

# SAFETY DATA SHEET

## A.W.F. E.M. LIQUID METAL ACTIVATOR

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	A.W.F. E.M. Liquid Metal Activator
Supplier	A.W.F. SMS Ltd
Address	Unit I D Brymau 3 Estate River Lane Saltney Chester, CH4 8RQ
Phone Number	01244 - 677833
Fax Number	01244 - 677844

### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Substance/preparation

BENZYL ALCOHOL

CAS number	% by weight	EC number	Classification
000100-51-6	30 - 40%	202-859-9	Xn; R20/22

BENZENE-1,3-DIMETHANAMINE

CAS number	% by weight	EC number	Classification
001477-55-0	10 - 15%	216-032-5	Xn; R20/22, C; R35

DIAMINOPOLYPROPYLENE GLYCOL

009046-10-0 5 - 10% C; R34

2-PIPERAZIN-1-YLETHYLAMINE

CAS number	% by weight	EC number	Classification
000140-31-8	5 - 10%	205-411-0	Xn; R21/22, C; R34, R43, R52/53

NONYLPHENOL

CAS number	% by weight	EC number	Classification
025154-52-3	1 - 5%	246-672-0	Repr. Cat. 3; R62, R63, Xn; R22, C; R34, N; R50/53

See section 16 for the full text of the R-phrases declared above  
Occupational exposure limits, if available, are listed in section 8.

### 3. HAZARDS IDENTIFICATION

The preparation is classified as dangerous according to Directive 1999/45/EC and its amendments.

Classification Xn; R20/22, C; R35, R43, N; R51/53

Human health hazards

Harmful by inhalation and if swallowed. Causes severe burns. May cause sensitisation by skin contact.

Environmental hazards

Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

See section 11 for more detailed information on health effects and symptoms.

#### 4. FIRST AID MEASURES

Ingestion Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If potentially dangerous quantities of this material have been swallowed, call a physician immediately.

Skin contact Wash contaminated skin with soap and water. Remove contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation develops.

Eye contact In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Check for and remove any contact lenses. Get medical attention immediately.

See section 11 for more detailed information on health effects and symptoms.

#### 5. FIRE-FIGHTING MEASURES

Extinguishing media In case of fire, use water spray (fog), foam, dry chemical or CO<sub>2</sub>. Do not use water jet.

Special exposure hazards No specific hazard.

Hazardous thermal decomposition products

In a fire, the following may be released: carbon oxides (CO, CO<sub>2</sub>) nitrogen oxides (NO, NO<sub>2</sub> etc.)

Protection of fire-fighters

Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

#### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (section 8).

Environmental precautions Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up If emergency personnel are unavailable, contain spilt material. For small spills, add absorbent (soil may be used in the absence of other suitable materials), scoop up material and place in a sealable, liquid-proof container for disposal. For large spills, dyke spilt material or otherwise contain it to ensure runoff does not reach a waterway. Place spilt material in an appropriate container for disposal.

#### 7. HANDLING AND STORAGE

Handling Do not get in eyes, on skin or on clothing. Keep container closed. Wash thoroughly after handling.

Storage Store in original sealed containers at temperatures between 5° and 30°C.

#### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory protection A respirator is not needed under normal and intended conditions of product use.

Hand protection Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk

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assessment indicates this is necessary. >8 hours (breakthrough time): nitrile rubber  
Eye protection Safety glasses. Chemical splash goggles. Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin protection Protective clothing. Repeated or prolonged contact with irritants may cause dermatitis.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Liquid. (Clear viscous liquid.)	Odour	Ammoniacal
pH	Alkaline	Boiling point	>200°C (392°F)
Flash point	Closed cup: >100°C (212°F).	Flammability	Non-flammable.
Explosion limits	Not available.	Oxidising properties	Not available.
Vapour pressure	Not available.	Relative density	1 g/cm <sup>3</sup>
Solubility	Insoluble in cold water.	Vapour density	Not available.
Evaporation rate	Not available.	Octanol/water	Not available.
(butyl acetate = 1)		partition coefficient	
Auto-ignition temperature	>250°C (482°F)	Melting point	>10°C (50°F)

## 10. STABILITY AND REACTIVITY

Stability The product is stable.

Conditions to avoid None identified.

Materials to avoid This product should be stored away from oxidising materials and strong bases. acids Amines peroxides These could cause the product to polymerise exothermically. Unintentional contact with them should be avoided

Hazardous decomposition products

In a fire, the following may be released: carbon oxides (CO, CO<sub>2</sub>) nitrogen oxides (NO, NO<sub>2</sub> etc.)

