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

1.1. Identification of the product

Identification of the mixture: Ekaland DO+TG C

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

Use of the Substance/Mixture : Vulcanization agent, Additive for :, Pigments

1.3. Details of the supplier of the safety data sheet

Supplier
MLPC International
209, avenue Charles Despiau
F-40370 RION-LES-LANDES
Tel. + 33 (0) 5 58 57 02 00
http://www.mlpc-intl.com

E-mail address
fds@mlpc-intl.com

1.4. Emergency telephone number

001866 978 0789 (Carechem24 – MLPC 29003) **Americas**
+44 (0) 1235 239 670 (Carechem24 – MLPC 29003) **Europe**
+65 3158 1074 (Carechem24 – MLPC 29003) **Asia-pacific region** (excluding China)
+86 10 5100 3039 (Carechem – MLPC 29003) **China**

2. HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No 1272/2008):
Oral: Acute toxicity, 3, H301
Oral: Acute toxicity, 3, H331
Eye irritation, 2, H319
Carcinogenicity, 1B, H350
Acute toxicity, 1, H400

Classification according to EU Directives 1999/45/EC :

Carc.Cat.2; R45
T; R23/25
Xi; R36
N; R50

Additional information:
For the full text of the R, 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:
1,3-Di-o-tolylguanidine

Hazard pictograms:

Signal word: **Danger**

Hazard statements:
H301 + H331 : Toxic if swallowed or if inhaled
H319 : Causes serious eye irritation.
H350 : May cause cancer.
H400 : Very toxic to aquatic life.

Precautionary statements:
Prevention:
P280 : Wear protective gloves/protective clothing/eye protection/face protection.
P273 : Avoid release to the environment.
Response:
P311 : Call a POISON CENTER or doctor/ physician.
P304 + P340 : IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P337 + P313 : If eye irritation persists: Get medical advice/ attention.
P308 + P313 : IF exposed or concerned: Get medical advice/ attention.
Disposal:
P501 : Dispose of contents/ container to an approved incineration 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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Chemical nature of the mixture[1]:
Mixture

Hazardous components (according to Regulation (EC) No. 1907/2006 and its amendment (453/2010)) :

Chemical Name[1] & REACH Registration Number[2]	EC-No.	CAS-No.	Concentration	Classification Directive 67/548/EEC	Classification Regulation (EC) No 1272/2008
1,3-Di-o-tolylguanidine (01-2119974274-31)	202-577-6	97-39-2	97 - 98%	T; R25	Acute Tox. 3 (Oral); H301
Distillates (petroleum), hydrotreated light paraffinic	265-158-7	64742-55-8	1 - 2%	WEL substance	AH 1; H304 Nota L: DMSO <3%

Hazardous impurities :

Chemical Name[1]	EC-No.	CAS-No.	Concentration	Classification Directive 67/548/EEC	Classification Regulation (EC) No 1272/2008
o-Toluidine	202-429-0	95-53-4	0,1 - 0,2%	Carc.Cat.2; R45 N; R50 Xi; R36 T; R23/25 Carc.Cat.2; R45 N; R50 Xi; R36 T; R23/25	

[1]: See chapter 14 for Proper Shipping Name
[2] :See the text of the regulation for applicable exceptions or provisions : The transition time according to REACH Regulation, Article 23, is still not expired.
For the full text of the R, H, EUH-phrases mentioned in this Section, see Section 16.

4. FIRST AID MEASURES

4.1. & 4.2. Description of necessary first-aid measures & Most important symptoms/effects, acute and delayed:

General advice:
Take off immediately all contaminated clothing.

Inhalation:
Move to fresh air. Consult a physician.

Skin contact:
Wash off immediately with plenty of water. If significant contact: Consult a physician.

Eye contact:
Rinse immediately with plenty of water for at least 15 minutes. If irritation persists, consult an ophthalmologist.

Ingestion:
Do NOT induce vomiting. Consult a physician.

Protection of first-aiders:
For any intervention, wear appropriate breathing apparatus.

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:
Thermal decomposition gives :, Hydrogen cyanide (hydrocyanic acid), Temperature exceeding 280 °C:

5.3. Advice for firefighters:

Specific methods:
Remove all sources of ignition. Suppress gases, fumes and/or dust with water spray jet.

Special protective actions for fire-fighters:
Wear self-contained breathing apparatus and protective suit.

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:

Methods for cleaning up:
Shovel or sweep up. Pick up and transfer to properly labelled containers.

Recovery:
Recover the product and place in a dry labelled container. Store in waterproof containers.

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.

Safe handling advice:
Provide for appropriate exhaust ventilation and dust collection at machinery. Provide showers, eye-baths In case of dust formation, wear a dust mask. Avoid accumulation of static charges during transfers in metallic systems.

Hygiene measures:
Follow general hygiene guidelines. Avoid contact with the skin and the eyes. Avoid breathing dust.
Wash hands after handling. Remove contaminated clothing and protective equipment before entering eating areas.

7.2. Conditions for safe storage, including any incompatibilities:
Store protected from moisture. Store protected from all ignition sources. Must be stored in dry conditions below than 50°C and protected from UV.

