

**1. PRODUCT AND COMPANY IDENTIFICATION:**

**PRODUCT CODE** A0654  
**PRODUCT NAME** LAEVO BORNEOL  
**SUPPLIER** Shanghai M & U International Trade Co., Ltd.  
Rm 1717, No 598 North NuJiang Road  
200333 Shanghai, China  
+86-21-32515501 32515502  
[sales@mu-intel.com](mailto:sales@mu-intel.com)

**FOR EMERGENCIES CALL CHEMTREC: 800-424-9300 (24-HOURS)**

**2. HAZARD IDENTIFICATION:**

**Classification of the substance or mixture:**

This substance is classified and labeled according to the Globally Harmonized System (GHS).



Flam. Solids 2	H228 Flammable solid.
Skin Sens. 1	H317 May cause an allergic skin reaction.
Aquatic Acute Tox. 3	H402 Harmful to aquatic life
Chronic Aquatic Tox. 3	H412 Very harmful to aquatic life with long lasting effects.

**Label elements**

Harmful in contact with skin and vapor.

**GHS label elements**

Pictograms on label shall be in the shape of a square set at a point and shall include a black hazard symbol on a white background with a red frame sufficiently wide to be clearly visible. The substance is classified and labeled according to the Globally Harmonized System (GHS).

**Hazard pictograms**



**Signal word**

Warning

**Hazard statements**

H228 Flammable solid.  
H317 May cause an allergic skin reaction.  
H412 Harmful to aquatic life with long-lasting effects

**Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
P240 Ground/bond container and receiving equipment.  
P241 Use explosion proof electrical/ventilating/lighting equipment.  
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P273 Avoid release into the environment.  
P280 Wear protective gloves/clothing/face and eye protection.  
P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
P321 Specific treatment (see supplemental first aid instructions on this label).  
P332+P337+P313 If skin or eye irritation occurs get medical advice/attention.  
P362+P363 Take off contaminated clothing and wash before reuse.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Classification system:****NFPA ratings (scale 0 - 4)**

Health = 1  
Fire = 1  
Reactivity = 0

**HMIS-ratings (scale 0 - 4)**

Health = 1  
Fire = 1  
Reactivity = 1

**Other hazards****Results of PBT and vPvB assessment****PBT:**

Not applicable.

**vPvB:**

Not applicable.

**3. COMPOSITION AND INFORMATION ON INGREDIENTS:****Chemical characterization: Substances**

**CAS No.:** 72403-67-9

**Description:** l-borneol

**Identification number(s)**

**EC No.:** 276-650-6

**Hazardous Components**

Component	Classification	Concentration
<b>(1S-endo)-1,7,7-Trimethylbicyclo [2.2.1]heptan-2-ol</b>		
	Flam. Sol. 2; Skin Sens. 1; Aquatic Acute 3; Aquatic Chronic 3; H228, H317, H412	-

**4. FIRST-AID GUIDE:**

**Description of first aid measures**

**After inhalation:**

Supply fresh air. In case of unconsciousness place patient stably in side position for transportation. Call a doctor if symptoms develop or persist.

**After skin contact:**

Wash off with plenty of soap and water. Consult a doctor.

**After eye contact:**

Rinse opened eye for several minutes under running water.

**After swallowing:**

Do not give anything by mouth to an unconscious person. If swallowed rinse mouth with water (only if person is conscious). If symptoms persist consult doctor.

**Information for doctor:**

**Most important symptoms and effects, both acute and delayed**

No further relevant information available.

**Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

**5. FIRE-FIGHTING GUIDE:**

**Extinguishing media**

**Suitable extinguishing agents:**

CO2 or extinguishing powder. Fight larger fires with alcohol resistant foam.

**Special hazards arising from the substance or mixture**

Carbon oxides.

**Advice for firefighters**

**Protective equipment:**

No special measures required.

**Additional information**

Cool endangered receptacles with water spray.

Collect contaminated firefighting water separately. It must not enter the sewage system.

**6. ACCIDENTAL RELEASE GUIDE:****Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas.

Ensure adequate ventilation. Evacuate personnel to safe area.

**Environmental precautions:**

Prevent further leakage if safe to do so. Do not let product enter drains.

