U.S. Department
of Transportation

**Research and
Special Programs
Administration**

400 Seventh Street, S.W
Washington, D.C. 20590

APR 15 1998

Mr. Gene Secor
Environmental Health and Safety Department
H.B. Fuller Automotive Company
31601 Research Park Drive
Madison Heights, MI 48071

Dear Mr. Secor:

This is in response to your letters and telephone conversations with members of my staff and the Office of Hazardous Materials Technology asking if an adhesive with the proper shipping description "Self heating, solid, organic, n.o.s., 4.2, UN 3088," formulated as either PG II or PG III, is subject to the requirements specified in the Hazardous Materials Regulations (49 CFR Parts 171-180) when placed between automotive parts and offered for transportation on racks with no outside packaging. You stated the adhesive is applied to provide structural support to the parts before they are cured.

You provided the following additional information:

1. the parts are large metal assemblies such as rear tailgates, doors, hood decks, and fenders used predominantly on mini vans and small utility vehicles.

2. a maximum amount of 2.6 ounces of the adhesive is placed around the outer periphery of the parts in a 16-foot long continuous bead that is 3 mm wide and high, and the parts are sandwiched together.

3. the parts are cured in an oven at 300°F to 350°F.

4. the maximum temperature developed on the surface of the parts when they are cured is 300°F to 350°F.

The answer is no, the adhesive no longer meets the definition of a Division 4.2 material in the packaging and transportation scenario described. Thank you for your inquiry. If we can assist you further, please contact us.

Sincerely,

Hattie L. Mitchell

Hattie L. Mitchell, Chief
Regulatory Review and Reinvention
Office of Hazardous Materials Standards

Kaiser
File: 172.101
SC: 300, 410

H.B. Fuller Automotive Company

31601 Research Park Drive
Madison Heights, Michigan 48071
(248) ~~(810)~~ 585-2200 • (800) 633-7789
FAX (810) 585-3699

October 04, 1996

USDOT
Research and Special Programs Administration
Office of HazMat Standards
400 Seventh St., S.W.
Washington D.C. 20590-0001

ATTN: Mr. Ed Mazzello

We have many customers who purchase products regulated by DOT as follows:

Self-heating, solid, organic, n.o.s., 4.2 UN3088, PG II (Contains epoxy resins)

Self-heating, solid, organic, n.o.s., 4.2, UN3088, PG III (Contains epoxy resins)

These materials are used in various automotive assemblies to provide structural strength after curing. Almost always the uncured material is sandwiched between metal pieces of the various assemblies while waiting to be cured.

A customer has raised the following query: The regulated material is applied as described above but the assemblies are then shipped with uncured adhesives to another plant for finishing and curing. The amount of regulated material (adhesive) on these assemblies is small compared to a shipping container of this same adhesive. What is the regulatory status of the assemblies in transportation? My interpretation is that the assemblies are not regulated for transportation because the adhesive is a small part of the "whole" and the adhesive is not in a container.

Your comments on these questions are appreciated.

Regards,

GENE SECOR
Eastman Operations Coordinator

FAX

1-23-98

Date 1/16/98

Number of pages including cover sheet 3

FROM

~~TO:~~ Gene Secor
H.B. Fuller Automotive Co.
31601 Research Park Dr.
Madison Heights, MI
48071

Phone (248) 585-2200
Fax Phone (248)585-3699

CC:

~~FROM:~~ Eileen Edmonson
To: USDOT, Research and Special Programs Administration
DHM-12
400 7th Street, SW
Washington, DC 20590-0001

Phone 202-366-8553
Fax Phone 202-366-3753

Eileen - please see the attached 2 Pg. letter.

