

AMMONIA-CYANIDE TS USP

Date 31.8.2011

Previous date: -

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**1.1 Product identifier****1.1.1 Commercial Product Name**

AMMONIA-CYANIDE TS USP

1.1.2 Product code

FF6097 100 ML

1.2 Relevant identified uses of the substance or mixture and uses advised against**1.2.1 Recommended use**

MP0112 - Laboratory use: R&D laboratory use

1.3 Details of the supplier of the safety data sheet**1.3.1 Supplier**

Oy FF-Chemicals Ab

P.O.Box

Teollisuustie 4

Postcode and post office

FI-90830 Haukipudas

Finland

Telephone

+358 (0)8 5563 193

Telefax

+358 (0)8 5563 194

Email

ffc@ff-chemicals.fi

1.4 Emergency telephone number**1.4.1 Telephone number, name and address**

Emergency telephone number 112

2. HAZARDS IDENTIFICATION**2.1 Classification of the substance or mixture**

This product is a mixture. Health hazard information is based on its components.

1272/2008 (CLP)

Acute Tox. 3, H301

Acute Tox. 3, H311

Acute Tox. 3, H331

Aquatic Acute 1, H400

Aquatic Chronic 1, H410

Eye Dam. 1, H318

Skin Irrit. 2, H315

EUH032

67/548/EEC - 1999/45/EC

T+, N, C; R23/24/25-32-50/53-41-38

2.2 Label elements**1272/2008 (CLP)**

GHS05 - GHS09 - GHS06

Signal word

Danger**Hazard Statements**

H301 Toxic if swallowed.

H311 Toxic in contact with skin.

H331 Toxic if inhaled.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H318 Causes serious eye damage.

H315 Causes skin irritation.

EUH032 Contact with acids liberates very toxic gas.

Precautionary Statements

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P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P309	IF exposed or if you feel unwell:
P310	Immediately call a POISON CENTER or doctor/physician.

2.3 Other hazards**3. COMPOSITION/INFORMATION ON INGREDIENTS****3.2 Mixtures****Hazardous components**

CAS/EC and Reg. number	Chemical name of the substance	Concentration	Classification
151-50-8	Potassium cyanide	2%	T+; R26/27/28 N; R50/53 R32 ;Acute Tox. 2, H330 Acute Tox. 1, H310 Acute Tox. 2, H300 Aquatic acute 1, H400 Aquatic Chronic 1, H410
1336-21-6	ammonia....%	3,8%	C; R34;N; R50; Skin Corr. 1B, H314; Aquatic Acute 1, H400

4. FIRST AID MEASURES**4.1 Description of first aid measures**

Immediate medical attention is required. First aider needs to protect himself. Immediately call in physician (mentioning hydrocyanic acid poisoning)

4.1.2 Inhalation

If inhaled, remove to fresh air. If breathing has stopped, apply artificial respiration. Oxygen, if needed. Get medical attention immediately.

4.1.3 Skin contact

In case of contact, immediately flush skin with plenty of water. Take off all contaminated clothing immediately. Get medical attention immediately.

4.1.4 Eye contact

In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately.

4.1.5 Ingestion

If accidentally swallowed obtain immediate medical attention. Drink 1 or 2 glasses of water. administer activated charcoal (20-40 g in a 10% slurry). Prevent vomiting if possible. Do not give milk. Do not give oils. Keep respiratory tract clear. laxative: Sodium sulfate Note to physician: After ingestion of large amounts: Gastric lavage

4.2 Most important symptoms and effects, both acute and delayed

irritant effects, , Shortness of breath,Vertigo,Unconsciousness,nausea,Vomiting,Cardiovascular disorders. Death
The following applies to cyanogen compounds/nitriles in general: Utmost caution! Release of hydrocyanic acid is possible- blockade of cellular respiration. Blockade of cellular respiration. Cardiovascular disorders,dyspnoea,unconsciousness.

4.3 Indication of immediate medical attention and special treatment needed

Always have on hand a cyanide first-aid kit, together with proper instructions.

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5. FIREFIGHTING MEASURES**5.1 Extinguishing media****5.1.1 Suitable extinguishing media**

Foam, Dry chemical

5.1.2 Extinguishing media which must not be used for safety reasonsWater, Carbon dioxide (CO₂)**5.2 Special hazards arising from the substance or mixture**

Fire may cause evolution of: Hydrogen cyanide (hydrocyanic acid)

5.3 Advice for firefighters

Stay in danger area only with self-contained breathing apparatus..Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

5.4 Specific methods

Prevent fire extinguishing water from contaminating surface water or the ground water system. Suppress (knock down) gases/vapours/mists with a water spray jet.

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

Avoid substance contact Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Immediately evacuate personnel to safe areas. Consult an expert

6.2 Environmental precautions

Do not empty into drains.

6.3 Methods and materials for containment and cleaning up

. Large spills should be collected mechanically (remove by pumping) for disposal. Dispose of wastes in an approved waste disposal facility. Contaminated area must be cleaned

6.4 Reference to other sections

See chapter 13

7. HANDLING AND STORAGE**7.1 Precautions for safe handling**

E83 - Handle in a fume cupboard or under extract ventilation. Do not breathe vapours/dust. Observe label precautions.

7.2 Conditions for safe storage, including any incompatibilities

Packaging materials to be avoided: Metals

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep locked up or in an area accessible only to qualified or authorised persons.