**Methods and material for containment and cleaning up:**

Sweep up and shovel. Contain spillage, then collect with electrically protected vacuum or by wet-brushing. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Ensure adequate ventilation.

**Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

**7. HANDLING AND STORAGE:****Handling:****Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Take measures to prevent the build up of electrostatic charge.

**Information about protection against explosions and fires:**

Keep container tightly closed in a dry well-ventilated place.

**Conditions for safe storage, including any incompatibilities****Storage:****Requirements to be met by storerooms and receptacles:**

Keep container closed, handle containers with care.

**Information about storage in one common storage facility:**

Not required.

**Further information about storage conditions:**

Store in cool, dry location. Keep receptacle tightly sealed.

**Specific end use(s)**

No further relevant information available.

**8. EXPOSURE AND PERSONAL PROTECTION:**

**Additional information about design of technical systems:**

No further data; see item 7.

**Control parameters**

**Components with limit values that require monitoring at the workplace:**

Use explosion proof ventilation equipment.

**Additional information:**

The lists that were valid during the creation were used as a basis.

**Exposure controls**

**Personal protective equipment:**

**General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

**Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

**Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture. Selection of the glove material should be based on consideration of the penetration times, rates of diffusion and the degradation

**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Penetration time of glove material**

The exact break through time has to be determined by the manufacturer of the protective gloves and has to be observed.

**Eye protection:**

Tightly sealed goggles.

**9. PHYSICAL AND CHEMICAL PROPERTIES:**

Information on basic physical and chemical properties

<b>General Information</b>	
<b>Appearance:</b>	
<b>Form:</b>	Crystalline
<b>Color:</b>	According to product spec
<b>Odor:</b>	According to product spec
<b>Odour threshold:</b>	Not determined.
<b>pH-value:</b>	Not determined.
<b>Change in condition</b>	
<b>Melting point/Melting range:</b>	206-209°C (403-408 °F)
<b>Boiling point/Boiling range:</b>	210 °C
<b>Flash point:</b>	65 °C (149°F)
<b>Flammability (solid, gaseous):</b>	Flammability category 2
<b>Ignition temperature:</b>	Not determined
<b>Decomposition temperature:</b>	Not determined.
<b>Auto igniting:</b>	Not determined.
<b>Danger of explosion:</b>	Not determined
<b>Explosion limits:</b>	
<b>Lower:</b>	
<b>Upper:</b>	
<b>Vapor pressure:</b>	44.7 hPa (33.5 mmHg)
<b>Density at 25 °C (77 °F):</b>	Not determined.
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.
<b>Solubility in / Miscibility with Water:</b>	Not miscible or difficult to mix.
<b>Partition coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
<b>Dynamic:</b>	Not determined.
<b>Kinematic:</b>	Not determined.
<b>Organic solvents:</b>	Not determined.
<b>Other information</b>	No further relevant information available.

**10. STABILITY AND REACTIVITY:****Reactivity**

**Chemical stability****Thermal decomposition/conditions to be avoided:**

No decomposition if used according to specifications.

**Possibility of hazardous reactions**

No dangerous reactions known.

**Conditions to avoid**

Heat, flames, sparks. Extreme temperatures.

**Incompatible materials:**

Strong oxidizing agents.

**Hazardous decomposition products:**

Carbon oxides.

**11. TOXICOLOGICAL INFORMATION:****Information on toxicological effects****Acute toxicity:**

LD50 Oral – rat – 5,800 mg/kg

**Primary irritant effect:****On the skin:**

Irritating effect.

**On the eye:**

Irritating effect.

**Sensitization:**

No sensitizing effects known.

**Additional toxicological information:****Carcinogenic categories****IARC (International Agency for Research on Cancer)**

Substance is not listed.

**NTP (National Toxicology Program)**

Substance is not listed.

**OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

**12. ECOLOGICAL INFORMATION:****Toxicity**

**Aquatic toxicity:**

Toxicity to fish LC50 – Pimephales promelas (fathead minnow) – 67.8 mg.l – 96 h

**Persistence and degradability**

No further relevant information available.

**Behavior in environmental systems:**

**Bioaccumulative potential**

Not biodegradable.

