



## FRUTALIV

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

- 1.1 Product identifier:** FRUTALIV
- 1.2 Relevant identified uses of the substance or mixture and uses advised against:**  
Relevant uses: Fertilizer. For professional use only.  
Uses advised against: All uses not specified in this section or in section 7.3
- 1.3 Details of the supplier of the safety data sheet:** Futureco Bioscience S.A.U  
Av. del Cadí 19-23, P.I. Sant Pere Molanta, Olèrdola  
08799 Barcelona - Barcelona - Spain  
Phone.: +34 938182891 - Fax: +34 938921726  
calidad@futurecobioscience.com  
www.futurecobioscience.com
- 1.4 Emergency telephone number:**

### SECTION 2: HAZARDS IDENTIFICATION

- 2.1 Classification of the substance or mixture:**
- Directive 67/548/EC and Directive 1999/45/EC:**  
This product was classified in accordance with Directive 67/548/EC and Directive 1999/45/EC, adapting the requirements to Regulation (EC) n°1907/2006 (REACH regulation).  
Xi: R36 - Irritating to eyes
- CLP Regulation (EC) n° 1272/2008:**  
Classification of this product has been carried out in accordance with CLP Regulation (EC) n° 1272/2008.  
Eye Irrit. 2: Eye irritation, Category 2
- 2.2 Label elements:**
- Directive 67/548/EC and Directive 1999/45/EC:**  
In accordance with the legislation, the elements on the label are as follows:
- Xi**  
  
Irritant
- R Phrases:**  
R36: Irritating to eyes
- S Phrases:**  
S25: Avoid contact with eyes
- Supplementary information:**  
Non-applicable
- CLP Regulation (EC) n° 1272/2008:**
- Attention**  

- Hazard indications:**  
Eye Irrit. 2: H319 - Causes serious eye irritation.
- Cautionary advice:**  
P264: Wash thoroughly after use.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313: If eye irritation persists: Get medical advice/attention.
- Supplementary information:**  
Non-applicable

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### SECTION 2: HAZARDS IDENTIFICATION (continue)

#### 2.3 Other hazards:

Non-applicable

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical description:** Mixture of substances

#### Components:

In accordance with Annex II of Regulation (EC) n°1907/2006 (point 3), the product contains:

Identification	Chemical name/Classification	Concentration
CAS: 7320-34-5 EC: 230-785-7 Index: Non-applicable REACH: 01-2119489369-18-XXXX	<b>Tetrapotassium pyrophosphate</b> Self-classified	25 - <50 %
	Directive 67/548/EC Xi: R36	
	Regulation 1272/2008 Eye Irrit. 2: H319 - Attention	
CAS: 10043-35-3 EC: 233-139-2 Index: 005-007-00-2 REACH: 01-2119486683-25-XXXX	<b>Boric acid</b> ATP ATP01	2,5 - <10 %
	Directive 67/548/EC Repr. Cat 2: R60, R61	
	Regulation 1272/2008 Repr. 1B: H360FD - Danger	

To obtain more information on the risk of the substances consult sections 8, 11, 12 and 16.

### SECTION 4: FIRST AID MEASURES

#### 4.1 Description of first aid measures:

The symptoms resulting from intoxication can appear after exposure, therefore, in case of doubt, seek medical attention for direct exposure to the chemical product or persistent discomfort, showing the MSDS of this product.

##### By inhalation:

This product does not contain substances classified as dangerous for inhalation, however, in case of symptoms of intoxication remove the person affected from the exposure area and provide with fresh air. Seek medical attention if the symptoms get worse or persist.

##### By skin contact:

In case of contact it is recommended to clean the affected area thoroughly with water and neutral soap. In case of modifications on the skin (stinging, redness, rashes, blisters,...), seek medical advice with this Security Data Sheet

##### By eye contact:

Rinse eyes thoroughly with luke warm water for at least 15 minutes. Do not allow the person affected to rub or close their eyes. If the injured person uses contact lenses, these should be removed unless they are stuck to the eyes, as this could cause further damage. In all cases, after cleaning, a doctor should be consulted as quickly as possible with the MSDS of the product.

##### By consumption:

In case of consumption, seek immediate medical assistance showing the MSDS of this product.

#### 4.2 Most important symptoms and effects, both acute and delayed:

Acute and delayed effects are indicated in sections 2 and 11.

