Securmark Safety Data Sheet

according to Regulation (EU) 2015/830

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier	
Trade name	: dDotDNA Metallic
Type of product	: Aerosol
1.2. Relevant identified uses of the sub-	stance or mixture and uses advised against
1.2. Relevant identified uses of the sub-	stance of mixture and uses advised against
Relevant identified uses	
Use of the substance/mixture	: Microdot identification
Uses advised against	
No additional information available	
1.3. Details of the supplier of the safety	data sheet
Securmark Scandinavia AS	
Box 1881 Stoa,	
N-4858 Arendal,	
Norway	
Tel: +47 37 06 29 00	
E-mail: mail@securmark.no	
Internet: www.securmark.no	
1.4. Emergency telephone number	

Country	Organisation/Company	Address	Emergency number	Comment
Norway	Giftinformasjonen Helsedirektoratet	P.O. Box 7000 St. Olavs Plass 0130 Oslo	+47 22 59 13 00	Ambulance: 113
Sweden	Giftinformationscentralen	Box 60 500 171 76 Stockholm	112	+46 8 33 12 31 (outside Sweden)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]		
Aerosol 1	H222;H229	
Skin Irrit. 2	H315	
Repr. 2	H361d	
STOT SE 3	H336	
STOT RE 2	H373	
Asp. Tox. 1	H304	

Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

Extremely flammable aerosol. Pressurised container: May burst if heated. Causes skin irritation. May cause drowsiness or dizziness. Suspected of damaging the unborn child. May cause damage to organs through prolonged or repeated exposure. May be fatal if swallowed and enters airways.

2.2. Label elements

Labelling according to Regulation (EC) No. Hazard pictograms (CLP)	1272/2008 [CLP]
	GHS02 GHS07 GHS08
Signal word (CLP)	: Danger
Hazardous ingredients	: n-butyl acetate; Toluene
Hazard statements (CLP)	: H222 - Extremely flammable aerosol. H229 - Pressurised container: May burst if heated.

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	H315 - Causes skin irritation. H336 - May cause drowsiness or dizziness. H361d - Suspected of damaging the unborn child. H373 - May cause damage to organs through prolonged or repeated exposure.
Precautionary statements (CLP)	 P201 - Obtain special instructions before use. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P211 - Do not spray on an open flame or other ignition source. P251 - Do not pierce or burn, even after use. P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. P280 - Wear protective gloves, protective clothing, eye protection, face protection. P302+P352 - IF ON SKIN: Wash with plenty of water. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. P308+P313 - IF exposed or concerned: Get medical advice/attention.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
n-butyl acetate	(CAS-No.) 123-86-4 (EC-No.) 204-658-1 (Index no) 607-025-00-1 (REACH-no) 01-2119485493-29	50 - 100	Flam. Liq. 3, H226 STOT SE 3, H336
dimethyl ether substance with a Community workplace exposure limit	(CAS-No.) 115-10-6 (EC-No.) 204-065-8 (Index no) 603-019-00-8 (REACH-no) 01-2119472128-37	25 - 50	Flam. Gas 1, H220 Press. Gas
Toluene	(CAS-No.) 108-88-3 (EC-No.) 203-625-9 (Index no) 601-021-00-3 (REACH-no) 01-2119471310-51	10 - 25	Flam. Liq. 2, H225 Skin Irrit. 2, H315 Repr. 2, H361d STOT SE 3, H336 STOT RE 2, H373 Asp. Tox. 1, H304

Full text of H-statements: see section 16

SECTION 4: First aid measures	
4.1. Description of first aid measure	'S
First-aid measures general	: In case of doubt or persistent symptoms, consult always a physician. Emergency telephone number, see section 1.4.
First-aid measures after inhalation	 Remove person to fresh air and keep comfortable for breathing. Artificial respiration and/or oxygen if necessary. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact	: Rinse with plenty of water and soap. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact	 Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Ingestion unlikely. Rinse mouth. Give milk or water to drink. Do not induce vomiting. Do not give an unconscious person anything to drink. Get medical advice/attention.
4.2. Most important symptoms and	effects, both acute and delayed
Symptoms/effects after inhalation	: May cause drowsiness or dizziness. Central nervous system depression. Dizziness, headaches, nausea. May be narcotic.
Symptoms/effects after skin contact	: Causes skin irritation. Redness, pain.
Symptoms/effects after eye contact	: May cause slight irritation.
Symptoms/effects after ingestion	: Gastrointestinal complaints. Large amounts: Risk of lung oedema.

