

FROM: S. M. ANDERSON

TO: J. DAMIANO
PITTSBURGH -- 6



1988 September 02

RE: FLAMMASTIC

I recently received the attached information on Flammastic which I thought you may find interesting.

A handwritten signature in cursive script, appearing to read "Scott M. Anderson".

Scott M. Anderson

/sma

Attachment

xc: J. M. Shaw - 60
D. E. Huddleston, Tennessee

ARD 003946



August 26, 1988

Mr. Scott Anderson
ALCOA
P.O. Box 150
Massena, NY 13662

Dear Mr. Anderson:

Pursuant to our telephone conversation of this morning, I am enclosing herewith a Material Safety Data Sheet for Flamemastic 71-A along with a copy of a Test Report of a study made of the quantity of asbestos fibers introduced into the atmosphere when cables are removed from a bundle which had been coated with Flamemastic 71-A.

As you will note, the MSDS for Flamemastic 71-A is quite old. We have not updated it because manufacture of the product was terminated over fifteen years ago.

I trust you will find this information helpful in your negotiations with the environmental protection people of New York state.

If we can be of further assistance, please do not hesitate to contact us.

Sincerely yours,
THE FLAMEMASTER CORPORATION

Samuel L. Engel, Sr.

Samuel L. Engel, Sr.,
Vice President, Research and Development

Flamemaster Corporation
11120 Sherman Way, P.O. Box 1458, Sun Valley, CA 91353-1458
Telephone: (818) 982-1650 or Telex: 19-4865

ARD 003947



ANALYTICAL RESEARCH LABORATORIES, INC.

160 TAYLOR STREET, P.O. BOX 369, MONROVIA, CALIFORNIA 91016

(213) 357-3247

1 March 1976

LL 26019

The following test was performed to determine whether a significant amount of asbestos fibers is released to the atmosphere when individual cables are removed from a group of cables that have been sprayed with Flamemastic 71A.

Eleven one inch cables and one cable bundle comprised of 3, one-half inch intertwined cables, were placed in a twelve inch P-W Western cable tray. The cables and tray were twelve feet long and the cables were individually attached to the tray. Flamemaster Corporation personnel sprayed the filled tray top and bottom with a 1/8" thick coating of Flamemastic 71A. The coating was allowed to dry for six days and the dried material had an average thickness of about 1/16". The coated tray and cables were brought to Analytical Research Laboratories for testing.

Asbestos fibers were monitored by three devices during the removal of the cables:

1. Analytical Research Lab., Inc. sampler (ARL - Stationary) - filter was mounted approximately three feet above the tray and equidistant from the ends of the tray.
2. Analytical Research Lab., Inc. sampler (ARL - Operator) - filter was attached to the person removing the cables, in his breathing zone.
3. Flamemaster Corp. - MSA portable sampler (FMEN - 1) - filter was held by a second operator at the point where the cable was being removed from the tray. This filter was from six to twelve inches from the Flamemastic 71A coating, as it was breaking loose from the tray and cables. This filter followed the removal of all twelve cables in the manner described above.

The operator removed the cables from the tray individually. Total time to remove the twelve cables was 15.5 minutes.

ARD 003948

1 March 1976

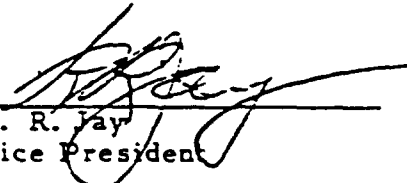
LL 26019

The filters were examined by the method described in the NIOSH Bulletin HSM 72-10267 (1972) by Mr. K. Inouye of ARLI. The results are as follows:

<u>SAMPLE</u>	<u>SAMPLING RATE</u>	<u>ASBESTOS PARTICLE COUNT</u>
ARLI - Stationary	3 l/min. for 15.5 mins.	0.07/cc.
ARLI - Operator	3 l/min. for 15.5 mins.	0.07/cc.
FMEN-1	2 l/min. for 15.5 mins.	0.15/cc.

CONCLUSION:

The level of airborne asbestos fibers produced during removal of the cables from the Flamemastic 71A coated bundles is significantly less than the existing (5 fiber/cc.) or proposed (.5 fiber/cc.) OSHA limits.