Incompatible products:
Oxidizing agents, Strong acids

Packaging material:
Recommended: Paper bags

7.3. Specific end use(s): None.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters:

Exposure Limit Values

Distillates (petroleum), hydrotreated light paraffinic

Source	Date	Value type	Value (ppm)	Value (mg/m3)	Remarks
ACGIH (US)	01 2010	TWA	–	5	Inhalable fraction.
ACGIH (US)	01 2010		–	–	Included in the regulation but with no data values. See regulation for further details.
ACGIH (US)	01 2010		–	–	Exposure by all routes should be carefully controlled to levels as low as possible.

o-Toluidine

Source	Date	Value type	Value (ppm)	Value (mg/m3)	Remarks
ACGIH (US)	2008	TWA	2	–	–
ACGIH (US)	2008	SKIN	–	–	Can be absorbed through the skin.

Derived No Effect Level (DNEL):

End Use	Inhalation	Ingestion	Skin contact
Workers	0,6 mg/m3 (SE, LT)		1,70 mg/kg (LT, SE)
Consumers	0,15 mg/m3 (LT, SE)	0,085 mg/kg (LT, SE)	0,85 mg/kg (SE, LT)

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

Predicted No Effect Concentration:

Compartment:	Value:
Fresh water	0,0568 mg/l
Marine water	0,0568 mg/l
Water (Intermittent release)	0,072 mg/l
Fresh water sediment	1,78 mg/kg dw
Marine sediment	0,178 mg/kg dw
Soil	0,3222 mg/kg dw

8.2. Exposure controls:

Personal protective equipment:

Respiratory protection:	Effective dust mask.
Hand protection:	Gloves
Eye/face protection:	Safety glasses
Skin and body protection:	At the workplace / Intervention at incident : Appropriate protective clothing.

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 (20 °C)
Form:	powder
Colour:	white, to, pink

Granulometry:	D10 : 0,007 mm Particle size
	D50 : 0,033 mm Particle size
	D90 : 0,067 mm Particle size
Odour:	Characteristic and slight
Olfactory threshold:	No data available.
pH:	Not applicable
Melting point :	177,5 °C Active ingredient (OECD Test Guideline 102)
	Not applicable (decomposes on heating)
Flash point:	Not relevant
Evaporation rate:	No data available.
Flammability (solid, gas):	
Flammability:	Non flammable product (Standard A10)
Vapour pressure:	< 0,00001 Pa , at 25 °C Active ingredient (OECD Test Guideline 104)
Vapour density:	No data available.
Density:	0,773 g/cm3 , at 20 °C True volume mass (ASTM D 1895)
Water solubility:	70 mg/l at 20 °C (OECD Test Guideline 105)
Partition coefficient: n-octanol/water:	log Kow : = 2,9 , at 25 °C (OECD Test Guideline 107)
Auto-ignition temperature:	Not applicable (decomposes on heating)
Decomposition temperature:	Average 195 °C 3 K/min Active ingredient (TGA (Thermal Gravimetric Analysis))
Viscosity, kinematic:	not applicable
Explosive properties:	
Explosivity:	Not relevant (due to the chemical structure)Not explosive
Oxidizing properties:	Not relevant (due to the chemical structure)

9.2. Other data:

Solubility in other solvents:	Insoluble in : Benzene
	Soluble in: Acetone
	Soluble in alcohols
Surface tension:	69,9 mN/m at 20,6 °C (OECD Test Guideline 115)
pKA:	10,67 at 20 °C (calculated)
Molecular Weight:	239,3 g/mol

10. STABILITY AND REACTIVITY

10.1. & 10.2. Reactivity & Chemical stability: No data available.

10.3. Possibility of hazardous reactions: No data available.

10.4. Conditions to avoid:
Exposure to moisture. Remove all sources of ignition.

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

10.6. Hazardous decomposition products:

Thermal decomposition:
Decomposition temperature: Average 195 °C, Heat rate: 3 K/min
Active ingredient

nitrogen oxides (NOx), Carbon dioxide (CO_2)

11. TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects:

Acute toxicity:

Ingestion:	**Toxic if swallowed.**
• In animals :	LD50/rat: 56 mg/kg (Method: OECD Test Guideline 401)

Dermal: **Slightly harmful in contact with skin**
• In animals : No mortality/rat: 2.000 mg/kg (Method: OECD Test Guideline 402)

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

Skin contact: **Non irritating to skin**
• In animals : No skin irritation (After semi-occlusive contact, rabbit, Exposure time: 24 h)

Eye contact: **Slightly irritating to eyes.**
• In animals : Mild eye irritation (Draize Test, rabbit)

Respiratory or skin sensitisation:

Inhalation: No data available.

