

Safety Data Sheet

COMMISSION REGULATION (EU) NO 2015/830 OF 1st June 2015

Amending Annex II of Regulation EU No 453/2010

Revision No-6

Printing Date: 25/08/2020 Product Name – DBU(1,8 diazobicyclo [5,4,0]undec-7-ene) Revision Date- 24/08/2020

1. Identification Of the Substance

1.1 Product Identifier

- **Product Name:** DBU (1,8 diazobicyclo [5,4,0] undec-7-ene)
- **Synonym/IUPAC name:** 2,3,4,6,7,8,9,10-octahydropyrimido[1,2-a]azepine
- **CAS No:** 6674-22-2
- **EC No:** 229-713-7

1.2 Relevant Identified Uses of the substance or mixture and uses advised against: As catalyst, complexing ligand and non-nucleophilic base.

1.3 Details of the Supplier of the Safety Data Sheet

– **Manufacturer/supplier:**

Alkyl Amines Chemicals Ltd
401-407 , Nirman Vyapar Kendra, Plot No-10
Sect-17, Vashi, Navi Mumbai
India – 400703

Emergency Contact no- +91 2117 235175 / 235222 **Mobile no -**+919423002721 / +919881973507

Emergency Contact No for US only- +1 703 527 3887 / 800 424 9300

e-mail Address of the competent Person responsible for Safety Data Sheet:

rsattigeri@alkylamines.com

Information Dept: R&D

1.4 Emergency Telephone Numbers : As mentioned above

2. Hazard Identification

2.1 Classification of Substance or Mixture

– **Classification According to EC regulation 1272/2008**



GHS05 Corrosion

Skin Corrosion Cat- 1B H314- Causes severe skin burns and eye damage

Eye Damage Cat-1 H318- Causes serious eye damage



GHS06 Skull and cross-bones

Acute Toxicity Oral Cat-3 H301- Toxic if swallowed

2.2 Label Elements :

- **Labelling according to EC Regulation No 1272/2008**

The substance is classified and labelled according to CLP Regulation

Hazard Pictograms



Signal word – Danger

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Hazard Statements-**H314** Causes severe skin burns and eye damage.**H301** Toxic if swallowed.**Precautionary statements****Prevention:****P260** Do not breathe dust/fume/gas/mist/vapours/spray**P270** Do not eat, drink or smoke when using this product.**P280** Wear protective gloves/protective clothing/eye protection/face protection.**Response:****P305+P351+P338 IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing**P303+P361+P353 IF ON SKIN (or hair):** Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower**P301+P310 If swallowed** Immediately Call a POISON CENTER or doctor/physician.**P310** Immediately Call a POISON CENTER or doctor/physician.**Storage****P405 :** Store locked up**Disposal****P501-** Dispose of the content/container in accordance with the local/regional/national/international regulation.**2.3 Other hazards****Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable**3.Composition/Information on Ingredients**

Description	CAS No	EC No	Content (% w/w)
DBU (1,8 diazobicyclo[5,4,0]undec-7-ene)	6674-22-2	229-713-7	>99.0

Molecular Formula – C₉H₁₆N₂**Molecular Wt-** 152.24 g/mole**4.First- Aid Measures****--4.1 Description of first aid measures****- General information:**

Immediately remove any clothing contaminated by the product.

If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position).

-After inhalation:

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

-After skin contact:

Take off contaminated cloths immediately. Wash the portion 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 Doctor immediately .**- After swallowing:**

.. Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

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

Material is destructive to the tissue of mucus membrane , upper respiratory tract ,eyes and skin.

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

No further relevant information available.

5. Fire Fighting Measures

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-5.1 Extinguishing media**Suitable extinguishing agents**Carbon dioxide (CO₂), extinguishing powder or water spray/fog, foam.· **For safety reasons unsuitable extinguishing agents:** Not Applicable.**- 5.2 Special hazards arising from the substance or mixture**Nitrogen oxides (NO_x)Carbon monoxide (CO) and Carbon dioxide (CO₂)**- 5.3 Advice for fire-fighters**· **Protective equipment:** Wear self-contained breathing apparatus.**- Additional information**

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

6. Accidental release Measures**- 6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation.

Use breathing protection against the effects of fumes/dust/aerosol.

