

Material Safety Data Sheet According to 91/155 EEC

Printing date 09.11.2005

Reviewed on 16.06.2005

* 1 Identification of substance:

- **Product details:** Reagent for water analysis
- **Product name:** Aluminum ECR F20 ml
- **Catalogue number:** CW/53.06.20
- **Supplier:**
Camlab Limited
Camlab House, Norman Way, Over, Cambridge CB4 5WE
United Kingdom
Tel: +44 (0)1954 233100
- **Informing department:** Technical Support
- **Emergency information:**
National Poisons Information Service, United Kingdom
Tel: 0870 600 6266 (24 hours) • <http://www.npis.org/>

* 2 Composition/Data on components:

- **Description:** Preparation contains anorganic and organic compounds.

- **Dangerous components:**

CAS: 70-49-5	mercaptosuccinic acid	☒ Xn; R 22-36/37/38	5-10%
EINECS: 200-736-4			

- **Additional information** For the wording of the listed risk phrases refer to section 16.

* 3 Hazards identification

- **Hazard designation:** void
- **Information pertaining to particular dangers for man and environment**
The product does not have to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.
- **Classification system**
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

* 4 First aid measures

- **General information** No special measures required.
- **After inhalation** Supply fresh air; consult doctor in case of symptoms.
- **After skin contact** Instantly wash with water and soap and rinse thoroughly.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing**
Drink copious amounts of water, induce vomiting.
In case of persistent symptoms consult doctor.
- **The following symptoms may occur:**
After swallowing of large amounts:
sickness
vomiting

(Contd. on page 2)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 09.11.2005

Reviewed on 16.06.2005

Product name: Aluminum ECR F20 ml

(Contd. of page 1)

- **Danger** Danger of disturbed cardiac rhythm.

* 5 Fire fighting measures

- **Suitable extinguishing agents**
CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
 - **Special hazards caused by the material, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.
Hydrogen chloride (HCl)
dipotassium oxide
nitrogen oxides
 - **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
 - **Additional information**
Ambient fire may liberate hazardous vapours.
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
-

* 6 Accidental release measures

- **Person-related safety precautions:** Wear protective equipment. Keep unprotected persons away.
 - **Measures for environmental protection:** Do not allow product to reach sewage system or water bodies.
 - **Measures for cleaning/collecting:**
Dispose of contaminated material as waste according to item 13.
Collect mechanically.
Ensure adequate ventilation.
 - **Additional information:** No dangerous materials are released.
-

* 7 Handling and storage

- **Handling**
 - **Information for safe handling:** Thorough dusting.
 - **Information about protection against explosions and fires:** The product is not flammable
 - **Storage**
 - **Requirements to be met by storerooms and containers:** Store in cool location.
 - **Information about storage in one common storage facility:** Store away from oxidizing agents.
 - **Further information about storage conditions:**
Protect from heat and direct sunlight.
Store under dry conditions.
Protect from humidity and keep away from water.
Protect from the effects of light.
 - **Storage class** Not required.
-

* 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
 - **Components with limit values that require monitoring at the workplace:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
 - **Additional information:** The lists that were valid during the compilation were used as basis.
 - **Personal protective equipment**
 - **General protective and hygienic measures**
Wash hands during breaks and at the end of the work.
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(Contd. on page 3)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 09.11.2005

Reviewed on 16.06.2005

Product name: Aluminum ECR F20 ml

(Contd. of page 2)

- Do not eat, drink or smoke while working.
 - **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
 - **Recommended filter device for short term use:** Filter P1
 - **Protection of hands:** Preventive skin protection by use of skin-protecting agents is recommended.
 - **Material of gloves**
nitrile
Recommended thickness of the material: ≥ 0.11 mm
 - **Penetration time of glove material**
Value for the permeation: Level ≥ 6 (480 min)
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
 - **Eye protection:** Safety glasses
 - **Body protection:** Protective work clothing.
-

* 9 Physical and chemical properties:

· Form:	Powder
· Colour:	Orange
· Odour:	Sulphurous
· Melting point/Melting range:	Not determined
· Boiling point/Boiling range:	1413°C
· Flash point:	Not applicable
· Danger of explosion:	Product is not explosive.
· Density	Not determined
· Solubility in / Miscibility with Water:	Soluble
· pH-value (22 g/l) at 20°C:	2.8
· Solvent content:	
Organic solvents:	0.0 %
· Solids content:	100.0 %

* 10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
 - **Materials to be avoided:**
acids
oxidizing agents
--> forms heat
 - **Dangerous products of decomposition:** see chapter 5
-

* 11 Toxicological information

- **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.

