



**MATERIAL SAFETY DATA SHEET**

**6-BENZYLADENINE 040 SL**

Revision date: 11.11.10

**1. COMPOSITION AND PRODUCT IDENTIFICATION**

<b>Product name:</b>	6-benzyladenine 040 SL
<b>Substance:</b>	6-benzyladenine, 6-aminopurine
<b>Use:</b>	Plant growth regulator
<b>Producer:</b>	Almandine Corporation SA Gotthardstrasse 3 6300 Zug Switzerland
<b>London Liaison Office:</b>	Tel. +44 20 8995 8391 Fax: +44 20 8995 7639
<b>Formulation Contractor:</b>	Sub-Micron Industries, Unit B Spenceck Business Park Balme Road Cleckheaton BD19 4EW

**2. HAZARDS IDENTIFICATION**

<b>R10</b>	<b>Flammable</b>
<b>R37</b>	<b>Irritating to the respiratory system</b>
<b>R41</b>	<b>Risk of serious damage to eyes</b>
<b>R61</b>	<b>May cause harm to the unborn child</b>
<b>R67</b>	<b>Vapours can cause drowsiness and dizziness</b>

**Inhalation:** Irritating to the respiratory tract and may cause CNS depression with symptoms such as nausea, vomiting, drowsiness and dizziness.

**Ingestion:** May cause gastro-intestinal irritation.

**Skin contact:** May cause mild irritation.

**Eye contact:** Severely irritating to eyes.

Exposure to this chemical may have adverse effects on the fetus, keep away from pregnant women.

**3. COMPOSITION / INFORMATION ON INGREDIENTS**

Component	CAS N°.	Content (g/l)	Symbol(s)	R-phrase(s)
6-benzyladenine	1214-39-7	40	-	R22, R36, R52/53
N-methyl pyrrolidone	872-50-4	<300	T	R36/37/38, R61
Propylene glycol monomethyl ether	107-98-2	<300		R10
Alkylarylsulfonate salt /isobutanol		<300	Xi	R10, R37/38, R41, R67

For definition of R factors see Sections 15, 16

**4. FIRST AID MEASURES**

<b>Inhalation:</b>	Move patient to fresh air. Seek medical attention
<b>Ingestion:</b>	First aid is not generally required. If in doubt contact a doctor.
<b>Skin:</b>	Wash product from skin with copious amounts of water. If any unusual symptoms become evident, or if in doubt, contact a doctor.
<b>Eye:</b>	If irritation does occur, flush contaminated eye(s) with lukewarm, gently flowing water for 5 minutes until the product is removed. Obtain medical advice if irritation becomes painful or lasts more than a few minutes.

**5. FIRE FIGHTING MEASURES**

<b>Extinguishing media:</b>	Water fog, foam, CO <sub>2</sub> or dry chemical extinguishers.
<b>Flash point:</b>	45°C
<b>Fire and explosion hazards:</b>	This material is flammable and may pose an explosion hazard. Use spray to cool down unaffected containers. Fire fighters should use self contained breathing apparatus and suitable clothing.
<b>Under fire conditions:</b>	May release toxic fumes: NO <sub>x</sub> , CO <sub>x</sub> .

**6. ACCIDENTAL RELEASE MEASURES****Accidental release:**

Minor spills do not normally need any special clean up measures. In the event of a major spill, prevent spillage from entering drains or water courses. As a minimum, wear overalls, goggles and gloves. Stop leak if safe to do so, and contain spill.



Absorb onto sand, vermiculite or other suitable absorbent material. If spill is too large or if absorbent material is not available, try to create a dike to stop material spreading or going into drains or waterways. Sweep up and shovel or collect recoverable product into labelled containers for recycling or salvage, and dispose of promptly. After spills, wash area preventing runoff from entering drains. If a significant quantity of material enters drains, advise emergency services. Thoroughly launder protective clothing before storage or re-use.

## 7. HANDLING AND STORAGE

- Handling:** Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Check Section 8 of this MSDS for details of personal protective measures, and make sure measures are followed. Keep away from pregnant women. Wash hands and face before handling. Do not eat drink or smoke when handling this product. Keep away from open flames. Use non sparking equipment.
- Storage:** Make sure that containers of this product are kept tightly closed. Some liquid preparations settle or separate on standing and may require stirring before use. Keep in a cool, shaded place. Keep away from sources of open flames.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

