumoconiosis and obstructive lung disease may occur.

Boron

May cause irritation of eyes, nose and skin. Affects the central nervous, circulatory and digestive systems. May cause circulatory depression, vomiting and diarrhea, followed by shock and coma. Body temperature may become subnormal and a erythematous rash may cover the entire body.

Copper

Inhalation may cause metal fume fever, a flu like illness. Signs and symptoms may include fever, chills, muscle aches, nausea, sweet metallic taste in mouth, and dry throat. Exposure has been associated with discoloration of the skin and hair. Chronic exposure may damage liver, kidney, and spleen. Copper oxide is an irritant to eyes and upper respiratory tract.

Coating Oils

Steel coated with an oil may result in a mild skin irritation upon prolonged and repeated contact. Wear gloves and/or wash skin following contact to prevent skin irritation.

California Proposition 65:

Warning: Steel products contain arsenic, cadmium, lead and nickel in trace amounts, unless otherwise specified in Section II, known to the State of California to cause cancer or birth defects or other reproductive harm.

CARCINOGENIC REFERENCES:

Certain substances in steel products such as arsenic, chromium, nickel, and cobalt-chromium alloys have been identified by the International Agency for Research on Cancer (IARC) and/or the National Toxicology Program (NTP) as potential cancer causing agents.

SECTION IX - MEDICAL

FIRST AID:
 Inhalation: Move person to fresh air. Administer oxygen if necessary. Seek physician's assistance.
 Skin: Wash with soap and water. Consult physician if necessary.
 Eye: Flush with copious amounts of water. Consult a physician if necessary.

NOTES TO PHYSICIAN:
 Respiratory disorders may be aggravated by exposure to metallic dusts or fumes.

SECTION X - SPECIAL PRECAUTIONS

NONE

SECTION XI - SARA

The chemicals identified by (®) in Section II denotes this product contains a toxic chemical or chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.



Material Safety/Health Data Sheet

LTV Steel Company
 200 Public Square
 Cleveland, Ohio 44114
 Telephone (216) 622-5000

For additional information contact:
 LTV Steel Company
 Manager Safety & Environmental Health Services
 Telephone (216) 622-5242

Number 4004G

Revised: 04-01-87 Reviewed: 06-01-00

SECTION I - PRODUCT IDENTIFICATION

PRODUCT NAME
HOT DIPPED GALVANIZED LOW CARBON STEEL
 (Coating/Thickness in inches)
 G80-A40/.051-.013 G80-G75/.099-.025 G90/.129-.031
 G115/.168-.040 G140-G185/.168-.050 G210-G235/.168-.076

GRADE(S)
 CQ, DQ, DDQ, DQSK, LFG, SQ, EDDQ;
 ASTM A525; A526; A527; A528; A642;
 Including Galvanneal Products

SECTION II - INGREDIENTS

Ingredients	CAS#	%wt.	Exposure Limits	OSHA		
				PEL mg/M3	ACGIH TLV mg/M3	ACGIH STEL mg/M3
Iron	1809-87-1	94-99	PEL as Iron Oxide Fume	10	5	
Carbon	7440-44-0	.001-.15	PEL as P.N.O.R. (*) (+)	15	10	
Manganese	7439-96-5	.01-.99	PEL as Manganese	5 (c)	.2	
Phosphorous	8049-19-2	.001-.020	PEL as P.N.O.R. (*) (+)	15	10	
Sulfur	7704-84-9	.001-.020	PEL as P.N.O.R. (*) (+)	15	10	
Silicon	7440-21-3	.01-.30	PEL as P.N.O.R. (*) (+)	15	10	
Aluminum	7429-90-5	.01-.08	PEL as Metal Dust (+)	15	10	
@Zinc (1)	7440-68-6	1.00-4.50	PEL as Zinc Oxide Dust as Zinc Oxide Fume	15 5	10 5	10
Titanium (2)	7440-32-6	.01-.15	PEL as P.N.O.R. (*) (+)	15	10	
Columbium (2)	7440-03-1	.01-.15	PEL as P.N.O.R. (*) (+)	15	10	

Phosphate treated, with light chromate rinse. (3)
 Rinse with light chromate. (3)

- Applied as a metallic surface coating.
 - If specified Columbium - Titanium stabilized.
 - If specified.
- (*) P.N.O.R. - Particulates Not Otherwise Regulated
 (+) PEL as Respirable Fraction - 5 mg/M3
 (c) Denotes Ceiling Limit

The above chemistries are provided for industrial hygiene and environmental purposes and are not intended to represent product specifications. This information has been compiled from data believed to be reliable. Elements such as aluminum, arsenic, boron, calcium, cadmium, chromium, cobalt, copper, lead, molybdenum, nickel, tin, titanium, vanadium and zirconium may be present in trace amounts. Steel products may be coated with petroleum oils to meet customer specifications. Information relative to specific coatings may be obtained from LTV Steel. Steel products as shipped do not present an exposure hazard.

SECTION III - PHYSICAL DATA

BOILING PT.: NA
 MELTING PT.: 2400 to 2800 F
 SPECIFIC GRAVITY: 7.5 to 8.5
 VAPOR PRESSURE: NA
 VAPOR DENSITY: NA
 SOLUBILITY IN WATER: INSOLUBLE
 APPEARANCE AND ODOR:
 SOLID GRAY ODORLESS METAL

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

STEEL PRODUCTS IN THE SOLID STATE PRESENT NO FIRE OR EXPLOSION HAZARD; HOWEVER, THE PARTICULATES GENERATED MAY PRESENT A DUST EXPLOSION HAZARD.

SECTION V - REACTIVITY

STABILITY: STABLE
 INCOMPATIBLE MATERIALS: NONE
 HAZARDOUS DECOMPOSITIONS: NONE
 POLYMERIZATION: WILL NOT OCCUR

SECTION VI - SPILL OR LEAK PROCEDURES

PRODUCT IS A SOLID MATERIAL AS SHIPPED. NO POTENTIAL FOR SPILL OR LEAK.

SECTION VII - SPECIAL PROTECTION INFORMATION

VENTILATION:
 IF YOUR OPERATION GENERATES PARTICULATES WHEN PROCESSING THIS PRODUCT, LOCAL AND GENERAL VENTILATION MAY BE NECESSARY TO CONTROL EMPLOYEE EXPOSURES TO WITHIN APPLICABLE LIMITS.

RESPIRATORY PROTECTION:
 IF THE EXPOSURE LIMITS INDICATED ARE EXCEEDED, RESPIRATORS CERTIFIED UNDER 42 CFR 84 SHOULD BE WORN IN ACCORDANCE WITH 29 CFR 1910.134 AND USE LIMITATIONS UNDER 42 CFR 84.

PROTECTIVE EQUIPMENT:
 APPROPRIATE PROTECTIVE EQUIPMENT SHOULD BE WORN WHEN BURNING OR WELDING THIS PRODUCT. GLOVES SHOULD BE CONSIDERED WHEN HANDLING MATERIAL TO PREVENT CUTS AND SKIN IRRITATION. APPROVED EYE PROTECTION IS RECOMMENDED FOR OPERATIONS INVOLVING BURNING, GRINDING, BRAZING, WELDING, OR MACHINING.

MSDS Id #: 4004G

Steel products as shipped do not present an inhalation, ingestion or contact hazard. However, operations such as burning, welding, sawing, brazing, and grinding may result in the following effects if exposures exceed permissible limits as listed in Section II.

MAJOR EXPOSURE ROUTES

- INHALATION
- SKIN CONTACT
- SKIN ABSORPTION
- EYE CONTACT
- INGESTION

Iron Oxide

Prolonged or repeated exposures to high concentrations may cause lung changes considered to be a benign pneumoconiosis (siderosis). Inhalation of iron oxide may cause irritation of eyes, nose, and throat, and metal fume fever.

Manganese

Exposure may cause irritation of eyes, nose, and throat, metallic taste in mouth and metal fume fever. Advanced exposure symptoms may include weakness, sleepiness, nervousness, lack of coordination, uncontrollable laughter, mental confusion, speech disturbances, and aggressiveness. Manganese may cause bronchitis, pneumonitis and central nervous system disturbances.

Aluminum

Generally considered to be a nuisance particulate. May cause irritation of the upper respiratory tract, skin, and eyes. Inhalation of fine particles may cause a pulmonary fibrosis known as Shaver's disease. Symptoms may include dyspnea, cough and fatigue. May be implicated in Alzheimer's disease.

Zinc

Syndrome of metal fume fever. Symptoms may include metallic taste in mouth, dryness and irritation of throat, cough, feeling of weakness, fatigue with fever, chills and profuse sweating. Symptoms generally occur 12-14 hours after exposure. May cause a dermatitis condition known as oxide pox.

Coating Oils

Steel coated with an oil may result in a mild skin irritation upon prolonged and repeated contact. Wear gloves and/or wash skin following contact to prevent skin irritation.

California Proposition 65:

Warning: Steel products contain arsenic, cadmium, lead and nickel in trace amounts, unless otherwise specified in Section II, known to the State of California to cause cancer or birth defects or other reproductive harm.

CARCINOGENIC REFERENCES:

Certain substances in steel products such as arsenic, chromium, nickel, and cobalt-chromium alloys have been identified by the International Agency for Research on Cancer (IARC) and/or the National Toxicology Program (NTP) as potential cancer causing agents.

FIRST AID:

Inhalation: Move person to fresh air. Administer oxygen if necessary. Seek physician's assistance.

Skin: Wash with soap and water. Consult physician if necessary.

Eye: Flush with copious amounts of water. Consult a physician if necessary.

NOTES TO PHYSICIAN:

Respiratory disorders may be aggravated by exposure to metallic dusts or fumes.

NONE

The chemicals identified by (P) in Section II denotes this product contains a toxic chemical or chemicals subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1980 and 40 CFR Part 372.

**COILPLUS****ILLINOIS INC**2001 COILPLUS DR. PLAINFIELD, IL 60544
(815) 436-3999 • FAX (815) 436-3244

Mrs. Wendy Nemetz
Fisher-Hamilton Inc.
1316 18th Street
Two Rivers, WI 54241

18 June, 2002

Wendy,

In reply to your request for information concerning the "scrap Content" of flat rolled steel, the following information is being forwarded to you.

1. Blast Furnaces, these type of operations use 20 to 26% scrap during a normal heat – 250 tons – the balance of the material consists of "raw" material such as Iron ore.
2. Mini-Mills typically are 100% scrap charged electric furnaces. These producers rarely use any "raw" material.

We purchase approximately 70% of our steel from Mills that use Blast Furnaces to make steel. If a break down on purchased Blast furnace items is required, this can be obtained, but will take some time to put together.

If additional information is required please contact me directly.

Sincerely,

Michael G. Pepler
Manager – Quality and Technical Services





ISPAT INLAND INC.

3210 Watling Street (2-108)
East Chicago, Indiana 46312

January 29, 2002

Wendy Nemetz
Fisher Hamilton

Ms. Nemetz,

For the year 2000, the amount of recycled material used in our flat products steel was 25.1%. We do not have an average for 2001 yet, but it is believed to be slightly higher. We also do not have a breakdown by grade. Let me know if you have any further questions.

