


PT PUPUK SRIWIDJAJA PALEMBANG



SAFETY DATA SHEET 4 SMK3 046	DEPARTEMEN K3 & LH
No. Dokumen Terkait : 3 SMK3 006	

UREA

1. Product Identification	
Product Name	: Urea
CAS Number	: 57-13-6
Product Use	: Fertilizer, agricultural and Industrial Uses
Manufacturer	: PT Pupuk Sriwidjaja Palembang
Adress	: Jl. Mayor Zen, Palembang 30118
Emergency Number	: Phone : (0711) 712 222 / 712 111 ext. 45 / 7945 Email : k3@pusri.co.id
Date of issue / revision	: May 29, 2020
Date of previous issue	: November 11, 2019

2. Hazard Identification	
GHS Classification	: Hazardous incase of skin contact, eye contact, ingestion and ihalation - irritant
Hazard Pictograms	: 
Signal Word	: Warning.
Hazard Statements	: Irritant

3. Composition		
Ingredient Name	%	CAS Number
Urea	99.54	57-13-6
Imidodicarbonic diamide (biuret)	0.46	108-19-0

Analysis Result

No.	Parameter	Method	Unit	Result
1.	Total Nitrogen	SNI 02-2801:2010	%wt	46.44
2.	Biuret	SNI 02-2801:2010	%wt	0.46
3.	Moisture	SNI 02-2801:2010	%wt	0.40
4.	Free Ammonia	DL-Pusri-041.01	ppm	91.68
5.	Iron	DL-Pusri-051.01	ppm	0.36
6.	Crushing strength	DL-Pusri-030.01	kg/cm ²	14.85
7.	Oil content	DL-Pusri-069.02	ppm	30.49
8.	Size distribution			
	(US std. sieve) + No. 6	SNI 02-2801:2010	%wt	0.63
	No. -6 + 18	SNI 02-2801:2010	%wt	99.18
	No. -18 + 25	SNI 02-2801:2010	%wt	0.17
	Pan	SNI 02-2801:2010	%wt	0.02

Tanggal diterbitkan : 20 – 11 – 2019	No. Terbitan : 1	No. Perbaikan : 2	Halaman : 1 dari 8
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4. First Aid Measures	
Eye Contact	: Check for and remove any contact lenses. Flush eyes with plenty of water at least 15 minutes. Seek medical attention immediately.
Ingestion	: Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie, wristband or belt. Get medical attention if symptoms appear.
Inhalation	: Remove person to fresh air. If not breathing, administer artificial respiration. If breathing is difficult, administer oxygen. Obtain prompt medical attention.
Skin Contact	: Flush affected area with plenty of water at list 15 minutes. Cover the irritated skin with an emollient. Remove contaminated clothing and shoes. Seek medical attention immediately.

5. Fire Fighting Measures	
Potential of fire	: This product is non-flammable.
Extinguishing Media	: Material will not burn. Undergoes thermal decomposition at elevated temperatures to produce solid cyanuric acid and release toxic and combustible gases (ammonia carbon dioxide, and oxides of nitrogen). If fumes or gases are present, fire fighters should wear self contained breathing apparatus. Use extinguishing media suitable for surrounding.
Special Remarks on Fire Hazard	: Flammable / toxic gases will form at elevated temperatures by thermal decomposition. When exposed to heat, ammonia is released.
Unusual Fire and Explosion Hazards	: May be explosive on contact halogens such as chlorine. Non-explosive from open flame and sparks, shocks, heat, oxidizing materials, combustible materials, organic materials, metals, acids, alkalis, or moisture.
Special Remarks on Explosion Hazard	: May be explosive when mixed with hypochlorites due to the formation of nitrogen trichloride which explode spontaneously in air.
Hazardous Products	Combustion : Undergoes thermal decomposition at elevated temperatures to produce solid cyanuric acid and release toxic and combustible gases (ammonia carbon dioxide, and oxides of nitrogen).

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6. Accidental Release Measures

Steps to be taken if material is released or spilled : Use appropriate tools to put the spilled solid in a suitable container for intended use or disposal. Prevent additional discharge of material, if possible to do so without hazard. Prevent spills from entering sewers, watercourses, wells, etc. product will promote algae growth which may degrade water quality and taste. Notify downstream water users. Recover and place material in suitable container for reuse, recycle or disposal.

7. Handling & Storage

Precaution : If user operations generate dust, fume, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. Keep out of reach of children.

Storage : Store in dry, cool and well ventilated area. Keep away from incompatible materials such as reducing agents. Do not blend or store in contact with ammonium nitrate.

8. Exposure and Personal Protective Equipment

Engineering Control : Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit. Keep out of reach of children.

