

# SYSTEMS APPROVALS PTY. LTD.

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P.O. BOX 45,  
BOOLAROO. N.S.W. 2284.

The Manager,  
Fluid Film (Aust) Pty Ltd,  
P.O.Box 51,  
WICKHAM. N.S.W. 2293.

OUR REF:A004.

FILE REF: C90/0842.

ATTENTION: MR A.E. SMITH.

DATE: 29/7/1992.

## APPROVAL OF APPARATUS

Dear Sir,

APPARATUS: FLUID FILM CORROSION INHIBITOR

APPROVAL No.: MDCA Ex 2354.

I refer to your application for approval of the above apparatus for use in the coal mines of New South Wales as required by the Coal Mines Regulation Act, 1982.

Please find enclosed herewith the relevant approval documentation.

Yours Faithfully,



A.J. Weeks  
Assessing Authority  
No. MDA-A2507.

encl

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New South Wales  
Department of Mineral Resources  
Accredited Assessing Authority MDA-A2507  
**COAL MINES REGULATION ACT, 1982.**  
**NOTICE OF APPROVAL**

**APPROVAL No.:** MDCA Ex 2354.

**FILE No.:** C90/0842.

**DATE.:** 29/7/1992.

It is hereby notified that the Chief Inspector of Coal Mines, pursuant to the provisions of clause 6 of the Coal Mines Regulation (Approval of Items) Regulation, 1984, and for the purposes of clause 27 of the Coal Mines Regulation (Electrical-Underground Mines ) Regulation, 1984, approves as being in compliance with the requirements of, and for the purposes of the said clause 27 of any apparatus or cable listed below:

**Description:** FLUID FILM CORROSION INHIBITOR.

**Identification:** TYPE: FF-A.

**Category (clause 27):** EXPLOSION PROTECTED.

**Sub-category:** COMPONENT - FLAMEPROOF.

**This approval is issued to:**

**Name:** FLUID FILM AUSTRALIA PTY LTD.

**Address:** P.O.BOX 51, WICKAM. N.S.W. 2293.

It is the responsibility of this approval holder to ensure that the above apparatus or cable is manufactured, tested, and supplied in accordance with the requirements of this approval including the schedule.

This approval does not in any way reduce the need for manufacturers to comply with the Occupational Health and Safety Act No.20, 1983 Section (18) Division 1, Part III.

This apparatus or cable may be used in any part of a coal mine in New South Wales subject to the requirements of this approval and the requirements of the Coal Mines Regulation Act, 1982.

A.J. Weeks  
Assessing Authority  
No.MDA-A2507  
FOR CHIEF INSPECTOR OF COAL MINES

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New South Wales  
 Department of Mineral Resources  
 Accredited Assessing Authority MDA-A2507  
**COAL MINES REGULATION ACT, 1982**

**NOTICE OF APPROVAL**

**APPROVAL No.: MDCA Ex 2354.**

**FILE No.: C90/0842.**

**DATE.: 29/7/1992.**

**APPARATUS**

Fluid Film Corrosion Inhibitor.

**DOCUMENTS**

Product Data Sheet	210.1	Dated Jan	1992.	— AR
Product Data Sheet	210	Dated April	1993.	— A
Product Information Sheet	207.1	Dated Dec	1992.	— AS
Product Data Sheet	207.2	Dated Sept	1992.	— AS
Product Information Sheet	207.3	Dated Dec	1992.	— AS

A copy of this information shall be supplied with the compound.

The approval number is to be inscribed in a prominent position on each container of the compound.

This compound may be taken, and applied, in hazardous areas underground in coal mines in any container **EXCEPT AEROSOL SPRAY CANS.**

This compound may be used in any part of a coal mine in New South Wales subject to compliance with the requirements of this approval and the requirements of the Coal Mines Regulation Act, 1982.

A.J. Weeks  
 Assessing Authority  
 No.MDA-A2507  
 FOR THE CHIEF INSPECTOR OF COAL MINES



# TECHNICAL BULLETIN

1/90 VOID AFTER 1/92

## PRODUCT DATA #210.1 SUBJECT: FLUID FILM LIQUID AR

### DESCRIPTION:

Amber, semi-liquid.

