

Safe and Environment Friendly

KIC



Adhesive for Bookbinding and Graphics **Yuhannol KY-500 Series**
Pellet Binder for Animal Fodder **Gelbond KY-100 Series**



Kooyong Industrial Corp.

Intoduction

KIC(Kooyong Industrial Corp.) is a leading manufacturer of industrial gelatin and derived products in Korea, who has dedicated in this industry since 1977. Since last three decades customers recognize KIC as a unique source of innovative products who carries out strict responsible care for customers' satisfaction. As a result of concentration of its core competence on two major business fields, gelatin adhesive and animal fodder pellet binder, KIC led the industry with renovation who invented jelly type(compounded gelatin) adhesive "Yuhannol". Now, KIC is a largest compound gelatin adhesive manufacturer who shares over 80% of domestic market. KIC currently supplies more than 10 different countries. The animal fodder pellet binder "Gelbond" is also one of KIC's innovative results based on its experienced technology. "Gelbond" presented great services to productivity of animal fodder industry by increasing pellet binding efficiency and decreasing production loss(by increase pellet durability). These days, with the experience in gelatin binder and adhesive, KIC developed new products with other natural sources. "Starbond" and "Supertack" are newly developed products We continue to invest in innovation and product development to meet the changing needs of our customers.



Gelatin

KIC, gelatin specialist, provides high quality technical gelatin for bookbinding and graphics last 3 decades. Technical gelatin for bookbinding and graphics requires high tack and low level of impurities.



Reference

| Index | Unit | Value |
|--------------------------------|-------|-----------|
| Jelly Strength at 6.67% (10°C) | Bloom | 70~140 |
| Viscosity at 6.67% (60°C) | mPa.s | 4~7 |
| PH at 6.67% (35°C) | - | 5~6 |
| Transmittance at 10% (570nm) | % | 50 |
| Water Contents | % | max. 16.0 |
| Ash Contents | % | max. 4.00 |
| Fat Contents | % | max. 1.00 |
| Insoluble Content | % | max. 0.50 |

Packing

- 25Kg in laminated moisture free paper bag

Handling

- Store in cool and dry condition
- Take care to avoid caking caused by excess moisture
- Biodegradable

Shelf Life

- Semi-permanent with bag packed
- Recommended to use within a short period after bag opened

Yuhannol KY-500 Sereise

Yuhannol KY-500 series are manufactured from carefully selected quality gelatin. It is safe and environment friendly. KY-500 series are pre-mixed jell type glue which increase productivity and guarantee stable quality production. Yuhannol KY-500 series not only preserve advantage of properties of gelatin, but also considered easiness of operation and productivity.

It performs high tack, low splashing, excellent finish, warp resistant and keeps flexibility, great machining properties, suited for extreme climatic conditions, easy cleaning, safe and environment friendly.

Suitable for Hard Cover, Album Cover, Paper Coating, and Box Covering. Excellent for Horauf BDM/Kolbus Case making equipment.



Yuhannol KY-500A

The highest tack which is transparent spread on material. Recommended to apply high quality products.

Yuhannol KY-500B

Excellent tack which is transparent spread on material. Recommended to apply high quality products.

Yuhannol KY-500C

Strong adhesive strength with economical price helps operating costs control. Best selling item that is used for various purposes.

Reference

| | unit | KY-500A | KY-500B | KY-500C |
|------------|---------------|-------------|-----------------------|------------------------------|
| Viscosity* | mPa.s | 3,500±250 | 2,900±250 | 2,700±250 |
| pH | - | 6~7 | 6~7 | 6~7 |
| Solidity | % | 65±2 | 65±2 | 65±2 |
| Color | Before Spread | Clear brown | Semitransparent brown | Light brown or deep purple** |
| | After Spread | Transparent | Transparent | Opaque |

* Viscosity at 60±2° C, Brookfield Viscometer

**Color may vary according to production lot, but color does not effect on the quality of the product.

Direction for use

- Melt in a water-bath or a heat circulation tank at 55~65°C and spread at 60°C.
- Do not heat above 70°C, and melted adhesive shall be used within 24 hours.

Packing

- 2.0Kg in sealed PE bag, 10

Handling

- Store in cool and dry condition
- Avoid get frozen
- Biodegradable
- Avoid direct contact of sun light

Shelf Life

- Minimum 6 months in cool and dry condtion

Supertack

"Choice of more than 100 companies all over the world."
You can increase productivity and reduce cost with Yuhannol KY-500 Series



Supertack

Application area



Cellphone box packaging



Wine box packaging

Developed to be suitable for rigid-box. Supertack shows great performance even with very difficult cover materials. Good adhesion at lower viscosity is essential part of this glue. The physical character of the glue allows longer open time. Supertack is suitable for automatic machines even down to manual work. This adhesive is suitable for fast running rigid-box machines or case-making machines (especially very thick cover materials). This glue is not suitable for manual work. Supertack is recommended for longer open time for slow speed.