Sincerely,

Bruce M. Binkley
Technical Service Manager
Customer Technical Service
Quality
Ispat inland Steel

Cc: F. D. Grabski

3000 Sherman Road * Northbrook, IL 60062
Phone: (847) 291-2400 * Fax: (847) 291-8107



SPECIALTY FLAT ROLLED NORTHBROOK

Fax

To: WENDY NEMETZ From: ANDY PAYSCHKE
 Fax: 920-794-6200 Pages: 5
 Phone: — Date: 9-19
 Re: MSDS SHTS CC: —

- Urgent For Review Please Comment Please Reply Please Recycle

*Wendy - These are the MSDS sheets from LTV,
 our supplier for Fisher Hamilton. Includes Carbon
 and Galvanized sheets. If you need anything
 else, please contact me.*

*Metals
 does not 16+20
 gauge blanks only.
 WM.*

*Thanks
 Andy
 X215*



ILLINOIS INC

2001 COILPLUS DR. PLAINFIELD, IL 60544
(815) 436-3999 • FAX (815) 436-3299

***** FAX COVER SHEET *****

TO: WENDY NEMETZ DATE: 9.18.01

COMPANY: FISHER-HAMILTON

FROM: MICHAEL G. PEPLER

PHONE: 815-436-3999

FAX: 815-436-3299

E-MAIL: MPEPLER@COILPLUSIL.COM

*They do
All sheet, 18+22
gauge blanks,
coil + galv.*

PAGE: 1 OF 7

MESSAGE: ① Main Steel Supplier ISPAT/Inland.

② Copy of M.S.D.S. Attached.

③ PERCENT RECYCLED MATERIAL - All STEEL Melts ARE APPROXIMATELY
50% Scrap - balance Raw material.

Michael G. Pepler

④ 3 main Raw materials = Iron, MANGANESE, ALUMINUM.



**ISPAT INLAND INC.**

Harold S. Junker
Manager, Health & Safety

January 2001

Attention: Hazard Communication Coordinator

Dear Ispat Inland Customer:

Enclosed is the most recent Ispat Inland Inc. Flat Products Material Safety Data Sheet (MSDS) for steel sheet and plate products. The information contained in the MSDS and its distribution to you are the principal means of achieving an effective Hazard Communication Program and of satisfying the "Right-to-Know" laws. You will find wording enclosed for satisfying labeling requirements.

The enclosed MSDS reflects the result of the hazard evaluation process and should only be utilized for health and safety training or compliance with "Right-to-Know" laws, not for specification purposes. Specific product information can be obtained through the Ispat Inland Steel Inc. Flat Products Sales Office.

Section 313 of the Emergency Planning and Community Right-to-Know Act and 40 CFR Part 372 require us to inform you that a product or products you purchase from us may contain one or more regulated chemicals. This information may be important to you if under the Act you are required to estimate releases of applicable regulated chemicals. If you are unsure that you must report or require further information, call the U.S. EPA Emergency Planning and Community Right-to-Know Hotline (800)535-0202 or (202)479-2449 in Washington, D.C.

Ispat Inland Inc. products are not manufactured with Class I or II ozone depleting chemicals. Also, certain governmental agencies are adopting the Coalition of Northeast Governors (CONEG) model regulation whose intent is to reduce the release of certain heavy metals to the environment by reducing the amount of those heavy metals in packaging materials that would be either landfilled or incinerated. Certification that Ispat Inland Inc. packaging materials comply with the CONEG model regulation can be made available through your Ispat Inland representative.

Please note that this notice must accompany the MSDS and if you repackage or otherwise redistribute this product to other industrial customers, a notice similar to this one must be forwarded to those customers.

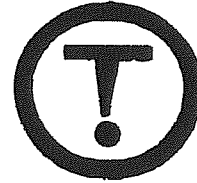
Very truly yours,

Harold S. Junker

h1fhViat2001.doc

Ispat Inland Inc., 3210 Watling Street, MC 8-227, East Chicago, Indiana 46312
Tel: +1 219 399 4723 • Fax: +1 219 399 6039 • E-mail: hsjunk@ispat.com

Subsidiary of ISPAT INTERNATIONAL N.V.



STEEL SHEET AND PLATE

CAUTION: Inhalation of high concentrations of dust or fume from further processing, such as welding, burning, melting, cutting, brazing, grinding, or machining may result in respiratory distress, central nervous system effects, or possibly affect other organs. These products may be coated with an oil film which upon prolonged or repeated skin contact may result in skin irritation.

PRECAUTIONS: Avoid inhalation of airborne particulates by appropriate respiratory protection and/or suitable exhaust ventilation. Minimize contact with oil film when present. Use impervious garments.

FIRST AID: Inhalation — remove person to fresh air. If breathing is difficult or stopped, administer oxygen or artificial respiration. Obtain medical assistance. Contact — wash areas with a mild soap and water. If irritation persists, seek medical attention.

Ispat Inland Inc.
3210 Watling Street
East Chicago, Indiana 46312

Material Safety Data Sheet



ISPAT INLAND FLAT PRODUCT
a division of Ispat Inland Inc.

I. Manufacturer's Name: Ispat Inland Inc.
a subsidiary of Ispat International N.V.
Address: 3210 Watling Street (8-213)
East Chicago, Indiana 46312
Chemical Name and Synonyms: Steel Sheet and Plate

Telephone Information:
Mon. - Fri. (8:00 a.m. - 5:00 p.m.) (219) 399-5447
Other times: (219) 399-6055

II. PRODUCT IDENTIFICATION AND INGREDIENTS IDENTITY INFORMATION: See Chart Inside

III. PHYSICAL DATA

Melting Points: Base Metal: Greater than 2700°F (1482°C)
Metallic Coatings: Aluminum 1216°F (658°C), Zinc 786°F (419°C)
Appearance: Sheet, strip, or plate that can vary from grayish to silver. A film of rust preventative oil may be present.
Odor: The product is practically odorless but the presence of a protective film may impart a refined oil aroma.

Specific Gravity (H₂O = 1): About 7.8
Solubility in Water: Not Soluble

IV. FIRE AND EXPLOSION HAZARD DATA

Steel sheet and plate products are not flammable, do not present an explosion hazard, and do not contribute to the combustion of other materials. Use fire fighting technique(s) or agent(s) applicable to surrounding materials.

V. HEALTH HAZARD AND INFORMATION DATA

Steel products under normal circumstances do not present an inhalation, skin contact, or ingestion hazard. Processes such as burning, cutting, welding, brazing, grinding, etc. that elevate the temperature of the product or produce dust may create elevated concentrations of contaminants. See the listing inside for applicable statutory or recommended occupational exposure limits for contaminants that may be generated during the processing of steel sheet and plate products. There is no American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Value (TLV) or OSHA Permissible Exposure Limit (PEL) for steel. Except as otherwise stated, the following ingredients are not listed in the NTP Annual Report on Carcinogens, or found to be a potential carcinogen in the IARC Monographs or by OSHA.

Effects of Overexposure:

Acute - Dust or fume may cause irritation to the eyes, nose, or throat and may leave a metallic taste in the mouth. Inhalation of the oxides (fresh and typically the result of a welding or torch cutting type activity) of manganese, zinc, or copper may be manifested as flu-like symptoms (24-48 hours characterized by chills, fever, aching muscles, dryness of the mouth and throat, and/or headache) commonly known as "metal fume fever." Some sheet products are shipped with a film of protective coating. Contact with the protective coating may result in skin irritation; welding or torch cutting may produce fume or vapor that may cause eye and/or respiratory tract irritation.

Chronic - Aluminum: Inhalation of aluminum (aluminum oxide) fume may result in a benign pneumoconiosis.

Antimony: Inhalation of antimony compounds may result in a benign pneumoconiosis. Inhalation may also result in headache, pain or tightness in the chest, shortness of breath, metallic taste, nausea, gingivitis, or anemia. Contact may cause itching or skin eruptions.

Chromium: Chromium metal and its insoluble salts are considered relatively non-toxic but when inhaled have been associated with decreased pulmonary function in the presence of confounding contaminants. Soluble chromic and chromous salts are considered as possible irritants, allergens, and sensitizers through inhalation and contact. Hexavalent chromium compounds are irritants and corrosive and may enter and affect the body through inhalation, ingestion, or skin contact. The National Toxicology Program (NTP) and the International Agency for Research on Cancer (IARC) report they possess sufficient evidence to establish a causal relationship for human cancer for chromium and certain chromium compounds.

Copper: Inhalation may result in nose and throat irritation, nasal ulceration, and metallic taste and prolonged contact may cause dermatitis. Individuals with Wilson's disease are susceptible to elevated rates of copper metabolism and storage.

Iron: Inhalation of iron oxide fume or dust may result in a deposit in the lung tissue that causes a condition known as siderosis. This condition is benign and no physical impairment is indicated.

Manganese: Inhalation may result in symptoms such as headache, restless sleep patterns, restlessness, personality changes, neurological dysfunction, or muscular weakness.

Nickel: Inhalation may result in inflammation of the respiratory tract that may be accompanied by fever. Nickel compounds are known sensitizers. The National Toxicology Program (NTP) and the International Agency for Research on Cancer (IARC) report they possess limited evidence of human carcinogenicity for nickel and certain nickel compounds.

Titanium: Inhalation of titanium oxides may result in pulmonary irritation without disabling pneumoconiosis.

Vanadium: Inhalation of vanadium oxides may result in metallic taste, throat irritation, cough and/or bronchitis. Contact may cause local irritation.

(Continued on back page)

DISCLAIMER

ISPAT INLAND MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

The information contained in this Material Safety Data Sheet (MSDS) is believed to be correct, but no representations, guarantees or warranties of any kind are made as to its accuracy, suitability for particular applications, hazards connected with the use of the material or the results to be obtained from the use thereof. User assumes all risk and liability with the use or handling of any material beyond Ispat Inland's control. Variations in methods, conditions, equipment used to store, handle or process the material and hazards connected with the use of the material are solely the responsibility of the user and remain at its sole discretion.

When applicable, the product described in this MSDS is considered to be an "article" within the meaning of Title 29 of the Code of Federal Regulations, Section 1910.1200 *et. seq.* This MSDS is intended to be used solely for the purpose of satisfying informational requests made pursuant to that requirement. It is not intended to preempt, replace or expand the terms contained in Ispat Inland's Conditions of Sale. Compliance with all applicable federal, state and local laws and regulations remains the responsibility of the user, and the user has the responsibility to provide a safe work-place, to examine all aspects of its operation, and to determine if or where precautions, in addition to those described herein, are required.

VI. REACTIVITY DATA AND PHYSICAL HAZARDS

Stability: Considered stable under conditions of use, storage and transportation.
Incompatibility: Not Applicable.
Hazardous Polymerization: Not Applicable.
Conditions to Avoid: Not Applicable

VII. SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled: Steel products are stable but massive and can easily destroy objects in their path. If the product is spilled it should be determined if any utilities (power, water, or gas), persons, or vehicles are involved. Steel products conduct electricity. Control the situation. Assist the injured, control traffic, and control sources that may cause injury. Notify the nearest fire fighting facility.
Waste Disposal Method: Damaged products described herein are not considered a hazardous waste under the Resource Conservation and Recovery Act (RCRA). The material may be claimed for reuse and/or recycle.