### GENERAL USAGE:

Anti-corrosive coating for all metals for protection against attack by moisture, salt solutions, marine and industrial atmospheres, where a permanently soft coating is not objectionable. Ideal for use in ballast tanks, voids, and cofferdams, where only a thin coating is desired and where flotation is not practical.

Preservation of metal parts and machinery in shed or other protected storage.

Descaling tanks. See "Surface Preparation" below, second paragraph.

For longer term protection, use of FLUID FILM, Gel B, may be considered. See Technical Bulletin #202.

Airless spray, roller, or brush. When spraying, use of a nozzle which will give coarse spray, minimizes atomization making application easier for workmen.

NOTE: The Liquid AR is very thixotropic and if it is to be transferred from its original container into a spraying device, mechanical agitation will lower the viscosity sufficiently to make such pouring feasible.

### APPLICATION:

### SURFACE PREPARATION:

For optimum service: No sandblasting required. Remove flaking rust and peeling paint. Break all blisters larger than one inch (25 mm). Remove all standing water. Clean up all debris and silt. Residual coal tar and asphaltic coatings should be removed to leave a thickness of no more than 0.002 inches (50 microns). For further details, see Technical Bulletin #202.4.

If sufficient time and/or funds are not available for ideal surface preparation, FLUID FILM, Liquid AR, may be applied with less preparation or none at all. If this be the case, it must be remembered that the product will soften scale to the point where exfoliation is likely. While this provides a relatively inexpensive method of descaling, tanks should be inspected more often, perhaps every several months, to determine if scale and coating have fallen. If so, touch-up of bare areas should be accomplished as soon as practical.

C.M.F.A. APPROVAL DOCUMENT	MDA No. <u>Ex 2354</u> FILE No <u>C90/0842</u>
ACCREDITED ASSESSING AUTHORITY	DATE <u>29-7-92</u> MDA: <u>A2507</u> <i>[Signature]</i>



AR.

**COVERAGE:** 1000 m<sup>2</sup> (11,000 ft<sup>2</sup>) per 55 gallon drum @ 200 microns (8 mils).

**TYPICAL PROPERTIES:**

*Specific Gravity* 0.92  
*Flash Point* 157 ° C (315 ° F)

Cleveland Open Cup  
(ASTM-D92)

<i>Viscosity</i>	<u>RPM</u>	<u>Stokes</u>
Brookfield HBF	2	900
Spindle #3	5	500
	10	300

*Effect on Copper, Brass* No staining.

**NOTE:** When welding in tanks coated with FLUID FILM, wipe material back a distance of 1.5 meters (4 feet) from where hot work is to be performed and from the deck area beneath the hot work. See Technical Bulletin No. 202.2.

NOTE: ORIGINAL APPROVAL IS DONE ON DOUBLE SIDED PAPER. *DL*

FLUID FILM and PERMA FILM are trademarks of Eureka Chemical Company



# TECHNICAL BULLETIN

PRODUCT DATA: #210  
SUBJECT: LIQUID A

4/93

## DESCRIPTION:

Oily amber liquid.

**GENERAL USAGE:**  
**C.M.R.A. APPROVAL DOCUMENT**

N. A No Ex 2354 FILE No C90/0842

DATE 29-7-92 MDA-A2507 Alab

**ACCREDITED ASSESSING AUTHORITY**

Anti-corrosive coating for all metals for protection against attack by moisture, salt solutions, marine and industrial atmospheres, where a permanently soft coating is not objectionable. When used as a flotation type coating, FLUID FILM A forms a gel which adheres to the metal surfaces and is not subject to discharge overboard during deballasting. FLUID FILM A is also useful as a penetrant and lubricant.

### Descaling

May be used to help descale tanks with heavy scale. For surface preparation, coverage and application procedures, see proper section below.

## APPLICATION (GENERAL):

### Methods

Airless spray, roller, brush, dip, flotation.

### Protective Equipment

None required.

### Thinners

Do not use.

### Heating Required

Do not heat.

### Cleaning Up

Rags and kerosene, or other petroleum solvent.

## APPLICATION (MARINE):

### Flotation

For long term protection of ballast tanks of ships and offshore drilling rigs; remove loose flaking rust and peeling paint. Break all blisters larger than 25 mm (one inch). Remove all standing water. Clean up all debris and silt. Calculate coverage as 102 m<sup>2</sup> (1100 ft<sup>2</sup>) per 208 liter (55 gallon) drum to produce a coating thickness of 2 mm (80 mils). For lightly rusted tanks, increase coverage by 10%. For tanks with heavy scale, decrease coverage by 10%.