REMARKS: ☐ Urgent ☐ For your review ☒ Reply ASAP ☐ Please Comment

Dear Mr. Secor:

I presented your questions about how to test your adhesive as a Division 4.2 in the packaging your automotive manufacturing customers use, that is sandwiched between automotive parts as part of the metal curing process. One of our chemists, Dr. Charles Schultz, asked me to ask you the following questions. He said the information in the file you provided is not sufficient to base an opinion as to whether these parts should be regulated. He said we need more detailed information on:

1. What types of parts are involved?
2. How much adhesive is applied to the parts?
3. What is the curing temperature?
4. What is the maximum temperature developed on the surface of the parts when they are cured?

If you wish to discuss these issues with Dr. Shultz directly, his telephone number is (202) 366-4545.

H.B. Fuller Automotive Company

31601 Research Park Drive
Madison Heights, Michigan 48071
(810) 585-2200 • (800) 633-7789
FAX (810) 585-3699

January 23, 1998

Eileen Edmonson
USDOT, RSPA
DHM-12
400 7th St. S.W.
Washington, D.C. 20590-0001

REFERENCE: Your Fax dated 1/16/98

Dear Ms. Edmonson:

I have pursued the questions in the FAX with Dr. Charles Schultz as you suggested. A synopsis of our discussion follows:

1. What types of parts are involved?

Answer: Large metal assemblies such as rear tailgates, doors, and hood decks, and fenders used in the automobile industry - - - predominately on mini vans and small utility vehicles.

2. How much adhesive is applied to the parts?

Answer: Worse case, a maximum of 2.6 ounces of adhesives would be extruded around the periphery of a part and then sandwiched between overlapping metal sheets; Bead is 3mm wide and high by a maximum continuous length of 16 feet. Parts are then put in a rack to await fabrication.

3. What is the curing temperature?

Answer: Actual parts with adhesive are cured in an oven at 300°F to 350°F. This generally occurs during the cycle used to cure (dry) freshly applied paint.

4. What is the maximum temperature developed on the surface of the parts when they are cured?

Answer: 300° to 350°F during the paint cure cycle. Although curing can take place very slowing at ambient temperatures, the large quantity of metal in an assembly dissipates heat as rapidly as it is formed so there is no noticeable surface temperature rise.

Dr. Schultz and I are both in agreement that the situation described here and in my previous correspondence poses no hazard in transportation and the assemblies would be considered unregulated(absent any other hazards) cartage.

Eileen, we would like to get this resolved; as always, we thank the Department for its help. Feel free to call me at (248) 583-1267 if there are any questions.

Regards,

Gene Secor

GENE SECOR
Environmental Health & Safety Department

Encl

Re: H.B. Fuller Automotive Company letter of 10/4/96 concerning automotive parts containing uncured adhesive.

The information in this file is not sufficent to base an opinion as to whether these parts should be regulated. We need more detailed information on:

What types of parts are involved?
How much adhesive is applied to the parts?
What is the curing temperature?
What is the maximum temperature developed on the surface of the parts when they are cured?

C.W. Schultz
1/15/98

TELEPHONIC CONVERSATION RECORD

	ROUTING	
Specialist Placing Call: Eileen Edmonson	SYMBOL	INT
Date of Call: 1/13/98		
Person(s) Contacted: Gene Secor, Eastman Operations Coordinator		
Their Organization: H.B. Fuller Automotive Company, 31601 Research Park Drive, Madison Heights, MI 48071, (248) 585-2200		
Date of Incoming Letter: 10/4/96		
Specific Subject (including section #'s and key words): Can "Self-heating, solid, organic, n.o.s., 4.2, UN 3088, PG II and PG III, (contains epoxy resins) used an adhesive to provide structural strength between auto parts prepared for curing be shipped as unregulated material?		

Summary: In a follow up conversation to a telephone message I'd left Mr. Secor, I explained that the Sciences Branch pointed out how he is responsible for determining the hazard class of the material now that it is exposed to the air and sandwiched between the metal auto parts. Mr. Secor agreed and stated he believed there was insufficient material present to meet the Division 4.2 hazard class. However, he requested that I present him with that statement in writing. I spoke with Hattie Mitchell on the matter. She said this type of testing was reviewed in the past by Charles Schultz and asked me to present it to him for his opinion.

