

Modified Atmosphere Packaging



A complete range of pure & mixed gases to address the shelf life requirements of your food products

- Preserve the freshness, color, flavor and nutritional attributes of your food products with an all-natural solution
- Extend product shelf life by slowing down microbial, enzymatic and physical deterioration that would otherwise occur under air
- Optimize inventory levels and expand your distribution networks

ALIGAL™

Quality you can depend on...

- Food grade gases compliant with local regulations & HACCP* methodology
- Specific filling and quality control procedures are followed
- Traceability and product recall systems are in place

* Hazard Analysis and Critical Control Points

Reliability when you need it...

- The same quality & consistency anywhere in the world
- Local availability supported by an extensive production and distribution network
- Different supply modes to adapt to your changing gas requirements
- On-site mixing capabilities for greater flexibility

Food safety in every cylinder...

- Dedicated cylinders, with specific labeling, for use only in the food industry
- Special valves to avoid cross-contamination
- Tamper-evident seals to guarantee gas integrity

ALIGAL™ products are specially formulated for Modified Atmosphere Packaging by leveraging the properties of each gas molecule:

Nitrogen	Carbon Dioxide	Oxygen	Argon
• Prevents oxidation • Limits the growth of aerobic bacteria • Protects against package collapse	• Limits the growth of bacteria • Slows down the development of mold • Contributes to package collapse	• Maintains the bright color of red meat • Prevents anaerobic conditions • Essential for respiration of fresh fruits and vegetables	• Similar benefits to nitrogen • Inhibiting effect on the respiration of fresh fruits and vegetables

There is always an ALIGAL™ product for you:

Products	ALIGAL™ 1	ALIGAL™ 2	ALIGAL™ 3	ALIGAL™ 6	ALIGAL™ 13	ALIGAL™ 15	ALIGAL™ 27	ALIGAL™ 62
Bakery Products	•	•			•	•		
Cheese	•	•			•			
Dry Food (coffee, snacks)	•				•			
Fish, Seafood & Surimi-Processed					•	•		
Fish-Dried /Smoked	•				•			
Fresh Mussels & Oysters			○				•	
Meat Cuts-Raw			○				•	
Meat & Poultry-Processed					•	•		
Poultry Parts-Raw		•				•		
Prepared Meals & Pasta					•	•		
Milk Powder	•				•			
Sandwiches		•			•			•
Vegetables & Fruits (incl. salad, tomatoes)	•			•				•
Vegetables-Fresh-cut (incl. carrots, squash)					•	•		

○ ALIGAL™ 3 is available for on-site mixing of ALIGAL™ 27

Customized ALIGAL™ products mixtures available on demand.

Let Air Liquide's food specialists recommend the best ALIGAL™ solution for your process requirements.

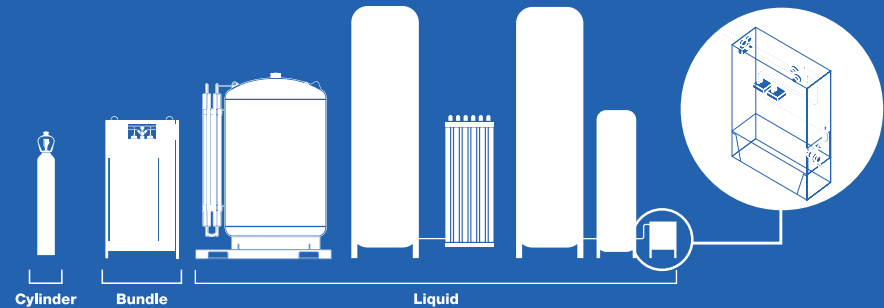
The purity of ALIGAL™ gases protects the quality of your food products:

Products Specifications	ALIGAL™ 1	ALIGAL™ 2	ALIGAL™ 3	ALIGAL™ 6	ALIGAL™ 13	ALIGAL™ 15	ALIGAL™ 27	ALIGAL™ 62
Gas purity - Gas composition	N ₂ ≥ 99.995%	CO ₂ ≥ 99.9%	O ₂ ≥ 99.5%	Ar ≥ 99.99%	N ₂ 70% CO ₂ 30%	N ₂ 50% CO ₂ 50%	O ₂ 70% CO ₂ 30%	Ar 80% CO ₂ 20%
H ₂ O (ppm v/v)	≤ 50	≤ 50	≤ 50	≤ 50	≤ 50	≤ 50	≤ 50	≤ 50
O ₂ (ppm v/v)	≤ 20	≤ 30		≤ 20	≤ 20	≤ 20		≤ 20
CO (ppm v/v)	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10	≤ 10
NO/NO ₂ (ppm v/v)	≤ 10	≤ 10			≤ 10	≤ 10	≤ 10	≤ 10 ⁽³⁾
C _n H _m (ppm v/v)	≤ 30	≤ 30	≤ 100	≤ 100	≤ 30	≤ 30	≤ 100	≤ 30
CO ₂ (ppm v/v)			≤ 300					
Total Sulfur (ppm v/v)		≤ 0,5 ⁽³⁾			≤ 0,5 ⁽³⁾	≤ 0,5 ⁽³⁾	≤ 0,5 ⁽³⁾	≤ 0,5 ⁽³⁾
NVOR ⁽¹⁾ (ppm w/w)		≤ 5 ⁽³⁾			≤ 5 ⁽³⁾	≤ 5 ⁽³⁾	≤ 5 ⁽³⁾	≤ 5 ⁽³⁾
Odor			odor free	odor free				
Tests ⁽²⁾		tests passed						

(1) NVOR = Non Volatile Organic Residue (oil, grease)
(2) "Acidity" test and "Reducing substances + hydrogen phosphide & sulfide" test
(3) Guaranteed in the liquid CO₂ raw product

ALIGAL is Air Liquide's trademark - July 2024 - Photos credits: Cyril ABAD / CAPA Pictures

ALIGAL™ is available with the best choice of supply modes to ensure quality, consistency, reliability and cost competitiveness.



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