Personal Protection : The selection of personal protective equipment varies, depending upon conditions of use. Under well controlled conditions where contact with the substance is limited and exposures are below the occupational exposure limit, normal work clothing may suffice. Where skin and eye contact may occur as a result of brief periodic exposures, wear long sleeved clothing or coveralls and safety glasses with side shields.
Wear appropriate respirator when ventilation is inadequate. A filtering facepiece dust mask is adequate for most applications. A NIOSH approved full facepiece or half mask dust respirator with N-100 or P-100 filters should be used under conditions where airborne concentrations may exceed occupational exposure limits. For U.S facilities, a respiratory protection program that meets OSHA 29 CFR 1910.134 requirements must be followed whenever workplace conditions warrant a respirator's use.

Exposure Limits : AIHA Workplace Environmental Exposure Limits: 10 mg/m³ TWA for Urea as inhalable dust. OSHA PEL: 15 mg/m³ for Particulates Not Otherwise Regulated.

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9. Physical & Chemical Properties

Appearance, odor	: White, odorless to slightly ammoniacal.
State	: Granular solid.
Molecular weight	: 60.06
Boiling point	: Decomposes at 135 °C (at 1 atm)
Melting point	: 132 °C (at 1 atm)
Specific gravity	: 0.74 g/ml (at -33.4 °C)
Vapor pressure	: 0.08 kPa
Bulk Density	: Loose : 721 – 770 kg/m ³ ; 45 - 48 lbs/ft ³ Tapped : 800-809 kg/m ³ ; 49 – 51 lbs/ft ³
Solubility	: easily soluble in hot water. Soluble in cold water. Partially soluble in methanol, diethyl.
pH (10% Soln/Water)	: 8

10. Stability & Reactivity

Chemical stability	: Stable
Materials to avoid	: Halogens, oxidizing agents, reducing agents, acids, alkalis, moisture.
Special Remarks on Reactivity	: Absorb moisture from the air. Hygroscopic; keep container tightly closed.
Special Remarks on Corrosivity	: Avoid contact with moisture. Slow hydrolysis may produce acids corrosive to metals.

11. Toxicological Information

Significant Routes Of Exposure	: Ingestion, inhalation.
Toxicity to Animals	: See Section II. Under controlled feeding conditions, urea is used as a nutritional supplement in cattle and other animals. The toxic dose in cattle given urea for the first time is considered to be 0.45 g/kg or a total of 100-200 g. Mature bulls can digest as much as 400 g a day without ill effect. As little as 50 g may cause adverse effects in cattle not accustomed to it.

12. Ecological Information

Ecotoxicity	: Will slowly release ammonia and degrade to nitrate. Ammonia is a toxic hazard to fish. However, ammonia release is slow making urea much less toxic than ammonium salts. Aquatic toxicity tests indicate 24 Hr exposure at 16,000 mg/L of urea did not kill Creek Chubs. Urea is added in small quantities as a feed supplement for cattle. Urea ingestion may be harmful to mammals and birds at body burdens of several thousands of mg/kg. Ensure that
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BOD & COD Product of Degradation	livestock and wildlife do not ingest urea unless adequately mixed with feed rations. Nonpersistent. Non-cumulative when applied using normal agricultural practises. The product itself and its products of degradation are not harmful under normal conditions of careful and responsible use. U.S. D.O.T.: This material is NOT listed as a Marine pollutant. : Not Available : Ammonia, carbon dioxide and water.
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13. Disposal Consideration	
Waste Disposal Or Recycling	: Recover and place material in a suitable container for intended use or disposal. Ensure disposal complies with government requirements and local regulations.

14. Transport Information	
DOT / TDG Classification : Not controlled under DOT (US) or TDG (Canada)	
PIN and Shipping Name : Not applicable	
Special Provisions For Transport : Not applicable	
Non-Hazardous Material under RID / ADR, GGVS / GGVE, ADN, IMDG, ICAO – TI / IATA – DCR	

15. Regulatory Information	
Other Regulations : The Domestic Substances List (DSL) and acceptable for use under the provisions of CEPA. EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances. CERCLA/SUPERFUND, 40 CFR 117,302: This product contains no Reportable Quantity (RQ) Substances. This product is not considered as a priority pollutant as regulated under the Clean Water Act. TSCA (Toxic Substance Control Act): This product and all its components are listed on the TSCA Inventory. CALIFORNIA PROPOSITION 65: This product contains no chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and is not subject to control under WHMIS (Canada), or the Hazcom Standard (US).	

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16. Other Information

Issued by : HSE Department
PT Pupuk Sriwidjaja Palembang
Telp. (+62711) 712 222 / 712 111 ext. 7952 / 7953

Notice to consumer : To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.