· LD/LC50 values that are relevant for classification:		
7447-40-7 potassium chloride		
Oral	LD50	2600 mg/kg (rat)
7783-20-2 ammonium sulphate		
Oral	LD50	2840 mg/kg (rat)

(Contd. on page 4)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 09.11.2005

Reviewed on 16.06.2005

Product name: Aluminum ECR F20 ml

(Contd. of page 3)

70-49-5 mercaptosuccinic acid		
Oral	LD50	800 mg/kg (rat)
	LD50 IVN	> 1000 mg/kg (rabbit)
50-81-7 ascorbic acid		
Oral	LD50	11900 mg/kg (rat)

- **Primary irritant effect:**

- **on the skin:** No irritant effect.

- **on the eye:** Irritant effect.

- **Sensitization:** No sensitizing effect known.

- **Additional toxicological information:**

The product is not subject to classification according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version.

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

The usual precautionary measures should be adhered to general rules for handling chemicals.

* 12 Ecological information:

- **Information about elimination (persistence and degradability):**

- **Other information:** Quantitative data on the ecological effect of this product are not available.

· Behaviour in environmental systems:	
7783-20-2 ammonium sulphate	
log P(o/w)	- 5.1 (.)
70-49-5 mercaptosuccinic acid	
log P(o/w)	-0.88 (.)
50-81-7 ascorbic acid	
log P(o/w)	-2.15 (.)

- **Ecotoxicological effects:**

- **Aquatic toxicity:**

7447-40-7 potassium chloride	
EC50	825 mg/l/48h (Daphnia magna)
LC50	920 mg/l/96h (Gambusia affinis)
50-81-7 ascorbic acid	
LC50	33000 (Merck) mg/l/48h (Leuciscus idus)
	1020 mg/l/96h (Onchorhynchus mykiss)

- **Remark:**

Toxic for fish:

NH₄⁺ > 0.3 mg/l

sulphates > 7 g/l

- **Bacterial toxicity:** sulphates toxic > 2.5 g/l

- **General notes:**

Water danger class 3 (German Regulation) (Self-assessment acc. VwVwS Annex 4): extremely hazardous for water.

Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

Danger to drinking water if even extremely small quantities leak into soil.

* 13 Disposal considerations

- **Product:**

- **Recommendation** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 5)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 09.11.2005

Reviewed on 16.06.2005

Product name: Aluminum ECR F20 ml

(Contd. of page 4)

· European waste catalogue	
16 05 09	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

· Uncleaned packagings:**· Recommendation:** Disposal must be made according to official regulations.**· Recommended cleaning agent:** Water, if necessary with cleaning agent.

14 Transport information

· Land transport ADR/RID (cross-border)**· ADR/RID-GGVS/E Class:** -**· Maritime transport IMDG:****· IMDG Class:** -**· Marine pollutant:** No**· Air transport ICAO-TI and IATA-DGR:****· ICAO/IATA Class:** -**· Transport/Additional information:** Not dangerous according to the above specifications.

*15 Regulatory information

· Designation according to EC guidelines:**· Special designation of certain preparations:**

Safety data sheet available for professional user on request.

16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant R-phrases

22 Harmful if swallowed.

36/37/38 Irritating to eyes, respiratory system and skin.

· Department issuing data specification sheet: Technical Department**· * Data compared to the previous version altered.**

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Reviewed on 10.11.2005

1 Identification of substance:

- **Product details:** Reagent for water analysis
- **Product name:** Hexamine F20 ml
- **Catalogue number:** CW/53.16.50
- **Supplier:**
Camlab Limited
Camlab House, Norman Way, Over, Cambridge CB4 5WE
United Kingdom
Tel: +44 (0)1954 233100
- **Informing department:** Technical Support
- **Emergency information:**
National Poisons Information Service, United kingdom
Tel: 0870 600 6266 (24 hours) • <http://www.npis.org/>

2 Composition/Data on components:

- **Description:** Mixture of the substances listed below with harmless additions.

- **Dangerous components:**

CAS: 100-97-0	methenamine	☒ Xn, ☒ F; R 11-42/43	90-100%
EINECS: 202-905-8			
EC Number: 612-101-00-2			

- **Additional information** For the wording of the listed risk phrases refer to section 16.

3 Hazards identification

- **Hazard designation:**



Xn Harmful
F Highly flammable

- **Information pertaining to particular dangers for man and environment**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 11 Highly flammable.

R 42/43 May cause sensitisation by inhalation and skin contact.

- **Classification system**

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

4 First aid measures

- **General information** Instantly remove any clothing soiled by the product.
- **After inhalation**
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness bring patient into stable side position for transport.
- **After skin contact**
Instantly rinse with water.

(Contd. on page 2)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 10.11.2005

Reviewed on 10.11.2005

Product name: Hexamine F20 ml

(Contd. of page 1)

Seek medical treatment.

