# ▲ MITSUBISHI-CHEMICAL FOODS CORPORATION Division 3

1-1, Marunouchi 1-chome, Chiyoda-ku, Tokyo, 100-8251, Japan TEL +81-3-6748-7418 FAX +81-3-3286-1196 http://www.mfc.co.jp

#### Notes :

The regulations governing food, food additives, dietary supplements and cosmetics do vary between countries, and the use of some products may be restricted in some places. Therefore, customers are requested to observe the appropriate regulations when using these products. While the information provided in this document is presented in good faith and believed to be accurate, it does not bind MITSUBISHI-CHEMICAL FOODS CORPORATION under any legal obligations. It is presented only for the purpose of your guidance. Any information in this document may change without prior notice.

# **Bulk Products**

Food Ingredients, Health Functional Materials and Cosmetic Ingredients











### **Natural Vitamin E Products**

					Category*				Packaging	
Туре	Product name	Content (International Unit)	Description	Functions	Cosmetics	Dietary Supplement	Food	Major applications	(kg)	Shelf life
<i>d</i> -alpha	d-alpha Tocopherol 1000	d-a-Tocopherol ≥67.1% (1000 IU/g)	Oil			•	•		5, 15, 180	3 years
	d-alpha Tocopherol 1000-GL	d-a-Tocopherol ≥67.1% (1000 IU/g)	Oil			•	•		180	3 years
	d-alpha Tocopherol 1300	d-a-Tocopherol ≥87.3% (1300 IU/g)	Oil	Anti-oxidation effect inside the body (protecting body from the damage of oxidation). Anti-oxidation effect in		•	•		180	3 years
	d-alpha Tocopherol Powder 50	d-α-Tocopherol 47.5-55.0%	Powder			•	•	Food fortification and hard capsules, tablets as nutrient supplement.	10 (1 kg x 10)	2 years
	d-alpha Tocopheryl Acetate 1100	d-a-Tocopheryl acetate ≥80.9% (1100 IU/g)	Oil	ingredients.		•		Supplement preparations such as soft capsules.	180	3 years
	d-alpha Tocopheryl Acid Succinate	d-a-Tocopheryl acid succinate 96.0-102.0% (1210 IU/g)	Powder			•		Supplement preparations such as tablets and hard capsules.	25	3 years
	d-Mixed Tocopherols Concentrate S4a	Total tocopherols 8.0% d-a-Tocopherol 4.0%	Emulsion				•	Food fortification and hard capsules, tablets as nutrient supplement.	10 (1 kg x 10, 5 kg x 2)	2 years
d gamma	D-GAMMA Tocopherol 90	d-γ-Tocopherol ≥90.0%	Oil	Effective in reducing wrinkles and pores; Diuretic activity, improving sodium metabolism.  Anti-oxidant for cosmetics and food with high heatstability.	•	•		Supplement preparations such as soft capsules.	15	3 years
<i>d</i> -gamma	GAMMA Tocopherol POWDER 30	d-γ-Tocopherol ≥30%	Powder			•		Supplement preparations such as tablets, hard capsules.	1, 10	2 years
<i>d</i> -delta	d-delta-rich Tocopherols Concentrate	Total tocopherols $\geq 96.0\%$ a) $d$ - $\delta$ -Tocopherol $\geq 90.0\%$ of total tocopherols b)	Oil		•		•	Anti-oxidation of oils, fats for food and cosmetics.	5, 15	3 years
	d-Mixed Tocopherols Concentrate 50L	Total tocopherols ≥50.0%	Oil	Anti-oxidant for food.			•		15	3 years
	d-Mixed Tocopherols Concentrate 70L	Total tocopherols ≥68.0%	Oil		•		•	Fortification and Anti-oxidation of oils fats and fry.	5, 15	3 years
	d-Mixed Tocopherols Concentrate E10	Total tocopherols 7.5-10.0%	Emulsion				•		12 (1 kg x 12)	1 year
d-Mixed	d-Mixed Tocopherols Concentrate E30	Total tocopherols 27.0-36.0%	Emulsion				•	Anti-oxidation of processed foods, seafood, frozen food.	12 (1 kg x 12)	1 year
	d-Mixed Tocopherols Concentrate P20	Total tocopherols 16.0-21.0%	Powder				•		10	2 years
	d-Mixed Tocopherols Concentrate P34C	Total tocopherols ≥32.0%	Powder				•	Anti-oxidation of dry foods such as flour and dry milk.	10	2 years
Tocotri-	Mixed Tocotrienols 92	Total tocotrienols ≥65.0% Total tocotrienols and total tocopherols ≥92.0%	Oil	Anti-oxidant; Lowering cancer	•	•		Supplement preparations such as soft capsules. Fortification and Anti-oxidation of oils and fats.	1, 5, 15	2 years
Tocotri- enol	MIXED TOCOTRIENOLS POWDER 30	Tocotrienols ≥20% Total tocotrienols and tocopherols ≥30%	Powder	risk; heat health; Beauty effects; Brain health.		•		Supplement preparations such as hard capsules. Fortification and Anti-oxidation of oils and fats.	1, 10	2 years

