



## AROFLEX 608

### 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

**Trade name** : aroflex 608  
**Type of product** : Polyurethanic component.  
**Product code** : fx608  
**Use** : Industrial.  
**Company identification** : POZZI-AROSIO srl  
Via Manzoni 6  
22060 Arosio - CO- ITALY  
Tel +39 031 761313  
Fax +39 031 761546  
**Emergency phone nr** : Tel +39 031 761313  
Fax +39 031 761546  
**Name and function of the responsible person**: Dr Diego Luise - d.luise@pozziariosio.com

### 2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture  
Classification according to EU Directives 67/548/EEC or 1999/45/EC  
This product is not classified as dangerous according to EC criteria.

2.2 Label elements  
Labelling according to EC Directives  
This product is not classified as dangerous according to EC criteria.  
Safety data sheet available for professional users on request.

2.3 Other Hazards  
No information available

### 3 COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.2 Mixture

This product is a mixture

REGULATION (EC) No 1272/2008

CAS-No. EC-No. Index	REACH No.	Amount	Component	Classification:
CAS-No. Not available EC-No. Polymer	—	> 90.0 %	Polyether polyol##	Not classified
CAS-No. 6711-48-4 EC-No. 229-761-9	—	0.5 - < 1.0 %	Bis(N,N-dimethyl-3-aminopropyl)amine	Acute Tox., 4, H302 Acute Tox., 4, H312 Skin cor/irr, 1, H314
CAS-No. 111-42-2 EC-No. 203-868-0 Index 603-071-00-1	—	0.1 - < 1.0 %	2,2'-Iminodiethanol; diethanolamine	Acute Tox., 4, H302 STOT RE, 2, H373 Skin cor/irr, 2, H315 Eye cor/irr, 1, H318 Aquatic Chronic 3 H412

#### 67/548/EEC

CAS-No. EC-No. Index	Amount	Component	Classification 67/548/EEC
CAS-No. Not available EC-No. Polymer	> 90.0 %	Polyether polyol##	Not classified.
CAS-No. 6711-48-4 EC-No. 229-761-9	0.5 - < 1.0 %	Bis(N,N-dimethyl-3-aminopropyl)amine	C: R34; Xn: R21/22
CAS-No. 111-42-2 EC-No. 203-868-0 Index 603-071-00-1	0.1 - < 1.0 %	2,2'-Iminodiethanol; diethanolamine	Xn: R22, R48/22; Xi: R38, R41

## Voluntarily disclosed component(s).

For the full text of the H-Statements mentioned in this Section, see Section 16.

See Section 16 for full text of R-phrases



#### 4 FIRST AID MEASURES

##### 4.1 Description of first aid measures

General advice: If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air; if effects occur, consult a physician.

Skin Contact: Wash skin with plenty of water.

Eye Contact: Flush eyes thoroughly with water for several minutes. Remove contact lenses after the initial 1-2 minutes and continue flushing for several additional minutes. If effects occur, consult a physician, preferably an ophthalmologist.

Ingestion: If swallowed, seek medical attention. Do not induce vomiting unless directed to do so by medical personnel.

##### 4.2 Most important symptoms and effects, both acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), no additional symptoms and effects are anticipated.

##### 4.3 Indication of immediate medical attention and special treatment needed

No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

#### 5 FIRE-FIGHTING MEASURES

##### 5.1 Extinguishing Media

Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Alcohol resistant foams (ATC type) are preferred. General purpose synthetic foams (including AFFF) or protein foams may function, but will be less effective.

Extinguishing Media to Avoid: Do not use direct water stream. May spread fire.

##### 5.2 Special hazards arising from the substance or mixture

Hazardous Combustion Products: During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Container may rupture from gas generation in a fire situation. Violent steam generation or eruption may occur upon application of direct water stream to hot liquids.