**Mobility in soil**

No further relevant information available.

**Additional ecological information:**

**General notes:**

Water hazard class 2 (assessment by list): hazardous for water. Do not let discharge reach drains, Water courses, or onto the ground. Do not allow material to enter drains, sewers/water supplies.

**Results of PBT and vPvB assessment**

**PBT:**

Not applicable.

**vPvB:**

Not applicable.

**Other adverse effects**

No further relevant information available.

**13. DISPOSAL RECOMMENDATIONS:**

**Waste treatment methods**

**Recommendation:**

Burn in chemical incinerator equipped with afterburner and scrubber but exert extra care in ignition as it is a highly flammable. Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Empty containers should be taken to an approved waste handling site for recycling or disposal.

**Uncleaned packaging:**

**Recommendation:**

Disposal must be made according to official regulations.

**14. TRANSPORTATION INFORMATION:**

<b>UN-Number</b>	UN1312
<b>DOT, ADR, IMDG, IATA</b>	
<b>UN proper shipping name</b>	



<b>DOT ADR IMDG, IATA</b>	BORNEOL
<b>Transport hazard class(es) DOT, ADR, IMDG, IATA Class</b>	4.1
<b>Packing group DOT, ADR, IMDG, IATA</b>	III
<b>Environmental hazards: Marine pollutant:</b>	No
<b>Special precautions for user Danger code: EMS No.: Stowage Category</b>	F-A, S-I
<b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
<b>Transport/Additional information: DOT Quantity limitations</b>	Not applicable.
<b>ADR Excepted quantities (EQ)</b>	Not applicable.
<b>IMDG Limited quantities (LQ) Excepted quantities (EQ)</b>	Not applicable.
<b>UN "Model Regulation":</b>	Not applicable.

## 15. REGULATORY INFORMATION:

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

**Sara**

**Section 355 (extremely hazardous substances):**

Substance is not listed.

**Section 311/312 (hazardous chemical):** Not listed

**Section 313 (Specific toxic chemical listings):**

Substance is not listed.

**TSCA (Toxic Substances Control Act):**

Substance is not listed.

**Proposition 65**

**Chemicals known to cause cancer:**

Substance is not listed.

**Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

**Carcinogenic categories**

**EPA (Environmental Protection Agency)**

Substance is not listed.

**TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

**NIOSH-Ca (National Institute for Occupational Safety and Health)**

Substance is not listed.

**GHS label elements**

The substance is classified and labeled according to the Globally Harmonized System (GHS).

**Hazard pictograms**



Flam. Solids 2

Skin Sens. 1

Aquatic Acute Tox. 3

Chronic Aquatic Tox. 3

H228 Flammable solid.

H317 May cause an allergic skin reaction.

H402 Harmful to aquatic life

H412 Very harmful to aquatic life with long lasting effects.

**Precautionary statements**

P261 Avoid breathing dust/fume/gas/mist/vapors/spray.

P264 Wash skin thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/clothing/face and eye protection.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a poison center or a doctor if you feel unwell.

P321 Specific treatment (see supplemental first aid instructions on this label).

P332+P337+P313 If skin or eye irritation occurs get medical advice/attention.

P362 Take off contaminated clothing and wash before reuse.

P403+P233+P235 Store in a well-ventilated place. Keep container tightly closed. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Chemical safety assessment:**

A Chemical Safety Assessment has not been carried out.

**16. OTHER INFORMATION:**

The information in this SDS was obtained from current and reliable sources. However, the data is provided without any warranty, expressed or implied, regarding its correctness or accuracy. Since the conditions for use, handling, storage and disposal of this product are beyond M&U's control, it is the responsibility of the user both to determine safe conditions for use of this product and to assume liability for loss, damage, or expense arising out of the products improper use. No warranty expressed or implied regarding the product described herein will be created by or inferred from any statement or omission in the SDS. Various federal, state, or provincial agencies may have specific regulations concerning the transportation, handling, storage, use, or disposal of this product which may not be reflected in the SDS. The user should review these regulations to ensure full compliance.

**Prepared By:** M&U International LLC

**REVISED:** 06/26/2018