#### 4.3 Indication of any immediate medical attention and special treatment needed:

Non-applicable

### SECTION 5: FIREFIGHTING MEASURES

#### 5.1 Extinguishing media:

Product is non-flammable under normal conditions of storage, manipulation and use. In the case of inflammation as a result of improper manipulation, storage or use preferably use polyvalent powder extinguishers (ABC powder), in accordance with the Regulation on fire protection systems. IT IS NOT RECOMMENDED to use tap water as an extinguishing agent.

#### 5.2 Special hazards arising from the substance or mixture:

As a result of combustion or thermal decomposition reactive subproducts are created that can become highly toxic and, consequently, can present a serious health risk.

#### 5.3 Advice for firefighters:

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### SECTION 5: FIREFIGHTING MEASURES (continue)

Depending on the magnitude of the fire it may be necessary to use full protective clothing and individual respiratory equipment. Minimum emergency facilities and equipment should be available (fire blankets, portable first aid kit,...) in accordance with Directive 89/654/EC.

#### Additional provisions:

Act in accordance with the Internal Emergency Plan and the Information Sheets on actions to take after an accident or other emergencies. Destroy any source of ignition. In case of fire, refrigerate the storage containers and tanks for products susceptible to inflammation, explosion or BLEVE as a result of high temperatures. Avoid spillage of the products used to extinguish the fire into an aqueous medium.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

#### 6.1 Personal precautions, protective equipment and emergency procedures:

Isolate leaks provided that there is no additional risk for the people performing this task. Personal protection equipment must be used against potential contact with the spilt product (See section 8). Evacuate the area and keep out those who do not have protection.

#### 6.2 Environmental precautions:

Product not classified as dangerous for the environment, however it is necessary to avoid spillage as the product is classified as dangerous for health and/or its physicochemical properties.

#### 6.3 Methods and material for containment and cleaning up:

It is recommended:

Absorb the spillage using sand or inert absorbent and move it to a safe place. Do not absorb in sawdust or other combustible absorbents. For any concern related to disposal consult section 13.

#### 6.4 Reference to other sections:

See sections 8 and 13.

### SECTION 7: HANDLING AND STORAGE

#### 7.1 Precautions for safe handling:

##### A.- Precautions for safe manipulation

Comply with the current legislation concerning the prevention of industrial risks. Keep containers hermetically sealed. Control spills and residues, destroying them with safe methods (section 6). Avoid leakages from the container. Maintain order and cleanliness where dangerous products are used.

##### B.- Technical recommendations for the prevention of fires and explosions

Product is non-flammable under normal conditions of storage, manipulation and use. It is recommended to transfer at slow speeds to avoid the generation of electrostatic charges that can affect flammable products. Consult section 10 for information on conditions and materials that should be avoided.

##### C.- Technical recommendations to prevent ergonomic and toxicological risks

Do not eat or drink during the process, washing hands afterwards with suitable cleaning products.

##### D.- Technical recommendations to prevent environmental risks

It is recommended to have absorbent material available at close proximity to the product (See subsection 6.3)

#### 7.2 Conditions for safe storage, including any incompatibilities:

##### A.- Technical measures for storage

Minimum Temp.: 5 °C  
Maximum Temp.: 30 °C  
Maximum time: 36 Months

##### B.- General conditions for storage

Avoid sources of heat, radiation, static electricity and contact with food

#### 7.3 Specific end use(s):

Except for the instructions already specified it is not necessary to provide any special recommendation regarding the uses of this product.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters:

Substances whose occupational exposure limits have to be monitored in the work environment

There are no environmental limits for the substances contained in the product

#### DNEL (Workers):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Tetrapotassium pyrophosphate CAS: 7320-34-5 EC: 230-785-7	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	44,08 mg/m <sup>3</sup>	Non-applicable
Boric acid CAS: 10043-35-3 EC: 233-139-2	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	392 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	8,3 mg/m <sup>3</sup>	Non-applicable

#### DNEL (Population):

Identification		Short exposure		Long exposure	
		Systemic	Local	Systemic	Local
Tetrapotassium pyrophosphate CAS: 7320-34-5 EC: 230-785-7	Oral	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Dermal	Non-applicable	Non-applicable	Non-applicable	Non-applicable
	Inhalation	Non-applicable	Non-applicable	10,87 mg/m <sup>3</sup>	Non-applicable
Boric acid CAS: 10043-35-3 EC: 233-139-2	Oral	0,98 mg/kg	Non-applicable	0,98 mg/kg	Non-applicable
	Dermal	Non-applicable	Non-applicable	196 mg/kg	Non-applicable
	Inhalation	Non-applicable	Non-applicable	4,15 mg/m <sup>3</sup>	Non-applicable