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4.3. Indication of any immediate m	edical attention and special treatment needed
Treat symptomatically.	
SECTION 5: Firefighting measur	res
5.1. Extinguishing media	
Suitable extinguishing media	: carbon dioxide (CO2), powder, alcohol-resistant foam, water spray.
Unsuitable extinguishing media	: Do not use straight streams.
5.2. Special hazards arising from t	he substance or mixture
Fire hazard	: Extremely flammable aerosol. Pressurised container: May burst if heated.
Hazardous decomposition products in case fire	e of : May include: Carbon oxides (CO, CO2). Hazardous vapours.
5.3. Advice for firefighters	
Precautionary measures fire	: Move containers away from the fire area if this can be done without risk. Use water stream to cool containers.
Protection during firefighting	: Wear a self-contained breathing apparatus (SCBA) and appropriate personal protective equipment (PPE).
Other information	: Do not allow run-off from fire fighting to enter drains or water courses.
SECTION 6: Accidental release	measures
• •	ive equipment and emergency procedures
General measures	: Ventilate spillage area. Eliminate every possible source of ignition. Evacuate unnecessary personnel. Do not breathe aerosol. Do not breathe vapour. Avoid contact with skin and eyes. Use personal protective equipment as required. Refer to section 8.
6.2. Environmental precautions	
Avoid release to the environment. Prevent	entry to sewers and public waters.
6.3. Methods and material for cont	ainment and cleaning up
For containment	: Keep away from ignition sources.
Methods for cleaning up	: Take up liquid spill into absorbent material, e.g.: sand, earth, vermiculite. Rinse with plenty of water.
Other information	: Hazardous waste. Dispose of materials or solid residues at an authorized site. Refer to section 13.
6.4. Reference to other sections	
For further information refer to section 8 ar	1d 13.
SECTION 7: Handling and stora	ge
7.1. Precautions for safe handling	
Precautions for safe handling	: Obtain special instructions before use. Avoid contact during pregnancy/while nursing. Provide adequate general and local exhaust ventilation. Do not pierce or burn, even after use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from sunlight. Avoid breathing spray, vapours. The liquid may cause frostbite. Avoid contact with skin and eyes. Wear personal protective equipment. Refer to section 8.
Hygiene measures	: Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
7.2. Conditions for safe storage, in	cluding any incompatibilities
Storage conditions	Store in a well-ventilated place. Keep container tightly closed. Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. Keep cool. Store in original container. Always keep container in upright position.
la seven stiller an stanista	

7.3. Specific end use(s)

Incompatible materials

Heat and ignition sources

See section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

: Oxidation agents.

: Keep away from sources of ignition.

