Date of issue : 11 August, 2003
Date of revision : 1 March, 2011

Material Safety Data Sheet

1. Product and company identification

Product name	:	Guanine
Name of manufacturer	:	KANTO CHEMICAL CO., INC.
Address	:	2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, Japan
Name of section	:	Reagent division, catalog and products information section
Telephone number	:	+81-3-6214-1090
Facsimile number	:	+81-3-3241-1047
Mail address	:	BC32@gms.kanto.co.jp
MSDS No.	:	17055

2. Summary of danger and Hazard

GHS classification

Physical and chemical hazard

Flammable solids	:	Out of category
Pyrophoric solids	:	Out of category

3. Composition/Information on ingredients

Substance/Mixture	:	Substance
Chemical name or commercial name	:	Guanine
Ingredients and composition	:	Guanine min. 96.0%
Chemical formula	:	C5H5N5O
CAS No.	:	73-40-5
TSCA Inventory	:	Registered
EINECS No.	:	2007998

4. First aid measures

Inhalation	:	Remove the victim to fresh air, and make him blow his nose and gargle.
Skin contact	:	Wash the affected areas under running water.
Eye contact	:	Wash the affected areas under running water for at least 15 minutes. If necessary, get medical treatment.
Ingestion	:	Give the victim water or salt water and induce vomiting. If necessary, get medical attention.

5. Fire fighting measures

Extinguishing media	:	Water, dry chemical powder, carbon dioxide, dry sand, foam
Prohibited extinguishing media	:	None

Particular fire fighting : Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.

Protection for firefighters
: Firefighters should wear protective equipment.

6. Accidental release measures

Cautions for personnel : Wear proper equipment and avoid contact with skin and inhalation of dust. Keep away personnel except for authorized ones from spillage area by stretching ropes.

Cautions for environment : Attention should be given not to cause damage to the environment by flowing of spillage to rivers. In case of the dilution of copious water, do not cause damage to the environment by untreated wastewater.

Removal measure : Sweep up in a chemical waste container. Flush residual area with copious amounts of water.

7. Cautions of handling and storage

Handling

Engineering measures : If necessary, wear proper protective equipment not to contact with skin or inhale the dust.

Cautions for safety handling
: Handle the chemical not to generate aerosol or dust.

Storage

Adequate storage condition
: Store in a dark, cool place and tightly closed.

Safety adequate container materials
: Glass, polyethylene, polypropylene

8. Exposure control/Personal protection

Engineering measures : Use only with adequate ventilation and in closed systems.

Control parameters

ACGIH(2009) : Not established

Protective equipment

Respiration protective equipment
: If necessary, wear dust mask

Hands protective equipment
: Impervious protective gloves

Eyes protective equipment
: Safety goggles

9. Physical and chemical properties

Appearance : Powder

Color : White-pale orange

Odor : Odorless

Boiling point : Decomposition

Melting point : more than 360℃

Specific gravity : Not available

Solubility

Solubility in solvents : Water ; 0.0068%

Organic solvents ; Insoluble

Other data : Readily soluble in ammonia water, potassium hydroxide solution

10. Stability and reactivity

Stability : Stable under normal usage.

Reactivity : May react with strong oxidizing substances.

Incompatible conditions : Light, heat

Incompatible materials : Oxidizing substances

Hazardous decomposition products

: Carbon monoxide, nitrogen oxides

11. Toxicological information

Acute toxicity : Oral : Not possible to classify because of insufficient data.

Dermal : Not possible to classify because of insufficient data.

Inhalation(vapor) : Not possible to classify because of insufficient data.

Inhalation(dust, mist) : Not possible to classify because of insufficient data.

Irritation to skin, eyes : Not possible to classify because of insufficient data.

Respiratory sensitization or Skin sensitization

: Respiratory sensitization : Not possible to classify because of insufficient data.

Skin sensitization : Not possible to classify because of insufficient data.

Mutagenicity : Not possible to classify because of insufficient data.

Carcinogenic effects : Not possible to classify because of insufficient data

Effects on the reproductive system

: Not possible to classify because of insufficient data.

Specific target organ systemic toxicity single exposure

: Not possible to classify because of insufficient data.

If swallowed, may cause nausea, vomiting.But impossible to classify due to insufficient data.

Specific target organ systemic toxicity repeated exposure

: Not possible to classify because of insufficient data.

Aspiration hazard : Not possible to classify because of insufficient data.

12. Ecological information

Ecotoxicity

Fish toxicity : Acute aquatic toxicity : Not possible to classify because of insufficient data.

Chronic aquatic toxicity : Not possible to classify because of insufficient data.

Rediualbility and degradability

: Not available

Ecorediualbility : Not available

13. Disposal consideration

Residual disposal	:	Mixed with flammable organic solvents and burn in a chemical incinerator equipped with an afterburner and a scrubber. Or entrust approved waste disposal companies with the disposal.
Containers	:	In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

UN class	:	Not applicable

15. Regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

16. Other information

References: Dictionary of Organic Compounds, The society of Synthetic Organic Chemistry, Kodansha Ltd.(1985)

The information contained herein is based on several references and the present state of our knowledge. However the MSDS does not always cover all information about the product, handle the product carefully.The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements.The information herein is only provision of information, and it does not represent a guarantee the properties of the product.