R. R. Jay
Vice President

ARD 003949

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

OSHA No. 44-11287

MATERIAL SAFETY DATA SHEET

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

SECTION I

MANUFACTURER'S NAME THE FLAMEMASTER CORPORATION		EMERGENCY TELEPHONE NO. (213) 982-1650
ADDRESS (Name, Street, City, State, and ZIP Code) 11120 SHERMAN WAY, SUN VALLEY, CALIFORNIA 91352		
CHEMICAL NAME AND SYNONYMS N/A		TRADE NAME AND SYNONYMS FLAMEMASTIC 71A SPRAYABLE
CHEMICAL FAMILY N/A	FORMULA N/A	

SECTION II HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS Antimony Oxide	4.3	0.5 mg/m³			
CATALYST			ALLOYS		
VEHICLE			METALLIC COATINGS		
			FILLER METAL PLUS COATING OR CORE FLUX		
ADDITIVES Beta chloroethyl phosphate	2.6	Unknown	OTHERS		
OTHERS Asbestos	9.6	(See attached test report)			
HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES					

The asbestos and antimony oxide contained in this material are wetted and coated with the vehicle and do not offer the hazard associated with the dry material. (See enclosed test reports)

SECTION III PHYSICAL DATA

BOILING POINT (°F.)	212°	SPECIFIC GRAVITY (H ₂ O=1)	1.37
VAPOR PRESSURE (mm Hg.)	H₂O at RT	PERCENT VOLATILE BY VOLUME (%)	32.7
VAPOR DENSITY (AIR=1)	H₂O Vapor	EVAPORATION RATE (H ₂ O=1)	Approx. 1
SOLUBILITY IN WATER	Misc.		
APPEARANCE AND ODOR	White, heavy-bodied paint - slight odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Methods used)	None	FLAMMABLE LIMITS	LCI	UCI
EXTINGUISHING MEDIA	N/A			
SPECIAL FIRE FIGHTING PROCEDURES	N/A			
UNUSUAL FIRE AND EXPLOSION HAZARDS	N/A			

SECTION V HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE

N/A

EFFECTS OF OVEREXPOSURE

None observed.

EMERGENCY AND FIRST AID PROCEDURES

Eyes: Wash with water for approx. 15 min. and get immediate medical aid. Skin: Wash with plenty of water and soap immediately.

SECTION VI REACTIVITY DATA

STABILITY

UNSTABLE

CONDITIONS TO AVOID

STABLE

X

INCOMPATIBILITY (Materials to avoid)

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS
POLYMERIZATION

MAY OCCUR

CONDITIONS TO AVOID

WILL NOT OCCUR

X

SECTION VII SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Scrape up spill and place in plastic container. Wipe floor with water-soaked rags.

WASTE DISPOSAL METHOD

Dispose as asbestos-containing waste. Land burial where statutes permit.

SECTION VIII SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION (Specify type)

Usual protection used when spraying water-based coatings.

VENTILATION

LOCAL EXHAUST

SPECIAL

MECHANICAL (General)

OTHER

PROTECTIVE GLOVES

EYE PROTECTION

OTHER PROTECTIVE EQUIPMENT

SECTION IX SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

OTHER PRECAUTIONS

ARD 003951

FROM: S. M. ANDERSON
J. M. SHAW

TO: MEMORANDUM

1988 August 12

RE: FLAMMASTIC COVERED CABLE

Recently we surveyed some of the electrical substations for asbestos in the flammastic which covers the cable and cable trays. Our survey revealed that the flammastic contains 5 to 15% chrysotile asbestos. This material is gray in color and was sprayed on the cables when the substations were built. The asbestos is in a non-friable form and it will not easily generate fibers. However, the presence of asbestos presents a significant problem for us in light of New York's asbestos regulations. The State regulations treats the removal or disturbance of ANY asbestos containing material as an asbestos abatement job. This requires us to construct a plastic enclosure, place the enclosure under negative pressure, use water to reduce asbestos dust, de-energize all electrical equipment and to only allow state certified asbestos removers to perform the work. Many of these requirements cannot be safely carried out in our substations.

Effective immediately the following procedures will be carried out when working in cable trays that have flammastic covered cable:

1. Flammastic covered cables that are no longer useful are not to be removed, rather they are to be cut where they enter and leave the flammastic covered area. The flammastic covered portion will be left in place and the cable ends clearly identified and labeled. The non-flammastic covered cable will be removed.
2. The re-routing of flammastic covered cables is no longer permitted. New cable must either be installed or other solutions sought.

We have discussed leaving de-energized cables in cable trays with Mr. William Burke of the Syracuse OSHA office and he said, "that it is acceptable to do this provided we label and do not violate the requirements of the National Electrical Code". To help us out of this regulatory catch 22, we are applying for a variance from some of the requirements of New York's asbestos regulations. When or if we receive a variance, the decision to remove the cable or to leave it in place will be left to the Chief Electrical Engineer.

ARD 003938

By copy of this letter to the Electrical Maintenance Supervisors,
we are asking that they inform the electricians of this condition
and policy.

