Blue Lotus Chem
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SAFETY DATA SHEET

Product Name:

MONOISOPROPYLAMINE (MIPA) 70%

COMMISION REGUALTION (EU) NO 2015/830 OF 1st June 2015
Amending Annex II of Regulation EU No 453/2010

1. IDENTIFICATION

Product Identifier

- **Product Name:** Monoisopropylamine 70% Aqueous Solution
- **Synonym:** Isopropylamine 70% Aq. solution, 2-aminopropane 70% Aq. Solution
- **Trade Name:** MIPA 70
- **CAS No:** 75-31-0
- **E.C No:** 200-860-9

Details of the supplier of the safety data sheet

Manufacturer/Supplier: Blue Lotus Chem LLC
Address: 25420, Suite D800, Kuykendahl Road, Tomball, TX 77375 (USA)
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2. HAZARD(S) IDENTIFICATION

2.1 Classification of the Substance

Classification According to Regulation EC No 1272/2008

GHS02 Flammable Liquid Cat-2 H225– Highly Flammable liquid and vapor

GHS06 Acute dermal Toxicity Cat.3 H311- Toxic in contact with skin
Acute oral Toxicity Cat-3 H301- Toxic if swallowed.

5 Skin Corrosion Cat. 1A H314– Causes severe skin burns and eye damage

Acute inhalation toxicity Cat-4 H332- Harmful if inhaled.
STOT SE Cat.3 H335- May cause Respiratory irritation

2.2 Label elements

Labelling According Regulation EC No: 1272/2008

The substance is classified according to CLP regulation

Signal word- Danger

Hazard Statements:

H225– Highly Flammable liquid and vapor

H311- Toxic in contact with skin

H314- Causes severe skin burns and eye damage

H301- Toxic if swallowed

H332- Harmful if inhaled

H335- May cause respiratory irritation

Precautionary statements:

Prevention:

P210- Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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

Response:

P301+P330+P331- If swallowed: Rinse mouth. DO NOT induce vomiting

P303+P361+P353-If on skin (or hair): Remove/takeoff immediately all contaminated clothing. rinse skin with water/shower.

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

P310 -Immediately call a POISON CENTER or doctor/physician.

Storage:

P403+P225- store in a well-ventilated place. Keep cool.

Disposal:

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

Additional Precautionary statements-

P370 + P378 - In case of fire: Use for extinction: CO2, powder or water spray.

2.3 Other Hazards:

PBT: Not Applicable

vPvB: Not Applicable

3. COMPOSITION / INFORMATION ON INGREDIENTS

Description	CAS No	EC No	Content (% w/w)	Description
Monoiso-propylamine	75-31-0	200-860-9	Min 70%	Monoisopropylamine
Water	7732-18-5	---	Max 30%	Water
Molecular Formula: C3H9N **Molecular Wt.:** 59.11 g/mole				

4. FIRST- AID MEASURES

4.1. Description of first aid measures

General information:

Immediately remove any clothing contaminated by the product.

IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician.

After inhalation:

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor.

After skin contact:

Rinse with soap and plenty of water. If skin irritation continues, consult a doctor.

After eye contact:

Rinse opened eye for several minutes under running water.

Use eye protection.

Call a doctor immediately.

After swallowing:

Rinse out mouth and then drink plenty of water. Never give anything by mouth to an unconscious person.

Do not induce vomiting. Call a doctor immediately.

4.2. Most important symptoms and effects, both acute and delayed

Causes severe skin and eye burns. Lung's oedema.

Inhalation of vapors may cause throat pain and cough.

4.3. Indication of any immediate medical attention and special treatment needed

No further relevant information available

5. FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing agents

Carbon dioxide (CO_2), extinguishing powder or water spray/fog. Fight larger fires with water spray/fog or alcohol-resistant foam.

For safety reasons unsuitable extinguishing agents. high volume water jet.

5.2. Special hazards arising from the substance or mixture

The substance is highly flammable. Can be released in case of fire:

Nitrogen oxides (NOx)

Carbon monoxide (CO) and Carbon dioxide (CO_2), ammonia

5.3. Advice for fire-fighters

Protective equipment: Wear self-contained breathing apparatus.

Additional information

Cool endangered containers with water spray jets.

Dispose of fire debris and contaminated firefighting water in accordance with official regulations.

If without risk possible, move drums with material away from dangerous area.

6. ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

Avoid contact with skin and eyes.

Do not breathe vapor.

6.2. Environmental precautions:

Damp down gases/fumes/haze with water spray jet.

Do not allow to enter drainage system, surface or ground water.

6.3. Methods and material for containment and cleaning up:

Use explosion proof equipment

Ensure adequate ventilation.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose of the material collected according to regulations.

6.4. Reference to other sections

See Section 8 for information on personal protection equipment.

