

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

MATERIAL SAFETY DATA SHEET

**PLAINTIFF'S
EXHIBIT**

AL-640

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 (Number, 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 COPE 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	%	TLV (Units)
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	Let	Uel
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



ANALYTICAL RESEARCH LABORATORIES, INC.

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(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 (ARLI - Stationary) - filter was mounted approximately three feet above the tray and equidistant from the ends of the tray.
2. Analytical Research Lab., Inc. sampler (ARLI - 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.

1 March 1976

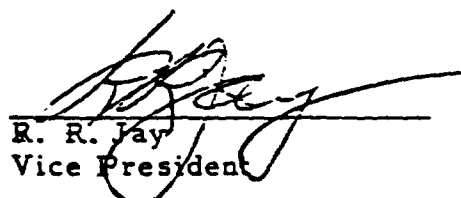
LL 26012

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