#### PNEC:

Identification					
Tetrapotassium pyrophosphate CAS: 7320-34-5 EC: 230-785-7	STP	50 mg/L	Fresh water	0,05 mg/L	
	Soil	Non-applicable	Marine water	0,005 mg/L	
	Intermittent	0,5 mg/L	Sediment (Fresh water)	Non-applicable	
	Oral	Non-applicable	Sediment (Marine water)	Non-applicable	
Boric acid CAS: 10043-35-3 EC: 233-139-2	STP	10 mg/L	Fresh water	2,02 mg/L	
	Soil	5,4 mg/kg	Marine water	2,02 mg/L	
	Intermittent	13,7 mg/L	Sediment (Fresh water)	Non-applicable	
	Oral	Non-applicable	Sediment (Marine water)	Non-applicable	

### 8.2 Exposure controls:



A.- General security and hygiene measures in the work place

As a preventative measure it is recommended to use basic Personal Protection Equipment, with the corresponding "CE marking" in accordance with Directive 89/686/EC. For more information on Personal Protection Equipment (storage, use, cleaning, maintenance, class of protection,...) consult the information leaflet provided by the manufacturer. For more information see subsection 7.1.



B.- Respiratory protection

The use of protection equipment will be necessary if a mist forms or if the professional exposure limits are exceeded.

C.- Specific protection for the hands

LRP Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory hand protection	Chemical protective gloves		EN 374-1:2003 EN 374-3:2003/AC:2006 EN 420:2003+A1:2009	Replace the gloves at any sign of deterioration.

D.- Ocular and facial protection



LRP Pictogram	PPE	Labelling	CEN Standard	Remarks
 Mandatory face protection	Panoramic glasses against liquid splash		EN 166:2001 EN 172:1994/A1:2000 EN 172:1994/A2:2001 EN 165:2005	Clean daily and disinfect periodically according to the manufacturer's instructions.

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### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION (continue)

#### E.- Bodily protection

LRP Pictogram	PPE	Labelling	CEN Standard	Remarks
	Work clothing		EN 340:2003	For professional use only.
	Anti-slip work shoes		EN ISO 20347:2004/A1:2007 EN ISO 20344:2011	None

#### F.- Additional emergency measures

Emergency measure	Standards	Emergency measure	Standards
 Emergency shower	ANSI Z358-1 ISO 3864-1:2002	 Eyewash stations	DIN 12 899 ISO 3864-1:2002

#### Environmental exposure controls:

In accordance with the community legislation for the protection of the environment it is recommended to avoid environmental spillage of both the product and its container. For additional information see subsection 7.1.D

#### Volatil organic compounds:

With regard to Directive 1999/13/EC, this product has the following characteristics:

V.O.C. (Supply):	0 % weight
V.O.C. density at 20 °C:	0 kg/m <sup>3</sup> (0 g/L)
Average carbon number:	Non-applicable
Average molecular weight:	Non-applicable

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1 Information on basic physical and chemical properties:

For complete information see the product datasheet.

##### Apperance:

Physical state at 20 °C:	Liquid
Apperance:	Fluid
Color:	Turquoise
Odor:	Citric

##### Volatility:

Boiling point at atmospheric pressure:	100 °C
Vapour pressure at 20 °C:	2350 Pa
Vapour pressure at 50 °C:	12381 Pa (12 kPa)
Evaporation rate at 20 °C:	Non-applicable *

##### Product description:

Density at 20 °C:	1280 - 1320 kg/m <sup>3</sup>
Relative density at 20 °C:	1,28 - 1,32
Dynamic viscosity at 20 °C:	1,92 cP
Kinematic viscosity at 20 °C:	1,54 cSt
Kinematic viscosity at 40 °C:	Non-applicable *
Concentration:	Non-applicable *
pH:	8,5 - 9,5

\*Not relevant due to the nature of the product, not providing information property of its hazards.

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### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES (continue)

Vapour density at 20 °C:	Non-applicable *
Partition coefficient n-octanol/water 20 °C:	Non-applicable *
Solubility in water at 20 °C:	Non-applicable *
Solubility property:	Non-applicable *
Decomposition temperature:	Non-applicable *

#### Flammability:

Flash Point:	Non Flammable (>60 °C)
Autoignition temperature:	Non-applicable *
Lower flammability limit:	Non-applicable *
Upper flammability limit:	Non-applicable *

#### 9.2 Other information:

Surface tension at 20 °C:	Non-applicable *
Refraction index:	Non-applicable *

\*Not relevant due to the nature of the product, not providing information property of its hazards.