Notes: The assay method for each of the products in the above section (Natural Vitamin E Products) is HPLC, with the marked exceptions.

a) Cerium titration determination, b) Gas Chromatographic determination.

\* Above category and applications are based on the authorization in Japan.

## **Synthetic Vitamin E Products**

			Content (International Unit) Description Functions		Category*				Packaging	
Туре	Product name	Content (International Unit)		Cosmetics	Dietary Supplement	Food	Major applications	(kg)	Shelf life	
	dl-alpha Tocopherol	dl-a-Tocopherol 96.0-102.0% (1100 IU/g)	Oil	Anti-oxidation effect in ingredients.	•	•	•	Fortification and Anti-oxidation of other ingredients.	15	2.5 years
dl-alpha	dl-alpha Tocopheryl Acetate	dl-a-Tocopheryl acetate 96.0- 102.0% (1000 IU/g)	Oil	Anti-oxidation effect inside the	•	•		Active ingredient of cosmetics and dietary supplement	50	3 years
	Vitamin E 50% CWS/S	dl-a-Tocopheryl acetate ≥50%	Powder	body (protecting body from the damage of oxidation).		•	•	Fortification for dry food such as flour, dry milk and beverage powders, and waterbase foods.	20	2 years
	dl-alpha-Tocopheryl Nicotinate	dl-a-Tocopheryl nicotinate ≥96.0% (880 IU/g)	Oil or solid	Vasodilator action; Improvement of microcirculation; Stronger enhancement of hair growth.	•			Active ingredient of cosmotics	5, 25	3 years
	Vitamin E Linoleate Mixture	dl-a-Tocopheryl linoleate/oleate 96.0-102.0%	Oil	Promoting regular skin turnover; Moisturizing effect; Improvement of deep wrinkles.	•			Active ingredient of cosmetics.	5, 15	3 years

# **Functional Products**

					Category*				Packaging (kg)	Shelf life
Туре	Product name Content Description Functions Cost	Cosmetics	Dietary Supplement	Food	Major applications					
Plants'	Hydroxytyrosol-20 (From Olive leaf)	Hydroxytyrosol ≥20.0%	Powder	Maintaining joint health; Restoration of cartilage; Protecting oxidative damage of LDL; Skin care.	•	•	•	Cumplement proporations such as tablets and hard capsules	1, 5	3 years
extracts	Olive leaf Extract	Oleuropein ≥35.0%	Powder	Improving metabolic syndrome; Reducing visceral fat, blood glucose, blood pressure and blood lipid.		•	•	Supplement preparations such as tablets and hard capsules.	1, 5	3 years
	Phytosterol-FKP	Phytosterols 95.0-102.0%	Powder			•		Supplement preparations such as tablets and hard capsules.	1, 10	1 year
Phytos- terol	Phytosterol-AQD	Phytosterols ≥85%	Water dispersible powder	Reducing cholesterol.			•	Fortification of drink, dairy products, meat substitute.	10 (5 kg x 2)	1 year
Sodium Ferrous Citrate		10.0-11.0% as Fe	Powder	Iron fortification.		•	•	Food additive and supplement ingredient.	10	2 years
SODIUM (	COPPER CHLOROPHYLLIN	Sodium copper chlorophyllin	Powder	Colorant.			•	Food colorant such as processed products of vegetable and fruit, baked food, gum and jelly.	5	1.5 years
PHYTONADIONE (Vitamin K1)		Phytonadione 97.0-103.0%	Oil	Vitamin K supplementation.		•	•		1, 5	3 years
Coenzyme Q10		Coenzyme Q10 98.0-101.0%	Powder	Anti-oxidation effect inside the body; Acting on cellular energy production.	•	•		Supplement preparations such as soft capsules.	1, 5	3 years