Dry the surface and hose Liquid A onto the metal at the rate of 1600 m<sup>2</sup> (17,000 ft<sup>2</sup>) per drum to provide a coating thickness of 120 microns (5 mils). After 48 hours, if the scale has absorbed the FLUID FILM coating, reapply.

Voids

Spray or brush FLUID FILM, Liquid A, onto the surfaces at the rate of 8 liters/100 m<sup>2</sup> (2 gallons/1000 ft<sup>2</sup>) to provide a coating thickness of 80 microns (3 mils). If voids are rarely entered, the increased thickness of a FLUID FILM, Gel B, coating will provide almost indefinite protection.

**APPLICATION (AGRICULTURE AND INDUSTRIAL):**

Hand Tools

Spray, wipe or brush on a thin coat of FLUID FILM Liquid A. Wipe off excess.

Parts in Storage

Spray, brush or dip.

Storage Bins

Spray or brush.

Machinery, Conveyors, Hinges, etc.

FLUID FILM provides lubrication as well as corrosion protection.

Inaccessible Areas, Pipes, etc.

Coat by filling and draining.

Flotation

To coat small tanks with limited access, pour FLUID FILM, Liquid A, into the access hole at the rate of 3 gallons per hundred square feet of surface area. If possible, roll tank to cover all metal surfaces. Fill tank slowly with water. Remove water, either from tank bottom or by insertion of a syphon line below the liquid level. Repeat 3 or 4 times until all FLUID FILM, Liquid A, has gelled and placed itself on tank surface.

**PROPERTIES:**

Specific Gravity (60/60) 0.92

Viscosity (Ford Cup No. 4) 30 seconds @ 20°C (68°F)

Flash Point 157°C (315°F)  
Cleveland Open Cup  
(ASTM-D92)

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A3 SHEET DJ

Hose at least 25% of required amount of FLUID FILM A onto the tank overhead, the upper vertical surfaces and the tank bottom. Add remainder of FLUID FILM A to tank, making sure that in large tanks, the material is distributed into all portions of the tank.

Start adding ballast water at a rate to raise the water level by no more than 15 cm (6 inches) per minute. DO NOT ALLOW FLUID FILM LIQUID A TO SIT IN A DAMP TANK FOR A LONG PERIOD OF TIME BEFORE STARTING PLACEMENT PROCEDURE. Raise level of water as high as practical without causing overflow. Deballast at rate of not more than 15 cm (6 inches) per minute, stopping short of suction bell. Repeat 2 to 4 times until all material is placed on steel.

Due to the fact that overheads and other sections of tank where air may be trapped are difficult to coat in ballasting procedures, we recommend, if time permits, the use of FLUID FILM Gel, B White, which is applied by positive placement to all surfaces.

NOTE: The use of anodes in tanks coated with FLUID FILM is not recommended nor necessary.

Flotation to Tanks With  
Very Heavy Scale Deposits

If tanks are coated with blisters and heavy scale and there is insufficient time to descale the surfaces properly, interim protection may be secured by adding FLUID FILM, Liquid A, at half the amount recommended above; i. e. one drum for each 204 m<sup>2</sup> (2200 ft<sup>2</sup>), hosing the ENTIRE amount of FLUID FILM A onto the surfaces and ballasting as above. After a year or 18 months, this procedure may be repeated, or, if time permits, the softened scale may be removed and a coating of FLUID FILM, Liquid A or Gel B, may be applied at full thickness to provide corrosion protection for several years.

To Soften Heavy Scale

If heavy scale has formed on metal surfaces, FLUID FILM, Liquid A, may be used to soften this scale prior to descaling by water blasting or other methods.

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<u>Specific Conductivity</u>	Less than $10^{-9}$ mho/cm @ 1M Hz
<u>Effect on Rubber</u> (ASTM-D471 @ 158°F, 70 hours)	None on neoprene, buna-n and most synthetics. Some swelling on natural rubber.
<u>Effect on Aluminum</u>	No pitting.
<u>Effect on Copper, Brass</u>	No staining.
<u>Toxicity</u> (Tests performed by outside laboratory using standard methods)	Oral: LD <sub>50</sub> greater than 3 g/kilogram. Skin Irritation: Non-irritating response. Albino rabbits - 24 hour contact of FLUID FILM on intact and abraded skin. Eye Irritation: Very slight response. FLUID FILM inserted in rabbits eyes. On immedi- ate washout, slight response after 24 hours. None after 48 hours. With no washout, slight response after 24 hours. None after 72 hours.