Comments for Further Action: Discuss Division 4.2 testing with Charles Schultz. Present response to Hattie.

Specialist Signature: Eileen Edmonson

Date: 1/13/98

TELEPHONIC CONVERSATION RECORD

	ROUTING	
Specialist Placing Call: Eileen Edmonson	SYMBOL	INT
Date of Call: 12/10/97, 12/16/97		
Person(s) Contacted: Gene Secor, Eastman Operations Coordinator		
Their Organization: H.B. Fuller Automotive Company, 31601 Research Park Drive, Madison Heights, MI 48071, (248) 585-2200		
Date of Incoming Letter: 10/4/96		
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Summary: Mr. Secor is inquiring on behalf of his customers. He said his company sells the adhesive in 5 gallon pails and 55 gallon drums to car manufacturers, like Ford Co. He said these companies sandwich the material approximately 0.015 -1 inches thick between 2 pieces of metal, like doors parts, etc. Mr. Secor said 1 or 2 lbs of material is used between parts. The motor vehicle companies then transport these parts without packaging by motor vehicle over public highways to a facility with a curing oven. Mr. Secor said during this stage the material is exposed to the air, but, to his knowledge, there have been no incidents because not enough of the material is present for the material to demonstrate its hazard. He also said the metal parts that surround the material aid in suppressing the reaction of the material. He said the material can cure without being treated to the heat of a curing oven, but it would take a long time. I asked him to supply me with a material safety data sheet. On 12/16/97, he said he sent me the material safety data sheet by facsimile on 12/12/97 for the PG II material, since it was the worst case, and the report on the classification test procedures performed on the material.

Comments for Further Action: Supply DHM-21 with the material and incoming Mr. Secor submitted and ask if they agree with his determination that the material is unregulated when sandwiched between metal auto parts.

Specialist Signature: Eileen E. Edmonson

Date: 12/16/97

H.B. Fuller Automotive Company

31601 Research Park Drive
Madison Heights, Michigan 48071
(248) (810) 585-2200 • (800) 633-7789
FAX (810) 585-3699

Karen
File: 172.101
SC: 300, 410

DHM-21 - Do you agree with this gentleman's opinion? How would you like me to respond?

Eileen, DHM-12
X64481

October 04, 1996

USDOT
Research and Special Programs Administration
Office of HazMat Standards
400 Seventh St., S.W.
Washington D.C. 20590-0001

ATTN: Mr. Ed Mazzello

We have many customers who purchase products regulated by DOT as follows:

Self-heating, solid, organic, n.o.s., 4.2 UN3088, PG II (Contains epoxy resins)

Self-heating, solid, organic, n.o.s., 4.2, UN3088, PG III (Contains epoxy resins)

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A customer has raised the following query: The regulated material is applied as described above but the assemblies are then shipped with uncured adhesives to another plant for finishing and curing. The amount of regulated material (adhesive) on these assemblies is small compared to a shipping container of this same adhesive. What is the regulatory status of the assemblies in transportation? My interpretation is that the assemblies are not regulated for transportation because the adhesive is a small part of the "whole" and the adhesive is not in a container.

Your comments on these questions are appreciated.

LMTC 10:18A 1/1/98 EE

Regards,

GENE SECOR
Eastman Operations Coordinator

ENTERED
12/23/97
amp

Mr. Schultz -
I understand from Mattie that you did work on Division 4.2 tests. Mr. Secor says the physical state & amount of this material his customer ships cannot be tested in accordance with the UN tests & criteria for this hazard class. Mr. Secor believes there is an insufficient amt. of the material in the pkg to meet the hazard class. Do you think he's right? Eileen x64481 1/14

Whether the material (4.2 PG II/III & to begin with) incorporated in the part is still 4.2 or something else is up to the shipper to decide. They should take the whole thing (part?) into consideration, not just the raw material or component.