VIII. EMERGENCY AND FIRST AID PROCEDURES

Inhalation: In the event of excessive exposure to dust or fume, remove the employee to fresh air. If breathing is difficult, administer artificial respiration or oxygen. Obtain immediate medical assistance.
Skin: Abrasions and cuts should be washed and closed by a clean compress and be immediately medically treated. Burns must be immediately medically treated. Should skin irritation occur, wash affected area with mild soap and rinse with clean, warm water.
Eyes: Depending upon the type and nature of exposure, relief may be obtained by fresh air or rinsing the eyes with clean water. Obtain medical assistance.
Medical Conditions Aggravated by Exposure: Persons with a predisposition to respiratory disorders (i.e., asthma, emphysema, etc.) may be adversely affected by particulates or respiratory irritants generated during the manufacturing process.

IX. SPECIAL PROTECTION INFORMATION AND CONTROL MEASURES

Consult your regional codes or Code of Federal Regulations, Title 29, Part 1910; Subpart G - Occupational Health and Environmental Control; Subpart I - Personal Protective Equipment; Subpart Q - Welding, Cutting, and Brazing; and Subpart Z - Toxic and Hazardous Substances. Certain welding type activities may produce hazardous substances such as carbon monoxide, ozone, phosgene in the presence of certain chemicals, or produce inert suffocating atmospheres in addition to the production of ultraviolet radiation and/or noise.

Ventilation: Local exhaust or ventilation systems sufficient to maintain exposure levels to contaminants below prescribed limits may be required.

Personnel Protection:

Inhalation: When controls are not sufficient to reduce the exposure below the applicable exposure limit then use NIOSH approved respiratory protection within the use limitations of the respirator.

Contact: Appropriate protective gloves, wristlets or clothing should be used to protect against cutting edges or material with an oil film. Replace damaged or oil soaked gloves and/or garments. Appropriate heat shielding garments should be used for activities using or generating heat.

Eyes: Use safety glasses, goggles, helmet, face shield as appropriate to the operation.

Precautions to be taken in handling and storing: Be alert to sharp edges, slippery surfaces when handling, and unsecured lifts.

X. OTHER INFORMATION

SARA Section 313 Toxic Chemical List, De Minimis Concentrations:

Greater than 1.0%	Greater than 0.1%
Antimony Compounds	Nickel Compounds
Chromium Compounds	
Copper Compounds	
Manganese Compounds	
Zinc Compounds	
Aluminum (dust and fume)	
Vanadium (dust and fume)	

Potential SARA Hazard Categories are:

- Immediate (acute) health hazard
- Delayed (chronic) health hazard

WELKOTE-U Organic Composite	
Organic Film	
(includes chromate layer) Type 1	
Epoxy Resin	<59%
SiO ₂	<39%
Polyethylene Wax	<5%
Blocked Isocyanate	<21%
Cr	<8%
Zn	<0.8%
Zr	<0.4%
F	<0.4%
Si	<0.3%

California Proposition 65: The state of California lists cadmium and cadmium compounds, chromium (hexavalent compounds), and lead as chemicals known to cause cancer or reproductive toxicity. Cadmium, cadmium compounds, and lead may be present as impurities of the manufacturing process. Chromium (hexavalent compounds) may be generated during certain manufacturing processes.

Issued by: Ispat Inland Inc.
 Health & Safety

Prepared by: W. R. Koenig

Date Prepared: January 2001

CAS NUMBER: 7439-89-6 7439-96-5 7429-90-5 7440-47-3 7440-50

Iron Manganese Aluminum Chromium Copper

INGREDIENTS AND TYPICAL PERCENT

Cold Rolled and Electrolytic Galvanized Products	Iron	Manganese	Aluminum	Chromium	Copper
1. Cold Rolled Sheet*	>95	<1.0	<0.1	<0.1	<0.2
2. DECOR™ Embossed Cold Rolled Sheet*	>95	<1.0	<0.1	<0.1	<0.2
3. Zinkote (Electrolytic Galvanize)**	>95	<1.0	<0.1	<0.1	<0.2
4. DECOR™ Embossed Zinkote**	>95	<1.0	<0.1	<0.1	<0.2
5. DURZINKLITE***	>95	<1.0	<0.1	<0.1	<0.2
6. WELKOTE-U (# Organic Composite Coated Steel)**	>95	<1.0	<0.1	<0.1	<0.2
7. HI-FORM™ including HFY and HFT	>95	<1.7	<0.1	<0.1	<0.2
8. CAL HI-FORM	>95	<1.7	<0.1	<0.1	<0.2
9. CAL DI-FORM™	>95	<1.7	<0.1	<0.1	<0.2
10. ISOdent	>95	<1.0	<0.1	<0.1	<0.2
11. MINdent	>95	<1.0	<0.1	<0.1	<0.2
12. MartInsite®	>95	<1.0	<0.1	<0.1	<0.2
13. Motor Lamination	>95	<1.0	<0.3	<0.1	<0.2
14. Incore FP	>95	<1.0	<0.3	<0.1	<0.2
15. Ti-Namel® Sheet and Titanium Bearing Sheet	>95	<1.0	<0.1	<0.1	<0.1
16. PINacle Sheet	>95	<1.0	<0.1	<0.1	<0.1
17. Mill/Nium®	>95	<1.0	<0.1	<0.1	<0.2
18. Electrosite	>95	<1.0	<0.1	<0.1	<0.2
19. ElectroFORM	>95	<1.7	<0.1	<0.1	<0.2
20. ElectroDI-FORM	>95	<1.7	<0.1	<0.1	<0.2
Hot Dipped Coated Products					
21. TI-CO® Galvanized Sheet including HI-FORM and HFY	>95	<1.0	<0.1	<0.1	<0.2
22. TI-CO® Galvanized DECOR™ Embossed	>95	<1.0	<0.1	<0.1	<0.2
23. DURGRIP Galvannealed Sheet incl. HI-FORM and HFY	>95	<1.0	<0.1	<0.1	<0.2
24. GALVEX TI-CO Galvanized Sheet incl. HI-FORM and HFY	>95	<1.0	<0.1	<0.1	<0.2
25. GALVEX DURGRIP Galvannealed Sheet incl. HI-FORM and HFY	>95	<1.0	<0.1	<0.1	<0.2
26. DURGRIP-E Galvannealed Sheet incl. HI-FORM and HFT	>95	<1.0	<0.1	<0.1	<0.2
27. GALVEX DURGRIP-E Galvannealed incl. HI-FORM and HFT	>95	<1.0	<0.1	<0.1	<0.2
28. ALUMINIZED Sheet including HI-FORM	>95	<1.0	<0.1	<0.1	<0.2
29. TI-CO Galvanized Culvert Sheet	>95	<1.0	<0.1	<0.1	<0.2
30. DURGRIP Galvanized and Sheet HFT	>95	<1.2	<0.1	<0.1	<0.2
31. GALVEX DURGRIP Galvannealed Sheet HFT	>95	<1.2	<0.1	<0.1	<0.2
32. TI-CO® Galvanized MINdent	>95	<1.0	<0.1	<0.1	<0.2
Hot Rolled Sheet and Plate Products					
33. Hot Rolled Sheet incl. SAE 1006-1026***	>95	<1.0	<0.1	<0.1	<0.2
34. INX and HSLA	>95	<1.5	<0.1	<0.1	—
35. HI-FORM™ including HFY	>95	<1.4	<0.1	<0.1	—
36. SAE 1524 and 1527	>95	<1.7	<0.1	<0.1	—
37. ASTM A414 and A570	>95	<1.7	<0.1	<0.1	—
38. Titanium Bearing	>95	<0.4	<0.1	<0.1	<0.1

*except as modified by items 7 through 17 **except as modified by items 7 through 18 ***except as modified by items 34 through 38 #See S

Contaminant and Exposure Limits (milligrams per cubic meter)	Aluminum		Antimony	Chromium		Copper		Iron	
	OSHA ACGIH PEL TLV	Welding fume as Al — 5	Metal dust as Al 15 10	Compounds as Sb 0.5 0.5	+2,+3 Compounds as Cr 0.5 0.5	+6 Compounds as Cr H ₂ O Sol (0.1) 0.05 H ₂ O Insol — 0.01	Fume as Cu 0.1 0.2	Dust as Cu 1 1	Iron Oxide as Fe ₂ O ₃ as Fe Dust — 5

1 = Short Term Exposure Limit
= Ceiling

COMPOSITION BY WEIGHT

METALLIC COATINGS

40-02-0	7704-34-9	7440-62-2	7440-32-6	7440-36-0	7440-66-6	7439-89-6	7429-90-5	7440-02-0
Nickel	Sulfur	Vanadium	Titanium	Antimony	Zinc	Iron	Aluminum	Nickel
<0.1	<0.1	—	<0.2	—	—	—	—	—
<0.1	<0.1	—	—	—	—	—	—	—
<0.1	<0.1	—	<0.2	—	>98	—	—	—
<0.1	<0.1	—	<0.2	—	>98	—	—	—
<0.1	<0.1	—	—	—	>85	—	—	<14
<0.1	<0.1	—	—	—	>85	—	—	<14
<0.1	<0.1	—	<0.2	—	—	—	—	—
<0.1	<0.1	—	—	—	—	—	—	—
<0.1	<0.1	—	—	—	—	—	—	—
<0.1	<0.1	—	<0.1	—	—	—	—	—
<0.1	<0.1	—	—	—	—	—	—	—
<0.1	<0.1	—	<0.1	—	—	—	—	—
<0.1	<0.1	—	—	<0.1	—	—	—	—
<0.1	<0.1	—	—	<0.1	—	—	—	—
<0.1	<0.1	—	<0.7	—	—	—	—	—
<0.1	<0.1	—	<0.2	—	—	—	—	—
<0.1	<0.1	—	<0.2	—	—	—	—	—
<0.1	<0.1	—	<0.1	—	>98	—	—	—
<0.1	<0.1	—	—	—	>98	—	—	—
<0.1	<0.1	—	—	—	>98	—	—	—
<0.1	<0.1	—	<0.2	—	>98	—	—	—
<0.1	<0.1	—	<0.2	—	>98	—	—	—
<0.1	<0.1	—	<0.2	—	>87	<13	—	—
<0.1	<0.1	—	<0.2	—	>98	—	—	—
<0.1	<0.1	—	<0.2	—	>87	<13	—	—
<0.1	<0.1	—	<0.2	—	>87	<13	—	—
<0.1	<0.1	—	<0.2	—	>87	<13	—	—
<0.1	<0.1	—	—	—	—	<4	>85	—
<0.1	<0.1	—	—	—	>98	—	—	—
<0.1	<0.1	—	<0.2	—	>87	<13	—	—
<0.1	<0.1	—	<0.2	—	>87	<13	—	—
<0.1	<0.1	—	<0.2	—	>98	—	—	—
<0.1	<0.1	—	—	—	—	—	—	—
<0.1	<0.1	<0.2	—	—	—	—	—	—
<0.1	<0.1	<0.2	—	—	—	—	—	—
<0.1	<0.1	—	—	—	—	—	—	—
<0.1	<0.1	—	—	—	—	—	—	—
<0.1	<0.1	—	<0.7	—	—	—	—	—

Section X

Manganese	Nickel	Sulfur	Titanium	Vanadium	Zinc	Welding Fume (NOC)
(5) 0.2	Soluble compounds as Ni 1 0.1 Insoluble compounds as Ni 1 0.2	Sulfur Dioxide 13 5.2 [13]	Titanium Dioxide Total dust 15 — Titanium Dioxide — 10	As V ₂ O ₅ Respirable dust (0.5) 0.05 Fume (0.1) 0.05	Zinc oxide fume 5 5 [10] Zinc oxide dust 15 10 Respirable fraction 5 —	— 5* *Inside welding helmet

09-18-2001

Fisher Hamilton
1316 16th Street
Two Rivers, WI 54241
US

MANUAL146972

SUBJECT: Material Safety Data Sheet

Dear Paul Zeman,

Enclosed, find the Material Safety Data Sheet(s) (MSDS) for the requested product(s). We have reviewed our products, conducted a hazard determination, and prepared MSDSs in compliance with the requirements of the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910.1200 and Canada's Workplace Hazardous Materials Information System (WHMIS). Our MSDSs also provide information on any toxic chemical subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA).