7. HANDLING AND STORAGE

7.1. Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Avoid contact with skin and eyes.

Do not inhale vapors/aerosols.

Information about protection against explosions and fires:

Can form explosive mixtures in air if heated above flash point and/or when sprayed or atomised.

Protect from heat. Use spark-proof tools/equipment's

Keep ignition sources away - Do not smoke.

7.2. Conditions for safe storage, including any incompatibilities

Storage

Requirements to be met by storerooms and containers:

Observe all local and national regulations for storage of water polluting products.

Information about storage in one common storage facility: Not required.

Further information about storage conditions:

Store under shade at ambient temperature (<450C) & dry conditions in well-sealed containers

Store container in a well-ventilated place

Keep in properly labelled container.

7.3. Specific end use(s): Refer section-1.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1. Control parameters

Components with critical values that require monitoring at the workplace:

Chemical Name	ACGIH TLV	OSHA PEL
Isoprolamine	TWA: 5 ppm STEL: 10 ppm	TWA: 5 ppm

Additional information: The lists that were valid during the compilation were used as basis.

8.2. Exposure controls

Personal protective equipment

General protective and hygienic measures

- Keep away from foodstuffs, beverages and food.
- Instantly remove any contaminated garments.
- Do not eat, drink or smoke while working.
- Avoid contact with the eyes and skin.
- Do not inhale gases / fumes / aerosols.
- Wash hands during breaks and at the end of the work.

Breathing equipment:

- Use respirator in case of vapor formation.
- In case of higher concentration, use self-contained breathing apparatus.

Protection of hands:

- Protective gloves
- To avoid skin problems, reduce the wearing of gloves to the required minimum.
- Check the permeability prior to each renewed use of the glove.
- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material must be on consideration of the penetration times, rates of diffusion and the degradation.

Material of gloves

- Butyl rubber - BR
- Recommended thickness of the material: ≥ 0.3mm
- The selection of 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

- Penetration time: < 30 minutes
- The exact breakthrough time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Tightly sealed safety glasses, face shield.

Body protection:

- Protective work clothing
- Body protection must be chosen depending on possible activity and exposure.

Environmental Protection:

- Do not contaminate surface water
- Prevent material from entering drainage system.
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9. PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic physical and Chemical Properties

General information	
Appearance/Physical state /color	Colorless liquid
Explosive limit Upper **lower**	10.4 vol % 2.3 %
Odor	ammonia like
Vapor pressure	1397 hPa@25**°C**
Odor Threshold	0.21 ppm
Vapor density	2.04 (air=1.0)
PH (10% in water)	13.0
Density	0.7800 g/cm3@ 20°C
Melting point/freezing point	No data available
Solubility in water	Soluble
Initial Boiling Point/Boiling Range	48.0°C
Flash Point	-26 °C
Evaporation Rate	No data available
Flammability (solid, gas)	Not Applicable
Partition Coefficient: n-Octanol Water	Log Pow= 0.3
Auto ignition Temperature	402 °C
Decomposition temperature	No data available
Viscosity	No data available
Danger of Explosion	The product is not explosive. However, formation of explosive air/vapor mixtures is possible.

9.2. Other information- No further information available

10. STABILITY AND REACTIVITY

10.1. Reactivity

10.2. Chemical stability

Thermal decomposition / conditions to be avoided:

- No decomposition if used according to specifications.
- To avoid thermal decomposition, do not overheat.

10.3. Possibility of hazardous reactions

- Very exothermic reaction with strong acids. Halogenated products are likely to react violently in presence of Alkaline medium. Dissolves in water with evolution of heat.
- Corrosion with metals such as Zn. Cu. Al etc.

10.4. Conditions to avoid:

- Flames, heat and sparks. Ensure to take necessary steps in order to avoid static electricity discharge.

10.5. Incompatible materials:

- Strong oxidizing agents
- Acids
- Halogenated Hydrocarbons
- Metals like Zinc, Copper and Aluminum

10.6. Hazardous decomposition products:

- Nitrogen oxides (NOx)
- Carbon monoxide (CO), Carbon dioxide (CO_2) and ammonia.

11. TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects:

Acute Toxicity:

LD50/LC50 values that are relevant for classification	
LD 50 Oral	*173 mg/kg for rat (male/female)*
LD 50 Dermal	*>400 mg/kg (Rabbit)*
LC 50 Inhalation	*7.7-8.7 mg/l 4rs rat (for anhydrous MIPA)*

Primary Irritant effect:

Assessment: Corrosive, damages skin and eyes. Skin irritation/corrosion:

- Animal Tests (OECD Guideline 404) conducted show the substance to be highly corrosive.

Eye irritation:

- Animal Test results show the substance causes serious eyes damage.

Sensitization:

- Not Applicable

Specific Target organ Toxicity: Animal study suggests that substance may cause respiratory irritation.

