ATCO OXYGEN ABSORBERS
FTM1000 SACHETS

1°) SPECIFICATIONS

REFERENCE	TYPE	CAPACITY ml absorbed oxygen	DIMENSIONS	Pouch	Carton	Pallet 120 X 100 50 cartons
V11006	ATCO FTM 1000/50	1000	80 x 80 mm	50	500	25000

Composition:
Packaging: Polypropylene/non woven / printed PET complex. The printed text mentions in several languages the advice not to eat.

Contents: Mixing of mineral active matters iron and iron-oxide-based; no risk of toxicity is expected even in the case of accidental ingestion.

2°) RATE OF OXYGEN ABSORPTION

Subject to validation of the use terms of our products by our technicians and subject to the respect of the normal use terms stated in the present data sheet, **ATCO FTM 1000 sachets** enable to reach values below 0.1 % residual oxygen within 48 hours at ambient temperature (20°C).

The rate of oxygen absorption depends on temperature. The higher it is, the quicker the reaction is. This absorption process is by itself exothermic.

3°) AREAS OF APPLICATION

ATCO FTM 1000 is used in museums for the pest control of the works of art or the transfer and the preservation of the works with a view to a future exhibition or a restoration.

ATCO FTM 1000 is used indifferently in wet or dry micro-atmospheres.

ATCO FTM 1000 will be preferred each time an important variation of hygrometry must be avoided.

ATCO FTM 1000 has been designed to reduce the release of heat and humidity in the treated chamber.

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4°) PRECAUTIONS TO BE TAKEN

Oxygen absorption is an exothermic process. Any misuse of oxygen absorbers may lead to an excessive temperature of ATCO sachets and a release of humidity in the treated volume. Therefore, it is strongly recommended that the use of multiple oxygen absorbers in the same volume is conducted by a trained person.

Opening large volume without oxygen must be done carefully (risk of suffocation).

ATCO oxygen absorbers should be used for products packed in low oxygen permeable packing (20 ml/m²/24 H/atm) and perfectly sealed.

The quality of sealing areas is determinant for packaging atmosphere tightness. It is therefore necessary to take into account both oxygen permeability and welding properties when choosing packaging materials.

ATCO FTM 1000 oxygen absorber has to be put into a packaging designed on such a way that the air can circulate all over the volume.

A long time exposure to anhydrous atmosphere might deteriorate **ATCO FTM 1000** oxygen absorber capacity.

ATCO FTM 1000 oxygen absorbers are not designed for oven or microwaves applications (sachets contain iron).

ATCO FTM 1000 oxygen absorbers are packed under partial vacuum.

IMPORTANT:

ATCO FTM1000 oxygen absorbers must be spread on a flat surface immediately after their overpouch opening and not stacked in piles. Indeed the absorption process being exothermic, a too high temperature rise within the stack may lead to a performance loss. The maximum air exposure time before packaging closing must not exceed 60 minutes at 22°C with a relative humidity between 40 %< HR< 99 %.
ATCO FTM1000 oxygen absorbers should be used by a trained technician for anoxic treatment.

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5°) CALCULATION OF OXYGEN VOLUME TO BE ABSORBED

5.1. Volume of oxygen present at the time of packing

$$A = \frac{(V - P) \times 21}{100}$$

V= volume of the finished pack determined by submersion in water and expressed in ml.

P = weight of the finished pack in g.

21 % = amount of oxygen in the air. This figure must be corrected after testing when a scanning or a substitution by compensated vacuum is carried out.

5.2. Volume of oxygen likely to permeate through the packaging during the life of the product.

This quantity in ml may be calculated as follow:

$$B = S \times P \times D$$

S = surface area of the pack in sq metres.
P = permeability of the packaging ml/m²/24h/atm.
D = life of the product in days.

5.3. Size or quantity of ATCO sachets to be used

$$n = (A + B)/C$$

C = Capacity of the absorbers 1000 ml.

Of course, the result should be rounded off to the superior whole number and, if necessary a safety margin can be applied. Indeed this calculation is not always accurate enough for all applications. It does not take into account, for example, the variations in permeability to oxygen according to humidity, and differences at this level can be very important for some polymers (EVOH).

6°) SAFETY

Even if they are not intended to be eaten, **ATCO** absorbers are made from non toxic materials and can be put into normal waste bins.

It is the user responsibility to check if the use of oxygen absorbers is in conformity with effective regulations.

7°) STORAGE

ATCO oxygen absorbers must be stored in a well ventilated area to avoid any risk of oxygen depletion in their original cartons. The cartons or pouches should not be directly exposed to sun light. **ATCO FTM1000** oxygen absorbers may be stored at room temperature for at least twelve months without detectable deterioration in terms of oxygen absorption capacity and oxygen absorption rate.

8°) MEANING OF THE BATCH NUMBER

EX 201301304-205

The batch number is made up of 13 figures

- first four figures for the year	2013
- 2 figures for the setting up week	01
- 1 figure for the setting up day	3
- 2 figures for the machine number	04
- 1 dash	-
- 1 figure for the team number	2
- 2 figures for the order number of production	05

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