If this product, or any component of it, is considered to be hazardous or carcinogenic under the OSHA Hazard Communication Standard or the WHMIS regulations, information is provided in Section 2: COMPOSITION/INFORMATION ON INGREDIENTS or in Section 3: HAZARDS IDENTIFICATION.

You have received the MSDS because

- 1 You have ordered the products for the first time, or
- 2 Your company reordered products where the MSDS has changed since you last ordered, or
- 3 You requested the MSDS.

If you have any questions, please contact your Sales Representative.

Sincerely yours,

Global Regulatory



Fisher Hamilton L.L.C.
1316 18th St. P.O. Box 137
Two Rivers, WI 54241

Tel: 920-793-1121
Fax: 920-793-3084

interoffice memo

DATE: March 8, 2000

TO: Richard Johnson

FROM: Paul Zeman

SUBJECT: Disposal of Powder Coat Waste

Fisher Hamilton utilizes a powder coat recovery system for its finish color of greatest use. The small amount of powder overspray from the variety of other colors electrostatically applied daily is effectively and efficiently collected in spray-to-waste booths comprising a closed system to the outside.

The non-hazardous powder waste is transferred to heavy-duty plastic bags of more than 100 lbs. each, which are collected in a landfill hopper. The bags of powder waste are transported to the landfill.

Plastic bags for powder waste must resist breaking. Powder coating waste, considered to be a nuisance dust, must be prevented from blowing about before being earth covered.

Paul Zeman

PZ/pk

MATERIAL SAFETY DATA SHEET

REVISION DATE: 08-20-2001

SUPERSEDES: None

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION

Global Coatings Division
H.B. Fuller Company
2900 Granada Lane
Oakdale, MN 55128
Phone: 651-236-3700

Medical Emergency Phone Number (24 Hours): 1-888-853-1758
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

PRODUCT INFORMATION

PRODUCT IDENTIFIER: 810260PM
PRODUCT NUMBER: IF9430 ROCK OF AGES UR
PRODUCT DESCRIPTION: Powder coating

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Unlisted ingredients are not 'hazardous' per the Occupational Safety and Health Administration Hazard Communication Standard (29 CFR 1910.1200) and/or are not found on the Canadian Workplace Hazardous Materials Information System ingredient disclosure list. See Section 8 for any additional exposure limit guidelines.

Chemical Name	CAS #	PERCENT	OSHA PEL
Epoxy resin	25036-25-3	30 - 50	Not established
Titanium dioxide	13463-67-7	1 - 5	TWA (Total dust) 10 MG/M3
Iron oxide, hydrated	51274-00-1	1 - 5	TWA (as Fe) Fume 10 MG/M3
Carbon black	1333-86-4	0.1 - 1	TWA 3.5 MG/M3

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Dust clouds in air can be ignited by electric sparks, hot surfaces and open flame.

May cause allergic skin reaction.

HMIS RATING: HEALTH -- 1 FLAMMABILITY -- 1 REACTIVITY -- 0

See SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for personal protective equipment recommendations.

MATERIAL SAFETY DATA SHEET

POTENTIAL HEALTH EFFECTS BY ROUTE OF ENTRY

EYE: Can cause minor irritation, tearing and reddening. Can cause mechanical irritation if dusts are generated.

SKIN: Can cause minor skin irritation, defatting, and dermatitis. May cause sensitization.

INHALATION: Can cause minor respiratory irritation. Dust may be slightly irritating to the respiratory tract. Inhalation of dusts produced during cutting, grinding or sanding of this product may cause irritation of the respiratory tract.

Overexposure to iron oxide dust/fume may cause siderosis.

INGESTION: Ingestion is not an anticipated route of exposure.

LONG-TERM (CHRONIC) HEALTH EFFECTS

TARGET ORGAN(S): Skin, Lungs

REGULATED CARCINOGEN STATUS:

Unless noted below, this product does not contain regulated levels of NTP, IARC, ACGIH, or OSHA listed carcinogens.

Carbon black

EXISTING HEALTH CONDITIONS AFFECTED BY EXPOSURE: Skin disease including eczema and sensitization; Lung disease

SECTION 4: FIRST AID MEASURES

IF IN EYES: Flush eye with water for 20 minutes. Get medical attention.

IF ON SKIN: Wash with soap and water. Get medical attention if irritation develops or persists.

IF VAPORS INHALED: Remove to fresh air. Call a physician if symptoms persist.

IF SWALLOWED: No hazard in normal industrial use. Do not induce vomiting. Seek medical attention if symptoms develop. Provide medical care provider with this MSDS.

SECTION 5: FIRE FIGHTING MEASURES

FLASH POINT:	Not applicable
AUTOIGNITION TEMPERATURE:	Not established
LOWER EXPLOSIVE LIMIT (% in air):	Not established
UPPER EXPLOSIVE LIMIT (% in air):	Not established
EXTINGUISHING MEDIA:	Use water spray, foam, dry chemical or carbon dioxide.
UNUSUAL FIRE AND EXPLOSION HAZARDS:	Material will burn in a fire. Normal LEL for powder coatings 0.04 to 0.07 ounces/cubic foot. Strong explosions are not expected below 0.4 to 0.7.
SPECIAL FIRE FIGHTING INSTRUCTIONS:	Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.
HAZARDOUS COMBUSTION PRODUCTS:	Carbon dioxide, Carbon monoxide

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPECIAL PROTECTION: No health effects expected from the cleanup of this material if contact can be avoided. Follow personal protective equipment recommendations found in Section 8 of this MSDS.

CLEAN-UP: Avoid creating dusts. Eliminate ignition sources. If a vacuum is used, ensure that the material is wetted or otherwise treated so an explosive dust atmosphere is not created within the vacuum.

MATERIAL SAFETY DATA SHEET

Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

SECTION 7: HANDLING AND STORAGE

Handling: Mildly irritating material. Avoid unnecessary exposure. Avoid creating dusts as an explosive dust air mixture can be created at high concentrations. If dusts are created, ensure no sources of ignition are present. Take precautionary measures to prevent electrostatic discharges.

This product contains a blocked isocyanate polymer. When heated to temperatures greater than 300 F (150 C) methylene bis(4-cyclohexylisocyanate) may be released. Methylene bis(4-cyclohexylisocyanate) is a potential skin and respiratory sensitizer. Persons with existing allergies may be sensitive to methylene bis(4-cyclohexylisocyanate).

Curing ovens must be properly exhausted to control the release of caprolactam. Inhalation of vapors during cure will cause irritation.

Storage: Store in a cool, dry place.

Consult the Technical Data Sheet for specific storage instructions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION: Wear safety glasses when handling this product.

SKIN PROTECTION: Avoid skin contact by wearing chemically resistant gloves.

GLOVES: Nitrile

RESPIRATORY PROTECTION: Respiratory protection may be required to avoid overexposure when handling this product. Use a respirator if general room ventilation is not available or sufficient to eliminate symptoms. NIOSH approved air purifying respirator with dust/mist filter. Respirators should be selected by and used following requirements found in OSHA's respirator standard (29 CFR 1910.134).

VENTILATION: Use local exhaust ventilation or other engineering controls to minimize exposures.

EXPOSURE LIMITS:

Chemical Name	ACGIH EXPOSURE LIMITS	AIHA WEEL
Epoxy resin	Not established	Not established
Titanium dioxide	TWA (Total dust) 10 MG/M3	Not established
Iron oxide, hydrated	TWA (as Fe) Fume 5 MG/M3	Not established
Carbon black	TWA 3.5 MG/M3	Not established

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Solid

MATERIAL SAFETY DATA SHEET

COLOR: Green
ODOR: Neutral
ODOR THRESHOLD: Not established
WEIGHT PER GALLON (lbs.): 11.58
SPECIFIC GRAVITY: 1.39
SOLIDS (% by weight): 100.0
pH: Not applicable
BOILING POINT (deg. C): Not established
FREEZING/MELTING POINT (deg. C): Not established
VAPOR PRESSURE (mm Hg): Not established
VAPOR DENSITY: Not established
EVAPORATION RATE: Not established
OCTANOL/WATER COEFFICIENT: Not established

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Stable under normal conditions.
CHEMICAL INCOMPATIBILITY: Not established
HAZARDOUS POLYMERIZATION: Will not occur.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide

SECTION 11: TOXICOLOGICAL INFORMATION

CHEMICAL NAME	LD50/LC50
Epoxy resin	Oral LD50 Rat > 30 g/kg Inhalation LC50 Rat > 800 mg/cu m/4H Dermal LD50 Rabbit > 3 g/kg
Titanium dioxide	Not established
Iron oxide, hydrated	Not established
Carbon black	Oral LD50 Rat >15400 mg/kg Dermal LD50 Rabbit > 3 g/kg

TOXICOLOGY SUMMARY: No additional health information available.

SECTION 12: ECOLOGICAL INFORMATION

OVERVIEW: No ecological information available

No levels of volatile organic compound emissions are expected at ambient temperatures and pressure. Depending on powder chemistry, however, higher levels of VOC and low molecular weight hydrocarbons may be emitted at cure temperatures. Emissions data are best developed by monitoring actual plant conditions.

SECTION 13: DISPOSAL CONSIDERATIONS

To the best of our knowledge, this product does not meet the definition of hazardous waste under the U.S. EPA Hazardous Waste Regulations 40 CFR 261. Disposal via incineration at an approved facility is recommended. Consult state, local or provincial authorities for more restrictive requirements.

SECTION 14: TRANSPORTATION INFORMATION

Consult Bill of Lading for transportation information.

MATERIAL SAFETY DATA SHEET

SECTION 15: REGULATORY INFORMATION

INVENTORY STATUS

U.S. EPA TSCA: This product is in compliance with the Toxic Substances Control Act's Inventory requirements.

If you need more information about the inventory status of this product call 651-236-5858.

TSCA Section 12(b) - Export Notice Requirements

This product contains a chemical substance that is currently on the EPA's Section 12(b) Export List. Contact the company Global Regulatory Group at 651/236-5858 for the identity of the Section 12(b) chemical(s).

FEDERAL REPORTING

EPA SARA Title III Section 313

Unless listed below, this product does not contain toxic chemical(s) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA) and 40 CFR part 72. EPA has advised that when a percentage range is listed the midpoint may be used to fulfill reporting obligations.

Chemical Name	CAS#	%
---------------	------	---

WHMIS STATUS: Unless listed below, this product is not controlled under the Canadian Workplace Hazardous Materials Information System.

D2B D2A

STATE REPORTING

This MSDS is not prepared for distribution in California.

SECTION 16: ADDITIONAL INFORMATION

This Material Safety Data Sheet is prepared to comply with the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (29 CFR 1910.1200) and the Canadian Workplace Hazardous Materials Information System (WHMIS).