Avoid inhalation, contact with skin and eyes.

-6.2 Environmental precautions:

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

Inform respective authorities in case product reaches water or sewage system.

Prevent material from reaching sewage system, holes and cellars.

- 6.3 Methods and material for containment and cleaning up:

Use explosion proof equipments

Wear self-contained breathing apparatus and protective suit.

Ensure adequate ventilation.

For small amounts absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). For large amounts – pump off the material

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 thorough ventilation/exhaustion at the workplace.

Ensure good interior ventilation, especially at floor level (fumes are heavier than air).

Restrict the quantity stored in the work place.

Do not inhale vapours/aerosols.

Avoid skin and eye contact under any circumstances.

Wash the hands and face before breaks and at the end of the shift.

Do not eat, drink or smoke when handling the substance.

· Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Keep fire extinguishers handy.

Protect against electrostatic charges.

- 7.2 Conditions for safe storage, including any incompatibilities**· Storage****· Requirements to be met by storerooms and containers:**

Store under shade at ambient temperature (<45°C) & dry conditions in well-sealed containers

Observe regulations for storage of flammable liquids.

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

· Information about storage in one common storage facility:

Observe regulations for storage of flammable liquids.

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· Further information about storage conditions:

Protect from heat and direct sunlight.

Store container in a well ventilated place.

Protect from overexposure to light.

Protect from humidity and keep away from water.

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

8. Exposure Control/Personal Protection- **Additional information about design of technical systems:** No further data; see item 7.**- 8.1 Control parameters**

Components with workplace control parameters

- **Additional information:****-8.2 Exposure controls****-Personal protective equipment****- General protective and hygienic measures**

Keep away from foodstuffs, beverages and food.

Do not eat, drink or smoke while working.

Instantly remove any contaminated garments.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Wash hands during breaks and at the end of the work.

- Breathing equipment:

Self contained breathing apparatus with full face shield

Air purifying respirator with full face piece and canister providing protection against this substance.

- 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 on consideration of the penetration times, rates of diffusion and the degradation.

- Material of gloves

Nitrile rubber - NBR

Recommended thickness of the material: ≥ 0.4 mm

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 materialPenetration time: ≥ 8 hours

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

- As protection from splashes gloves made of the following materials are suitable:

Butyl rubber - BR

Recommended thickness of the material: ≥ 0.7 mmPenetration time: ≥ 30 min.**- Eye protection:** Tightly sealed safety glasses. Wear face shield if splashing hazard exists.**- Body protection:**

Use protective suit.

Body protection must be chosen depending on activity and possible exposure.

9. Physical and Chemical Properties**-9.1 Information on basic Physical and Chemical Properties****General Information-**

Appearance/Physical state /colour

Colourless to light yellow liquid

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Explosive limit Upper lower	No data available
Odour	Ammonia like
Vapour pressure	0.02hPa @ 20 °C
Odour Threshold	No data available
Vapour density	No data available
PH (10% in water)	12.6 @ 20 °C
Density	1.0190g/ml @ 20°C
Melting point/freezing point	No data available
Solubility in water	Soluble
Initial Boiling Point/Boiling Range	260 °C
Flash Point	111 °C
Evaporation Rate	No data available
Flammability (solid, gas)	Not Applicable
Partition Coefficient : n-Octanol Water	Log Pow= -0.43 @ 25°C
Auto ignition Temperature	260°C
Decomposition temperature	No data available
Viscosity- dynamic	11.6 mPa.s @ 20°C
Kinematic	No data available
Danger of Explosion	Product is not explosive. However, formation of explosive air/vapour mixtures is possible.

-9.2 Other Information- Not applicable

10. Stability and Reactivity

-10.1 Reactivity

No hazardous reactions if stored and handled as prescribed/indicated.

Substance is not expected to be corrosive to the metals, however corrosion in presence of water can't be ruled out.

- 10.2 Chemical stability

Substance is stable under recommended conditions.