### SECTION 10: STABILITY AND REACTIVITY

#### 10.1 Reactivity:

No hazardous reactions are expected if the following technical instructions storage of chemicals. See section 7.

#### 10.2 Chemical stability:

Chemically stable under the conditions of storage, handling and use.

#### 10.3 Possibility of hazardous reactions:

Under the conditions no hazardous reactions are expected to produce a pressure or excessive temperatures.

#### 10.4 Conditions to avoid:

Applicable for handling and storage at room temperature:

Shock and friction	Contact with air	Increase in temperature	Sunlight	Humidity
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

#### 10.5 Incompatible materials:

Acids	Water	Combustive materials	Combustible materials	Others
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

#### 10.6 Hazardous decomposition products:

See subsection 10.3, 10.4 and 10.5 to find out the specific decomposition products. Depending on the decomposition conditions, complex mixtures of chemical substances can be released: carbon dioxide (CO<sub>2</sub>), carbon monoxide and other organic compounds.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1 Information on toxicological effects:

No experimental information is available on the product itself in relation to the toxicological properties. When performing the danger classification on corrosive or irritant effects the recommendations included in section 3.2.5 of Annex VI of Directive 67/548/EC, in paragraphs b) and c) of section 3 of article 6 of Directive 1999/45/EC and in section 3.2.3.3.5. of Annex I of CLP Regulation were taken into account.

#### Dangerous health implications:

In case of exposure that is repetitive, prolonged or at concentrations higher than recommended by the occupational exposure limits, it may result in adverse effects on health depending on the means of exposure:

##### A.- Ingestion:

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for consumption. For more information see section 3.

##### B- Inhalation:

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### SECTION 11: TOXICOLOGICAL INFORMATION (continue)

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for inhalation. For more information see section 3.

**C- Contact with the skin and the eyes:**

Produces eye damage after contact.

**D- CMR effects (carcinogenicity, mutagenicity and toxicity to reproduction):**

Based on available data, the classification criteria are not met, however it does contain substances classified as dangerous for this effect. For more information see section 3.

**E- Sensitizing effects:**

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous with sensitizing effects. For more information see section 3.

**F- Specific target organ toxicity (STOT)-time exposure:**

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**G- Specific target organ toxicity (STOT)-repeated exposure:**

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**H- Aspiration hazard:**

Based on available data, the classification criteria are not met, as it does not contain substances classified as dangerous for this effect. For more information see section 3.

**Other information:**

Non-applicable

**Specific toxicology information on the substances:**

Identification	Acute toxicity		Genus
	LD50 oral	LD50 dermal	
Tetrapotassium pyrophosphate CAS: 7320-34-5 EC: 230-785-7	Non-applicable	4640 mg/kg	Rabbit
	Non-applicable	Non-applicable	
	Non-applicable	Non-applicable	
Boric acid CAS: 10043-35-3 EC: 233-139-2	2660 mg/kg	Non-applicable	Rat
	Non-applicable	Non-applicable	
	Non-applicable	Non-applicable	

### SECTION 12: ECOLOGICAL INFORMATION

The experimental information related to the ecotoxicological properties of the mixture itself is not available

Contains phosphates. Excessive discharge may cause eutrophication.

**12.1 Toxicity:**

Identification	Acute toxicity		Specie	Genus
	LC50	EC50		
Boric acid CAS: 10043-35-3 EC: 233-139-2	1,02 mg/L (72 h)		Carassius auratus	Fish
	133 mg/L (48 h)		Daphnia magna	Crustacean
	Non-applicable			

**12.2 Persistence and degradability:**

Not available

**12.3 Bioaccumulative potential:**

Identification	Bioaccumulation potential	
	BCF	Pow Log
Boric acid CAS: 10043-35-3 EC: 233-139-2	0	-0,76
	Low	

**12.4 Mobility in soil:**

Not available

**12.5 Results of PBT and vPvB assessment:**

Non-applicable

**12.6 Other adverse effects:**

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### SECTION 12: ECOLOGICAL INFORMATION (continue)

Not described

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods:

Code	Description	Waste class (Directive 2008/98/EC)
	It is not possible to assign a specific code, as it depends on the intended use by the user	Dangerous

#### Waste management (disposal and evaluation):

Consult the authorized waste service manager on the assessment and disposal operations in accordance with Annex 1 and Annex 2 (Directive 2008/98/EC). As under 15 01 (2000/532/EC) of the code and in case the container has been in direct contact with the product, it will be processed the same way as the actual product. Otherwise, it will be processed as non-dangerous residue. We do not recommend disposal down the drain. See paragraph 6.2.

