Gibberellic acid

I - IDENTIFICATION OF THE PRODUCT AND THE COMPANY

1. Identification of the product: Gibberellic acid

1.1 Product identifier
Product name: Gibberellic acid 40g/L SL
Brand name: TIVAG
CAS-No.: 77-06-5
Identified uses: Manufacture of substances, plant growth regulator

1.2 Details of the supplier of the safety data sheet
Company: March Chemicals Co., Ltd
Tel: +86-571-85814681
Fax: +86-571-85814679

II - HAZARDS IDENTIFICATION

2.1 Classification of the preparation
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.3 Other hazards: This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Pictogram:

III - COMPOSITION / INFORMATION ON INGREDIENTS

Common name: Gibberellic acid
Formula: C_{19}H_{22}O_{6}
Molecular Weight: 346.37 g/mol
CAS-No.: 77-06-5
4.1 **Description of first aid measures:**

*If inhaled:* Move to fresh air. Oxygen or artificial respiration if necessary. Consult a doctor.

*In case of skin contact:* Immediately remove contaminated clothing and footwear and flush skin with plenty of water. Wash affected area thoroughly with soap and water as soon as possible. Consult a doctor if skin irritations or allergic reactions occur. Wash contaminated clothing before reuse.

*In case of eye contact:* If in eyes, flush with water for 15 minutes. Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing. If persistent eye irritation, consult a specialist.

*Ingestion:* DO NOT INDUCE VOMITING. Wash out mouth with clean water. Seek medical attention immediately.

4.2 **Indication of any immediate medical attention and special treatment needed:** Treatment: If swallowed, the stomach should be emptied by gastric lavage under medical supervision. Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

5.1 **Extinguishing media**

*Suitable extinguishing media:* Alcohol resistant foam. Water fog. Dry chemical powder. Carbon dioxide (CO2).

5.2 **Special hazards arising from the substance or mixture:** Vapours may form explosive mixtures with air. Vapours may travel considerable distance to a source of ignition and flash back. During fire, gases hazardous to health may be formed.

5.3 **Advice for firefighters:** Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

5.4 **Further information:** No data available

6.1 **Personal precautions, protective equipment and emergency procedures:** Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of vapours. Fully encapsulating, vapour protective clothing should be worn for spills and leaks with no fire. Do not touch damaged containers or spilled material...
unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.

6.2 Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). The product is toxic to the aquatic environment if released in large quantities. Keep people and animals away.

6.3 Methods and materials for containment and cleaning up: Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Take precautionary measures against static discharge. Use only non-sparking tools. Keep combustibles (wood, paper, oil etc) away from spilled material.

6.4 Reference to other sections: For disposal see section 13.

VII-HANDLING AND STORAGE

7.1 Precautions for safe handling: Vapours may form explosive mixtures with air. Do not handle, store or open near an open flame, sources of heat or sources of ignition. Protect material from direct sunlight. Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Use non-sparking tools and explosion-proof equipment. Do not taste or swallow. Avoid breathing vapour. Avoid contact with skin. Avoid contact with eyes. Avoid prolonged exposure. Avoid contact with clothing. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. When using, do not eat, drink or smoke. Wash hands thoroughly after handling. Wash contaminated clothing before reuse.

7.2 Conditions for safe storage, including any incompatibilities: Keep away from heat, sparks and open flame. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Store in original tightly closed container. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Refrigeration recommended. Store away from incompatible materials. Keep in an area equipped with sprinklers.

7.3 Specific end uses: No data available

VIII-EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure controls
Appropriate engineering controls: Explosion-proof general and local exhaust ventilation. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Provide eyewash station.
**Personal protective equipment**

**Eye/face protection**
Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

**Skin protection**
Wear suitable protective gloves/clothing.

**Respiratory protection**
Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. Dust protection mask. Decontaminate all personal protective equipment after use. When this is not possible dispose of as contaminated wastes.