C. Ke
12/24/97

TELEPHONIC CONVERSATION RECORD

	ROUTING	
Specialist Placing Call: Eileen Edmonson	SYMBOL	INT
Date of Call: 12/10/97, 12/16/97		
Person(s) Contacted: Gene Secor, Eastman Operations Coordinator		
Their Organization: H.B. Fuller Automotive Company, 31601 Research Park Drive, Madison Heights, MI 48071, (248) 585-2200		
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Comments for Further Action: Supply DHM-21 with the material and incoming Mr. Secor submitted and ask if they agree with his determination that the material is unregulated when sandwiched between metal auto parts.

Specialist Signature: Eileen Edmonson

Date: 12/16/97

H.B. Fuller Automotive Company

31601 Research Park Drive
Madison Heights, Michigan 48071
(810) 585-2200 • (800) 633-7789
FAX (810) 585-3699

MAIN FAX NUMBER:	248 (810) 585-3699 ☐
SALES DEPT. FAX NUMBER:	(810) 585-4897 ☐
ORDER ENTRY DEPT. FAX NUMBER:	(810) 585-3799 ☐

FACSIMILE COVER SHEET

TO:	EILEEN EDMONSON
COMPANY:	US DOT
FAX NUMBER:	202 366 3753
FROM:	GENE SECOR
PHONE NUMBER:	(248) 248 583 1267
DATE:	12-12-97

URGENT ☐ FOR YOUR REVIEW ☐ AS REQUESTED ☒
REPLY ASAP ☐ PLEASE COMMENT ☐ FYI ☐

PAGES INCLUDING THIS COVER SHEET: 13

MESSAGE: Per our discussion, Attached is MSDS for PG-II Matl (Worst Case), Test Report, and copy of my letter to DOT with additional comments clarifying end use. Call me if any of questions

Thanks.
Gene Secor

C: _____

H.B. Fuller Automotive Company

31601 Research Park Drive
Madison Heights, Michigar 48071
(810) 585-2200 • (800) 633-7789
FAX (810) 585-3699

October 04, 1996

USDOT
Research and Special Programs Administration
Office of HazMat Standards
400 Seventh St., S.W.
Washington D.C. 20590-0001

Sold by Fuller in 5-gal Pails and 55-gal drums

ATTN: Mr. Ed Mazzello

We have many customers who purchase products regulated by DOT as follows:

Self-heating, solid, organic, n.o.s., 4.2 UN3088, PG II (Contains epoxy resins)

Self-heating, solid, organic, n.o.s., 4.2, UN3088, PG III (Contains epoxy resins)

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Your comments on these questions are appreciated.

Regards,

Gene Secor

GENE SECOR
Eastman Operations Coordinator

Product is then skived or pumped From pails or drums by our customers and sandwiched between metal as above. Mat'l, as applied, is no greater than 0.015 inch thickness by perhaps 1-inch wide at times but. It could go around the periphery of a door panel etc which is the Article alluded to above.

Gene Secor

DustTech Inc.

Creamery Commercial Park
U.S. Highway 206 & Rt. 15
Box 222
Augusta, NJ 07822
201-579-3188

STUDIES FOR CLASSIFICATION OF SELF-HEATING SUBSTANCES (TWO LABORATORY SAMPLES)

DTI Report 2539

- to -

H.B. Fuller Automotive Products, Inc.
Madison Heights, Michigan

June 8, 1995

William J. Crumce, M.S., FAIC
Consulting Chemist

DTI Report 2539
H.B. Fuller Automotive Products, Inc.

I. INTRODUCTION

This report summarizes the results of a series of experiments performed by Dust Tech, Inc., Augusta, New Jersey, for H.B. Fuller Automotive Products, Inc., of Madison Heights, Michigan, under Purchase Order No. F18517. Contact with H.B. Fuller Automotive Products, Inc., was maintained through Mr. Gene Seacore.

Self-heating evaluations of two samples were conducted using the UN Test Method (14.3.4) to determine UN packaging class (4.2).

II. MATERIALS

Two samples were submitted, which were tested as received. These were identified as "WC2290B" and "WC2390", epoxy adhesives; WC2290B was blue, and WC2390 was gray-green.

