

Product: **EKALAND™ DBTU CRA**

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SDS No.: 100007-100 (Version 3.0)

Date 27.08.2019 (Cancel and replace : 22.01.2018)

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Identification of the product

Substance name: EKALAND™ DBTU CRA
 REACH Registration Number: 01-2120773450-57-0000
 EC Nr: 203-674-6
 CAS-No.: 109-46-6

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture : Vulcanization agent, Rubber products

1.3. Details of the supplier of the safety data sheet

Supplier	MLPC International 209, Avenue Charles Despiau F-40370 RION-DES-LANDES, FRANCE Telephone: + 33 (0) 5 58 57 02 00 E-mail address: http://www.mlpc-intl.com fds@mlpc-intl.com
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1.4. Emergency telephone number

+1-703-741-5970 CHEMTREC international emergency phone number (ARKEMA CCN830055)

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008):

Dermal: Acute toxicity, 4, H312
 Skin sensitisation, 1A, H317
 Specific target organ toxicity - repeated exposure, 1, Thyroid gland, H372
 Acute aquatic toxicity, 2, H401
 Chronic aquatic toxicity, 2, H411

Additional information:

For the full text of the H, EUH-phrases mentioned in this Section, see Section 16.

2.2. Label elements

Label elements (REGULATION (EC) No 1272/2008):

Hazardous components which must be listed on the label:

CAS-No. : 109-46-6

1,3-Dibutyl-2-thiourea

Hazard pictograms:



Signal word:

Danger

Hazard statements:

H312 : Harmful in contact with skin.
 H317 : May cause an allergic skin reaction.
 H372 : Causes damage to organs through prolonged or repeated exposure.
 H401 : Toxic to aquatic life.
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Precautionary statements:

Prevention:

P280 : Wear protective gloves/ protective clothing.
P260 : Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P273 : Avoid release to the environment.

Response:

P302 + P352 : IF ON SKIN: Wash with plenty of soap and water.
P312 : Call a POISON CENTER or doctor/ physician if you feel unwell.
P333 + P313 : If skin irritation or rash occurs: Get medical advice/ attention.
P391 : Collect spillage.
P501 : Dispose of contents or container to an approved waste disposal plant.

2.3. Other hazards : None.

Other:

Results of PBT and vPvB assessment : According to REACH regulation, annex XIII, the substance does not meet PBT and vPvB criteria.

This substance is not considered to be persistent, bioaccumulating, toxic (PBT), nor very persistent, very bioaccumulating (vPvB).

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Formulated product Based on :

Chemical name ¹	EC-No.	CAS-No.	Concentration	Classification REGULATION (EC) No 1272/2008
1,3-Dibutyl-2-thiourea	203-674-6	109-46-6	98 - 99,7 %	Acute Tox.4 (Dermal); H312 Skin Sens.1A; H317 STOT RE1; H372 Aquatic Acute2; H401 Aquatic Chronic2; H411

¹: See chapter 14 for Proper Shipping Name

4. FIRST AID MEASURES

4.1. Description of necessary first-aid measures:

General advice:

Take off immediately all contaminated clothing.

Inhalation:

Dust inhalation: Move to fresh air. In case of problems : Consult a doctor

Skin contact:

Wash immediately, abundantly and thoroughly with water. If skin irritation occurs, seek medical advice/attention. Consult a physician.

Eye contact:

In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Ingestion:

In case of problems : Consult a doctor.

Protection of first-aiders:

If entering a saturated atmosphere, wear a self contained breathing apparatus.

4.2. Most important symptoms/effects, acute and delayed: No data available.

4.3. Indication of immediate medical attention and special treatment needed, if necessary: No data available.

5. FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable extinguishing media: Water spray, Foam, Dry powder

Unsuitable extinguishing media: All other extinguishants

5.2. Special hazards arising from the substance or mixture:

Sulphur oxides, Nitrogenous derivatives

5.3. Advice for firefighters:**Specific methods:**

Suppress gases, fumes and/or dust with water spray jet.

Special protective actions for fire-fighters:

Wear a self contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures:**

Avoid contact with skin and eyes and inhalation of dust.