Prepared by: The Global Regulatory Department

Phone: 651-236-5842

The information and recommendations set forth herein are believed to be accurate. Because some of the information is derived from information provided to the H.B. Fuller Company from its suppliers, and because the H.B. Fuller Company has no control over the conditions of handling and use, the H.B. Fuller Company makes no warranty, expressed or implied, regarding the accuracy of the data or the results to be obtained from the use thereof. The information is supplied solely for your information and consideration, and the H.B. Fuller Company assumes no responsibility for use or reliance thereon. It is the responsibility of the user of H.B. Fuller Company products to comply with all applicable federal, state and local laws and regulations.

SECTION 12345

Wood Laboratory Casework

QUALITY ASSURANCE

Environmental Compliance

1. Wood Products for Laboratory Casework

All wood products used in the fabrication shall comply with the FSC's Percentage-Based Claims Policy (Forest Stewardship Council) Green Rating System. All lumber shall come from FSC "certified" sustainably managed forestry sources. The building contractor and/or manufacturer must submit documentation (i.e. "Source of Materials", Invoices) for lumber products purchased for this project providing that each source of lumber is certified for sustainability contents. The Chain-of Custody Certificate shall be submitted to the Owner Representative/ Architect for approval – at time of bid submittal.

A. Sustainably Managed Forests: Shall mean forests that are being managed through a professionally administered forestry management plan in which timber growth equals or exceeds harvesting rates in both quality and quantity. Other considerations include protecting rivers and streams from degradation, minimizing damage to the forest when harvesting, promoting biodiversity, and fair compensation to the local population

B. Chain-of-Custody Certified Manufacturer: Fabricator shall provide documentation (Validation/Certification Number) that provides a system for tracking certified wood from the forest, through each stage of production and distribution, to the point of sale. This tracking system shall provide assurance to the customer that all wood products bearing the Forest Conservation Program Label, is in fact, produced from an FSC certified "Well Managed" forest. Manufacturing fall-off shall not enter the solid waste system and/or become a product of landfill space. The customer/buyer shall request a manufacturing audit once the participant signs the Chain-of-Custody contract.

C. Combining Solid and Chip and Fiber Components in an Assembled Product: Because assembled and chip and fiber products can carry two different percentage claims, there shall be two options for calculating a percentage claim, on an assembled product that uses both types:

1. The entire product must meet a 70% by volume content threshold (FSC Certified Sustainable) *or*
2. If the chip and fiber and solid wood components can individually meet their respective threshold by volume or weight, then the assembled product made from these components can carry the FSC label.

D. Acceptable Certifiers: Certifiers shall be the SmartWood program administered by the Rainforest Alliance or a FSC accredited equivalent.

2. **Finish for Wood Laboratory Products**

All Wood Laboratory Products shall utilize an environmentally friendly, laboratory grade water-borne finish. Finish process (stains and finishes) shall be by means of compression spray, providing high-transfer efficiency low waste generation. Any solvent applied coatings **shall not** be acceptable and will not be considered. Manufacturer shall supply documentation that waste generated during the finishing process, is a non-hazardous material, eliminating liquid waste disposal in landfills.

A. Chemically Resistance Finish: Only highly chemically resistant water-borne finish that passes the SEFA 8 casework specifications for chemical and durability resistance will be acceptable. A letter from a third-party validator, verifying independent test results, shall be submitted to the Owner Representative/ Architect for approval - prior to award of contract.

B. Operator Protection: The application is convenient and easily mastered, in a custom spray booth. The painting process is cleanly contained and has no solvent odor and is performed in an air-conditioned room.

C. VOC Emissions: Water-borne finishes shall be sprayed and cured with a near zero (1.25 lbs. per gallon maximum) VOC (Volatile Organic Compounds) emissions.

E. Offgasing: After all wood products have cooled from the curing ovens, the coating shall be firm and stable. **No further emissions** or "Offgasing/Decomposition" vapors shall occur at room temperature.

**Sustainable Certified Wood Products
(Chain-Of-Custody Guidelines)
As defined by the Forest Stewardship Council**

The purpose of the Forest Stewardship Council program is to access, monitor and recognize good forest managers through independent verification (i.e. Smartwood, Scientific Certification Systems) of forest management practices.

Chain-of-Custody refers to the complete process by which wood is transformed from a tree in a certified forest to the final end product provided to the customer. The purpose of Chain-of-Custody auditing is to ensure the products carry the FSC label or certified marks in fact are produced with materials from independently-certified sources.

All public claims made by certified operations (e.g. forest, log suppliers, mill, manufactures) must be reviewed by independent verification prior to release if these companies wish to use the FSC label and/or certified mark or mention the Chain-of-Custody program.

The following guidelines below outline what a Chain-of-Custody assessor evaluates during the annual on-site audit or site visit to the facilities of a company under evaluation for certification (see enclosed documentation for detailed descriptions).

1. Control System Responsibilities
2. Certified Raw Material Handling
3. Certified Product Processing and Storage
4. Certified Product Shipping and Transport
5. Certified Product Record Keeping
6. Personnel Training
7. Marketing, Advertising and Public Information

Furthermore, FSC has established the following Chain-of-Custody procedure description and certification standards for any operations to be certified.

Principle 1: Documented control system

Principle 2: Confirmation of inputs

Principle 3: Separation and/or demarcation of certified and non-certified inputs

Principle 4: Secure product labeling

Principle 5: Identification of certified outputs

Principle 6: Record keeping

In summary, the average time for an operation to be certified through independent verification (i.e. Smartwood, Scientific Certification Systems) is six (6) months to (9) months. Additionally, any operation must dedicate substantial resources (financial, record keeping systems, on-site audits, separate inventory control and storage, personnel training, etc.) to obtain and maintain this certification.

For manufactures like Fisher Hamilton, to produce a casework cabinet that complies to the Chain-of-Custody standards, (70 % by weight or volume must be certified virgin fiber – solid lumber, cores, veneers) requires dedication of purchasing, facilities, manufacturing processes and inventory control.

All sustainable certified casework must be inventoried separately, manufactured separately, identified separately, warehoused separately and packaged uniquely.

The Chain-of-Custody paperwork must be received from our suppliers (mills, forest products suppliers, etc.) and methodically followed thorough and provided to the customer.

Fisher Hamilton is cognoscente of our environmental stewardship. Fisher Hamilton adheres to material sourcing practices and manufacturing practices as established by the U.S. Green Building Council LEED 2.0 standards.

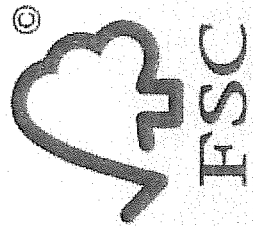
Fisher Hamilton manufactures casework for the laboratory environment. Harsh reagents, bases and flammables are commonplace in the day-to-day operation of most laboratories. The standards for chemical resistance, finish hardness, adhesion, etc. have been established by SEFA 8 requirements. (Scientific Equipment and Furniture Association). Fisher Hamilton has position itself as the only manufacture that has developed a water-borne wood finish that meets both SEFA 8 and LEED 2.0 standards (near-zero VOC emissions) in the laboratory furniture industry.



FISHER-HAMILTON, INC.
1316 18th Street, P.O. Box 137, Two Rivers, WI 54241

*is certified for chain-of-custody by SmartWood.
Fisher-Hamilton, Inc. markets both certified and noncertified
wood products. Wood products certified by SmartWood are recognized
as coming from "well-managed" forests adhering to strict environmental
and socioeconomic standards in accordance with the
Principles and Criteria of the Forest Stewardship Council (FSC).*

SmartWood is a program of the Rainforest Alliance accredited by the FSC.



ACCREDITED
FSC-ACC-004

A handwritten signature in dark ink, appearing to read "Richard Z. Donovan", is written over a horizontal line.

Richard Donovan, Director, SmartWood
Rainforest Alliance
65 Millet Street, Richmond, VT 05477
Valid from: July 19, 2005 to July 18, 2010
Certificate Registration Code: SW-COC-337

Glues and Adhesives

Material Safety Data Sheet

Hot melt glue used on the drawer boxes to seal the bottom



Jowat CORPORATION

MATERIAL SAFETY DATA SHEET

In compliance with OSHA's Hazard Communication Standard 29 CFR 1910.1200

PRODUCT - INFORMATION

JOWATHERM HOTMELT ADHESIVES AS LISTED IN LIST JOWAT JOWAT003L (SEE ATTACHED LIST JOWAT003L for specific product identity). PRODUCT CLASS: THERMOPLASTIC ADHESIVE

SECTION I - GENERAL INFORMATION

MANUFACTURER: JOWAT CORPORATION
6058 LOIS LANE - RANDOLPH INDUSTRIAL PARK
ARCHDALE NC 27263

EMERGENCY TELEPHONE NUMBER: 1-800-424-9300 (CHEMTREK 24 HOURS)
INFORMATION TELEPHONE NUMBER: 1-910-431-7128

DATE ISSUED: 06/06/96

DATE PREPARED: 06/04/96

PREPARED BY: G.HAAS

SECTION II - HAZARDOUS INGREDIENTS

	CAS#	Concentration	TLV	PEL
Vinyl acetate monomer	108-05-4	<= 1000 ppm	10	10

SECTION III - PHYSICAL DATA

MELTING POINT: N/A
BOILING POINT: N/A
VOLATILES: NEGLIGIBLE
WATER SOLUBILITY: NEGLIGIBLE
ODOR: MILD ESTER ODOR
FORM: AT ROOMTEMPERATURE SOLID
BLOCKS, PELLETS OR SLUGS

VOC %: <= 10g/L
MOISTURE CONTENT: <= 0.5%

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASHPOINT: ABOVE 200°C (390°F) COC
FIRE AND EXPLOSION HAZARDS: NONE KNOWN TO JOWAT CORPORATION
DANGEROUS COMBUSTION PRODUCTS: LIKE MOST ORGANIC PRODUCTS IT MAY FORM CARBONMONOXIDE, -DIOXIDE, AND OTHER BYPRODUCTS.
EXTINGUISHING MEDIA: WATER FOG, CARBONDIOXIDE, FOAM, DRY CHEMICAL
SPECIAL FIREFIGHTING PROCEDURES: DO NOT USE WATER TO EXTINGUISH FIRE AT TEMPERATURES ABOVE 220°C (430°F). MATERIAL MAY FLAM AND SPATTER. WEAR NIOSH/MSHA APPROVED POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS IF EXPOSED TO FUMES.

SECTION V - REACTIVITY DATA

STABILITY: STABLE
CONDITIONS TO AVOID: DO NOT HEAT ABOVE 220°C (430°F) FOR PROLONGED TIME.
MATERIALS TO AVOID: NONE KNOWN TO JOWAT CORPORATION.
DANGEROUS DECOMPOSITION AND BYPRODUCTS: LIKE MOST ORGANIC MATERIALS IT MAY FORM CARBONMONOXIDE, -DIOXIDE AND OTHERS.
DANGEROUS POLYMERIZATION: WILL NOT OCCUR

SECTION VI - HEALTH HAZARD DATA

EXPOSURE ENTRY:
HAZARD: OF VAPOR OF MOLTEN MATERIALS

THIS PRODUCT DOES NOT CONTAIN ANY TOXIC CHEMICAL SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III OF THE SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) AND 40 CFR PART 372.