Note: \* Above category and applications are based on the authorization in Japan.

Shelf-life Extension Preparation and Others

AMICANON Family is a shelf-life extension preparation in which Lysozyme,
a natural substance extracted from egg white is blended with Glycine, Organic acid, etc..
Egg-white lysozyme induces bacteriolysis by acting upon the cell walls of certain varieties of bacteria.

Therefore, AMICANON Family shows safer and more effective activities to inhibit the growth of bacteria in your food.	Therefore, AMICANON Family	shows safer and more effective act	tivities to inhibit the growth of bacte	ria in vour food.
--	----------------------------	------------------------------------	---	-------------------

Product name	Ingredients	Description	Functions	Category*	Major applications	Dosage	Packaging	Shelf life		
				Food			(kg)			
AMICANON	Lysozyme, Glycine, Lactose	Powder		•	Fresh noodles, Bakery filling	0.5-1.0%	10 (1 kg x 10)			
AMICANON-S	Lysozyme, Glycine, L-Cystine, Lactose	Powder		•	Japanese cakes, Bakery filling	0.5-1.0%	10 (1 kg x 10)	1 year		
AMICANON-U	Lysozyme,Glycine, Sodium acetate, DL-Malic acid, Sodium chloride	Powder		•	Japanese noodles	0.5-1.0%	10 (1 kg x 10)			
AMICANON-A	Lysozyme, Glycine, Sodium acetate, Adipic acid	Powder		•	Hamburgers, breaded meat, fish and vegetable products, ready-to- serve salad products (e.g. potato salad, egg salad)	0.4-0.7%	10 (1 kg x 10)			
AMICANON-SEVEN	Lysozyme, Glycine, Sodium acetate	Powder	Inhibit the growth of bacteria in food products	Inhibit the growth of bacteria in food products	- Inhibit the growth of bacteria in food products	•	Hamburgers, breaded meat, fish and vegetable products, ready-to- serve salad products (e.g. potato salad, egg salad)	0.4-0.8%	10 (1 kg x 10)	
AMICANON-M	Lysozyme, Sodium acetate, Adipic acid, Monosodium fumarate, Trehalose					•	Hamburgers, breaded meat, fish and vegetable products, ready-to- serve salad products (e.g. potato salad, egg salad)	0.4-0.7%	10 (1 kg x 10)	1.5 years
AMICANON-EX	Lysozyme, Glycine, Sodium acetate, DL-Malic acid, Dextrin	Powder			•	Hamburgers, breaded meat, fish and vegetable products, ready-to- serve salad products (e.g. potato salad, egg salad)	0.4-0.7%	10 (1 kg x 10)		
AMICANON-NEO	Lysozyme, Glycine, Sodium acetate, Citric acid, DL-Malic acid	Powder			•	Hamburgers, breaded meat, fish and vegetable products, ready-to- serve salad products (e.g. potato salad, egg salad), Food in disfavor with acidity	0.4-0.7%	10 (1 kg x 10)		
Egg White Lysozyme	Lysozyme	Powder			•	Dragogood food		0.5	2 years	
Egg White Lysozyme 5% powder	Lysozyme, Dextrin	Powder		•	Trocessed rood		10	1 year		
Kolimex-C	Egg white	Powder	Improving texture of noodle	•	Fresh noodle		10	1.5 years		
