

1. Product Identification

Commercial name: Geomembrane ATARFIL HD

Chemical name: Polyolefin

Formulation: (C2-H4) n

Manufacturer: ATARFIL

Location:

EUROPE: Ctra. de Córdoba, Km 429 -18230 Atarfe - Granada - SPAIN

MIDDLE EAST: P.O. Box 263122, Jebel Ali Free Zone - Dubai - U.A.E.

AMERICA: 324 Moore Avenue, Suffolk, Virginia VA 23434 - USA

2. Composition

General composition: Polyolefin and Additives

Dangerous components: None

3. Hazard Identification

Physics and chemistry: Risk of crushing during the handling of the rolls during the unloading, elevation or unrolling on the field.

Toxicology (symptoms):

- **INHALATION:** Irritating vapours to respiratory system and eyes may form when polymer is processed at high temperatures.
- **INGESTION:** No effects are expected for ingestion of small amounts.
- **SKIN:** Unknown acute effects resulting from skin contact.

4. First Aid Measures

Inhalation: Allow the victim to rest in a well-ventilated area.

Ingestion: No first aid procedures are needed.

Skin contact heated polymer: For serious burns from heated polymer, get medical attention.

Eye contact: Rinse with water for a few minutes. Seek medical attention if necessary.

General measures: To request medical help

5. Fire Fighting Measures

Fire fighting media: foam AFFF, Dry chemicals, CO₂, water spray or foam.

Contraindications: not present

Products of combustion: Carbon oxides (CO and CO₂) and soot.



Special measures: Remove the rolls from the fire, if it's possible without any risk. In case of intense fire in the loading zone, use a fire fighting media, without direct human manipulation to avoid any risk. Apply the security and emergency plan.

Special danger: The heated polymer can extend the fire. Fire may produce irritating gases and dense smoke.

Protective clothing: Wear gloves and suit heat resistance. Approved self-contained breathing apparatus.

6. Handling

Handling: Non smoking, eating or drinking during the manipulation of the product. Eliminate all the sources of ignition in the storage place, specially if there's dust accumulation. Preventive measures for loading jobs.

Special conditions: Safety mask should be in presence of heated polymer vapour (only in the case of being in a closed space).

Uses: It's allowed to be its use in contact with food.

7. Exposure Controls/Personal protection

Personal protection:

- **RESPIRATORY:** Safety mask are required in the presence of heated polymer vapour (only in the case of being in a closed space).
- **Hands:** Thermally insulated gloves are required when handling hot material
- **EYES:** Safety glasses should be worn when the polymer is melted

8. Storage

Temperature and decomposition products: No additional remarks.

Dangerous reaction: No additional remarks.

Storage conditions:

It is very important to be careful during unloading operations and storage of the goods. The storage of the rolls must be fulfilled using the following conditions:

- Floor should be as flat as possible.
- Storage area should be kept clean of sharp objects.
- Storage in a pyramidal scheme.
- The rolls in the base must be very well packed to avoid lateral movements.



9. Physics and Chemicals properties

- **Physics state and appearance:** rolls with a width between 6.00 m (19,7 feet), 6.30 m (21.3 feet) and 7.50m (24.5 feet), the minimum weight 1100Kg (2425lb).
- **Colour:** black.
- **pH:** not applicable
- **Melting point:** from 124 ° to 135° (crystalline)
- **Inflammability point:** 300 °C
- **Autoinflammability:** not available.
- **Explosive properties:** not available.
- **Combustion properties:** not available.
- **Boiling/condensation point:** not available.
- **Solubility in water:** Insoluble in water.
- **Density:** >0,940 gr/m³ at 23° C
- **Combustion heating:** 11.000 cal/g
- **Solubility:** at melting point temperatures is soluble in benzene, xylene, toluene, trichloroethylene and tetra chloromethane.

10. Stability and reactivity

Stability: The material is stable at room temperature. The ATARFIL HD presents resistance against water and organic salt aqueous solutions, as well as the weakness in acid and basic solutions.

Incompatibility with various substances: Incompatible or reactive with fluorine gas, oxidizing agents such as nitric, perchloric acid, free halogens, benzene, petroleum ether, gasoline, lubricant oils, aromatic and chlorinated hydrocarbons.

Hazardous decomposition products:

- **Decomposition products:** At temperatures above 400°C the product breaks down giving off toxic and irritant gases, in some cases traces of acrolein and formaldehyde may appear.
- **Complete combustion:** CO₂, H₂O.
- **Incomplete combustion:** CO, soot, aldehydes, Ketones, hydrocarbons and fatty volatile acids.

11. Toxicological information

Routes of entry: Inhalation of the melted product vapours. Direct contact with the skin and/or eyes.

Chronic effects on humans: The melted vapours of the product can produce irritation in the respiratory system and cause dermatitis by direct contact with the skin.

Carcinogenic effects: ICARC: group 3 (polyethylene is not classifiable by its carcinogenic effect in humans)

Toxicity for the fertility: no additional remarks.



12. Ecological information

Ways to eliminate the product (excess): If it is at all possible recycle the material.

Residue: solve or mix the material with a combustible solvent and burn it in a chemical incinerator equipped with a gas treating system.

Regulations: The establishments or companies dealing with the recovery, disposal, collection or transport of waste must fulfill the legislation in force for waste management in the area where the residues are located.

13. Other information

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 the one mentioned are the only existent hazards.



Test report

Nr. 6076/9400-He-e
(08.12.2000)

1. copy

Requested by:

ATARFIL, S.L.
Ctra. de Córdoba, Km.429
Complejo El Rey
E18230 Atarfe (Granada)
Spain

Date of request: 06.03.2000

Reference: -

Received: 06.03.2000

Contents of request:

Analysis, following BAM and NRW guidelines, of a double-sided smooth geomembrane on PE-HD base, with the product denomination

"Atarfil, d = 2.0 mm"

Date of receipt of samples: 17.04.2000

Samples: provided by manufacturer

The test report includes 3 pages and 11 annexes.

The publication of test reports, or summaries, or references to them for advertising purposes require in each individual case the written consent of this Institute. Each page in this report bears the stamp of the Institute if samples are used.

Properties/ Tests	Test norms	Test results
Density	DIN 53479 procedure A	$x = 0,947 \text{ g/cm}^3$
Normal flammability	DIN 4102 part 1	The requirements made on building material class B2 were complied.

x = Average value