JOWAT CORPORATION

DATE ISSUED:

ATTACHMENT LIST JOWAT003L TO MATERIAL SAFETY DATASHEET NO JOWAT003

THE MATERIAL SAFETY DATA SHEET NO. JOWAT003 IS VALID FOR THE FOLLOWING SPECIFIC PRODUCTS (SORTED BY TRADENAME AND ARTICLE):

JOWAT CLEANER 030 00; 030 060; 067 00; 069 00;
JOWATHERM 118-004; 250 00; 251 10; 251 30; 251 40; 251 45; 251 80; 252 00; 252 50;
JOWATHERM 253 10; 253 40; 253 50; 253 75; 253 80; 255 50; 256 50; 257 00; 257 20;
JOWATHERM 259 00; 259 10; 259 20; 259 30; 259 40; 259 70; 260 00; 260 80; 261 20;
JOWATHERM 261 40; 261 60; 266 00; 267 00; 267 50; 267 60; 267 69;
JOWASTIC 269 00 02; 269 00 03; 269 00 10; 269 10 02; 269 10 03; 269 10 10; 269 20 02; 269 20 03; 269 20 10;
JOWASTIC 269 30 04; 269 40; 269 40;
JOWATHERM 270 00; 270 30; 271 00; 271 00; 271 50; 275 00; 280 30; 280 30; 280 40;
JOWATHERM 280 60; 280 80; 284 00; 284 01; 284 02; 284 03; 285 00; 285 01; 285 02;
JOWATHERM 285 03; 285 09; 285 10; 285 11; 285 13; 285 60; 285 60; 285 61; 285 61;
JOWATHERM 285 61; 285 61; 285 62; 285 62; 285 63; 285 63; 286 00; 286 00; 286 01;
JOWATHERM 286 01; 286 02; 286 02; 286 02; 286 02; 286 03; 286 03; 286 09; 286 09;
JOWATHERM 286 50; 286 50; 286 51; 286 51; 286 52; 286 52; 286 53; 286 53; 286 60;
JOWATHERM 286 60; 286 61; 286 62; 286 62; 286 63; 287 00; 287 01; 287 02; 287 03;
JOWATHERM 287 60; 287 61; 287 62; 287 63; 288 00; 288 41; 288 42; 288 43; 288 50;
JOWATHERM 288 51; 288 52; 288 53; 288 60; 288 61; 288 62; 288 63; 288 80; 290 00;
JOWATHERM 290 10; 290 10; 290 20; 290 30; 290 39; 290 40; 290 50; 290 59; 290 60;
JOWATHERM 290 70; 290 70; 291 20; 291 40; 294 40; 295 10; 295 12; 295 30; 295 31;
JOWATHERM 295 80; 295 89; 296 30; 296 31; 296 32; 296 33; 296 40; 297 20; 297 22;
JOWATHERM 297 23; 297 50; 297 80; 299 40; 603596; EP 603099; EP 603560; EP 603563; EP 613121;
JOWATHERM EXP 003-020; EXP 003-028; EXP 007-027; EXP 007-035; EXP 014-119; EXP 023-101; EXP 025 047; EXP 025-042; EXP 025-085;
JOWATHERM EXP 025-104; EXP 025-146; EXP 025-146; EXP 025-147; EXP 025-148; EXP 025-149; EXP 025-152; EXP 025-157; EXP 025-160;
JOWATHERM EXP 025-161; EXP 025-161; EXP 025-162; EXP 025-163; EXP 026-067; EXP 034-005; EXP 037-059; EXP 037-060; EXP 037-061;
JOWATHERM EXP 037-062; EXP 037-063; EXP 037-085; EXP 037-086; EXP 037-099; EXP 041 073; EXP 041-120; EXP 041-121; EXP 043-010;
JOWATHERM EXP 051-002; EXP 052-001; EXP 052-002; EXP 052-002; EXP 052-003; EXP 052-004; EXP 052-005; EXP 052-010; EXP 052-015;
JOWATHERM EXP 052-017; EXP 053-154; EXP 058-043; EXP 058-043; EXP 062-072; EXP 062-075; EXP 062-086; EXP 062-091; EXP 062-107;
JOWATHERM EXP 063-013; EXP 063-014; EXP 063-014; EXP 070-011; EXP 070-011; EXP 070-012; EXP 077-004; EXP 077-005; EXP 085-006;
JOWATHERM EXP 085-016; EXP 090-014; EXP 091 091; EXP 095-007; EXP 095-008; EXP 095-010; EXP 096-009; EXP 096-013; EXP 096-018;
JOWATHERM EXP 100-071; EXP 100-079; EXP 102-033; EXP 102-049; EXP 102-059; EXP 102-077; EXP 102-078; EXP 102-082; EXP 107-004;
JOWATHERM EXP 107-010; EXP 107-012; EXP 107-012; EXP 107-012; EXP 107-015; EXP 107-102; EXP 108-025; EXP 108-064; EXP 108-084;
JOWATHERM EXP 108-102; EXP 109-003; EXP 115 003; EXP 115-001; EXP 115-002; EXP 116-009; EXP 116-016;
JOWATHERM EXP 121-001; EXP 121-001;
JOWATHERM EXP 121-005; EXP 121-009; EXP 125-038; EXP 95-1; EXP 95-10; U-2101 H; U-2541 F; U-2591;

Glues and Adhesives

Material Safety Data Sheet

Glue used on Fisher Hamilton's glue for dowels and glass
frame doors, type II exterior glue

Printing date 05/13/2000

Reviewed on 05/13/2000

1 Identification of substance

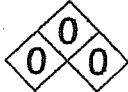
- Trade name: **KLEBIT 303**
 - Article number: 303.0
 - Manufacturer/Supplier:
KLEBCHEMIE
M.G.Becker GmbH & Co. KG
Max Becker Str. 4
D - 76356 Weingarten / Baden - Germany
 - Information department:
Telefon: +49 (0) 7244 62-0 / Labor
FAX: +49 (0) 7244 700-0
 - Emergency information:
1-800-424-9300 (CHEMTREC)
1-800-451-1403 (SARA-HOTLINE)
- KLEIBERIT Adhesives USA, Inc.**
 2400 Crown Point Executive Dr.
 Suite 100
 Charlotte, NC 2827
 USA
 Phone 001-704-708 5312
 FAX 001-704-708 5314

2 Composition/Data on components

- Description: Synthetic polymer emulsion of polyvinylacetate in water
- Dangerous components:
Void

3 Hazards identification

- Hazard description:
Void
- Information pertaining to particular dangers for man and environment:
• Not applicable.
- NFPA ratings (scale 0 - 4)



Health = 0
 Fire = 0
 Reactivity = 0

- WHMIS-ratings (scale 0 - 4)

HEALTH	0
FIRE	0
REACTIVITY	0

4 First aid measures

- General information: No special measures required.
- After inhalation: Void
- After skin contact:
Rinse with warm water.
Generally the product does not irritate the skin.
- After eye contact:
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- After swallowing: Rinse out mouth and then drink plenty of water.

5 Fire fighting measures

- Suitable extinguishing agents:
CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- Special hazards caused by the material, its products of combustion or resulting gases:
Acetic Acid
- Protective equipment: Wear self-contained respiratory protective device.

6 Accidental release measures

- Person-related safety precautions:
Particular danger of slipping on leaked/spilled product.

(Contd. on page 2)



Printing date 05/13/2000

Reviewed on 05/13/2000

Trade name: KLEBIT 303

(Contd. of page 1)

- **Measures for environmental protection:**
Do not allow to enter sewers/ surface or ground water.
- **Measures for cleaning/collecting:**
Pick up mechanically.
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- **Additional information:** No dangerous substances are released.

7 Handling and storage

- **Handling:**
- **Information for safe handling:** No special measures required.
- **Information about protection against explosions and fires:**
No special measures required.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
No special measures required.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** None.
- **Class according to regulation on flammable liquids:** Void

8 Exposure controls and personal protection

- **Additional information about design of technical systems:**
No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**
- **CAS No. Designation of material % Type Value Unit**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:**
The lists that were valid during the creation were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:** Protective gloves and protective skin cream
- **Eye protection:** Safety glasses

9 Physical and chemical properties

- **Form:** Fluid
- **Color:** White
- **Odor:** Acidic
- **Change in condition**
- **Melting point/Melting range:** Undetermined.
- **Boiling point/Boiling range:** 100 ° C
- **Flash point:** Not applicable.
- **Danger of explosion:**
Product does not present an explosion hazard.
- **Vapor pressure:** at 20 ° C 23 hPa
- **Density:** at 20 ° C 1.1 g/cm³
- **Solubility in / Miscibility with**
- **Water:** Fully miscible.

(Contd. on page 3)

Printing date 05/13/2000

Reviewed on 05/13/2000

Trade name: KLEBIT 303

(Contd. of page 2)

- pH-value: at 20 ° C 3
- Viscosity:
- Dynamic: at 20 ° C 13000 mPas
- Organic solvents: 0.0 %
- Solids content: 60.0 %

10 Stability and reactivity

- Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.
- Dangerous reactions No dangerous reactions known.
- Dangerous products of decomposition:
No dangerous decomposition products known.

11 Toxicological information

- Acute toxicity:
- Primary irritant effect:
- on the skin: No irritant effect.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.
- Additional toxicological information:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.
The substance is not subject to classification.

12 Ecological information

- Information about elimination (persistence and degradability):
- Other information: The product is biodegradable.
- General notes:
Water hazard class 1 (Self-assessment): slightly hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.

13 Disposal considerations

- Recommendation:
Can be disposed of with household garbage after solidification following consultation with the waste disposal facility operator and the pertinent authorities and adhering to the necessary technical regulations.
- Uncleaned packagings:
- Recommendation:
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

14 Transport information

Not applicable.

- Maritime transport IMDG:
- Marine pollutant: No

15 Regulations

- Sara
Section 355 (extremely hazardous substances):
None of the ingredient is listed.
- Section 313 (Specific toxic chemical listings):

(Contd. on page 4)

Printing date 05/13/2000

Reviewed on 05/13/2000

Trade name: KLEBIT 303

(Contd. of page 3)

None of the ingredients is listed.

TSCA (Toxic Substances Control Act):

None of the ingredients is listed.

• Proposition 65Chemicals known to cause cancer:

None of the ingredients is listed.

Chemicals known to cause reproductive toxicity:

None of the ingredients is listed.

• Product related hazard informations:

The substance is not subject to classification according to the sources of literature known to us.

Observe the general safety regulations when handling chemicals.

• National regulations:• Classification according to VbF: Void• Water hazard class:

Water hazard class 1 (Self-assessment): slightly hazardous for water.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

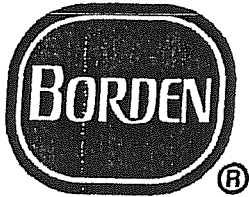
- Department issuing MSDS: Quality, Safety, Environment
- Contact: Dr. Wolfgang Stüber

USA

Glues and Adhesives

Material Safety Data Sheet

Cold press glue for all plastic laminate panels



MATERIAL SAFETY DATA SHEET

FOR INDUSTRIAL USE ONLY

DESCRIPTION: CASCOREZ IB-355

PAGE 1 OF 6

1. Chemical Product and Company Identification

DESCRIPTION: CASCOREZ IB-355
PRODUCT CODE: 16-.355P-.
PRODUCT TYPE: PVAC EMULSION
APPLICATION: LOW-COST LAMINATING PVAC FOR HPL TO PARTICLE BOARD

Manufacturer/Supplier Information

MSDS Prepared by:
Borden Chemical, Inc.
155 West A Street, Bldg. A-1
Springfield, OR 97477

Emergency Phone Number
Poison Control Center
1-800-228-5635 ext 261

For additional health, safety or regulatory information, call 541-744-3256.