7.3 Specific end use(s)**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control parameters****8.1.1 Threshold limits**

151-50-8	Potassium cyanide	1 mg/m ³ (8 h) skin, CN	5 mg/m ³ (15 min)
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8.2 Exposure controls**8.2.1 Appropriate engineering controls**

E83 - Handle in a fume cupboard or under extract ventilation. Wear personal protective equipment.

8.2.2 Individual protection measures**8.2.2.1 Respiratory protection**

Required when vapours/aerosols are generated. Recommended Filter type:B-(P3)

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8.2.2.2 Hand protection

Protective gloves. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

8.2.2.3 Eye/face protection

Goggles

8.2.2.4 Skin protection

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The rules which cover amongst other things the requirement for ventilation, protective clothing, personal protective equipment etc. can be obtained from the National Occupational Health and Safety Board.

8.2.3 Environmental exposure controls

Do not empty into drains.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 Important Health Safety and Environmental Information****9.1.1 Appearance**

Liquid, clear

9.1.2 Odour

stinging, bitter almond-like

9.1.4 pH

No information available.

9.1.7 Flash point

No information available.

9.1.8 Evaporation rate

No information available.

9.1.14 Solubility(ies)**9.1.14.1 Water solubility**

soluble

9.1.17 Decomposition temperature

No information available.

9.1.18 Viscosity

No information available.

9.1.19 Explosive properties

No information available.

9.1.20 Oxidising properties

No information available.

9.2 Other information**10. STABILITY AND REACTIVITY****10.1 Reactivity**

Possibility of hazardous reactions

10.2 Chemical stability**10.3 Possibility of hazardous reactions**

Exothermic reaction with: Fluorine, Magnesium

Risk of explosion with: Chlorates, Nitrites, Nitrates, Strong oxidizing agents, permanganates anhydrides, Mercury (II)nitrate, nitrogen trichloride

A risk of explosion and/or toxic gas formation exists with the following substances: Water, Acids, Hydrogen fluoride, Carbon dioxide (CO₂)

10.4 Conditions to avoid

Exposure to moisture.

10.5 Incompatible materials

Aluminium, Zinc, Tin

10.6 Hazardous decomposition products

Hydrogen cyanide (hydrocyanic acid)

11. TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects**

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This product is a mixture. Health hazard information is based on its components.

11.1.1 Acute toxicity

Information refers to the main component. (Potassium cyanide)

LD50/oral/rat = 5 mg/kg

LD50/dermal/rat = 20 mg/kg

LC50/hengitysteitse/60min/rotta= 0,16 mg/l

11.1.2 Irritation and corrosion

May be corrosive to metals.

11.1.3 Sensitisation

Information not available

11.1.4 Subacute, subchronic and prolonged toxicity

Contains no ingredient listed as a carcinogen

11.1.5 STOT-single exposure

The substance or mixture is not classified as specific target organ toxicant, single exposure.

11.1.6 STOT-repeated exposure

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

11.1.7 Aspiration hazard

No aspiration toxicity classification

12. ECOLOGICAL INFORMATION**12.1 Toxicity****12.1.1 Aquatic toxicity**

Information refers to the main component. (Potassium cyanide)

LC50/96h/bluegill sunfish = 0,45 mg/l

12.2 Persistence and degradability**12.2.1 Biodegradation**

No information available.

12.2.2 Chemical degradation

No information available.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Other adverse effects

Forms toxic mixtures in water, dilution measures notwithstanding

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****13.2 Waste from residues / unused products**

Dispose of as hazardous waste in compliance with local and national regulations.

14. TRANSPORT INFORMATION

	Land transport ADR/RID	Sea transport IMDG/IMO	Air transport ICAO/IATA
14.1 UN number	UN 1935	UN 1935	

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14.2 UN proper shipping name	CYANIDE SOLUTION,N.O.S. (Potassium cyanide, Ammonium hydroxide)	CYANIDE SOLUTION,N.O.S. (Potassium cyanide, Ammonium hydroxide)	
14.3 Transport hazard class(es)	6	6	
14.4 Packing group	II	II	
14.5 Environmental hazards	Hazardous to the environment	Marine pollutant	
Other information			

14.6 Special precautions for users**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code****15. REGULATORY INFORMATION**

Information refers to the main component.

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

Directive 96/82/EC applies

Very toxic

1

Amount 1: 5 t

Amount 2 : 20 t

Environmentally hazardous

9a

Amount 1 : 100 t

Amount 2 : 200 t

15.2 Chemical safety assessment**16. OTHER INFORMATION****16.4 Classification procedure**

REGULATION (EC) No 1272/2008

16.5 List of relevant R phrases, hazard statements, safety phrases and/or precautionary statements

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

R32 Contact with acids liberates very toxic gas.

R38 Irritating to skin.

R41 Risk of serious damage to eyes.

R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

16.6 Training advice

Provide adequate information, instruction and training for operators.

16.7 Recommended restrictions

Take note of Dir 94/33/EC on the protection of young people at work. Take note of Dir 92/85/EEC on the safety and health at work of pregnant workers.

16.8 Additional information available from:

Oy FF-Chemicals Ab, Tel. +358 8-5563 193

ffc@ff-chemicals.fi

The information contained herein is based on the present state of our knowledge and does therefore not guarantee certain properties.