Reference

| | unit | KY-500S | KY-500R |
|------------|-------|------------------|--------------------------|
| Viscosity* | mPa.s | 2,000±250 | 2,200±250 |
| pH | N/25m | 6~7 | 6~7 |
| Solidity | % | 40%±3 | 45%±3 |
| Color | - | Semi-Transparent | White / Semi-Transparent |

Pellet Binder forAnimal Fodder

Gelbond KY-100 Series

Gelbond KY-100 is an animal fodder pellet binder, which contains high percentage of protein (min 75%) and has very strong binding strength. Mainly, Gelbond KY-100 is for stream process animal feeds such as fish feed, dog feed, and many other animal feeds, which require low to medium density. Alternatively, Gelbond KY-100 can be added as protein additive for animal feeds. The high quality protein can enrich the composition of animal feeds; but also, you can obtain the smoother surface.

Careful selection of raw material and sanitary process is very important for pellet binder to avoid bacterial degradation. KIC has special know-how and fully equipped for such matters.



Reference

| Crude Protein | Mixture Ratio (per 1 metric ton of fodder) | Features |
|---------------|---|--|
| min. 75% | 0.25~1.5% | General fodder binder especially for concentrated fodder for poultry, and fish with small dosage. Binder for various fodder which provides durability and flexibility |

Appearance

- Basically light pink
(Color may vary according to production lot, but color does not effect on the quality of the product.)
- Natural odor of protein
- Manufactured and supplied in fine powder(100 Mesh)

Application

- Generally used for animal fodder for swine
- poultry and fish

Direction for Use

- Small dose is enough for bulk mixture. Premix is required.
- Forming pellets under 70~85° C with 13~15% moisture assorted fodder is recommended.
- Additive ratio depends on shape and type of fodder material.
Pilot production is required before mass production.

Packing

- 25Kg in laminated moisture free paper bag

Handling

- Store in cool and dry condition
- Take care to avoid caking caused by excess moisture
- Biodegradable

Shelf Life

- Semi-permanent with bag packed
- Recommended to use within a short period after

Benefits

- Improves durability
KIC binder prevents pellet oxidation and moistness.
- Increases fodder efficiency
KIC binder provides excellent texture and easily absorbs in animal body.
- Restraint scraps & dust
KIC binder increases flexibility of pellet and restrains scraps and dust.
- Improves brightness
KIC binder makes brighter pellet by its transparency.
- Saves manufacturing cost & increases productivity
Excellent gel forming with small quantity increases binding strength and saves setting time.
- Safe for human and environment friendly
KIC binder is obtained from natural sources

Starbond KY-100

Aquagel KY-100

Starbond KY-100

KIC developed pellet-binder without containing any animal protein. “Starbond KY-100” only contains material derived from vegetables. However, Starbond shows almost the same performance as animal protein based pellet-binder. Inclusion method is the same as protein binders. It can be a good choice for who are hesitating to use animal protein for production. Now, you can enhance pellet durability with KIC Starbond without the concern for animal protein.



Packing

- 25Kg in laminated moisture free paper bag

Benefis

- Improves PDI
- Saves manufacturing cost
- Increases fodder efficiency
- Safe for human and environment friendly

Shelf Life

- Store in cool and dry condition
- Recommended to use within a short period after bag opened.

Reference

| Crude Starch | Mixture Ratio (per 1 metric ton of fodder) | Features |
|--------------|---|---|
| min. 70% | 0.5~1.5% | Binder for various fodder which provides durability and flexibility |

Aquagel KY-100

KIC developed Gelbond(pellet binder) in liquid form to meet the needs of customers. KIC supplied Gelbond in powder form(KY-100) to customers last two decades. However, with the KY-100, some of the customers could not obtain the best result. First, the powder form requires enough exposure to heat, but deterioration of facility could not meet the requirement. Also, sometimes, the penetrate sufficiently into the materials.

Consequently, the PDI was not improved as we observed in sample test. Those problems are the reason why KIC decided to develop liquid form pellet binder. Aquagel remains liquid at room temperature to solve the problem. Our experience and effort made it possible. It will definitely give better powder failed to results in overall.