2. Composition, Information on Ingredients

No hazardous ingredients known to Borden.

3. Hazards Identification

3.1 Emergency Overview

Appearance	Milk white liquid
Odor	Mild

Not a significant fire hazard.

HMIS Rating

HEALTH = 1 (slight)
FLAMMABILITY = 0 (minimal)
REACTIVITY = 0 (minimal)

3.2 Potential Health Effects

Immediate Hazards

INGESTION: No hazards known to Borden.

INHALATION: Not expected to be harmful under normal conditions of use. However, if allowed to become airborne, may cause irritation of nose, throat and lungs.

Immediate Hazards

- SKIN: May cause irritation on prolonged or repeated contact.
EYES: May cause irritation on prolonged or repeated contact.
-

Delayed Hazards

None of the components present in this product at concentrations equal to or greater than 0.1% have been listed by NTP, classified by IARC, nor regulated by OSHA as a carcinogen.

4. First Aid Measures

- INGESTION: If accidentally swallowed, dilute by drinking large quantities of water. Immediately contact poison control center or hospital emergency room for any other additional treatment directions.
- INHALATION: Remove to fresh air.
- SKIN: In case of irritation, flush with water.
- EYES: Immediately flush eyes with plenty of water. Call a physician if irritation persists.
-

5. Fire Fighting Measures

Flash point	None wet/Dry solids:>93C (200F)
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Autoignition temperature	Not applicable

Will not burn unless water has evaporated. Dried material may burn.

In case of fire, water should be used to keep fire-exposed containers cool.

6. Accidental Release Measures

Large quantities: Enclose with diking material to prevent seepage into natural bodies of water, then consult Borden, Inc. Small quantities: Soak up with absorbent material and remove to a chemical disposal area.

7. Handling and Storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety practices.

INHALATION: Avoid prolonged or repeated breathing of vapor.

SKIN: Avoid prolonged or repeated contact with skin and clothing.

EYES: Avoid prolonged or repeated contact with eyes.

7.2 Storage

Harmed by freezing. Cannot be made usable after freezing.
Store in a cool, dry place.

Do not store in bare metal drums or cans.

8. Exposure Controls/Personal Protection

8.1 Exposure Controls

If airborne contaminants are generated when the material is heated or handled, sufficient ventilation in volume and air flow patterns should be provided to keep air contaminant concentration levels below acceptable criteria.

8.2 Personal Protection

Where air contaminants can exceed acceptable criteria, use NIOSH/MSHA approved respiratory protection equipment. Respirators should be selected based on the form and concentration of contaminants in air in accordance with OSHA 29 CFR 1910.134 or other applicable standards or guidelines.

8.3 Exposure Guidelines

None established

9. Physical and Chemical Properties

Appearance	Milk white liquid
Odor	Mild
Specific gravity	~1.12
pH	~4.5 @ 25C
Solubility in water	Miscible
Vapor pressure @ 25 C	17.5 mm Hg @ 20C
Vapor density (air=1)	0.62 water
Evaporation rate (butyl acetate=1)	<1 water
Boiling point, 760 mm Hg	212F

10. Stability and Reactivity

Normally stable as defined in NFPA 704-12(4-3.1).

Decomposition products may include:

Oxides of carbon.

Hazardous polymerization:

Will not occur.

11. Toxicological Information

This product has not been tested by Borden.

12. Ecological Information

Not determined.

13. Disposal Considerations

Recover free liquid. Absorb residue and dispose of according to local, state/provincial, and federal requirements.

14. Transport Information

14.1 U.S. Department of Transportation (DOT)

The data provided in this section is for information only and may not be specific to your package size. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

Not Regulated

14.2 Canadian Transportation of Dangerous Goods (TDG)

Not determined.

15. Regulatory Information (Selected Regulations)

15.1 U.S. Federal Regulations

OSHA Hazard Communication Standard 29CFR1910.1200

This material is not a "health hazard" or a "physical hazard" as determined when reviewed according to the requirements of the Occupational Safety and Health Administration 29 CFR Part 1910.1200 "Hazard Communication" Standard.

SARA Title III: Section 311/312

Immediate health hazard

SARA Title III Section 313 and 40 CFR Part 372

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.

None required per SARA TITLE III SECTION 313.

TSCA Section 8(b) Inventory

All reportable chemical substances are listed on the TSCA Inventory. We rely on certifications of compliance from our suppliers for chemical substances not manufactured by Borden.

15.2 Canadian Regulations

Workplace Hazardous Materials Information System (WHMIS)

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

Not a controlled product

Canadian Environmental Protection Act (CEPA)

All reportable chemical substances are listed on the Domestic Substances List (DSL) or otherwise comply with CEPA new substance notification requirements.

National Pollutant Release Inventory (NPRI)

This product contains the following chemical(s) subject to the reporting requirements of the Canadian Environmental Protection Act (CEPA) subsection 16(1), National Pollutant Release Inventory.

None required.

16. Other Information

User's Responsibility

The OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace Hazardous Materials Information System (WHMIS) require that the information contained on these sheets be made available to your workers. Instruct your workers to handle this product properly.

Disclaimer

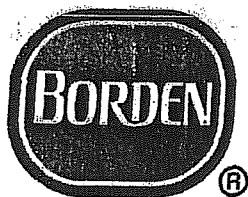
SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

CUR ISSUE 08-OCT-96
PREVIOUS ISSUE: 06-SEP-96

Glues and Adhesives

Material Safety Data Sheet

Assembly glue for drawer boxes



MATERIAL SAFETY DATA SHEET

FOR INDUSTRIAL USE ONLY

DESCRIPTION: CASCOREZ IB-355

PAGE 1 OF 6

1. Chemical Product and Company Identification

DESCRIPTION: CASCOREZ IB-355
PRODUCT CODE: 16-.355P-.
PRODUCT TYPE: PVAC EMULSION
APPLICATION: LOW-COST LAMINATING PVAC FOR HPL TO PARTICLE BOARD

Manufacturer/Supplier Information

MSDS Prepared by:
Borden Chemical, Inc.
155 West A Street, Bldg. A-1
Springfield, OR 97477

Emergency Phone Number
Poison Control Center
1-800-228-5635 ext 261

For additional health, safety or regulatory information, call 541-744-3256.

2. Composition, Information on Ingredients

No hazardous ingredients known to Borden.

3. Hazards Identification

3.1 Emergency Overview

Appearance Milk white liquid
Odor Mild

Not a significant fire hazard.

HMIS Rating

HEALTH = 1 (slight)
FLAMMABILITY = 0 (minimal)
REACTIVITY = 0 (minimal)

3.2 Potential Health Effects

Immediate Hazards

INGESTION: No hazards known to Borden.

INHALATION: Not expected to be harmful under normal conditions of use. However, if allowed to become airborne, may cause irritation of nose, throat and lungs.

Immediate Hazards

SKIN: May cause irritation on prolonged or repeated contact.
EYES: May cause irritation on prolonged or repeated contact.

Delayed Hazards

None of the components present in this product at concentrations equal to or greater than 0.1% have been listed by NTP, classified by IARC, nor regulated by OSHA as a carcinogen.

4. First Aid Measures

INGESTION: If accidentally swallowed, dilute by drinking large quantities of water. Immediately contact poison control center or hospital emergency room for any other additional treatment directions.

INHALATION: Remove to fresh air.

SKIN: In case of irritation, flush with water.

EYES: Immediately flush eyes with plenty of water. Call a physician if irritation persists.

5. Fire Fighting Measures

Flash point	None wet/Dry solids:>93C (200F)
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Autoignition temperature	Not applicable

Will not burn unless water has evaporated. Dried material may burn.

In case of fire, water should be used to keep fire-exposed containers cool.

6. Accidental Release Measures

Large quantities: Enclose with diking material to prevent seepage into natural bodies of water, then consult Borden, Inc. Small quantities: Soak up with absorbent material and remove to a chemical disposal area.

7. Handling and Storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety practices.

INHALATION: Avoid prolonged or repeated breathing of vapor.

SKIN: Avoid prolonged or repeated contact with skin and clothing.

EYES: Avoid prolonged or repeated contact with eyes.

7.2 Storage:

Harmed by freezing. Cannot be made usable after freezing.

Store in a cool, dry place.

Do not store in bare metal drums or cans.

8. Exposure Controls/Personal Protection

8.1 Exposure Controls

If airborne contaminants are generated when the material is heated or handled, sufficient ventilation in volume and air flow patterns should be provided to keep air contaminant concentration levels below acceptable criteria.

8.2 Personal Protection

Where air contaminants can exceed acceptable criteria, use NIOSH/MSHA approved respiratory protection equipment. Respirators should be selected based on the form and concentration of contaminants in air in accordance with OSHA 29 CFR 1910.134 or other applicable standards or guidelines.

8.3 Exposure Guidelines

None established

9. Physical and Chemical Properties

Appearance	Milk white liquid
Odor	Mild
Specific gravity	~1.12
pH	~4.5 @ 25C
Solubility in water	Miscible
Vapor pressure @ 25 C	17.5 mm Hg @ 20C
Vapor density (air=1)	0.62 water
Evaporation rate (butyl acetate=1)	<1 water
Boiling point, 760 mm Hg	212F

10. Stability and Reactivity

Normally stable as defined in NFPA 704-12(4-3.1).

Decomposition products may include:

Oxides of carbon.

Hazardous polymerization:

Will not occur.

11. Toxicological Information

This product has not been tested by Borden.

12. Ecological Information

Not determined.

13. Disposal Considerations

Recover free liquid. Absorb residue and dispose of according to local, state/provincial, and federal requirements.

14. Transport Information

14.1 U.S. Department of Transportation (DOT)

The data provided in this section is for information only and may not be specific to your package size. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

Not Regulated

14.2 Canadian Transportation of Dangerous Goods (TDG)

Not determined.

15. Regulatory Information (Selected Regulations)

15.1 U.S. Federal Regulations

OSHA Hazard Communication Standard 29CFR1910.1200

This material is not a "health hazard" or a "physical hazard" as determined when reviewed according to the requirements of the Occupational Safety and Health Administration 29 CFR Part 1910.1200 "Hazard Communication" Standard.

SARA Title III: Section 311/312

Immediate health hazard

SARA Title III Section 313 and 40 CFR Part 372

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.

None required per SARA TITLE III SECTION 313.

TSCA Section 8(b) Inventory

All reportable chemical substances are listed on the TSCA Inventory. We rely on certifications of compliance from our suppliers for chemical substances not manufactured by Borden.

15.2 Canadian Regulations

Workplace Hazardous Materials Information System (WHMIS)

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

Not a controlled product

Canadian Environmental Protection Act (CEPA)

All reportable chemical substances are listed on the Domestic Substances List (DSL) or otherwise comply with CEPA new substance notification requirements.

National Pollutant Release Inventory (NPRI)

This product contains the following chemical(s) subject to the reporting requirements of the Canadian Environmental Protection Act (CEPA) subsection 16(1), National Pollutant Release Inventory.

None required.

