

SAFETY DATA SHEET

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Version 02

PRODUCT	MONOSODIUM GLUTAMATE
CAS NO.	6106-04-3
MANUFACTURER	DAESANG Corporation

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY UNDERTAKING

Product identifier	Product name CAS number EC number Index number Registration number	Monosodium Glutamate (MSG) 6106-04-3 205-538-1 Not applicable Not applicable
Relevant identified uses	Applications	Food supplement
Details of the supplier	Names Address Tel/Fax Contact email	Daesang Corporation 26, Cheonho-daero, Dongdaemun-gu, Seoul, South Korea Tel: +82 2 2657 5371 & Fax: +82 2 2657 5333 bio@daesang.com
Emergency telephone no.	Telephone	+1 201 488 4010 for USA & Canada +31 20 640 6080 for Europe +82 2 2657 5371 for the rest countries

2. HAZARDS IDENTIFICATION

Classification of the substance	Physical hazards Health hazards Environmental hazards	Not applicable Not applicable Not applicable
Label elements		Not applicable
Potential effects		May cause eye and skin irritation It will increase the biological oxygen demand (BOD) of water

3. COMPOSITION INFORMATION ON INGREDIENTS

Substance	Name of substance CAS number EC number Index number Concentration	Monosodium Glutamate (MSG) 6106-04-3 205-538-1 - 100%
4. FIRST AID MEASURES		
Description of first aid measures	After eye contact	In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes
	After skin contact	Immediately wash skin with soap and flush with water
	After inhalation	Exposure If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen
	After ingestion	Wash out mouth with water provided person is conscious Call a physician
Most important symptoms and effects, both acute and delayed		Not determined
Indication of any immediate medical attention and special treatment needed		Not determined
5. FIRE FIGHTING MEASURES		
Extinguishing media		Water spray, Carbon dioxide, dry chemical powder or appropriate foam
Special hazards arising from the substance or mixture		Emits toxic fumes under fire conditions
Advice for firefighters		Protective equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes
6. ACCIDENTAL RELEASE MEASURES		
Personal precautions, protective equipment and emergency procedures		See precautions in section 7 and 8. Avoid raising dust Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves
Environmental precautions		None
Methods and material for containment and cleaning up		Sweep up, place in a bag and hold for waste disposal Ventilate area and wash spill site after material pickup is complete
Reference to other sections		See precautions in section 7 and 8
7. HANDLING AND STORAGE		
Precautions for safe handling		Avoid inhalation Avoid contact with eyes, skin and clothing Avoid prolonged or repeated exposure
Conditions for safe storage, including any incompatibilities		Store in a cool and dry place Recommended storage temperature is 15~30°C Keep container tightly closed and inner bag sealed

Specific end use(s)		Not applicable
8. EXPOSURE CONTROLS / PERSONAL PROTECTION		
Control parameters		Not applicable
Exposure controls		<u>Respiratory protection</u> : Government approved respirator <u>Hand protection</u> : Compatible chemical-resistant gloves <u>Eye protection</u> : Chemical safety goggles <u>Body protection</u> : Safety shower and eye bath <u>Hygiene measures</u> : Wash thoroughly after handling Mechanical exhaust required
9. PHYSICAL AND CHEMICAL PROPERTIES		
Information of basic physical and chemical properties	Physical state	White crystal or crystalline powder
	Colour	White
	Odour	Odorless
	Odour threshold	Not determined
	pH	6.7-7.2
	Melting point	Approx. 232°C
	Boiling point	Not determined
	Flash point	Not determined
	Evaporation rate	Not determined
	Flammability	Not determined
	Auto flammability	Not determined
	Upper/lower flammability or explosive limits	Not determined
	Explosive properties	Not determined
	Oxidising properties	Not determined
	Vapour pressure	Not determined
	% volatile by volume	Not determined
	Vapour density	Not determined
	Relative density	Not determined
	Solubility in water	Approx. 3.4% in water (25°C)
	Other solvents	Not determined
Partition coefficient (n-octanol/water)	Not determined	
Decomposition temperature	Not determined	
Viscosity	Not determined	
Other information		No other information
10. STABILITY AND REACTIVITY		
Reactivity		Not determined
Chemical stability		Stable under recommended storage conditions

Possibility of hazardous reactions	Not determined
Conditions to avoid	Not determined
Incompatible materials	Strong oxidizers
Hazardous decomposition materials	Carbon monoxide, Carbon dioxide, Nitrogen oxides
11. TOXICOLOGICAL INFORMATION	
Acute toxicity	May be harmful if absorbed through the skin May be harmful if inhaled May be harmful if swallowed
Skin corrosion/irritation	May cause skin irritation
Serious eye damage/irritation	May cause eye irritation
Respiratory or skin sensitization	Not determined
Germ cell mutagenicity	Not determined
Carcinogenicity	Not determined
Reproductive toxicity	Not determined
STOT-single exposure	May be irritating to mucous membranes and upper respiratory tract
STOT-repeated exposure	Not determined
Aspiration hazard	Not determined
RTECS No.	MA 1575000
12. ECOLOGICAL INFORMATION	
Toxicity	Not determined
Persistence and degradability	Not determined
Bioaccumulative potential	Not determined
Mobility in soil	Not determined
Results of PBT and vPvB assessment	Not determined
Other adverse effects	Not determined
13. DISPOSAL CONSIDERATIONS	
Waste treatment methods	Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber Observe all federal, state and local environmental regulations
List of CER codes	Allocation of the waste code numbers according EC Directive 91/692/EEC must be realized under considerations of existing sector specifics and processes
14. TRANSPORT INFORMATION	
UN Number	None
UN proper shipping name	None
Transport hazard classes	None
Packing group	None

Environmental hazards	None
Land transport (ADR/RID)	None
Onland waterway craft (ADN/ADNR)	None
Marine transport (IMDG)	None
Air transport (IATA)	None
Special precautions for user	None
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC code	Not determined
No special requirements for transport according to international regulations. For more information, contact Daesang Europe b.v.	
15. REGULATORY INFORMATION	
Safety, health and environmental regulations/legislation specific for the substance or mixture	<u>US Regulatory information:</u> SARA Listed : No TSCA Inventory items : Yes <u>Canada information:</u> WHEMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR DSL : Yes NDSL : No
Chemical safety assessment	Not applicable
16. OTHER INFORMATION	
This information is based on our present knowledge and is provided according to the relevant EC and national regulations. This information is intended as a characterization of the product in order to provide guidance for the relevant safety issues. However, this document does not provide any warranty, expressed or implied, regarding the properties of the product. In no event will Daesang Corp. be responsible for damages of any nature whatsoever resulting from the use of or reliance on information.	