##### 5.3 Advice for firefighters

Fire Fighting Procedures: Keep people away. Isolate fire and deny unnecessary entry. Use water spray to cool fire exposed containers and fire affected zone until fire is out and danger of reignition has passed. Fight fire from protected location or safe distance. Consider the use of unmanned hose holders or monitor nozzles. Immediately withdraw all personnel from the area in case of rising sound from venting safety device or discoloration of the container. Do not use direct water stream. May spread fire. Move container from fire area if this is possible without hazard. Burning liquids may be moved by flushing with water to protect personnel and minimize property damage. Contain fire water run-off if possible. Fire water run-off, if not contained, may cause environmental damage. Review the "Accidental Release Measures" and the "Ecological Information" sections of this (M)SDS.

Special Protective Equipment for Firefighters: Wear positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots, and gloves). Avoid contact with this material during fire fighting operations. If contact is likely, change to full chemical resistant fire fighting clothing with self-contained breathing apparatus. If this is not available, wear full chemical resistant clothing with self-contained breathing apparatus and fight fire from a remote location. For protective equipment in post-fire or non-fire clean-up situations, refer to the relevant sections.

#### 6 ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures: Isolate area. Refer to Section 7, Handling, for additional precautionary measures. Keep unnecessary and unprotected personnel from entering the area. Spilled material may cause a slipping hazard. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection

6.2 Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

6.3 Methods and materials for containment and cleaning up: Contain spilled material if possible. Absorb with materials such as: Dirt. Sand. Sawdust. Collect in suitable and properly labeled containers. Wash the spill site with water. See Section 13, Disposal Considerations, for additional information

#### 7 HANDLING AND STORAGE

##### 7.1 Precautions for safe handling

**POZZI-AROSIO srl In case of emergency : Tel +39 031 761313**

Via Manzoni 6 22060 Arosio - CO- ITALY

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Fax +39 031 761546

**Handling**

General Handling: Avoid contact with eyes. Wash thoroughly after handling. Keep container closed. This material is hygroscopic in nature. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

Other Precautions: Spills of these organic materials on hot fibrous insulations may lead to lowering of the autoignition temperatures possibly resulting in spontaneous combustion.

**7.2 Conditions for safe storage, including any incompatibilities****Storage**

Protect from atmospheric moisture. Store in a dry place. Avoid prolonged exposure to heat and air. Store in the following material(s): Carbon steel. Stainless steel. Polypropylene. Polyethylene-lined container. Teflon. Glass-lined container. Aluminum. Plasite 3066 lined container. Plasite 3070 lined container. 316 stainless steel. See Section 10 for more specific information.

Storage Period: 6 Months

Storage temperature: 15 - 25 °C

7.3 Specific end uses: See the technical data sheet on this product for further information.

**8 EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control parameters****Exposure Limits**

Component	List	Type	Value
2' Iminodiethanol; diethanolamine	ACGIH	TWA Inhalable fraction and vapour	1 mg/m <sup>3</sup> SKIN

A "skin" notation following the exposure guideline refers to the potential for dermal absorption of the material including mucous membranes and the eyes either by contact with vapors or by direct skin contact.

It is intended to alert the reader that inhalation may not be the only route of exposure and that measures to minimize dermal exposures should be considered.

**8.2 Exposure controls****Personal Protection**

Eye/Face Protection: Use safety glasses (with side shields). Safety glasses (with side shields) should be consistent with EN 166 or equivalent.

Skin Protection: Wear clean, body-covering clothing.