III. DESCRIPTION OF EXPERIMENTS

UN Test Method for Self-Heating Substance

The principle of the method (14.3.4) is to keep samples in stainless-steel screen cubes at constant temperature for 24 hours, making observations as to whether the temperature of the sample exceeds 200°C. (This test method is a modification of the Bowes-Cameron cage test, a self-heating test method for carbon.)

The test procedure is performed in a hot air circulating-type oven (Blue M) with an inner volume of 12-15 liters, capable of controlling the internal temperature at 140°C ± 2°C.

Cubic sample containers with 2.5-cm and 10-cm sides, made of 0.15" stainless-steel wire screening with a mesh opening of 0.53 mm (28 mesh),

with the top surface open, are used. Each container is housed in a cubic container cover made from 0.4-mm stainless-steel wire screen with a mesh opening of 0.595 mm (26 mesh) and slightly larger than the sample container, so that the container fits in this cover. In order to avoid the effect of air circulation, another stainless-steel cage, made from 0.4-mm wire screen with a mesh opening of 0.595 mm (26 mesh) and 15 cm x 15 cm x 25 cm in size, is further installed to house the covered sample container.

Stainless-steel-sheathed thermocouples of 1/8" diameter are used for temperature measurement. One is placed in the center of the sample and another between the sample container and the oven wall. The temperatures are measured continuously.

The sample powder or granulate (in the commercial form), is filled to the brim of the sample container, and the container tapped several times. If the sample settles, more is added. If the sample is heaped, it is leveled to the brim. The container is housed in the cover and hung at the center of the oven.

The oven temperature is raised to 140°C and kept there for 24 hours. The temperature of the sample is recorded.

The first test is conducted with the 10-cm cube sample. Observations are made to determine if spontaneous ignition occurs or if the temperature of the sample exceeds 200°C. If negative results are obtained, no further testing is necessary. If positive results are obtained, a second test is conducted with a 2.5-cm cube sample to determine the data for packing group assignment.

IV. RESULTS OF EXPERIMENTS

WC2390 (Gray-Green Paste)

Positive in 10.0-cm cube Sample thermocouple read 10°C to 35 minutes, rose slowly to 20°C at 43 minutes, rose quickly to 50°C at 49 minutes, 100°C at 50 minutes, 150°C at 51 minutes, 200°C at 53 minutes, and crested at 215°C at about 70 minutes.

Positive in 2.5-cm cube Sample thermocouple read 10°C at start, 30°C at 4 minutes, 55°C at 8 minutes, 75°C at 11 minutes, 85°C at 12 minutes, 200°C at 13 minutes, crested at 220°C at about 14 minutes.

WC2290B (Blue Paste)

Positive in 10.0-cm cube Sample thermocouple read 12°C at start, 23°C at 20 minutes, 44°C at 40 minutes, 65°C at 60 minutes, 80°C at 70 minutes, 108°C at 74 minutes, 180°C at 78 minutes, 195°C at 80 minutes, 210°C at 88 minutes, crested at 214°C at about 101 minutes.

Negative in 2.5-cm cube Sample thermocouple read 12°C at start, 35°C at 4 minutes, 63°C at 8 minutes, 82°C at 12 minutes, 95°C at 16 minutes, 104°C at 20 minutes, 128°C at 24 minutes, crested at 193°C at about 27 minutes.

V. DISCUSSION

Sample WC2390 yielded temperatures in excess of 200°C in both 10.0-cm and 2.5-cm cube configurations.

Sample WC2290B yielded temperatures in excess of 200°C in the 10.0-cm cube but not in the 2.5-cm cube configuration.

VI. SUBSTANCE CLASSIFICATION

A substance should be classified in Division 4.2 if, in the first test using the 10-cm cube sample, spontaneous ignition occurs, or the temperature of the sample exceeds 200°C during the 24-hour testing time.