· After eye contact

Rinse opened eye for several minutes under running water.

Call a doctor immediately.

· After swallowing

Rinse out mouth and then drink plenty of water.

Induce vomiting.

· The following symptoms may occur:

after inhalation:

breathing difficulty

coughing

after swallowing:

sickness

vomiting

cramps

mucous membrane irritation

gastric or intestinal trouble

· Danger

risk of airways sensitization

risk of skin sensitization

5 Fire fighting measures

· Suitable extinguishing agents

Foam

Alcohol-resistant foam

Fire-extinguishing powder

Carbon dioxide

· Special hazards caused by the material, its products of combustion or resulting gases:

Can form explosive gas-air mixtures.

Formation of toxic gases is possible during heating or in case of fire.

Nitrogen oxides (NO_x)

formaldehyde

Hydrogen cyanide (HCN)

nitrous gases

ammonia

· Protective equipment:

Wear full protective suit.

Wear self-contained breathing apparatus.

· Additional information

Cool endangered containers with water spray jet.

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Collect contaminated fire fighting water separately. It must not enter drains.

6 Accidental release measures

· Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

Avoid causing dust.

Use breathing protection against the effects of fumes/dust/aerosol.

· Measures for environmental protection:

Do not allow product to reach sewage system or water bodies.

Damp down gases/fumes/haze with water spray jet.

· Measures for cleaning/collecting:

Dispose of contaminated material as waste according to item 13.

Ensure adequate ventilation.

(Contd. on page 3)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 10.11.2005

Reviewed on 10.11.2005

Product name: Hexamine F20 ml

(Contd. of page 2)

Collect mechanically.

* 7 Handling and storage

- **Handling**
- **Information for safe handling:**
 - Thorough dedusting.
 - Work only in fume cupboard.
 - Use only in well ventilated areas.
- **Information about protection against explosions and fires:**
 - Protect from heat.
 - Keep ignition sources away - Do not smoke.
 - Protect against electrostatic charges.
- **Storage**
- **Requirements to be met by storerooms and containers:** Store in cool location.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:**
 - Keep container tightly sealed.
 - Store in cool, dry conditions in well sealed containers.
 - Store under dry conditions.
 - Protect from humidity and keep away from water.
 - Protect from the effects of light.
 - This product is hygroscopic.
- **Storage class** Not required.

* 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Components with limit values that require monitoring at the workplace:**
 - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the compilation were used as basis.
- **Personal protective equipment**
- **General protective and hygienic measures**
 - Keep away from foodstuffs, beverages and food.
 - Take off immediately all contaminated clothing
 - Wash hands during breaks and at the end of the work.
 - Do not eat, drink or smoke while working.
- **Breathing equipment:** Use breathing protection against the effects of fumes/dust/aerosol.
- **Recommended filter device for short term use:** Filter A
- **Protection of hands:**
 - Only use chemical-protective gloves with CE-labelling of category III.
 - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
 - After use of gloves apply skin-cleaning agents and skin cosmetics.
- **Material of gloves**
 - nitrile
 - nitrile rubber, NBR
 - Recommended thickness of the material: ≥ 0.11 mm
 - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
 - Value for the permeation: Level ≥ 6 (480 min)
 - The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Safety glasses

(Contd. on page 4)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 10.11.2005

Reviewed on 10.11.2005

Product name: Hexamine F20 ml

(Contd. of page 3)

 · **Body protection:** Protective work clothing.

9 Physical and chemical properties:

· Form:	Powder
· Colour:	White
· Odour:	Amine-like
· Melting point/Melting range:	280, Subl.°C
· Boiling point/Boiling range:	Not determined
· Flash point:	> 100°C
· Inflammability (solid, gaseous)	Highly flammable.
· Critical values for explosion:	
Lower:	20 g/m ³
· Density at 20°C	1.331 g/cm ³
· Settled apparent density at 20°C	600 kg/m ³
· Solubility in / Miscibility with Water at 20°C:	100 g/l
· pH-value (20 g/l) at 20°C:	8.5
· Solvent content:	
Organic solvents:	0.0 %
· Solids content:	100.0 %

*10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Materials to be avoided:**
 - acids
 - peroxides
 - Halogenated hydrocarbons
 - iodide
 - oxidizing agents
- **Dangerous reactions**
 - with nitric acid, acetic anhydride
 - Reacts with metals forming hydrogen
 - Forms hydrogen in aqueous solution with metals
 - > Explosive
 - Strong exothermic reaction with acids
 - Reacts with halogenated compounds
 - Corrodes aluminium
- **Dangerous products of decomposition:**
 - hydrogen cyanide (prussic acid)
 - formaldehyde
 - see chapter 5

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 (Contd. on page 5)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 10.11.2005

Reviewed on 10.11.2005

Product name: Hexamine F20 ml

(Contd. of page 4)

* 11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

100-97-0 methenamine		
Oral	LD50	569 mg/kg (mouse)
	LD50	9200 mg/kg (rat)

- **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.