#### FLUID FILM LIQUID AR

LIQUID A can be applied by spraying or brushing to a thickness of 2 to 3 mils (5 to 7 microns). Where a thicker coat and longer life expectancy are desired, LIQUID AR, a semi-liquid, can be applied at 10 to 12 mils (25 to 30 microns). While not designed for flotation, LIQUID AR can be sprayed onto badly scaled surfaces of ballast tanks for most effective descaling and interim anti-corrosion protection. See Technical Bulletin 210.1.

NOTE 1: When welding in tanks coated with FLUID FILM, wipe material back a distance of 1.5 meters (4 feet) from where hot work is to be performed and from the deck area beneath the hot work. See Technical Bulletin 202.2.

NOTE 2: Since FLUID FILM, Liquid A, forms a gel in the presence of water, keep all containers closed tightly when not in use. If Liquid A thickens in the container, agitation will restore it to the liquid condition. Thickening does not impair its effectiveness in any way.

NOTE 3: FLUID FILM is not recommended for use in tanks carrying petroleum solvents, acids, ammonia or ammonium hydroxide. Solutions of ammonium salts may cause slow degradation of the coating.

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P4

## **EUREKA CHEMICAL COMPANY**

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# TECHNICAL BULLETIN

12/92

**PRODUCT INFORMATION: #207.1 (Replaces #211)**  
**SUBJECT: MARINE USES FOR FLUID FILM**  
**AEROSOL SPRAY CAN**

For use on polished, machined, rough or rusty surfaces. FLUID FILM in the handy spray can is quickly applied to tools, machine parts, less accessible areas of mechanical equipment, chain and wire rope. FLUID FILM penetrates light rust to control corrosion of underlying metal surfaces and provides both rust inhibition and lubrication to rubbing or sliding metal parts, such as hinges, slides, tension spring seats and rods.

Suggested Marine uses for FLUID FILM spray can are:

- |  |  |
|--|--|
| 1. Valves, valve stems, valve bonnets            | 16. Hatch doggings                                       |
| 2. Port hole doggings and hinges                 | 17. Throttle control mechanism                           |
| 3. Water tight door hinges and mechanism         | 18. Bright work (brass)                                  |
| 4. Elevator and dumb waiter guides               | 19. Winch brake mechanism                                |
| 5. Telegraph mechanism                           | 20. Winch control mechanism                              |
| 6. Furniture drawers and guides                  | 21. Generator cooler heads                               |
| 7. Signal light mechanism                        | 22. Pelican hooks and turn-buckles, anchor chains        |
| 8. Chain falls, come-alongs, push and pull jacks | 23. Rudder machined surfaces                             |
| 9. Wire rope                                     | 24. Inside switch box doors                              |
| 10. Machined surfaces, lathes, drills, shapers   | 25. Life boat falls                                      |
| 11. Nuts, bolts, studs, tools                    | 26. Emergency steering blocks and sheaves                |
| 12. Exposed gear teeth                           | 27. Life line turnbuckles                                |
| 13. Turnbuckles                                  | 28. Forced draft blower mechanism                        |
| 14. Clapper valve mechanism                      | 29. All blocks and sheaves                               |
| 15. Piping and pipe joints                       |  |
|  | 30. Water tight deck drain enclosures                    |
|  | 31. All metals exposed to atmosphere or salt water spray |

DIRECTIONS: Spray on metal surfaces to be protected. Where applied to surfaces which may be touched or in contact with clothing, allow FLUID FILM to remain on the surface for a brief period, then wipe off with a soft cloth to remove excess.