6.2. Environmental precautions:

Do not let product enter drains. Do not contaminate surface water.

6.3. Methods and materials for containment and cleaning up:**Recovery:**

Sweep up and shovel. Recover the product and place in a dry labelled container.

Elimination:

Destroy the product by incineration (in accordance with local and national regulations).

6.4. Reference to other sections: None.**7. HANDLING AND STORAGE****7.1. Precautions for safe handling:****Technical measures/Precautions:**

Storage and handling precautions applicable to products: Dust forming. Provide appropriate exhaust ventilation at machinery. Provide showers, eye-baths

Safe handling advice:

In case of dust formation, wear a dust mask.

Hygiene measures:

Follow general hygiene guidelines. Avoid dust formation.

Wash hands after handling. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities:

Keep in a dry place.

Incompatible products:

Strong acids Oxidizing agents

Packaging material:

Recommended: Paper bags

7.3. Specific end use(s): None.**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1. Control parameters:****Exposure Limit Values (dust)**

Source	Date	Value type	Value (ppm)	Value (mg/m3)	Remarks
ACGIH (US)	02 2012	TWA	–	10	Inhalable particles.
ACGIH (US)	02 2012	TWA	–	3	Respirable particles.

Exposure Limit Values

Not relevant

Derived No Effect Level (DNEL):

End Use	Inhalation	Ingestion	Skin contact
Workers	0,14 mg/m ³ (LT, SE)		2,08 mg/kg (LT, SE)
Consumers	0,04 mg/m ³ (LT, SE)	0,02 mg/kg (LT, SE)	1,04 mg/kg (LT, SE)

LE : Local effects, SE : Systemic effects, LT : Long term, ST : Short term

Predicted No Effect Concentration:

Compartment:	Value:
Fresh water	0,0038 mg/l
Marine water	0,0004 mg/l
Water (Intermittent release)	0,038 mg/l
Sewage treatment plant	10 mg/l
Fresh water sediment	0,18 mg/kg dw
Marine sediment	0,018 mg/kg dw
Soil	0,033 mg/kg dw

8.2. Exposure controls:**Personal protective equipment:**

Respiratory protection:	Dust mask recommended.
Hand protection:	Gloves
Eye/face protection:	Safety glasses with side-shields
Skin and body protection:	Protective suit

Environmental exposure controls: See chapter 6

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties****Appearance:**

Physical state (20°C):	solid
Colour:	white
Odour:	No data available.
Olfactory threshold:	No data available.
pH:	No data available.
Melting point :	63 - 67 °C
Boiling range :	120 - 160 °C (A2 Method (D. 92/69/ECC))
Flash point:	Not relevant
Evaporation rate:	No data available.
Flammability (solid, gas):	No data available.
Vapour pressure:	0,3 Pa , at 25 °C (calculated)
Vapour density:	No data available.
Density:	approximately 1,02 g/cm ³ , at 20 °C
Water solubility:	212 mg/l at 20 °C (OECD Test Guideline 105)
Partition coefficient: n-octanol/water:	log Kow : 2,75 (OECD Test Guideline 107)
Auto-ignition temperature:	No data available.
Decomposition temperature:	No data available.
Viscosity:	No data available.
Explosive properties:	No data available.
Oxidizing properties:	No data available.

9.2. Other data: None.

10. STABILITY AND REACTIVITY

10.1. Reactivity: No data available.

10.2. Chemical stability: No data available.

10.3. Possibility of hazardous reactions: No data available.

10.4. Conditions to avoid:
Store protected from moisture.

10.5. Incompatible materials to avoid:
Strong acids, Oxidizing agents

10.6. Hazardous decomposition products:
Thermal decomposition giving toxic products

11. TOXICOLOGICAL INFORMATION

All available and relevant data on this product and/or the components quoted in section 3 and/or the analogue substances/metabolites have been taken into account for the hazard assessment.

11.1. Information on toxicological effects:

Acute toxicity:

Inhalation:

No data available.

No data available:

Ingestion:

May be harmful if swallowed.