#### Regulations related to waste management:

In accordance with Annex II of Regulation (EC) n°1907/2006 (REACH) the community or state provisions related to waste management are stated

Community legislation: Directive 2008/98/EC, 2000/532/EC: Commission Decision of 3 May 2000

### SECTION 14: TRANSPORT INFORMATION

This product is not regulated for transport (ADR/RID,IMDG,IATA)

### SECTION 15: REGULATORY INFORMATION

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

Candidate substances for authorisation under the Regulation (EC) 1907/2006 (REACH): Boric acid

Regulation (EC) 1005/2009, about substances that deplete the ozone layer: Non-applicable

Active substances for which a decision of non-inclusion onto Annex I (Regulation (EU) No 528/2012): Boric acid (excluded for the product type 1, 2, 3, 6, 7, 9, 10, 11, 12, 13, 18, 22)

Regulation (EC) 689/2008, in relation to the import and export of hazardous chemical products: Non-applicable

#### Limitations to commercialisation and the use of certain dangerous substances and mixtures (Annex XVII, REACH):

Non-applicable

#### Specific provisions in terms of protecting people or the environment:

It is recommended to use the information included in this safety data sheet as data used in a risk evaluation of the local circumstances in order to establish the necessary risk prevention measures for the manipulation, use, storage and disposal of this product.

#### Other legislation:

Non-applicable

#### 15.2 Chemical safety assessment:

The supplier has not carried out evaluation of chemical safety.

### SECTION 16: OTHER INFORMATION

#### Legislation related to safety data sheets:

This safety data sheet has been designed in accordance with ANNEX II-Guide to the compilation of safety data sheets of Regulation (EC) N° 1907/2006 (Regulation (EC) N° 453/2010)

#### Modifications related to the previous security card which concerns the ways of managing risks. :

Non-applicable

#### Text of R-phrases considered in section 3:

#### Directive 67/548/EC and Directive 1999/45/EC:

R36: Irritating to eyes

R60: May impair fertility (Category 2)

R61: May cause harm to the unborn child (Category 2)

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**FRUTALIV****SECTION 16: OTHER INFORMATION (continue)****CLP Regulation (EC) n° 1272/2008:**

Eye Irrit. 2: H319 - Causes serious eye irritation.

Repr. 1B: H360FD - May impair fertility. May damage the foetus.

**Advice related to training:**

Minimal training is recommended to prevent industrial risks for staff using this product, in order to facilitate their comprehension and interpretation of this safety data sheet, as well as the label on the product.

**Principal bibliographical sources:**

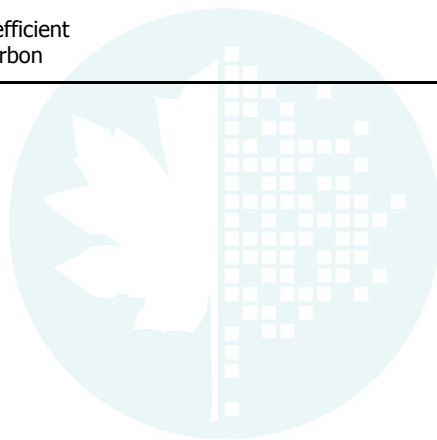
<http://esis.jrc.ec.europa.eu>

<http://echa.europa.eu>

<http://eur-lex.europa.eu>

**Abbreviations and acronyms:**

- ADR: European agreement concerning the international carriage of dangerous goods by road
- IMDG: International maritime dangerous goods code
- IATA: International Air Transport Association
- ICAO: International Civil Aviation Organisation
- COD: Chemical Oxygen Demand
- BOD5: 5-day biochemical oxygen demand
- BCF: Bioconcentration factor
- LD50: Lethal Dose 50
- CL50: Lethal Concentration 50
- EC50: Effective concentration 50
- Log-POW: Octanol–water partition coefficient
- Koc: Partition coefficient of organic carbon



The information contained in this security data sheet is based on sources, technical knowledge and current legislation at European and state level, without being able to guarantee its accuracy. This information cannot be considered a guarantee of the properties of the product, it is simply a description of the security requirements. The occupational methodology and conditions for users of this product are not within our awareness or control, and it is ultimately the responsibility of the user to take the necessary measures to obtain the legal requirements concerning the manipulation, storage, use and disposal of chemical products. The information on this security data sheet only refers to this product, which should not be used for needs other than those specified.

- END OF SAFETY DATA SHEET -