Hand protection: Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. If hands are cut or scratched, use gloves chemically resistant to this material even for brief exposures. Use chemical resistant gloves classified under Standard EN374: Protective gloves against chemicals and micro-organisms. Examples of preferred glove barrier materials include: Butyl rubber. Polyethylene. Neoprene. Natural rubber ("latex"). Polyvinyl chloride ("PVC" or "vinyl"). Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyvinyl alcohol ("PVA"). Ethyl vinyl alcohol laminate ("EVAL"). When prolonged or frequently repeated contact may occur, a glove with a protection class of 4 or higher (breakthrough time greater than 120 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 1 or higher (breakthrough time greater than 10 minutes according to EN 374) is recommended. NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Respiratory Protection: Atmospheric levels should be maintained below the exposure guideline. For most conditions, no respiratory protection should be needed; however, if material is heated or sprayed, use an approved air-purifying respirator. Use the following CE approved air-purifying respirator: Organic vapor cartridge with a particulate pre-filter, type AP2.

Ingestion: Use good personal hygiene. Do not consume or store food in the work area. Wash hands before smoking or eating.

**Engineering Controls**

Ventilation: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

**9 PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties****Appearance**

Physical State

Colour

Odour

Odour Threshold

pH

Melting Point

Liquid.

Colorless

Characteristic

No test data available

No test data available

No test data available

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Freezing Point	No test data available	
Boiling Point (760 mmHg)	No test data available.	
Flash Point - Closed Cup	> 100 °C Estimated.	
Evaporation Rate (Butyl Acetate = 1)	No test data available	
Flammability (solid,gas)	Not applicable to liquids	
Flammable Limits In Air	Lower: No test data available	
	Upper: No test data available	
Vapor Pressure	No test data available	
Vapor Density (air = 1)	No test data available	
Specific Gravity (H <sub>2</sub> O = 1) 25 °C/25 °C	1.01 - 1.03 25°C/25°C	ASTM D891
Solubility in water (by weight)	Partially soluble	
Partition coefficient, n-octanol/water (log Pow)	No data available for this product. See Section 12 for individual component data.	
Autoignition Temperature	No test data available	
Decomposition Temperature	No test data available	
Dynamic Viscosity	1,070 - 1,610 mPa.s @ 25 °C	ASTM D445
Explosive properties	Not explosive	
Oxidizing properties	No	
9.2 Other information		
Molecular Weight	No test data available	

## 10 STABILITY AND REACTIVITY

### 10.1 Reactivity

No dangerous reaction known under conditions of normal use.

### 10.2 Chemical stability

Stable under recommended storage conditions. See Storage, Section 7.

### 10.3 Possibility of hazardous reactions

Polymerization will not occur by itself.

10.4 Conditions to Avoid: Product can oxidize at elevated temperatures. Generation of gas during decomposition can cause pressure in closed systems.

10.5 Incompatible Materials: Avoid contact with oxidizing materials. Avoid contact with: Strong acids. Strong bases. Avoid unintended contact with isocyanates. The reaction of polyols and isocyanates generates heat.

### 10.6 Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Carbon dioxide. Alcohols. Ethers. Hydrocarbons. Ketones. Polymer fragments.

## 11 TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute Toxicity

#### Ingestion

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury.

As product: Single dose oral LD50 has not been determined

Typical for this family of materials. Estimated. LD50, Rat > 2,000 mg/kg

#### Aspiration hazard

Based on physical properties, not likely to be an aspiration hazard

#### Dermal

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product: The LC50 has not been determined.

Typical for this family of materials. LD50, Rabbit > 2,000 mg/kg

#### Inhalation

At room temperature, exposure to vapor is minimal due to low volatility; single exposure is not likely to be hazardous. Vapor from heated material or mist may cause respiratory irritation.

As product: The LC50 has not been determined

#### Eye damage/eye irritation

May cause slight temporary eye irritation. May cause slight temporary corneal injury.

#### Skin corrosion/irritation

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Prolonged exposure not likely to cause significant skin irritation. May cause more severe response if skin is abraded (scratched or cut).