	AMICANON-S  AMICANON-U  AMICANON-A  AMICANON-SEVEN  AMICANON-M  AMICANON-EX  AMICANON-NEO  Egg White Lysozyme  Egg White Lysozyme 5% powder  Kolimex-C	AMICANON Lysozyme, Glycine, Lactose  Lysozyme, Glycine, L-Cystine, Lactose  Lysozyme, Glycine, Sodium acetate, DL-Malic acid, Sodium chloride  Lysozyme, Glycine, Sodium acetate, Adipic acid  AMICANON-A Lysozyme, Glycine, Sodium acetate  Lysozyme, Glycine, Sodium acetate  Lysozyme, Glycine, Sodium acetate  Lysozyme, Sodium acetate, Adipic acid, Monosodium fumarate, Trehalose  Lysozyme, Glycine, Sodium acetate, DL-Malic acid, Dextrin  Lysozyme, Glycine, Sodium acetate, DL-Malic acid, DL-Malic acid  Lysozyme, Glycine, Sodium acetate, Citric acid, DL-Malic acid  Lysozyme, Glycine, Sodium acetate, Citric acid, DL-Malic acid	AMICANON Lysozyme, Glycine, Lactose Powder  AMICANON-S Lysozyme, Glycine, L-Cystine, Lactose Powder  AMICANON-U Lysozyme, Glycine, Sodium acetate, DL-Malic acid, Sodium chloride Powder  AMICANON-A Lysozyme, Glycine, Sodium acetate, Adipic acid  AMICANON-SEVEN Lysozyme, Glycine, Sodium acetate Powder  AMICANON-M Lysozyme, Sodium acetate, Adipic acid, Monosodium fumarate, Trehalose Powder  AMICANON-EX Lysozyme, Glycine, Sodium acetate, DL-Malic acid, Dextrin Powder  Lysozyme, Glycine, Sodium acetate, DL-Malic acid, DL-Malic acid  Egg White Lysozyme Lysozyme Powder  Egg White Lysozyme S% powder Lysozyme, Dextrin Powder  Kolimex-C Egg white Powder	AMICANON Lysozyme, Glycine, Lactose Powder  Lysozyme, Glycine, L-Cystine, Lactose Powder  Lysozyme, Glycine, Sodium acetate, DL-Malic acid, Sodium chloride Powder  AMICANON-A Lysozyme, Glycine, Sodium acetate, Adipic acid  AMICANON-SEVEN Lysozyme, Glycine, Sodium acetate  Lysozyme, Glycine, Sodium acetate  AMICANON-SEVEN Lysozyme, Sodium acetate, Adipic acid, Powder  Lysozyme, Sodium acetate, Adipic acid, Powder  Lysozyme, Glycine, Sodium acetate, Powder  Lysozyme, Glycine, Sodium acetate, DL-Malic acid, Dextrin  Lysozyme, Glycine, Sodium acetate, Citric acid, DL-Malic acid  Lysozyme, Glycine, Sodium acetate, Powder  Egg White Lysozyme Lysozyme Powder  Lysozyme, Dextrin Powder  Kolimex-C Egg white Powder Improving texture of noodle	AMICANON Lysozyme, Glycine, Lactose Powder  AMICANON-S Lysozyme, Glycine, L-Cystine, Lactose Powder  AMICANON-U Lysozyme, Glycine, Sodium acetate, DL-Malic acid, Sodium Acetate, Adlipic acid  AMICANON-A Lysozyme, Glycine, Sodium acetate, Adlipic acid, Sodium acetate, Adlipic acid  AMICANON-SEVEN Lysozyme, Glycine, Sodium acetate Powder  AMICANON-M Lysozyme, Glycine, Sodium acetate, Adlipic acid, Monosodium fumarate, Trehalose  AMICANON-EX Lysozyme, Glycine, Sodium acetate, Adlipic acid, DL-Malic acid, Dextrin  AMICANON-EX Lysozyme, Glycine, Sodium acetate, Citric acid, Dextrin  AMICANON-EX Lysozyme, Glycine, Sodium acetate, Citric acid, DL-Malic acid  Lysozyme, Glycine, Sodium acetate, Powder  Egg White Lysozyme Lysozyme Powder  Egg White Lysozyme Lysozyme, Dextrin Powder  Kolimex-C Egg white Powder