SCOTT M. ANDERSON

JAMES M. SHAW

SMA:JMS:afl

Copies to:

Electrical Engineers

Electrical Maintenance Supervisors

R. M. Overbey - 8

C. E. Johnson, Pittsburgh - 21

R. R. Taylor, Pittsburgh - 23

L. L. Rippey, Pittsburgh - 6

C. F. DiMascio, Pittsburgh - 6

J. P. Carroll - 316

B. L. Konkoski - 204

D. A. O'Connell - 50

S. C. Smith

ALUMINUM COMPANY OF AMERICA
MASSENA OPERATIONS
P.O. BOX 150
MASSENA, NEW YORK 13662



1988 August 11

Mr. Daniel Sullivan
State of New York
Department of Labor
Engineering Services Unit
The Gov. Averell Harriman
State Office Buidling Campus
Albany, New York 12240

Dear Mr. Sullivan:

Enclosed are three (3) copies of our request for variance from Part 56 of the New York Industrial Code.

If you have any questions, please call me at (315) 764-4186.

Very truly yours,

✓ SCOTT M. ANDERSON, CIH
Sr. Industrial Hygienist

SMA:af1

Enc.

Cc: J. M. Shaw
S. C. Smith

ARD 003940



ENGINEERING SERVICES UNIT
The Gov. W. Averell Harriman
State Office Building Campus
Albany, N.Y. 12240

SUBMIT IN TRIPPLICATE
COMPLETE FRONT AND

PETITION FOR A VARIANCE OR OTHER RELIEF

1. NAME AND ADDRESS OF PETITIONER (PERSON OR CORPORATION AFFECTED BY THE LAW OR CODE GIVEN BELOW)		TELEPHONE NO
Aluminum Company of America, P. O. Box 150, Massena, New York 13662		(315) 764-418
2. NAME AND ADDRESS OF PETITIONER'S AGENT, IF ANY		TELEPHONE NO
N/A		
3. NAME AND ADDRESS OF OWNER OF PREMISES	4. NAME OF OCCUPANT OF PREMISES	
Same	Same	

THE PETITIONER HEREBY PETITIONS THE COMMISSIONER OF LABOR FOR A VARIANCE (OR OTHER RELIEF) FROM REQUIREMENTS OF THE LABOR LAW, ORDERS OF THE COMMISSIONER OF LABOR REQUIRING COMPLIANCE WITH THE BUILDING CONSTRUCTION CODE, THE NEW YORK STATE UNIFORM FIRE PREVENTION AND BUILDING CODE, AND/ RULES OF THE COMMISSIONER OF LABOR AS STATED BELOW.

FOR ITEMS 5 - 8, IF APPLICABLE, GIVE THE SECTION AND PARAGRAPH OF THE RELEVANT LAW, CODE, OR REGULATION

5. LABOR LAW	6. STATE BUILDING CONSTRUCTION CODE	7. UNIFORM FIRE PREVENTION CODE	8. INDUSTRIAL CODE RULE NUMBER Part 56 of Title Labor Law Sect. 5
9. DATE ORDERS ISSUED, IF ANY	10. ORDERS ISSUED BY: ☐ STATE INSPECTOR ☐ LOCAL BUILDING INSPECTOR	11. ISSUED TO: ☐ OWNER ☐ AGENT ☐ LESSEE GIVE NAME APPEARING ON NOTICE OF VIOLATION	
12. AFFECTING PREMISES KNOWN AS Alcoa, Massena Operations		13. STREET ADDRESS OF SUCH PREMISES Park Avenue East, Massena, New York	

14. These premises are situated on North side of Park Avenue
NORTH-EAST-SOUTH-WEST STREET-AVENUE-ROAD

(Check one) in the ☐ CITY ☒ TOWN ☐ VILLAGE OF Massena, County of St. Lawrence

15. QUOTE HERE THE ORDERS, IF ANY, MENTIONED ABOVE

16. If a variance has been granted previously covering the same section and paragraph of the labor law as listed above in item 5., the same section and paragraph of the state building construction code, as listed above in item 6, the same section and paragraph of the uniform fire prevention code, as listed above in item 7, the same code rule number as listed above in item 8, give case number and date of such variance.