Sensitization

Skin

Not relevant data found

Respiratory

Not relevant data found

Repeated Dose Toxicity

For the major component(s): Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Chronic Toxicity and Carcinogenicity

Not relevant data found

Developmental Toxicity

Not relevant data found

Reproductive Toxicity

Not relevant data found

Genetic Toxicology

Not relevant data found

Component Toxicology: Bis(N,N-dimethyl-3-aminopropyl)amine

Inhalation: LC50, Vapor, Rat > 2.6 mg/l

Component Toxicology: N,N-Diethanolamine

Inhalation: LC0, 4 h, Aerosol, Rat, male 3.35 mg/l

## 12 ECOLOGICAL INFORMATION

### 12.1 Toxicity

Data for Component: Polyether polyol

For similar material(s): Material is not classified as dangerous to aquatic organisms.

Data for Component: Bis(N,N-dimethyl-3-aminopropyl)amine

Material is harmful to aquatic organisms (LC50/EC50/IC50 between 10 and 100 mg/L in the most sensitive species).

Fish Acute & Prolonged Toxicity

LC50, zebra fish (*Brachydanio rerio*), static, 96 h: 21 - 46.4 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, *Daphnia magna* (water flea), static test, 48 h, immobilization: 40.6 mg/l

Aquatic Plant Toxicity

EC50, algae, static, Growth rate inhibition, 72 h: 35 mg/l

Toxicity to Micro-organisms

EC50; bacteria: > 1,000 mg/l

Data for Component: 2,2'-Iminodiethanol; diethanolamine

Material is toxic to aquatic organisms (LC50/EC50/IC50 between 1 and 10 mg/L in the most sensitive species). May increase pH of aquatic systems to > pH 10 which may be toxic to aquatic organisms.

Fish Acute & Prolonged Toxicity

LC50, fathead minnow (*Pimephales promelas*), static, 96 h: 1,460 mg/l

Aquatic Invertebrate Acute Toxicity

EC50, water flea *Daphnia magna*, static, 48 h: 55 mg/l

Aquatic Plant Toxicity

ErC50, green alga *Pseudokirchneriella subcapitata* (formerly known as *Selenastrum capricornutum*), Growth rate inhibition, 96 h: 2.2 mg/l

Toxicity to Micro-organisms

EC50, OECD 209 Test; activated sludge, 3 h: > 1,000 mg/l

Aquatic Invertebrates Chronic Toxicity Value

water flea *Daphnia magna*, static renewal, 21 d, NOEC: 0.78 mg/l, LOEC: 1.56 mg/l

### 12.2 Persistence and Degradability

Data for Component: Polyether polyol

Most polyols are expected to degrade only slowly in the environment.

Data for Component: Bis(N,N-dimethyl-3-aminopropyl)amine

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.

OECD Biodegradation Tests:

Biodegradation	Exposure Time	Method	10 Day Window
> 70 %	28 d	OECD 301B Test	pass

Data for Component: 2,2'-Iminodiethanol; diethanolamine

Material is readily biodegradable. Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% mineralization in OECD test(s) for inherent biodegradability).

OECD Biodegradation Tests

**POZZI-AROSIO srl In case of emergency : Tel +39 031 761313**

Via Manzoni 6 22060 Arosio - CO- ITALY

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Fax +39 031 761546

Biodegradation  
93 %Exposure Time  
28 dMethod  
OECD 301F Test10 Day Window  
pass

### 12.3 Bioaccumulative potential

#### Data for Component: Polyether polyol

Bioaccumulation: No bioconcentration is expected because of the relatively high molecular weight (MW greater than 1000).

#### Data for Component: Bis(N,N-dimethyl-3-aminopropyl)amine

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): 0.2 Estimated.

#### Data for Component: 2,2'-Iminodiethanol; diethanolamine

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient, n-octanol/water (log Pow): -2.18 Shake flask (OECD 107 Test)

### 12.4 Mobility in soil

#### Data for Component: Polyether polyol

Mobility in soil: No relevant data found.

#### Data for Component: Bis(N,N-dimethyl-3-aminopropyl)amine

Mobility in soil: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is low (Koc between 500 and 2000).

Partition coefficient, soil organic carbon/water (Koc): 770 Estimated.