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n-butyl acetate (123-86-4)		
Sweden	Occupational exposure limit (NVG) (mg/m ³)	500 mg/m³
Sweden	Occupational exposure limit (NVG) (ppm)	100 ppm
Sweden	Short-term limit value (KTV) (mg/m ³)	700 mg/m ³
Sweden	Short-term limit value (KTV) (ppm)	150 ppm
Sweden	Comments (SE)	V (Indicative short-term limit value)
Norway	Butyl acetate (all isomers): 355 mg/m ³ / 75 ppm	
dimethyl ether (115-10-6)		
Sweden	Occupational exposure limit (NVG) (mg/m ³)	950 mg/m³
Sweden	Occupational exposure limit (NVG) (ppm)	500 ppm
Sweden	Short-term limit value (KTV) (mg/m ³)	1500 mg/m ³
Sweden	Short-term limit value (KTV) (ppm)	800 ppm
Sweden	Comments (SE)	V (Indicative short-term limit value)
Norway	Local name	Dimetyleter
Norway	Occupational exposure limit (mg/m ³)	384 mg/m ³
Norway	Occupational exposure limit (ppm)	200 ppm
Norway	Comments (NO)	E (EU has an indicative occupational exposure limit value)
Toluene (108-88-3)	·	·
Sweden	Occupational exposure limit (NVG) (mg/m³)	192 mg/m³
Sweden	Occupational exposure limit (NVG) (ppm)	50 ppm
Sweden	Short-term limit value (KTV) (mg/m ³)	384 mg/m ³
Sweden	Short-term limit value (KTV) (ppm)	100 ppm
Sweden	Comments (SE)	B (The substance may cause hearing loss), H (Can be absorbed through the skin)
Norway	Local name	Toluen
Norway	Occupational exposure limit (mg/m ³)	94 mg/m ³
Norway	Occupational exposure limit (ppm)	25 ppm
Norway	Comments (NO)	H (Can be absorbed through the skin); E (EU has an indicative occupational exposure limit value)

Reference

: AFS 2015:7; Swedish Work Environment Authority's regulations on occupational exposure limit and general advice on the application of the regulations.

Reference

: Regulations concerning Action and Limit Values, 06.12.2011 no. 1358 (Norwegian Labour Inspection Authority)

8.2. Exposure controls

Appropriate engineering controls:

Provide adequate general and local exhaust ventilation. Personal protective equipment must be chosen on the basis of the risk assessment. The supplier of the protective equipment can assist in the evaluation and choice of the equipment.

Hand protection:

Wear suitable gloves resistant to chemical penetration. Change gloves frequently. Breakthrough time and glove thickness are not measured, but based on information about the individual substances in the mixture. Other conditions may reduce the breakthrough time.

Туре	Material	Permeation	Thickness (mm)	Standard
	Butyl rubber	< 1 hour	0,7	EN 374
	Silver Shield®	5 (> 240 minutes)	-	EN 374

Eye protection:

Protective goggles. EN 166

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

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If risk of exposure: Positive pressure self-contained breathing apparatus (SCBA). EN 137

Environmental exposure controls:

Avoid release to the environment.

Other information:

Have safety shower and eye wash available.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical	and chemical properties
Physical state	: Liquid
Appearance	: Aerosol.
Colour	: Clear.
Odour	: Characteristic.
Odour threshold	: No data available
рН	: Not applicable
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable
Freezing point	: Not applicable
Boiling point	: -80 °C (758 mmHg)
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: 10 kPa (20°C)
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: Not applicable
Viscosity, dynamic	: Not applicable
Explosive properties	: Not explosive. Vapour could form explosive mixture with air.
Oxidising properties	: Not classified as oxidizing.
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Extremely flammable aerosol.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions may occur on contact with chemicals lited in 10.5, and under conditions given in 10.4.

10.4. Conditions to avoid

Heat and ignition sources.

10.5. Incompatible materials

Oxidizing agent.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. See also section 5.2.

SECTION 11: Toxicological information

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11.1. Information on toxicological effects	
Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)
n-butyl acetate (123-86-4)	
LD50 oral rat	10760 mg/kg
LD50 dermal rabbit	14112 mg/kg
LC50 inhalation rat (Vapours - mg/l/4h)	21 mg/l/4h
Toluene (108-88-3)	
LD50 oral rat	> 2600 mg/kg
Skin corrosion/irritation	: Causes skin irritation.
	pH: Not applicable
Serious eye damage/irritation	. Not classified (Based on available data, the classification criteria are not met)
conouc of o damage.initiation	pH: Not applicable
Additional information	: May cause slight irritation
Respiratory or skin sensitisation	. Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	. Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	. Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Suspected of damaging the unborn child.
STOT-single exposure	: May cause drowsiness or dizziness.
Additional information	: Central nervous system depression.
STOT-repeated exposure	: May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard	: May be fatal if swallowed and enters airways.
Additional information	: Ingestion is not considered a potential route of exposure
dDotDNA Metallic	
Vaporizer	Aerosol
Other information	: Likely routes of exposure: inhalation, skin and eye. Overexposure may cause : Headache. Dizziness. Tiredness. nausea, vomiting. Narcotic effect.