**Control of environmental exposure**
Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary.

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**IX - PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

**Form:** liquid

**Color:** Colorless to Light yellowish

**Odour:** Characteristic odour

**Odour Threshold:** No data available

**pH** (1% solution in water): 3 - 4 (20°C, 50% v/v in deionized water)

**Melting point/freezing point:** No data available

**Initial boiling point and boiling range:** 78°C

**Flash point:** 16.0°C (Close cup)

**Evaporation rate:** No data available

**Flammability (solid, gas):** Highly flammable.

**Upper/lower flammability or explosive limits:** No data available

**Vapour pressure:** 4.4kPa

**Vapour density:** No data available

**Relative density:** 0.83 g/ml

**Solubility:**
- **Hydrosolubility:** Soluble at all concentration
  - **Liposolubility (solvent oil to be specified):** No data
In Chloroform No data

Partition coefficient: n-octanol/water: No data available
Autoignition temperature: No data available
Decomposition temperature: No data available
Viscosity: No data available
Explosive properties: No data available
Oxidizing properties: No data available

X - STABILITY AND REACTIVITY

10.1 Reactivity: No data available
10.2 Chemical stability: Stable under recommended storage conditions.
10.3 Possibility of hazardous reactions: Under normal conditions of storage and use, hazardous reactions will not occur.
10.4 Conditions to avoid: Avoid heat, sparks, open flames and other ignition sources. Avoid temperatures exceeding the flash point. Contact with incompatible materials.
10.5 Incompatible materials: Strong oxidizing agents
10.6 Hazardous decomposition products: Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products: No data available

XI - TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects
Acute toxicity
  LD50 Oral - rat – 6,300 mg/kg
  LD50 Dermal - rabbit - > 2,000 mg/kg
Skin corrosion/irritation: Slight skin irritant (rabbits)
Serious eye damage/eye irritation: Highly eye irritant (rabbits)
Respiratory or skin sensitization: No observable abnormalities
Germ cell mutagenicity: Human leukocyte Other mutation test systems
Carcinogenicity
  IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
Reproductive toxicity: No data available
Specific target organ toxicity - single exposure: No data available
Specific target organ toxicity - repeated exposure: No data available
Aspiration hazard: No data available
Additional Information: No data available

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**XII - ECOLOGICAL INFORMATION**

12.1 Toxicity
Toxicity to fish: LC50 - Oncorhynchus mykiss (rainbow trout) - 150 mg/l - 96.0 h
Toxicity to Daphnia: EC50 - Daphnia magna - 122mg s.a./L – 48.0h

12.2 Persistence and degradability: Not toxic, and degrades rapidly in biological condition.
12.3 Bioaccumulative potential: This preparation contains no substance considered to be persistent, bioaccumulative and toxic (PBT). This preparation contains no substance considered to be very persistent or bioaccumulative (vPvB).
12.4 Mobility in soil: No data available
12.5 Results of PBT and vPvB assessment: This preparation contains no substance considered to be persistent, bioaccumulative and toxic (PBT). This preparation contains no substance considered to be very persistent or bioaccumulative (vPvB).
12.6 Other adverse effects: No data available

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**XIII - DISPOSAL CONSIDERATIONS**

13.1 Waste treatment methods
Residual waste: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Contaminated packaging: Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

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**XIV - TRANSPORT INFORMATION**

ADR/RID IMDG IATA
14.1 UN number: 1993
14.2 UN proper shipping name
   ADR/RID: FLAMMABLE LIQUID NOS-HAZMAT (CONTAIN ETHANOL)
   IMDG: FLAMMABLE LIQUID NOS-HAZMAT (CONTAIN ETHANOL)
   IATA: Flammable liquid nos-hazmat (contain ethanol)
14.3 Transport hazard class (es): 3
14.4 Packaging group: II
14.5 Environmental hazards: no
14.6 Further information: No data available

**XV - REGULATORY INFORMATION**

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

**Hazard statements**
H226 Flammable liquid and vapour.

**Precautionary statements**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P262 Do not get in eyes, or on skin.
P270 Do not eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/ eye protection/face protection.

**Chemical Safety Assessment:** For this product a chemical safety assessment was not carried out

**XVI - OTHER INFORMATION**

**Further information**
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information this document is based on the resent state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.