## 11. TOXICOLOGICAL INFORMATION

Potential acute health effects

Inhalation Corrosive to the respiratory system.

Ingestion Harmful if swallowed. May cause burns to mouth, throat and stomach

Skin contact Harmful in contact with skin. Corrosive to the skin. May cause sensitisation by skin contact.

Eye contact Corrosive to eyes.

Acute toxicity

Ingredient name	Test	Result	Route	Species
BENZYL ALCOHOL	LD50	1230 mg/kg	Oral	Rat
BENZENE-1,3-DIMETHANAMINE	LD50	1040 mg/kg	Oral	Rat
DIAMINOPOLYPROPYLENE GLYCOL	LD50	242 mg/kg	Oral	Rat
2-PIPERAZIN-1-YLETHYLAMINE	LD50	>2000 mg/kg	Oral	Rat
NONYLPHENOL	LD50	1620 mg/kg	Oral	Rat
	LD50	1000 mg/kg	Dermal	Rabbit

Potential chronic health effects

NONYLPHENOL

Carcinogenic effects	Mutagenic effects	Developmental toxicity	Impairs fertility
-	-	Repr. Cat. 3; R63	Repr. Cat. 3; R62

Carcinogenicity No carcinogenic effect

Mutagenicity No mutagenic effect

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Reproductive toxicity No known significant effects or critical hazards.

Over-exposure signs/symptoms

Inhalation No known significant effects or critical hazards.

Ingestion No known significant effects or critical hazards.

Skin Repeated skin exposure can produce local skin destruction or dermatitis.

Additional information No components of this material are listed as carcinogens by OSHA, NTP, ACGIH or IARC

## 12. ECOLOGICAL INFORMATION

Ingredient name	Species	Period	Result
BENZYL ALCOHOL	Minnows (LC50)	96 hours	460 mg/l
NONYLPHENOL	Minnows (LC50)	96 hours	0.128 mg/l
	Daphnia (EC50)	48 hours	0.19 mg/l

Persistence/degradability

Ingredient name	Aquatic half-life	Photolysis	Biodegradability
AWF E.M. Liquid Metal Activator	-	-	Not readily

Bioaccumulative potential

This product is not expected to bioaccumulate through food chains in the environment.

Mobility Do not allow to enter drains or watercourses.

Other adverse effects Toxic to aquatic organisms. May cause long-term adverse effects in the aquatic environment

## 13. DISPOSAL CONSIDERATIONS

Methods of disposal The generation of waste should be avoided or minimised wherever possible. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Hazardous waste The classification of the product may meet the criteria for a hazardous waste.

## 14. TRANSPORT INFORMATION

International transport regulations

UN number 2735

Proper shipping name Polyamines, Liquid, Corrosive, n.o.s. (Polyamine mixture)

Class 8

Packing group III

Additional information Emergency schedules (EmS) F-A,S-B

## 15. REGULATORY INFORMATION

EU regulations

Hazard symbol/symbols Corrosive, Dangerous for the environment.

Risk phrases R20/22- Harmful by inhalation and if swallowed. R35- Causes severe burns. R43- May cause sensitisation by skin contact. R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

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Safety phrases S24- Avoid contact with skin.S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.S28- After contact with skin, wash immediately with plenty of soap and water.S29- Do not empty into drains.S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

Contains

BENZENE-1,3-DIMETHANAMINE 216-032-5

2-PIPERAZIN-1-YLETHYLAMINE 205-411-0

BENZYL ALCOHOL 202-859-9

Product use Classification and labelling have been performed according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and the intended use.

- Consumer applications.

Other EU regulations

EU statistical classification 29215990

(Tariff Code)

National regulations

United States

SARA 313 toxic chemical notification and release reporting No products were found.

Germany Hazard class for water 3

## 16. OTHER INFORMATION

Full text of R-phrases referred to in sections 2 and 3 - Europe

R62- Possible risk of impaired fertility.R63- Possible risk of harm to the unborn child.R20/22- Harmful by inhalation and if swallowed.R21/22- Harmful in contact with skin and if swallowed.R22- Harmful if swallowed.R34- Causes burns.R35- Causes severe burns.R43- May cause sensitisation by skin contact.R50/53- Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Full text of classifications referred to in sections 2 and 3 - Europe

Repr. Cat.3 - Toxic to reproduction Category 3

C - Corrosive

Xn - Harmful

N - Dangerous for the environment.

Further information

Conforms to EU Directive 91/155/EEC, as amended by 2001/58/EC Canada - This product has been classified according to the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

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