SECTION 12: Ecological information

12.1. Toxicity	
Ecology - general	: Does not contain any ingredients currently classified as Dangerous for the Environment.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified
n-butyl acetate (123-86-4)	
LC50 fish	18 mg/l Pimephales promelas
EC50 Daphnia	44 mg/l Daphnia magna
EC50 72h algae (1)	67,7 mg/l Scenedesmus subspicatus
dimethyl ether (115-10-6)	
LC50 fish	> 4100 mg/l Poecilia reticulata
EC50 Daphnia	> 4400 mg/l Daphnia magna
Toluene (108-88-3)	
LC50 fish	5,5 mg/l Oncorhynchus kisutch
EC50 Daphnia	3,78 mg/l Ceriodaphnia dubia
EC50 72h algae (1)	207 mg/l Chlorella vulgaris

No available information on product.
Readily biodegradable.
83 % (28 days)

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dimethyl ether (115-10-6)	
Biodegradation	5 % (28 days)
Toluene (108-88-3)	
Persistence and degradability	Readily biodegradable. Oxidies rapidly by photo-chemical reactions in air.
Biodegradation	86 % (20 days)
12.3. Bioaccumulative potential	
dDotDNA Metallic	
Bioaccumulative potential	No available information on product.
n-butyl acetate (123-86-4)	
BCF	15,3 (estimated)
Log Pow	2,3
dimethyl ether (115-10-6)	
Log Pow	0,07
Bioaccumulative potential	No bioaccumulation.
Toluene (108-88-3)	
BCF	90
Log Pow	2,73
Bioaccumulative potential	No bioaccumulation is to be expected.
12.4. Mobility in soil	
dDotDNA Metallic	
Ecology - soil	Product evaporates rapidly when in contact with the air.
n-butyl acetate (123-86-4)	
Log Koc	1,268 - 1,844 (25°C)
Ecology - soil	Mobile.
dimethyl ether (115-10-6)	
Ecology - soil	Soluble in water. Product evaporates rapidly when in contact with the air.
Toluene (108-88-3)	
Ecology - soil	Insoluble in water. Product evaporates rapidly when in contact with the air.
12.5. Results of PBT and vPvB assessm	
dDotDNA Metallic	
This substance/mixture does not meet the PB This substance/mixture does not meet the vP	-
Component n-butyl acetate (123-86-4)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
11-Duly1 acelaic (123-00-4)	This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
dimethyl ether (115-10-6)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Toluene (108-88-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
12.6. Other adverse effects	
Additional information	: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods	
Waste treatment methods	: Hazardous waste. Remove to an authorized waste treatment plant.
Additional information	: The stated LoW code is indicative and must be considered in relation to the actual condition of the chemical. The final code must be determined by the user, based on the actual use of the chemical.
European List of Waste (LoW) code	: 08 01 11* - waste paint and varnish containing organic solvents or other dangerous substances 16 05 04* - gases in pressure containers (including halons) containing dangerous substances
Hazardous Waste Group	: 7055 Aerosol cans
SECTION 14: Transport informa	tion

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In accordance with ADR / RID / IMDG / IATA / ADN

In accordance with ADR / RI				
ADR	IMDG	IATA	ADN	RID
14.1. UN number				
1950	1950	1950	1950	1950
14.2. UN proper shippi	14.2. UN proper shipping name			
AEROSOLS	AEROSOLS	Aerosols, flammable	AEROSOLS	AEROSOLS
Transport document descu	ription			
UN 1950 AEROSOLS, 2.1, (D)	UN 1950 AEROSOLS, 2.1	UN 1950 Aerosols, flammable, 2.1	UN 1950 AEROSOLS, 2.1	UN 1950 AEROSOLS, 2.1
14.3. Transport hazard class(es)				
2.1	2.1	2.1	2.1	2.1
	2			
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental ha	azards	•	•	•
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
	No s	upplementary information avai	lable	•

