# COLYCINE Produced by SHOWA DENKO

# SHOWA DENKO GLYCINE Customer Safety, Product Reliability and Stable Supply

GLYCINE is one of the essential amino acids, commonly found in proteins. Large amount of free GLYCINE including a prawns, sea urchins, scallops and other shellfish. The characteristic flavor in these foods can be SHOWA DENKO GLYCINE is carefully produced and purified to meet your most demanding requirements.



is predominantly found in nature, attributed to GLYCINE.

## Features of SHOWA DENKO GLYCINE

## No.1

### No.1 manufacturer in Japan

We have the No.1 market share in Japan market and sell worldwide through our global network.

# History

### Over 40 years production & supply history

GLYCINE production was started at Kawasaki Plant in 1974.

## Service

### Highly-expertized sales/technical service

We promote close communication to meet our customer's requirement.

# Stable Supply

### In-house integrated production from raw material to GLYCINE

We are the only company in Japan that maintains an integrated production system, from raw materials to finished products.



## **Process Flow Chart**



## **Plant Certificate**



# From Dietary to Industrial Applications— SHOWA DENKO GLYCINE is a Versatile Product



# Food

GLYCINE is added to many food products to help create rich, elegant flavors.
GLYCINE prevents growth of Bacillus Subtilis and Escherichia Coli, improving the shelf life of foods.

# Personal Care

GLYCINE, along with its aluminumzirconium complex, is widely used in antiperspirants.

GLYCINE is an effective buffer in cosmetic and toiletry products and is the largest constituent in collagen protein.

# Metal Finishing

Many electrolytic and electroless metal plating baths use GLYCINE for its buffering, brightening and complexing ability. GLYCINE functions as an ammonia substitute in the formulation of low-odor plating solutions.

GLYCINE is also used for CMP (Chemical mechanical polishing) Slurry.



# **Chemical Synthesis**

Being a simple organic compound with reactive amino, carboxyl and methylene groups, GLYCINE has numerous applications in the synthesis of pharmaceuticals, agricultural chemicals and a wide variety of other organic chemicals.

# Feed Additives

GLYCINE can be used as feed additive that can not only improve feed nutrition levels but also has the effects of antioxidation and prolonging the shelf life of feed.

# Pet Food

GLYCINE is used as an ingredient in pet food formulations, to improve the taste.

# **Extraordinary Quality**

Our manufacturing plant is located right outside of Tokyo at Kawasaki, Japan. Both raw materials and with the highest standards and sent to our customers from Japan. Our manufacturing facilities have been high quality supplies. We work to maintain, pass on, and further advance the cutting-edge production

finished products are manufactured designed exclusively for the production of technologies that we have developed over the years.













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## **Item & Packaging**



### 20kg Paper Bag

Food grade, Technical grade(conform to USP grade), Feed grade



### 500kg Flexible Bag

Technical grade(conform to USP grade)

### **Specifications**

Assay	98.5~101.5%	
State of Solution	Transparent and Colorless	
рН	5.5~7.0	
Chloride (as CI)	0.021% max.	
Heavy Metals (as Pb)	20 ppm max.	

Arsenic (as As2O3)	4.0 ppm max.
Loss on Drying	0.30% max.
Residue on Ignition	0.10% max.
Check Tests (2 different types)	Conforming

**\*Specifications** can be customized.

## SHOWA DENKO—Japan's Leading Comprehensive Chemical Manufacturer

### Company Profile

Company Name SHOWA DENKO K.K.

Head Office 13-9, Shiba Daimon 1-Chome, Minato-ku, Tokyo 105-8518 Japan

Established June 1, 1939

Main Businesses Petrochemicals Petrochemicals Department, Organic Chemicals

Department)

Chemicals

Industrial Gases Division, Basic Chemicals Division (Industrial Chemicals Department),

Chemicals Department, Organic Industrial Chemicals Department),

Electronic Chemicals Division, Functional Chemicals Division (Functional Polymers Department, Specialty Chemicals Department)

Inorganics Ceramics Division, Carbons Division

Aluminum Rolled Products Division, Aluminum Specialty

Components Division, Aluminum Can Division

Electronics Materials Division, HD Division, Advanced Battery

Materials Division

Others Business Development Center

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### SHOWA DENKO GROUP

http://www.sdk.co.jp/

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