16. Other Information

User's Responsibility

The OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace Hazardous Materials Information System (WHMIS) require that the information contained on these sheets be made available to your workers. Instruct your workers to handle this product properly.

Disclaimer

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

CUR ISSUE 08-OCT-96
PREVIOUS ISSUE: 06-SEP-96

PRINT DATE: April 9, 1997 02:02 PM

040 16-.355P-. Order #419362 Ship to #33811060

THIS IS THE LAST PAGE

Glues and Adhesives

Material Safety Data Sheet

Hot melt glue used on all of Fisher Hamilton's edge bands

Material Safety Data Sheet

May be used to comply with
 OSHA'S Hazard Communication Standard,
 29 CFR 1910.1200. Standard must be
 consulted for specific requirements.

U.S. Department of Labor
 Occupational Safety and Health Administration
 (Non-Mandatory Form)
 Form Approved
 OMB No. 1218-0072

IDENTITY (As Used on Label and List)

DORUS KS 205 N

Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be marked to indicate that.

Section I

Manufacturer's Name
 Dr. Rudolph Scheiber

Emergency Telephone Number
 07362/81160

Address (Number, Street, City, State and ZIP Code)
 D-7085 Bopfingen

Telephone Number for Information
 07362/81160

West Germany

Date Prepared

November 15, 1999
 Signature of Preparer (optional)

Section II - Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity, Common Name(s))	OSHA PEL	ACGIH TLV	Other Limits Recommended	% (optional)
---	----------	-----------	--------------------------	--------------

RUS Hot Melt adhesives are not considered to be hazardous materials in the solid state. In the molten states, the typical precautions for handling hot, sticky, viscous melts must be observed.

Section III - Physical/Chemical

Boiling Point n.a.	Specific Gravity (H ₂ O = 1) 1.25
Vapor Pressure (m Hg) n.a.	Melting Point 114°C R & B
Vapor Density (AIR = 1) n.a.	Evaporation Rate (Butyl Acetate = 1) n.a.
Solubility in Water nil	
Appearance and Odor Solid granules of beige color, not smelling.	

Section IV - Fire and Explosion Hazard Data

Flash Point (method Used)	Flammable Limits	LEL	UEL
250°C (COC) DIN 51758	300°C DIN 51794		
Extinguishing Media	water, CO ₂ , foam, dry chemical		

Special Fire Fighting Procedures

Unusual Fire and Explosion Hazards

Section V - Reactivity Data

Stability	Unstable		Conditions to avoid
	Stable	X	

Incompatibility (Materials to Avoid)

Hazardous Decomposition or Byproducts

Hazardous Polymerization	May Occur		Conditions to avoid
	Will Not Occur	X	

Section VI - Health Hazard Data

Route(s) of entry	Inhalation?	Skin?	Ingestion?
-------------------	-------------	-------	------------

Health Hazards (Acute and Chronic)
 Heating above recommended temperature may cause hazardous fumes.
 Adequate ventilation must be provided.

Carcinogenicity: Known	NTP	IARC Monographs?	OSHA Regulated?
---------------------------	-----	------------------	-----------------

Signs and Symptoms of Exposure
 In the molten state the adhesive may cause burning when contacting.

Medical Conditions
 Generally aggravated by Exposure
 Not Known

Emergency and First Aid Procedures
 If molten adhesive contacts bare skin, cool rapidly with cold water and secure prompt medical attention for thermal burn.

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled
 Granules are slipping hazard. Sweep up carefully to prevent fall.

Waste Disposal Method
 Incineration. Dispose in accordance with local regulation.

Precautions to Be Taken in Handling and Storing

Other Precautions
 Avoid temperatures above 40° to prevent blocking.

Section VIII - Control Measures

Respiratory Protection (Specify Type)
 Not required if adequate ventilation is provided.

Ventilation	Local Exhaust Recommended	Special
	Mechanical (General) Ventilation hoods, fans	Other

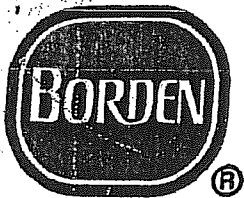
Protective Gloves For working with hot melt	Eye Protection Goggles for hot melt
--	--

Other Protective Clothing or Equipment
 Suitable to protect from hot melt

Glues and Adhesives

Material Safety Data Sheet

Glue used on Fisher Hamilton's glue machine for gluing
solid lumber on door and drawer fronts



MATERIAL SAFETY DATA SHEET

FOR INDUSTRIAL USE ONLY

DESCRIPTION: PERKINS VL-97

PAGE 1 OF 6

1. Chemical Product and Company Identification

DESCRIPTION: PERKINS VL-97
PRODUCT CODE: 19-VL97P-.
PRODUCT TYPE: LIQUID PVAC ADHESIVE
APPLICATION: PVAC EMULSION

Manufacturer/Supplier Information

MSDS Prepared by:
Borden Chemical, Inc.
155 West A Street, Bldg. A-1
Springfield, OR 97477

Emergency Phone Number
Poison Control Center
1-800-228-5635 ext 261

For additional health, safety or regulatory information, call 541-744-3256.

2. Composition, Information on Ingredients

The ingredients listed below have been associated with one or more immediate and/or delayed(*) health hazards. Risk of damage and effects depends upon duration and level of exposure. BEFORE USING, HANDLING, OR EXPOSURE TO THESE INGREDIENTS, READ AND UNDERSTAND THE MSDS.

50-00-0 *Formaldehyde

% by weight

3. Hazards Identification

3.1 Emergency Overview

Appearance	Opaque liquid
Odor	Faint sweet

Not a significant fire hazard.

HMIS Rating

HEALTH = 1 (slight)
FLAMMABILITY = 0 (minimal)
REACTIVITY = 0 (minimal)
CHRONIC = *

3.2 Potential Health Effects

Immediate Hazards

INGESTION: No hazards known to Borden.
INHALATION: No hazards known to Borden.
SKIN: May cause irritation on prolonged or repeated contact.
EYES: May cause irritation on prolonged or repeated contact.

Delayed Hazards**Formaldehyde 50-00-0****POTENTIAL CANCER HAZARD.**

Rats chronically exposed to 14 ppm formaldehyde contracted nasal cancers. Based on animal data and limited epidemiological evidence, NTP and IARC have listed formaldehyde as a probable human carcinogen. OSHA regulates formaldehyde as a potential human carcinogen.

May cause allergic skin reaction. Some reports suggest that formaldehyde may cause respiratory sensitization, such as asthma, and that pre-existing respiratory and skin disorders may be aggravated by exposure.

OSHA has identified 0.5 ppm as the "Action Level", 29CFR 1910.1048. Please refer to the OSHA Standard for guidance applicable to your specific operations.

4. First Aid Measures

INGESTION: If accidentally swallowed, dilute by drinking large quantities of water. Immediately contact poison control center or hospital emergency room for any other additional treatment directions.
SKIN: In case of irritation, flush with water.
EYES: Immediately flush eyes with plenty of water. Call a physician if irritation persists.

5. Fire Fighting Measures

Flash point	Not applicable
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Autoignition temperature	Not applicable

Will not burn.

In case of fire, use water spray, dry chemical, foam or CO2. Use water to keep fire-exposed containers cool.

6. Accidental Release Measures

Large quantities: Enclose with diking material to prevent seepage into natural bodies of water, then consult Borden, Inc. Small quantities: Soak up with absorbent material and remove to a chemical disposal area.

7. Handling and Storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing. Wash thoroughly after handling.

SKIN: Avoid prolonged or repeated contact with skin and clothing.

EYES: Avoid prolonged or repeated contact with eyes.

7.2 Storage

Keep from freezing.

Do not store near strong oxidizing chemicals.

Store in a tightly closed container.

8. Exposure Controls/Personal Protection

8.1 Exposure Controls

No special control measures necessary under normal conditions of use.

8.2 Personal Protection

Use goggles if contact is likely. Wear impervious gloves as required to prevent skin contact.

8.3 Exposure Guidelines

Formaldehyde 50-00-0

ACGIH TLV: 0.3 ppm (0.37 mg/m³) Ceiling, A2 - See Appendix A

OSHA PEL: 0.75 ppm(0.9 mg/m³) TWA; 2 ppm(2.5mg/m³)15min STEL

9. Physical and Chemical Properties

Appearance	Opaque liquid
Color	White to tan
Odor	Faint sweet
Specific gravity	~1.08-1.10
pH	4.0-6.0 @ 25C
Freezing point	<0C
Solubility in water	Miscible
Vapor pressure @ 25 C	~17.5 mm Hg @ 20C

9. Physical and Chemical Properties

Vapor density (air=1) 0.62 (water), air=1
Evaporation rate (butyl acetate=1) As water, <1
Boiling point, 760 mm Hg ~100C

10. Stability and Reactivity

Normally stable as defined in NFPA 704-12(4-3.1).

Incompatibilities:

Oxidizers, acids or bases.

Decomposition products may include:

Oxides of carbon.

Hazardous polymerization:

Will not occur.

11. Toxicological Information

See Section 3 Hazards Identification information.

Formaldehyde 50-00-0

LC50: rat=203 mg/m³ (RTECS)

LD50: orl-rat=0.8 g/kg (Merck); skn-rbt=0.27 g/kg (Sax)

12. Ecological Information

Not determined.

13. Disposal Considerations

Recover free liquid. Absorb residue and dispose of according to local, state/provincial, and federal requirements.

14. Transport Information**14.1 U.S. Department of Transportation (DOT)**

The data provided in this section is for information only and may not be specific to your package size. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

Non-Regulated

14.2 Canadian Transportation of Dangerous Goods (TDG)

Not determined.

15. Regulatory Information (Selected Regulations)

15.1 U.S. Federal Regulations

OSHA Hazard Communication Standard 29CFR1910.1200

This material presents possible health hazards as determined when reviewed according to the requirements of the Occupational Safety and Health Administration 29 CFR Part 1910.1200 "Hazard Communication" Standard.

SARA Title III: Section 311/312

Delayed health hazard

SARA Title III Section 313 and 40 CFR Part 372

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.

None required per SARA TITLE III SECTION 313.

TSCA Section 8(b) Inventory

All reportable chemical substances are listed on the TSCA Inventory. We rely on certifications of compliance from our suppliers for chemical substances not manufactured by Borden.

15.2 Canadian Regulations

Workplace Hazardous Materials Information System (WHMIS)

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

Not a controlled product

Canadian Environmental Protection Act (CEPA)

This product contains one or more chemical substances not included on either the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL).

National Pollutant Release Inventory (NPRI)

This product contains the following chemical(s) subject to the reporting requirements of the Canadian Environmental Protection Act (CEPA) subsection 16(1), National Pollutant Release Inventory.

None required.

16. Other Information

User's Responsibility

The OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace Hazardous Materials Information System (WHMIS) require that the information contained on these sheets be made available to your workers. Educate and train your workers regarding OSHA and WHMIS precautions. Instruct your workers to handle this product properly. Consult with appropriate experts to guard against hazards associated with use of this product and its ingredients.

Disclaimer

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the product shall conform to contracted specifications, and that the product does not infringe any valid United States or Canadian patent. No claim of any kind shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller be liable for incidental or consequential damages, whether Buyer's claim is based on contract, breach of warranty, negligence or otherwise.

CUR ISSUE 08-OCT-96
PREVIOUS ISSUE: 12-SEP-96