- In animals :

LD50/Rat: > 2.000 mg/kg (Method: OECD Test Guideline 423)

Dermal:

Harmful in contact with skin.

May be considered as comparable to a similar product for which experimental results are:

1,3-DIETHYL-2-THIOUREA :

- In animals :

LD50/Rat: 2.000 mg/kg (Method: OECD Test Guideline 402)

Local effects (Corrosion / Irritation / Serious eye damage):

Skin contact:

- In animals :

Non irritating to skin

No skin irritation (OECD Test Guideline 404, Rabbit)

Eye contact:

- In animals :

Not irritating to the eyes.

No eye irritation (OECD Test Guideline 405, Rabbit)

Respiratory or skin sensitisation:

Inhalation:

No data available.

Skin contact:

May cause an allergic skin reaction.

Strong skin sensitizer

- In man :

Some cases of cutaneous sensitization reported

- In animals :

Strong sensitizing effects by skin contact. (Method: Guinea pig maximization test, Guinea pig)

Strong sensitizing effects by skin contact. (Method: LLNA: Local Lymph Node Assay, Mouse)

CMR effects :

Mutagenicity:

In vitro tests did not show mutagenic effects

In vitro

Ames test in vitro: Inactive (Method: OECD Test Guideline 471)

In vitro mammalian cell gene mutation test: Inactive (Method: OECD Test Guideline 476)

in vitro mammalian cell micronucleus test: Inactive (Method: OECD Test Guideline 487)

Carcinogenicity:

No data available.

Reproductive toxicity:

Foetal development:

Based on the available data, the substance is not suspected of having developmental toxicity potential.

- In animals :

Absence of congenital malformations

NOAEL (Developmental Toxicity): 15 mg/kg bw/day

NOAEL (Maternal Toxicity): 25 mg/kg bw/day

(Method: OECD Test Guideline 414, Rat, By oral route)

Specific target organ toxicity :

Single exposure :

No data available.

Repeated exposure:**The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 1.**

Target Organs : Thyroid

May be considered as comparable to a similar product for which experimental results are:

1,3-DIETHYL-2-THIOUREA :
• In animals :

Oral: Danger of serious damage to health by prolonged exposure.

Target organs: Thyroid gland, NOAEL= < 6,25 mg/kg (Rat, Repeated exposure)

Aspiration hazard:

Not relevant

12. ECOLOGICAL INFORMATION

Ecotoxicology Assessment:

All available and relevant data on this product and/or the components quoted in section 3 and/or the analogue substances/metabolites have been taken into account for the hazard assessment.

All available and relevant data on this product and/or the components quoted in section 3 and/or the analogue substances/metabolites have been taken into account for the hazard assessment.

Acute aquatic toxicity : Toxic to aquatic life.

Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

12.1. Acute toxicity :**Fish:****Harmful to fish.**

LC50, 96 h (Danio rerio (zebra fish)) : = 17,8 mg/l (Method: OECD Test Guideline 203)

Aquatic invertebrates:**Toxic to daphnia.**

EC50, 48 h (Daphnia magna (Water flea)) : 3,8 mg/l (Method: OECD Test Guideline 202)

Aquatic plants:**Toxic to algae.**

ErC50, 72 h (Pseudokirchneriella subcapitata (microalgae)) : 6,9 mg/l (Method: OECD Test Guideline 201)

Microorganisms:

NOEC, 3 h (Activated sludge) : > 100 mg/l (Method: OECD Test Guideline 209)

Aquatic toxicity / Long term toxicity:**Aquatic plants:**

ErC10, 72 h (Pseudokirchneriella subcapitata (microalgae)) : 4 mg/l (Method: OECD Test Guideline 201)

12.2. Persistence and degradability :**Biodegradation (In water):****Not readily biodegradable.**

Not readily biodegradable.: 0 % after 28 d (Method: OECD Test Guideline 301 D)

12.3. Bioaccumulative potential :**Bioaccumulation:****Bioaccumulation is unlikely.**

Partition coefficient: n-octanol/water: log Kow : 2,75 (Method: OECD Test Guideline 107)

12.4. Mobility in soil - Distribution among environmental compartments:**Vapor pressure:**

0,3 Pa, 25 °C, (Method: calculated)

12.5. Results of PBT and vPvB assessment :

According to REACH regulation, annex XIII, the substance does not meet PBT and vPvB criteria.