Packing groups are assigned as follows:

(a) Packing Group II is assigned to substances which give positive results when tested with the 2.5-cm cube sample.

(b) Packing Group III is assigned to substances which give positive results when tested with the 10-cm cube sample, but which give a negative result with a 2.5-cm cube sample.

Using these criteria, Sample WC2390 is considered Div. 4.2., Packing Group II. Sample WC2290B is considered Div. 4.2, Packing Group III.

WC-2390
Date Printed: 12/11/97

MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY INFORMATION

EFTEC North America, L.L.C.
31601 Research Park Drive
Madison Heights, MI 48071
Phone: 800-633-7789
Fax: 810-585-3699

MSDS INFORMATION

Preparation Date: 04/29/97
Supersedes: 09/27/96
Prepared By: Industrial Hygiene
Phone Number: 612-236-5842

Medical Emergency Phone Number: 1-800-228-5635 ext 018
Transport Emergency Phone Number (CHEMTREC): 1-800-424-9300

PRODUCT INFORMATION

Product Name/Number: WC-2390
Product Description (product use): Epoxy resin

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

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). Unlisted ingredients are not 'hazardous' per the OSHA standard and/or are not found on the WHMIS ingredient disclosure list.

Chemical/CAS Number	Percent	OSHA PEL	ACGIH TLV
Epoxy resin	50-70%	Not estab.	Not estab.
Polyamide resin	10-30%	Not estab.	Not estab.
Epoxy-amine adduct	1-5%	Not estab.	Not estab.
Calcium oxide (1305-78-8) LD50: No data found LC50: No data found	5-10%	5 mg/M3	2 mg/M3

See Section 16 for additional information.

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Potential skin sensitizer

POTENTIAL HEALTH EFFECTS

Eyes: Eye contact with liquid product will cause irritation.

Skin: Epoxy resins are potential skin sensitizers.

Inhalation: Inhalation is not an anticipated route of exposure.

Ingestion: Harmful if swallowed.

Chronic: No anticipated chronic effects.

REGULATED CARCINOGEN STATUS:

This product does not contain regulated levels of NTP, IARC, ACGIH or OSHA listed carcinogens.

Existing Health Conditions Affected by Exposure: No known effects on other illnesses.

SECTION 4: FIRST AID MEASURES

If in eye: Flush immediately with water for 15 minutes. Consult a physician if irritation persists.

If on skin: Wash affected area with soap and water. Launder contaminated clothing before reuse.

If ingested: If person can swallow, give one glass of water or milk. Do not induce vomiting. Get immediate medical attention. Never give anything by mouth to an unconscious person.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point/Method: 300+ degrees F Pensky-Martens

Upper Explosive Limit/Lower Explosive Limit: Not applicable

Autoignition Temperature: Not applicable

Appropriate Extinguishers: Use water spray, foam, dry chemical or carbon dioxide.

Special Fire Fighting Procedures: Persons exposed to products of combustion should wear self-contained breathing apparatus and full protective equipment.

Unusual Fire and Explosion Hazards: None known.

Hazardous Combustion Product: Incomplete combustion can yield low molecular weight hydrocarbons, carbon monoxide, nitrogen compounds

SECTION 6: ACCIDENTAL RELEASE MEASURES

Spill or Leak Procedures: Wear rubber gloves and wipe up with absorbent material. Residue may be removed with a chlorinated solvent.

SECTION 7: HANDLING AND STORAGE

HANDLING INFORMATION

Avoid skin contact with product at all times.

STORAGE INFORMATION

Consult the Technical Data Sheet for specific storage instructions.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye Protection: Safety glasses.

Skin Protection: Prevent contact by using rubber gloves and appropriate protective clothing. Launder contaminated clothing before reuse.

Respiratory Protection: Not normally required. Use NIOSH/MSHA approved respirator if conditions warrant.