WARNING: Extremely flammable. Contents under pressure. Keep from open flame. Do not store over 120°F. ~~KEEP OUT OF REACH OF CHILDREN~~

<b>C.M.R.A. APPROVAL DOCUMENT</b>	
MDA No <u>Ex. 2354</u>	FILE No <u>C90/0842</u>
DATE <u>29/7/92</u>	MDA-A2507 <u>Glub</u>
<b>ACCREDITED ASSESSING AUTHORITY</b>	



# TECHNICAL BULLETIN

5/89 VOID AFTER 9/92

**PRODUCT DATA: #207.2**  
**SUBJECT: AUTOMOTIVE USES FOR FLUID FILM**  
**AEROSOL SPRAY CAN**

For use on polished, machined, rough or rusty surfaces. FLUID FILM in the handy spray can is quickly applied to tools, machine parts, and less accessible areas of mechanical equipment. FLUID FILM penetrates light rust to control corrosion of underlying metal surface and provides both rust inhibition and lubrication to rubbing or sliding metal parts, such as hinges, slides, tension spring seats and rods.

Suggested Automotive uses for FLUID FILM spray can are:

## AUTOMOBILES

- |   |                                 |
|---|---------------------------------|
| 1. All nuts, bolts and studs                      | 3. Seat moving tracks and locks |
| 2. Mechanical parts such as:                      | 4. Tools                        |
| a. Brake levers                                   | 5. Inside hub caps              |
| b. Brake cable (emergency),<br>speedometer cable  | 6. Wheel lugs                   |
| c. Hood and trunk mechanisms                      | 7. Preservation inside doors    |
| d. Door hinges, opening and<br>locking mechanisms | 8. Uncovered springs            |
| e. Window mechanisms                              | 9. Battery connections          |

## TRUCKS

- |                        |                        |
|------------------------|------------------------|
| 1. Trailer attachments | 3. Blocks, trunbuckles |
| 2. Truck bed bolts     | 4. Wire tie-downs      |

DIRECTIONS: Spray on metal surfaces to be protected. Where applied to surfaces which may be touched or in contact with clothing, allow FLUID FILM to remain on the surface for a brief period, then wipe off with a soft cloth to remove excess.

WARNING: Extremely flammable. Contents under pressure. Keep from open flame. Do not store over 120°F. KEEP OUT OF THE REACH OF CHILDREN.

### C.M.R.A. APPROVAL DOCUMENT

MDA No Ex 2354 FILE No 090/0842

DATE 29-7-92 MDA-A2507 [Signature]

ACCREDITED ASSESSING AUTHORITY

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# TECHNICAL BULLETIN

12/92

**PRODUCT INFORMATION: #207.3**  
**SUBJECT: INDUSTRIAL USES FOR FLUID FILM**  
**AEROSOL SPRAY CAN**

For use on polished, machined, rough or rusty surfaces. FLUID FILM in the handy spray can is quickly applied to tools, machine parts, and less accessible areas of mechanical equipment. FLUID FILM penetrates light rust to control corrosion of underlying metal surface and provides both rust inhibition and lubrication to rubbing or sliding metal parts, such as hinges, slides, tension spring seats and rods.

Suggested Industrial Uses For FLUID FILM Spray Can Are:

- |                                      |   |
|--------------------------------------|---|
| 1. Tool room - tools                 | 10. Window hinges                       |
| 2. Machinery spare parts             | 11. Door hinges                         |
| 3. Storage of spare parts            | 12. Nuts, bolts and studs               |
| 4. Preservation of machined surfaces | 13. Piping                              |
| 5. Chain falls                       | 14. Piping repairs                      |
| 6. Conveyor belt rollers             | 15. Exposed gears and machined surfaces |
| 7. Door guides and mechanism         | 16. Sliding parts                       |
| 8. Valves and valve stems            | 17. Wire Preservation                   |
| 9. Uncoated welding                  |   |
| 18. Swivels                          |   |
| 19. Pulleys                          |   |
| 20. Locks, battery connections       |   |
| 21. Metal Preservation               |   |

DIRECTIONS: Spray on metal surfaces to be protected. Where applied to surfaces which may be touched or in contact with clothing, allow FLUID FILM to remain on the surface for a brief period, then wipe off with a soft cloth to remove excess.

WARNING: Extremely flammable. Contents under pressure. ~~Keep from open flame. Do not store over 120°F. KEEP OUT OF THE REACH OF CHILDREN.~~

**C.M.R.A. APPROVAL DOCUMENT**

MDA No Ex 2354 FILE No C90/842

DATE 29-7-92 MDA-A2507 [Signature]

**ACCREDITED ASSESSING AUTHORITY**

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