Improving texture of noodle	AMICANON Lysozyme, Glycine, Lactose Powder  AMICANON-S Lysozyme, Glycine, Lactose Powder  AMICANON-I Lysozyme, Glycine, Lactose Powder  AMICANON-I Lysozyme, Glycine, Sodium acetate, Do-Malic acid, Sodium chloride  AMICANON-A Lysozyme, Glycine, Sodium acetate, Adipic acid Management of Bowder  AMICANON-Beven Lysozyme, Glycine, Sodium acetate  AMICANON-Beven Lysozyme, Glycine, Sodium acetate, Do-Malic acid, Devetin  AMICANON-Beven Lysozyme, Glycine, Sodium acetate, Do-Malic acid, Devetin  AMICANON-Beven Lysozyme, Glycine, Sodium acetate, Do-Malic acid, Devetin  AMICANON-Beven Lysozyme, Glycine, Sodium acetate, Citric acid, Di-Malic acid, Devetin  Powder  Egg White Lysozyme  Lysozyme, Glycine, Sodium acetate, Citric acid, Di-Malic acid  Lysozyme, Glycine, Sodium acetate, Citric acid, Di-Malic acid  Lysozyme, Glycine, Sodium acetate, Citric acid, Di-Malic acid  Lysozyme, Glycine, Sodium acetate, Do-Malic acid, Devetin  Powder  Lysozyme, Glycine, Sodium acetate, Citric acid, Di-Malic acid  Lysozyme, Glycine, Sodium acetate, Citric acid, Di-Malic acid  Powder  Lysozyme, Glycine, Sodium acetate, Citric acid, Di-Malic acid  Powder  Lysozyme, Glycine, Sodium acetate, Citric acid, Di-Malic acid  Powder  Lysozyme, Glycine, Sodium acetate, Citric acid, Di-Malic acid  Powder  Lysozyme, Glycine, Sodium acetate, Citric acid, Di-Malic acid  Powder  Lysozyme, Glycine, Sodium acetate, Citric acid, Di-Malic acid  Powder  Lysozyme, Glycine, Sodium acetate, Citric acid, Di-Malic acid  Powder  Lysozyme, Glycine, Sodium acetate, Citric acid, Di-Malic acid  Powder  Lysozyme, Glycine, Sodium acetate, Citric acid, Di-Malic acid  Powder  Lysozyme, Glycine, Sodium acetate, Citric acid, Di-Malic acid  Powder  Lysozyme, Glycine, Sodium acetate, Citric acid, Di-Malic acid  Powder  Lysozyme, Glyci	AMICANON-IS  Lysozyme, Glycine, Lactose  AMICANON-S  Lysozyme, Glycine, Lactose  AMICANON-S  Lysozyme, Glycine, Sodium acetate, DL Halle acid, Sodium acetate, Afficic acid  AMICANON-SEVEN  Lysozyme, Glycine, Sodium acetate, Afficic acid  AMICANON-Me  Lysozyme, Glycine, Sodium acetate, Afficic acid, Monocodium formarish, Freiabous  AMICANON-Me  Lysozyme, Glycine, Sodium acetate, Afficic acid, Monocodium formarish, Freiabous  AMICANON-Me  Lysozyme, Glycine, Sodium acetate, Afficic acid, Devater  Lysozyme, Glycine, Sodium a	AMICANON I sparyme, Glycine, Lectose Powder  AMICANON-S (sparyme, Glycine, Lectose Powder)  AMICANON-S (sparyme, Glycine, Ectose) Powder  AMICANON-S (sparyme, Glycine, Sodium acetales, Affigic acid  I sparyme, Glycine, Sodium acetales, Affigic acid  I sparyme, Glycine, Sodium acetales, Affigic acid  I sparyme, Glycine, Sodium acetales  AMICANON-M (sparyme, Glycine, Sodium acetales)  AMICANON-M (sparyme, Glycine		

Note: \* Above category and applications are based on the authorization in Japan.