- Thermal decomposition / conditions to be avoided:

Avoid source of ignition, heat, spark or open flame.

- 10.3 Possibility of hazardous reactions

Exothermic reaction with acids

- 10.4 Conditions to avoid :No further relevant information available.**- 10.5 Incompatible materials:**

Strong acids

- 10.6 Hazardous decomposition products:

No hazardous decomposition products known.

11. Toxicological Information

-11.1 Information on Toxicological effects

Acute Toxicity –

LD50/LC50 value that are relevant for classification

LD50 Oral (rat) 215-681 mg/kg

LD50 Dermal (Rat) Test not conducted (justification: high corrosivity)

LC50 inhalation, 1 hrs Rat Test not conducted (justification: very low volatility)

Skin corrosion/irritation Highly Corrosive to skin

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Serious eye damage/eye irritation	Corrosive
Respiratory/skin sensitization	No data available
Germ cell mutagenicity	No mutagenic effects observed in laboratory test animals.
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
Additional Toxicological Information-	
Substance extremely destructive to the tissue of mucus membrane and upper respiratory tract, eyes and skin.	

12. Ecological Information**-12.1 Toxicity****-Aquatic toxicity:**

Toxicity to Fish , LC50 – <i>Leuciscus Idus</i>	146.6 mg/l for 96 hrs
Toxicity to <i>Daphnia</i> and other invertebrates (<i>Daphnia Magna</i>) EC50	50 mg/l for 48 hrs
Toxicity to algae (<i>Desmodesmus subspicatus</i>) EC50	>100 mg/l for 96 hrs

-12.2 Persistence and degradability

, Not readily biodegradable in water.

-12.3 Bio accumulative potential

Substance does not accumulate in organisms. (Log Pow = -0.42 @25 deg C)

-12.4 Mobility in soil No further relevant information available.**-Additional ecological information:**

Water hazard class-2 (self assessment)

- 12.5 Results of PBT and vPvB assessment- **PBT:** Not applicable.- **vPvB:** Not applicable.- **12.6 Other adverse effects:** Not known, based on available information.**13. Disposal Consideration****-13.1 Waste treatment methods****-Recommendation**

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

- **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.

-- Uncleaned packagings:

-Recommendation: Disposal must be made according to official regulations. Drum decontamination shall be done by initially rinsing with 5% aqueous acetic acid solution 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	2922	2922	2922
UN Proper Shipping	14.2	Corrosive liquid,	Corrosive liquid,	Corrosive liquid,



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Name		Toxic N.O.S	Toxic N.O.S	Toxic N.O.S
Transport Hazard Class (es)	14.3	8	8	8
Subsidiary Risk		6.1	6.1	6.1
Packing Group	14.4	II	II	II
Environmental Hazard/Marine Pollutant	14.5	No	No	No
Special Precautions for User	14.6	No data available	No data Available	Corrosive liquid
ADR Tunnel restriction code		2(E)	Not Applicable	Not Applicable
Classification code		CT1	Not Applicable	Not Applicable
HIN		86	Not Applicable	Not Applicable
EMs		Not Applicable	Not Applicable	F-A , S-B
Transportation in Bulk according to Annex II of Marpol 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:
Quantity limits according to "EC Seveso directive" should be observed.
- Water hazard class: Water hazard class 2 (Self-assessment): hazardous for water
- Other regulations, limitations and prohibitive regulations
Observe restrictions on the 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

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship

Dept Issuing MSDS- R&D



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Only Representative : Global Product Compliance (Europe)AB, Lund , Sweden**e-mail: sk@reach-onlyrep.eu info@gpcregulatory.com****Abbreviations and acronyms:***RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the**International Transport of Dangerous Goods by Rail)**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)**ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International**Carriage of Dangerous Goods by Road)**IMDG: International Maritime Code for Dangerous Goods**IATA: International Air Transport Association**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***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) European Chemicals Agency, <http://echa.europa.eu/>
- 4) Toxnet HSDB
- 5) NIOSH Pocket Guide
- 6) GESTIS Substance data base