Skin contact: **Not a skin sensitizer**
Repeated or prolonged skin contact may cause allergic reactions with susceptible persons.
• In animals : No skin allergy was observed (Method: OECD Test Guideline 406 Guinea pig maximization test)

CMR effects :

Mutagenicity: **According to available experimental data: Overall not genotoxic**

In vitro

Ames test in vitro: Inactive (Method: OECD Test Guideline 471)
Tests for chromosome aberrations in vitro on mammalian cells: Active (Method: OECD Test Guideline 473)
In vitro gene mutations test on mammalian cells: Inactive (Method: OECD Test Guideline 476)

In vivo

Micronucleus test in vivo mouse: Inactive (Method: OECD Test Guideline 474)

Carcinogenicity: **Available experimental data indicates no particular problems for man. (in the usual conditions of use)**

Reproductive toxicity:

Fertility: **According to available experimental data: Absence of toxic effects on fertility**
• In animals : (Method: OECD Test Guideline 421, rat, By oral route)

Absence of toxic effects upon the reproductive system, NOAEL: 50 mg/kg
NOAEL (Parent): 8 mg/kg

Foetal development: **According to available experimental data: Absence of toxic effects for foetal development (at non toxic concentrations for the mothers)**
• In animals : NOAEL: 10 mg/kg (Method: OECD Test Guideline 414, rat, By oral route)

Maternal concentration without effect: 10 mg/kg

Specific target organ toxicity :
Single exposure :

Inhalation: **Possible irritation of respiratory system**

Repeated exposure: **The substance or mixture is not classified as specific target organ toxicant, repeated exposure.**

• In animals : By oral route: No specific toxic effects
NOAEL= 30mg/kg bw/day (Method: OECD Test Guideline 407, rat)

Aspiration hazard: Not relevant

12. ECOLOGICAL INFORMATION

12.1. Toxicity :

Fish: **Harmful to fish.**
LC50, 96 h (Oryzias latipes) : = 19,3 mg/l (Method: OECD Test Guideline 203)

Aquatic invertebrates: **Toxic to daphnia.**
EC50, 48 h (Daphnia magna (Water flea)) : = 7,19 mg/l (Method: OECD Test Guideline 202)

Aquatic plants: **Toxic to algae.**
ErC50, 72 h (Pseudokirchneriella subcapitata) : = 7,2 mg/l (Method: OECD Test Guideline 201, growth rate)

Microorganisms:
EC50, 3 h : > 100 mg/l (Method: OECD Test Guideline 209)

Aquatic toxicity / Long term toxicity:

Aquatic invertebrates: NOEC, 21 d (Daphnia magna (Water flea)) : = 2,84 mg/l (Method: OECD Test Guideline 211, Reproduction inhibition)

Aquatic plants: EC10, 72 h (Pseudokirchneriella subcapitata (green algae)) : = 4,8 mg/l (Method: OECD Test Guideline 201, growth rate)

12.2. Persistence and degradability :

Stability in water:
Not hydrolysable
(pH 4 - 9)
Method: OECD Test Guideline 111

Biodegradation (In water): **Not readily biodegradable.**
1 % after 28 d (Method: OECD Test Guideline 301 C)

12.3. Bioaccumulative potential :

Bioaccumulation: **Not bioaccumulable**
Partition coefficient: n-octanol/water: log Kow : = 2,9 , at 25 °C (Method: OECD Test Guideline 107)

12.4. Mobility in soil - Distribution among environmental compartments:
Surface tension: 69,9 mN/m 20,6 °C (Method: OECD Test Guideline 115)

12.5. Results of PBT and vPvB assessment :

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

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	UN number	Proper shipping name	Class	Label	PG	Environmentally hazardous	Other information
ADR	2811	TOXIC SOLID, ORGANIC, N.O.S.(1,3-Di-o-tolylguanidine)	6.1	6.1	III	yes	
RID	2811	TOXIC SOLID, ORGANIC, N.O.S. (1,3-Di-o-tolylguanidine)	6.1	6.1	III	yes	
IATA Cargo	2811	Toxic solid, organic, n.o.s. (1,3-Di-o-tolylguanidine)	6.1	6.1	III	yes	
IATA Passenger	2811	Toxic solid, organic, n.o.s. (1,3-Di-o-tolylguanidine)	6.1	6.1	III	yes	
IMDG	2811	TOXIC SOLID, ORGANIC, N.O.S. (1,3-Di-o-tolylguanidine)	6.1	6.1	III	Marine pollutant	EmS Number: F-A, S-A Mark: MP

15. REGULATORY INFORMATION

Safety data sheets: according to Regulation (EC) No. 1907/2006 and its amendment (453/2010)

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
AICS:	Conforms to
DSL:	All components of this product are on the Canadian DSL.
ENCS (JP):	Does not conform
KECI (KR):	Conforms to
PICCS (PH):	Conforms to
IECSC (CN):	Conforms to
NZIOC:	Conforms to

16. OTHER INFORMATION

Full text of R, H, EUH-phrases referred to under sections 2 and 3

R23/25	Toxic by inhalation and if swallowed.
R25	Toxic if swallowed.
R36	Irritating to eyes.
R45	May cause cancer.
R50	Very toxic to aquatic organisms.
H301	Toxic if swallowed.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H350	May cause cancer.
H400	Very toxic to aquatic life.

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).