- Exposure limits:** N-methyl pyrrolidone:  
AIHA Workplace Environmental Exposure Level (WEEL):10 ppm, 8-hour, TWA (skin notation).
- Propylene glycol monomethyl ether:  
ACGIH Threshold Limit Value (TLV):  
100 ppm (TWA), 150 ppm (STEL)
- The ADI for 6-benzyladenine is set at 0.02mg/kg/day.  
The corresponding NOEL is set at 30 mg/kg/day.  
ADI: Acceptable Daily Intake  
NOEL: No Observed Effect Level.
- Ventilation:** No special ventilation requirements are normally necessary for this product. However make sure that the work environment remains clean and that vapours and mists are minimised.
- Eye protection:** Wear suitable protective glasses or goggles.
- Skin protection:** To routinely avoid contact with all chemical products wear suitable chemical resistant gloves (preferably elbow-length).
- Protective material types:** Normal industrial clothing to protect skin.
- Respirator:** Normally, no respirator is necessary when using this product. If vapour levels go above the limits set by OELs, consider a half face mask with filter type ABE



### 9. PHYSICAL / CHEMICAL PROPERTIES

<b>Appearance:</b>	Clear green liquid.
<b>Odour:</b>	Mild organic odour
<b>Specific gravity:</b>	1.04-1.05 at 20°C
<b>Solubility in water:</b>	Completely soluble
<b>Flash Point:</b>	45°C

### 10. STABILITY AND REACTIVITY

<b>Reactivity:</b>	Unlikely to react or decompose under normal storage conditions.
<b>Conditions to avoid:</b>	Keep in a cool place, preferably below 30°C.
<b>Incompatibilities:</b>	Strong oxidising agents
<b>Fire decomposition:</b>	Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke.
<b>Hazardous polymerisation:</b>	Product is unlikely to undergo polymerisation.

### 11. TOXICOLOGICAL INFORMATION

<b>Acute LD<sub>50</sub> oral</b>	>2,000-5000 mg/kg (rat)
<b>Acute LD<sub>50</sub> dermal</b>	>2,000-5000 mg/kg (rat)
<b>Acute LC<sub>50</sub> inhalation</b>	>5.0 mg/l (rat), projected
<b>Eye irritation:</b>	Severe eye irritant
<b>Skin irritation:</b>	Not a skin irritant
<b>Skin Sensitisation:</b>	Not a skin sensitiser
<b>Chronic toxicity:</b>	No ingredients in this product are known as mutagenic, or carcinogenic. NMP has been found to cause birth defects in laboratory studies (depending on species), foetal death and reduced implantation. Chronic exposure to high levels of NMP can also have target organ effects to the bone marrow, spleen and liver.



**12. ENVIRONMENTAL INFORMATION**

**Persistence:** This product is believed to be biodegradable. It will not accumulate in the soil or water or cause long-term problems.

**Data for the technical:**

**Acute oral toxicity:** Bob white quail LD<sub>50</sub>: 1599 mg/kg

**Acute toxicity to fish:** LC<sub>50</sub> 96 h Zebra fish: 32 mg/L  
LC<sub>50</sub> 96h Carp: 38.5 mg/L

**EC<sub>50</sub> 48 h *Daphnia magna*:** >40 mg/L

**13. DISPOSAL CONSIDERATIONS**

**Product disposal:** This product is considered as hazardous and should be disposed of according to local and national regulations. DO NOT burn to dispose of product. Do not allow to enter water courses or drainage system.

**14. TRANSPORTATION INFORMATION**

This product is regulated for transport for sea and road under the following classification:


**Shipping Name:** Flammable liquid nos. (contains isobutanol)

**UN No:** 1212

**Class:** 3

**Packing group:** III

**15. REGULATORY INFORMATION**

**Pictograms:** T   
Toxic

**Risk phrases:**

R10	Flammable
R37	Irritating to the respiratory system
R41	Risk of serious damage to eyes
R52/53	Harmful to aquatic organisms; may cause long term adverse effects in the aquatic environment
R61	May cause harm to the unborn child
R67	Vapours can cause drowsiness and dizziness



**Safety phases:**

<b>S1/2</b>	<b>Keep locked up and away from the reach of children</b>
<b>S13</b>	<b>Keep away from food drink and animal feeding stuffs</b>
<b>S25</b>	<b>Avoid contact with eyes</b>
<b>S46</b>	<b>If swallowed, seek medical advice immediately and show this container or label</b>
<b>S61</b>	<b>Avoid release to the environment. Refer to special instructions/safety data sheet</b>

**16. OTHER INFORMATION**

No liability is accepted for any injury, loss, damage or cost arising directly or indirectly from the use of the product or from the use of information contained within the safety data sheet since the customer's treatment of the product is necessarily beyond our control. The supplied data are based on current knowledge and experience. This safety data sheet is intended to describe our product in terms of safety requirements. The customer should determine by appropriate trials that the product is suitable for his intended use.

**Additional relevant risk phrases:**

These risk phrases are for hazardous ingredients in the product but are not at levels which require classification, they are provided to provide additional information on risks.

**Other risk phrases:**

<b>R22</b>	<b>Harmful if swallowed</b>
<b>R36</b>	<b>Irritating to eyes</b>
<b>R38</b>	<b>Irritating to skin</b>