Ventilation: General dilution ventilation.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Paste
Color:	Green
Odor:	Mild (Ethereal)
Odor Threshold:	Not established
Weight per Gallon:	11.3 lbs.
Specific Gravity:	1.36
% Solids by Weight:	99.5
pH:	Not applicable
Boiling Range:	Not established
Freezing/Melting Point:	Not established
Vapor Pressure:	Not established
Vapor Density:	Not established
Evaporation Rate:	Not established

Water/Oil Partition Coefficient: Not established

SECTION 10: STABILITY AND REACTIVITY DATA

Stability: Stable

Incompatibility: Not established

Hazardous Decomposition:
Nitrogen compounds

Hazardous Polymerization: Will not occur

WC-2390
Date Printed: 12/11/97

SECTION 11: TOXICOLOGICAL INFORMATION

No data available

SECTION 12: ECOLOGICAL INFORMATION

No data available

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. Solidify and dispose of in an approved landfill. Consult state, local or provincial authorities for more restrictive requirements.

SECTION 14: TRANSPORTATION INFORMATION

UNITED STATES DEPARTMENT OF TRANSPORTATION (DOT)

DOT Proper Shipping Name:	Self-heating Solid, Organic N.O.S. (Epoxy Resin)
DOT Hazard Class/I.D. Code:	4.2, UN3088
DOT Label:	Spontaneously Combustible
DOT Packaging Group:	II

It is our opinion that the information provided here may be used to transport this product in compliance with Canadian Transportation of Dangerous Goods.

INTERNATIONAL TRANSPORTATION

IATA Proper Shipping Name:	Self-Heating Solid, Organic, N.O.S. (Epoxy Resin)
IATA Hazard Class:	4.2
IATA I.D. Code:	UN3088
IATA Label:	Spontaneously Combustible
IATA Packaging Group:	II

SECTION 15: REGULATORY INFORMATION

FEDERAL

Toxic Substances Control Act (TSCA)

Section 4 - Test Rule

This product contains the following chemical substance(s) that is(are) subject to a Section 4 Test Rule:

WC-2390
Date Printed: 12/11/97

Section 8(b) - Inventory Status

This product is in compliance with the Toxic Substances Control Act's inventory requirements.

Section 12(b) - Export Notice Requirements

This product contains a chemical substance that is currently on the EPA's Section 12(b) Export List. Within seven days of entering into a contract to export and certainly no later than the day of export, the agent of export must notify the EPA of their intent.

Contact the H.B. Fuller TSCA Compliance Manager at 612/481-4816 for the identity of the Section 12(b) chemical(s).

SARA TITLE III

Section 313: This product does not contain regulated levels of 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.

STATE REGULATIONS

California Proposition 65: Proposition 65, The Safe Drinking Water and Toxic Enforcement Act of 1986:

This product contains chemical(s) known to the state of California to cause cancer (c) or reproductive (r) damage.

< 0.1%	Crystalline silica (c) listed October 1, 1988	14808-60-7
<0.0003%	Epichlorohydrin (c)(r) listed October 1, 1987	106-89-8

WHMIS IDENTIFICATION/OTHER INTERNATIONAL REGULATIONS

D2B, B6

SECTION 16: ADDITIONAL INFORMATION

This product contains the following substance(s) identified by OSHA, WHMIS, or the ACGIH as hazardous. During normal use, the material will not present an exposure risk. Once the product has reached its final state and is abraded or disturbed, dusting and exposure may occur.

10-30% Calcium carbonate (1317-65-3)
Exposure limit total dust 15 mg/M3 (OSHA) 10 mg/M3 (ACGIH)
Exposure limit respirable dust 5 mg/M3 (OSHA)
LD50: No data found LC50: No data found

6.0% Talc-containing no asbestos fibers (14807-96-6)
Exposure limit total dust 15 mg/M3 (OSHA) 10 mg/M3 (ACGIH)
Exposure limit respirable dust 2 mg/M3 (OSHA) 2 mg/M3 (ACGIH)
LD50: No data found LC50: No data found

HMIS RATING

Health-2 Flammability-1 Reactivity-1

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

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, express 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 from 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.

H.B. Fuller Automotive Company

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