This substance is not considered to be persistent, bioaccumulating, toxic (PBT), nor very persistent, very bioaccumulating (vPvB).

12.6. Other adverse effects: None known.

13. DISPOSAL CONSIDERATIONS**13.1. Waste treatment:**

- Disposal of product:** Destroy the product by incineration (in accordance with local and national regulations).
- Disposal of packaging:** Destroy packaging by incineration at an approved waste disposal site (in accordance with local and national regulations).

14. TRANSPORT INFORMATION

Regulation	14.1. UN number	14.2. UN proper shipping name	14.3. Classes*	Label	14.4. PG*	14.5. Environmental hazards	14.6. Special precautions for user
ADR	3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,3-DIBUTYL-2-THIOUREA)	9	9	III	yes	
ADN	3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,3-DIBUTYL-2-THIOUREA)	9	9	III	yes	
RID	3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,3-DIBUTYL-2-THIOUREA)	9	9	III	yes	
IATA Cargo	3077	Environmentally hazardous substance, solid, n.o.s. (1,3-Dibutyl-2-thiourea)	9	9MI	III	yes	
IATA Passenger	3077	Environmentally hazardous substance, solid, n.o.s. (1,3-Dibutyl-2-thiourea)	9	9MI	III	yes	
IMDG	3077	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,3-DIBUTYL-2-THIOUREA)	9	9	III	Marine pollutant	EmS Number: F-A, S-F Mark: MP

*Description: 14.3. Transport hazard class(es)
14.4. Packing group

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code: Not applicable**15. REGULATORY INFORMATION**

Safety data sheets: accordance with Annex II of Regulation (EC) No 1907/2006 and its amendment(s)

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture:**15.2. Chemical safety assessment:** None.**INVENTORIES:**

EINECS:	Conforms to
TSCA:	Conforms to
DSL:	Conforms to
IECSC (CN):	Conforms to
ENCS (JP):	Conforms to
ISHL (JP):	Conforms to
KECI (KR):	Conforms to
PICCS (PH):	Conforms to
AICS:	Conforms to
NZIOC:	Conforms to

16. OTHER INFORMATION**Full text of H, EUH-phrases referred to under sections 2 and 3**

H312	Harmful in contact with skin.
H317	May cause an allergic skin reaction.
H372	Causes damage to organs through prolonged or repeated exposure.
H401	Toxic to aquatic life.
H411	Toxic to aquatic life with long lasting effects.

Product:
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Update:

Safety datasheet sections which have been updated:		Type:
1	1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING, Emergency telephone number	Revisions

Thesaurus:

NOAEL : No Observed Adverse Effect Level (NOAEL)
LOAEL : Lowest Observed Adverse Effect Level (LOAEL)
bw : Body weight
food : oral feed
dw : Dry weight
vPvB : very Persistent and very Bioaccumulative
PBT : Persistent, Bioaccumulative and Toxic

This information applies to the PRODUCT AS SUCH and conforming to specifications of ARKEMA. In case of formulations or mixtures, it is necessary to ascertain that a new danger will not appear. The information contained is based on our knowledge of the product, at the date of publishing and it is given quite sincerely. Users are advised of possible additional hazards when the product is used in applications for which it was not intended. This sheet shall only be used and reproduced for prevention and security purposes. The references to legislative, regulatory and codes of practice documents cannot be considered as exhaustive. It is the responsibility of the person receiving the product to refer to the totality of the official documents concerning the use, the possession and the handling of the product. It is also the responsibility of the handlers of the product to pass on to any subsequent persons who will come into contact with the product (usage, storage, cleaning of containers, other processes) the totality of the information contained within this safety data sheet and necessary for safety at work, the protection of health and the protection of environment.

NB: In this document the numerical separator of the thousands is the "." (point), the decimal separator is "," (comma).