Genetic Toxicity:

- The substance was not found to be mutagenic in animal tests.

Carcinogenicity:

- No component of this substance greater than or equal to 0.1% was identified to be probable/possible/confirmed carcinogenic by IARC.

Repeated Dose toxicity:

- No data available.

Toxicity to Reproduction:

- The substance is not expected to be toxic to the reproductive system.

Additional Toxicological Information-

- Over exposure may cause disturbance of vision, dyspnea

12. ECOLOGICAL INFORMATION

12.1. Toxicity:

Toxicity to Fish, LC50 – Oncorhynchus mykiss	40 mg/l for 96 hrs
Toxicity to Daphnia and other invertebrates (Daphnia Magna) EC50	47.4 mg/l for 48 hrs
Toxicity to algae (green algae)	*18.9 mg/l for 72 hrs*

12.2. Persistence and degradability:

The substance is readily biodegradable.

12.3. Bio-accumulative potential

Significant accumulation in organisms is not expected.

12.4. Mobility in soil No further relevant information available.

Additional ecological information:

General notes:

Do not allow products to reach ground water, water bodies or sewage system.

12.5. Results of PBT and vPvB assessment

- PBT: Not applicable.
- vPvB: Not applicable.

12.6. Other adverse effects: No further relevant information available.

13. DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods.

Recommendation

Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Disposal must be made according to official regulations.

Waste disposal key number: According to local/national regulations.

European waste catalogue:

Waste disposal key numbers from EWC have to be assigned depending on origin and processing.

Un-cleaned packaging:

Recommendation: Disposal must be made according to official regulations. Drum decontamination shall be done by initially rinsing with 5% aqueous acetic acid followed by water washing till neutral PH. It is strongly recommended to disfigure the container/drum before disposal.

14. TRANSPORT INFORMATION

	Section	ADR	IATA	IMDG
UN Number	14.1	1221	1221	1221
UN Proper Shipping Name	14.2	Isopropylamine (Monoisopropyl-amine 70% aqueous solu-tion)	Isopropylamine (Monoisopropyla-mine 70% aqueous solution)	Isopropylamine (Monoisopropyla-mine 70% aqueous solution)
Transport Hazard Class (es)	14.3	3	3	3
Subsidiary Risk		8	8	8
Packing Group	14.4	II	II	II
Environmental Haz-ard/Marine Pollutant	14.5	No	No	No
Special Precautions for User	14.6	No data available	No data Available	Flammable liquid
ADR Tunnel restriction code		1(C/E)	Not Applicable	Not Applicable
Classification code		FC	Not Applicable	Not Applicable
HIN		338	Not Applicable	Not Applicable
EMs		Not Applicable	Not Applicable	F-E , S-C
Transportation in Bulk ac-cording to Annex II of Mar-pol and IBC code	14.7	Not Applicable	Not Applicable	Not Applicable
Product Name		-	-	-
Ship Type		-	-	-
Pollution Category		-	-	-

15. REGULATORY INFORMATION

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

National regulations

Information about limitation of use: Employment restrictions concerning young persons must be observed.

Decree to be applied in case of technical fault: Directive 96/82/EC does not apply.

Water hazard class: WGK1-low hazards to water.

Other regulations, limitations and prohibitive regulations

Observe restrictions on marketing and use according to Annex XVII of Regulation (EC) No 1907/2006.

15.2. Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department Issuing MSDS: R&D

Only Representative : Global Product Compliance (Europe)AB, Lund , Sweden e-mail: sk@reach-onlyrep.eu; info@gpcregulatory.com

Abbreviations and Acronyms:

- **ADR**: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
- **RID**: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
- **IMDG**: International Maritime Code for Dangerous Goods IATA:
  International Air Transport Association
- **IATA-DGR**: Dangerous Goods Regulations by the "International Air Transport Association"
  (IATA) ICAO: International Civil Aviation Organization.
- **ICAO-TI:** Technical Instructions by the "International Civil Aviation Organization" (ICAO) GHS:
  Globally Harmonized System of Classification and Labelling of Chemicals
- **EINECS**: European Inventory of Existing Commercial Chemical Substances
  CAS: Chemical Abstracts Service (division of the American Chemical Society)
  LC50: Lethal concentration, 50 percent.
- **LD50**: Lethal dose, 50 percent TWA:
  Time weighted average
- **STEL**: Short Term Exposure limit (15 minutes)
- **EC**: Effective concentration

Ref-

1) *Regulation (EC)No 1272/2008 of the European Parliament and of the Council*
2) *Guidance on the compilation Safety Data Sheet publish by ECHA Ver. 2.1 Feb 2014*
3) *Toxnet HSDB*
4) *European Chemicals Agency, http://echa.europa.eu/*
5) *GESTIS Substance Data Base*

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