ARD 003941

24. Periodic maintenance and emergency repairs conducted in various electrical substations may require the removal or re-routing of electrical cable which is covered with a sprayed-on non-friable flammastic fire-proofing material. This material was sprayed on to our cables to prevent catastrophic damage in the event of a cable fire. However, this material may contain up to 15% chrysotile asbestos bound in a mastic substrate. These electrical substations distribute power to the environmental control systems for our aluminum reduction cells, cooling system of our rectifier station, carbon handling equipment, and many other systems essential to the safe, efficient, and the environmentally sound production of aluminum. These substations cannot be deenergized without halting all aluminum production or creating severe environmental emissions and occupational exposures to dust, hydrogen fluoride and coal, tar, pitch. In addition, water cannot be used in an energized substation because of electrocution hazards.
25. The substations are located within our plant site and access is limited to only Alcoa maintenance personnel. The work practices employed will be used to minimize any fiber generation during the re-routing or removal of cable sprayed with asbestos containing flammastic. The results of air monitoring conducted during the removal of cable trays sprayed with flammastic at other Alcoa locations outside New York found fiber counts to be ≤ 0.02 f/cc. The following are our proposed work practices:

General

Scope of Work

- 1.01 (a) The work covered by their request includes the re-routing and removal of cable covered with asbestos containing flammastic.

Qualifications

- 1.02 (a) All employees involved with the removal of flammastic covered cable will have received three (3) days of training in a course approved by the New York Commissioner of Health on the hazards of asbestos exposure, on the use of and fitting of respiratory protection, on protective clothing, on the use of showers, on entry and exit from the work area, and all other aspects of work procedures and protective measures.
- (b) All employees removing flammastic covered cable will have received medical examination as required by 29 CFR 1026.58.
- (c) Project Supervisor will have successfully completed an EPA/NYS approved training course in asbestos abatement.

Work Site Preparation

- 1.03 (a) All non-essential movable items shall be removed prior to any work.
- (b) Two layers of 6 mil. poly. shall be spread beneath the cable trays. Walls and control panels will not be covered because of the combustible nature of poly. and the presence of high voltage.
- (c) All entrances to the sub-stations shall be posted with signs which comply with 29 CFR 1916.58.
- (d) All ventilation systems, where possible, shall be shut down and covered with two layers of 6 mil. poly.. Some ventilation systems may need to be maintained to prevent the overheating of energized electrical equipment.

Personal Protective Equipment

- 1.04 (a) All workers shall be provided with, as a minimum, 1/2 facepiece respirators with HEPA filters. The respirators shall be worn at all times in the asbestos work area. Sufficient filters shall be provided for replacement as required.
- (b) All workers shall be provided with sufficient sets of disposable full-body clothing to be worn in the designated work area and/or whenever potential exposure to asbestos exists. Full-body clothing shall consist of full-body disposable coveralls with attached hood made of tyvek or equivalent material, gloves, eye protection, hard hats, and footwear.
- (c) Non-skid footwear shall be provided to all workers. Disposable clothing shall be adequately sealed to the footwear to prevent body contamination.
- (d) Protective clothing shall not be worn in lieu of street clothing outside the work area.
- (e) Visitor clothing: Alcoa shall provide authorized visitors with suitable respirators, protective clothing, gloves, head protection, eye protection, and footwear.

EXECUTION:

Cable Tray Preparation

- 2.01 (a) Flammastic covered cable tray and cable shall be pre-cleaned using a HEPA vacuum.

Cable Re-Routing

- 2.02 (a) Cables being re-routed shall be done with as little unnecessary bending and pulling as possible.
- (b) Cables shall be continuously vacuumed whenever they are pulled or otherwise rubbed against themselves or the cable tray.
- (c) Re-routed cables shall be vacuumed with a HEPA vacuum after all re-routing has been completed.
- (d) Air sampling will be conducted during the project.

Cable Removal

- 2.03 (a) Whenever possible, disconnected cables shall be cut and left in place. At times, electrical safety considerations may require the removal of the flammastic covered cable. The sawing of the cable or cable trays shall not be permitted.
- (b) Whenever a cable must be removed, it will be carefully separated from the other cables.
- (c) The cable will be cut using a cable cutter in lengths that will minimize the amount of pulling and possible abrasion that the cables would be subjected to.
- (d) The cable shall be HEPA vacuumed at each cut during shearing.
- (e) The cut lengths of flammastic covered cable shall be carefully lowered into a sealable fiber or metal drum which has been appropriately labeled.
- (f) The seal on the waste drum and HEPA vacuum must be on the outside.
- (g) Air sampling will be conducted during the project.

CLEAN-UP/DECONTAMINATION

- 3.01 (a) The cable tray and cable shall be HEPA vacuumed.
- (b) All ladders and other equipment shall be HEPA vacuumed.
- (c) The first layer of plastic shall be HEPA vacuumed and then picked up and disposed of in an approved asbestos waste bag.
- (d) The second layer of plastic shall be HEPA vacuumed and then picked up and disposed of in an approved asbestos waste bag.

- (e) Coveralls, boots, and respirators shall be HEPA vacuumed prior to removal.
- (f) Coveralls shall be removed and disposed of as asbestos waste.
- (g) A clean set of coveralls shall be donned and the workers shall remove the waste drums from the substation and then immediately proceed to a shower facility.