Reference

| Crude Protein | Mixture Ratio (per 1 metric ton of fodder) | Features |
|---------------|---|---|
| min. 40% | 3~5% | Binder for various fodder which provides durability and flexibility |

Packing

- 20Kg in Plastic drum

Benefits

- Improves PDI
- Saves manufacturing cost
- Increases fodder efficiency
- Safe for human and environment friendly

Shelf Life

- Store in cool and dry condition
- Recommended to use within a short period after drum opened.

펠릿사료 결합제

제리본드 KY-100

제리본드 KY-100 은 고단백(조단백질 75% 이상) 사료용 천연 결합제 입니다. 강력한 결합력으로 PDI 향상에 도움을 주며 생산량 향상에 도움이 됩니다. 특히 양어용 사료에 사용시 물에서 펠릿사료의 침출을 줄여 더 물속에서 오랫동안 형태를 유지하는데(Floating) 도움이 됩니다.

제리본드에 포함된 단백질은 펩신에 의해서 100% 가까이 소화되는 단백질 입니다. 멜라민 또는 우레아등 화학적 성분이 제외된 안전한 제품 입니다.



성분 및 함유량

| 조단백질 | 투입량 (사료 1톤당) | 특징 |
|-------|-----------------|--------------|
| 75%이상 | 0.25~1.5% | 다양한 펠릿사료에 적용 |

포장

• 25kg 지대 또는 톤백

보관

- 직사광선을 피하시고 서늘한 곳에 보관 하십시오
- 유통기한은 제조일로부터 2년 입니다

특장점

- 높은 영양적 가치
- PDI 향상
- 단백질(아미노산) 보충
- 100% 천연물질
- 저은 투입량
- 생산성 향상

스타본드 KY-100
아쿠아겔 KY-100

스타본드 KY-100

스타본드 KY-100은 사료용 식물성 천연 결착제입니다. 시장의 식물성 천연 결착제 요구에 부응하기 위하여 개발된 동물성 결착제의 대체품입니다. 자사의 결착제인 제리본드 보다는 결착력은 80% 정도 수준입니다. PDI 향상에 도움을 주며 생산량 향상에 도움이 됩니다.



포장

- 25Kg 지대 또는 톤백

보관

- 직사광선을 피하시고 서늘한 곳에 보관 하십시오
- 유통기한은 제조일로부터 2년 입니다

특장점

- PDI 향상
- 100% 천연물질
- 적은 투입량
- 생산성 향상

성분 및 함유량

| 탄수화물 | 투입량 (사료 1톤당) | 특징 |
|-------|-----------------|--------------|
| 70%이상 | 0.5~1.5% | 다양한 펠릿사료에 적용 |

아쿠아겔 KY-100

아쿠아겔 KY-100은 펠릿사료용 액상 결착제입니다. 양어사료 전용으로 개발된 제품입니다. 액상 단백질 함유량 40%이상의 제품으로 양어 사료 제조시 낮은 온도에서 사용이 용이하도록 개발되었습니다. 분말 제품의 단점인 낮은 온도에서의 결착력을 보완 하였습니다. 분말제품대비 분산성도 우수하여 양어용 펠릿사료 생산시 PDI 향상에 도움을 주며 펠릿사료 침출량을 줄여 줄수 있습니다.



성분 및 함유량

| 단백질 | 투입량 (사료 1톤당) | 특징 |
|-------|-----------------|--------------|
| 40%이상 | 3~5% | 다양한 펠릿사료에 적용 |

포장

- 20Kg 플라스틱 용기

보관

- 직사광선을 피하시고 서늘한 곳에 보관 하십시오
- 유통기한은 제조일로부터 1년 입니다

특장점

- 높은 영양적 가치
- PDI 향상
- 적은 투입량
- 생산성 향상
- 100% 천연물질
- 단백질(아미노산) 보충

History

January 1977

Established Ilsin general trading company (chemicals wholesaler)

July 1978

Established Goosung chemical trading company, beginning manufacturing at Kyunggi-do Gwangju

October 1978

Changed firm name to Kooryong Industry, moving the factory into Choongbuk Gyeongsang

June 1990

Extended factory production line

July 1990

Registered for trade business

March 1991

Completed the extension of factory production line

July 1991

Approved importation sale business of food, etc.

April 1996

Registered for the patent that is related to industrial adhesive

September 1996

Registered for the manufacturing industry of supporting feed-stuff

October 1999

Registered for a venture enterprise

October 2005

Changed company's CI and built the automation of production line

June 2007

Production line expanded to meet the demand of protein products

March 2010

Start to develop the liquid protein and the amino acid products

April 2011

Introduced veggie based pellet binder into Korea market

June 2014

Increased production capacity for amino acid products



Kooryong Industrial Corp.

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