Henry's Law Constant (H): 6.89E-12 atm\*m3/mole; 25 °C Estimated.

#### Data for Component: 2,2'-Iminodiethanol; diethanolamine

Mobility in soil: Given its very low Henry's constant, volatilization from natural bodies of water or moist soil is not expected to be an important fate process., Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient, soil organic carbon/water (Koc): 1 Estimated.

Henry's Law Constant (H): 3.97E-06 Pa\*m3/mole.; 25 °C Estimated.

### 12.5 Results of PBT and vPvB assessment

#### Data for Component: Polyether polyol

This mixture contains no substance considered to be persistent, bioaccumulating and toxic (PBT).

#### Data for Component: Bis(N,N-dimethyl-3-aminopropyl)amine

This substance has not been assessed for persistence, bioaccumulation and toxicity (PBT).

#### Data for Component: 2,2'-Iminodiethanol; diethanolamine

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT). This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

### 12.6 Other adverse effects

#### Data for Component: Polyether polyol

This substance is not in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

#### Data for Component: Bis(N,N-dimethyl-3-aminopropyl)amine

No relevant data found.

#### Data for Component: 2,2'-Iminodiethanol; diethanolamine

This substance is not in Annex I of Regulation (EC) 2037/2000 on substances that deplete the ozone layer.

## 13 DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Any disposal practice must be in compliance with all local and national laws and regulations. Do not dump into any sewers, on the ground, or into any body of water.

## 14 TRANSPORT INFORMATION

### ADR/RID

14.1 UN number Not applicable

14.2 UN proper shipping name Proper Shipping Name: NOT REGULATED

14.3 Transport hazard class(es) Not applicable

14.4 Packing Group Not applicable

14.5 Environmental hazards Not considered environmentally hazardous based on available data

14.6 Special precautions for user Special Provisions: no data available

Hazard identification No: no data available

### ADNR/ADN

14.1 UN number Not applicable

14.2 UN proper shipping name

Proper Shipping Name: NOT REGULATED

14.3 Transport hazard class(es) Not applicable

14.4 Packing Group Not applicable

14.5 Environmental hazards Not considered environmentally hazardous based on available data

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Fax +39 031 761546



14.6 Special precautions for user no data available

IMDG

14.1 UN number Not applicable

14.2 UN proper shipping name Proper Shipping Name: NOT REGULATED

14.3 Transport hazard class(es) Not applicable

14.4 Packing Group Not applicable

14.5 Environmental hazards Not considered environmentally hazardous based on available data

14.6 Special precautions for user EMS Number: Not applicable

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable

ICAO/IATA

14.1 UN number Not applicable

14.2 UN proper shipping name Proper Shipping Name: NOT REGULATED

14.3 Transport hazard class(es) Not applicable

14.4 Packing Group Not applicable

14.5 Environmental hazards Not considered environmentally hazardous based on available data

14.6 Special precautions for user No data available

## 15 REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

European Inventory of Existing Commercial Chemical Substances (EINECS)

The components of this product are on the EINECS inventory or are exempt from inventory requirements.

15.2 Chemical Safety Assessment: Not applicable

## 16 OTHER INFORMATION

Hazard statement in the composition section

H302 Harmful if swallowed.

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H315 Causes skin irritation.

H318 Causes serious eye damage.

H373 May cause damage to organs through prolonged or repeated exposure.

H412 Harmful to aquatic life with lasting effects

Risk-phrases in the Composition section

R21/22 Harmful in contact with skin and if swallowed.

R22 Harmful if swallowed.

R34 Causes burns.

R38 Irritating to skin.

R41 Risk of serious damage to eyes.

R48/22 Harmful: danger of serious damage to health by prolonged exposure if swallowed.

### Product Literature

Additional information on this product may be obtained by calling your sales or customer service contact.

The Pozzi-Arosio urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that this activities comply all federal, state provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.