14.6. Special precautions for user

- Overland transport

Classification code (ADR)	: 5F
Special provisions (ADR)	: 190, 327, 344, 625
Limited quantities (ADR)	: 11
Excepted quantities (ADR)	: E0
Packing instructions (ADR)	: P207, LP02
Special packing provisions (ADR)	: PP87, RR6, L2
Mixed packing provisions (ADR)	: MP9
Transport category (ADR)	: 2
Special provisions for carriage - Packages (ADR)	: V14
Special provisions for carriage - Loading, unloading and handling (ADR)	: CV9, CV12
Special provisions for carriage - Operation (ADR)	: S2
Tunnel restriction code (ADR)	: D
- Transport by sea	
Special provisions (IMDG)	: 63, 190, 277, 327, 344, 959
Limited quantities (IMDG)	: SP277
Excepted quantities (IMDG)	: E0
Packing instructions (IMDG)	: P207, LP02
Special packing provisions (IMDG)	: PP87, L2
EmS-No. (Fire)	: F-D
EmS-No. (Spillage)	: S-U
Stowage category (IMDG)	: None
Stowage and handling (IMDG)	: SW1, SW22
Segregation (IMDG)	: SG69
- Air transport	
PCA Excepted quantities (IATA)	: E0
PCA Limited quantities (IATA)	: Y203
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 203
10.07.2018	EN (English)

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ccording to Regulation (EU) 2015/830	
PCA max net quantity (IATA)	: 75kg
CAO packing instructions (IATA)	: 203
CAO max net quantity (IATA)	: 150kg
Special provisions (IATA)	: A145, A167, A802
ERG code (IATA)	: 10L
- Inland waterway transport	
Classification code (ADN)	: 5F
Special provisions (ADN)	: 190, 327, 344, 625
Limited quantities (ADN)	: 1L
Excepted quantities (ADN)	: E0
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01, VE04
Number of blue cones/lights (ADN)	: 1
- Rail transport	
Classification code (RID)	: 5F
Special provisions (RID)	: 190, 327, 344, 625
Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E0
Packing instructions (RID)	: P207, LP02
Special packing provisions (RID)	: PP87, RR6, L2
Mixed packing provisions (RID)	: MP9
Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W14
Special provisions for carriage - Loading, unloading and handling (RID)	: CW9, CW12
Colis express (express parcels) (RID)	: CE2
Hazard identification number (RID)	: 23

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

Contains no REACH substances with Annex XVII restrictions Contains no substance on the REACH candidate list Contains no REACH Annex XIV substances

National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

ADDIEVIALIONS and	acionyms.
BCF	Bioconcentration factor
EC50	The effective concentration of substance that causes 50% of the maximum response.
LC50	Median lethal concentration
LD50	Median lethal dose
PBT	Persistent Bioaccumulative Toxic
vPvB	Very Persistent and Very Bioaccumulative

Data sources

: Safety Data Sheet from the supplier/manufacturer.

Full text of H- and EUH-statements:

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ategory 1 ategory 1		
ategory 1		
Flammable liquids, Category 2		
Flammable liquids, Category 3		
Gases under pressure		
, Category 2		
on, Category 2		
toxicity — Repeated exposure, Category 2		
toxicity — Single exposure, Category 3, Narcosis		
Extremely flammable gas.		
Extremely flammable aerosol.		
Highly flammable liquid and vapour.		
Flammable liquid and vapour.		
Pressurised container: May burst if heated.		
wed and enters airways.		
ss or dizziness.		
ing the unborn child.		
May cause damage to organs through prolonged or repeated exposure.		
for mixtures according to Regulation (EC) 1272/2008 [CLP]:		
basis of test data		
Iculation method		
pert judgment		
Iculation method		
Iculation method		
pert judgment		

Other information

: Compiled by SDS-Chemie, Bente Frogner.

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product