

1. PRODUCT AND COMPANY IDENTIFICATION:

PRODUCT CODE	A0011
PRODUCT NAME	BORNEOL FLAKES
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

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

2. HAZARD IDENTIFICATION:

Classification of the substance or mixture



GHS02 Flame

Flam. Sol. 2 H228 Flammable solid.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Highly flammable
Flammable.

Information concerning particular hazards for human and environment:

Not applicable.

Label elements

GHS label elements

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

Hazard pictograms



GHS02

Signal word

Warning

Hazard statements

Flammable solid.

Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Use explosion-proof electrical/ventilating/lighting/equipment.

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

Ground/bond container and receiving equipment.

In case of fire: Use for extinction: CO₂, powder or water spray.

Classification system:

NFPA ratings (scale 0 - 4)



Health = 0

Fire = 2

Reactivity = 0

HMIS-ratings (scale 0 - 4)



Health = 0

Fire = 2

Reactivity = 0

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. Description

507-70-0 DL-borneol

Identification number(s)

EC number:

208-080-0

4. FIRST-AID GUIDE:

Description of first aid measures

After inhalation:

Supply fresh air; consult doctor in case of complaints.

After skin contact:

Generally the product does not irritate the skin.

After eye contact:

Rinse opened eye for several minutes under running water.

After swallowing:

If symptoms persist consult 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.

For safety reasons unsuitable extinguishing agents:

Water with full jet

Special hazards arising from the substance or mixture

No further relevant information available.

Advice for firefighters**Protective equipment:**

No special measures required.

Additional information

Cool endangered receptacles with water spray.

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

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

Wear protective equipment. Keep unprotected persons away.

Environmental precautions:

Do not allow to enter sewers/ surface or ground water.

Methods and material for containment and cleaning up:

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:

Precautions for safe handling

No special precautions are necessary if used correctly.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

Conditions for safe storage, including any incompatibilities

Storage:

Requirements to be met by storerooms and receptacles:

No special requirements.

Information about storage in one common storage facility:

Not required.

Further information about storage conditions:

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:

Not required.

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:

Wash hands before breaks and at the end of work.

Breathing equipment:

Not required.

Protection of hands:

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	
General Information	
Appearance:	
Form:	Solid
Color:	White
Odor:	Bornyl alcohol, Camphor
Odour threshold:	Not determined.
pH-value:	Not applicable.
Change in condition	
Melting point/Melting range:	190-210 °C (374-410 °F)
Boiling point/Boiling range:	Undetermined.
Flash point:	< 60 °C (< 140 °F)
Flammability (solid, gaseous):	Flammable.
Ignition temperature:	
Decomposition temperature:	Not determined.
Auto igniting:	Not determined.
Danger of explosion:	Not determined.
Explosion limits:	
Lower:	Not determined.
Upper:	Not determined.
Vapor pressure:	Not applicable.
Density:	Not determined.
Relative density	Not determined.

Vapour density	Not applicable.
Evaporation rate	Not applicable.
Solubility in / Miscibility with Water:	Insoluble.
Partition coefficient (n-octanol/water):	Not determined.
Viscosity:	
Dynamic:	Not applicable.
Kinematic:	Not applicable.
Organic solvents:	0.0 %
Solids content:	100.0 %
Other information	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

No further relevant information available.

Incompatible materials:

No further relevant information available.

Hazardous decomposition products:

No dangerous decomposition products known.

11. TOXICOLOGICAL INFORMATION:

Information on toxicological effects

Acute toxicity:

Primary irritant effect:

On the skin:

No irritant effect.

On the eye:

No 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:

No further relevant information available.

Persistence and degradability

No further relevant information available.

Bioaccumulative potential

No further relevant information available.

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 allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

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:




Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Un cleaned packaging:

Recommendation:

Disposal must be made according to official regulations.

14. TRANSPORTATION INFORMATION:

UN-Number	UN1312
DOT, ADR, IMDG, IATA	UN1312
UN proper shipping name	
DOT	Borneol
ADR	1312 Borneol
IMDG, IATA	BORNEOL
Transport hazard class (es)	
DOT	
	
Class	4.1 Flammable solids, self-reactive substances and solid desensitised explosives
Label	4.1
ADR	
	
Class	4.1 (F1) Flammable solids, self-reactive substances and solid desensitised explosives
Label	4.1
IMDG, IATA	
	
Class	4.1 Flammable solids, self-reactive substances and solid desensitised explosives
Label	4.1
Packing group	
DOT, ADR, IMDG, IATA	III
Environmental hazards:	
Marine pollutant:	No
Special precautions for user	Warning: Flammable solids, self-reactive substances and solid desensitised explosives
Danger code (Kemler):	40
EMS Number:	F-A,S-I
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.

Transport/Additional information:	
DOT	
Quantity limitations	On passenger aircraft/rail: 25 kg On cargo aircraft only: 100 kg
ADR	
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
IMDG	
Limited quantities (LQ)	5 kg
Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
UN "Model Regulation":	UN1312, Borneol, 4.1, III

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 313 (Specific toxic chemical listings):

Substance is not listed.

TSCA (Toxic Substances Control Act):

Substance is listed.

Proposition 65

Chemicals known to cause cancer:

Substance is not listed.

Chemicals known to cause reproductive toxicity for females:

Substance is not listed.

Chemicals known to cause reproductive toxicity for males:

Substance is not listed.

Chemicals known to cause developmental toxicity:

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

GHS02

Signal word

Warning

Hazard statements

Flammable solid.

Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

Use explosion-proof electrical/ventilating/lighting/equipment.

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

Ground/bond container and receiving equipment.

In case of fire: Use for extinction: CO2, powder or water spray.

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: 02/17/2015