- **on the eye:** Irritant effect.

- **Sensitization:**

- Sensitization possible by inhalation.

- Sensitization possible by skin contact.

- **Experience with humans:** Can cause kidney damages.

- **Additional toxicological information:**

- The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

- Harmful

* 12 Ecological information:

- **Information about elimination (persistence and degradability):**

- **Other information:**

- The product is biodegradable.

- CAS-No. 100-97-0: 39-47% / 28 d

- **Behaviour in environmental systems:**

100-97-0 methenamine	
log P(o/w)	-2.84 (.)

- **Mobility and bioaccumulation potential:** Does not accumulate in organisms

- **Ecotoxicological effects:**

- **Acquatic toxicity:**

100-97-0 methenamine	
EC50	36 mg/l/48h (Daphnia magna)
LC50	49.8 mg/l/96h (Pimephales promelas)
Toxicity EC10	5 g/l (fish)
Toxicity ECo	10 g/l/48h (Daphnia magna)

- **General notes:**

- Water hazard class 1 (German Regulation) (Self-assessment acc. VwVwS Annex 4): slightly hazardous for water.

- Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

- Must not reach sewage water or drainage ditch undiluted or unneutralized.

13 Disposal considerations

- **Product:**

- **Recommendation** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **European waste catalogue**

16 05 06	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals
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- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

(Contd. on page 6)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 10.11.2005

Reviewed on 10.11.2005

Product name: Hexamine F20 ml

(Contd. of page 5)

 · **Recommended cleaning agent:** Water, if necessary with cleaning agent.

14 Transport information

 · **Land transport ADR/RID (cross-border)**

 · **ADR/RID-GGVS/E Class:** 4.1 (F1) Flammable solids.
 · **Kemler Number:** 40
 · **UN-Number:** 1328
 · **Packaging group:** III
 · **Label:** 4.1
 · **Designation of goods:** 1328 HEXAMETHYLENETETRAMINE

 · **Maritime transport IMDG:**

 · **IMDG Class:** 4.1
 · **UN Number:** 1328
 · **Label:** 4.1
 · **Packaging group:** III
 · **EMS Number:** F-A,S-G
 · **Marine pollutant:** No
 · **Correct technical name:** HEXAMETHYLENETETRAMINE

 · **Air transport ICAO-TI and IATA-DGR:**

 · **ICAO/IATA Class:** 4.1
 · **UN/ID Number:** 1328
 · **Label:** 4.1
 · **Packaging group:** III
 · **Correct technical name:** HEXAMETHYLENETETRAMINE

*15 Regulatory information

 · **Designation according to EC guidelines:**

The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)

 · **Code letter and hazard designation of product:**

 Xn Harmful
 F Highly flammable

 · **Hazard-determining components of labelling:**

methenamine

 · **Risk phrases:**

 11 Highly flammable.
 42/43 May cause sensitisation by inhalation and skin contact.

(Contd. on page 7)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 10.11.2005

Reviewed on 10.11.2005

Product name: Hexamine F20 ml

(Contd. of page 6)

· **Safety phrases:**

- 16 Keep away from sources of ignition - No smoking.
 - 22 Do not breathe dust.
 - 24 Avoid contact with skin.
 - 37 Wear suitable gloves.
 - 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
 - 60 This material and its container must be disposed of as hazardous waste.
-
-

16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Relevant R-phrases**

- 11 Highly flammable.
- 42/43 May cause sensitisation by inhalation and skin contact.

· **Department issuing data specification sheet:** Technical Department

· *** Data compared to the previous version altered.**

Material Safety Data Sheet According to 91/155 EEC

Printing date 10.11.2005

Reviewed on 19.10.2005


* 1 Identification of substance:

- **Product details:** Reagent for water analysis
- **Product name:** ECR-Masking RGT
- **Catalogue number:** CW/53.16.25
- **Supplier:**
Camlab Limited
Camlab House, Norman Way, Over, Cambridge CB4 5WE
United Kingdom
Tel: +44 (0)1954 233100
- **Informing department:** Technical Support
- **Emergency information:**
National Poisons Information Service, United kingdom
Tel: 0870 600 6266 (24 hours) • <http://www.npis.org/>

* 2 Composition/Data on components:

- **Description:** aqueous solution

- **Dangerous components:**

CAS: 12125-01-8	ammonium fluoride		T; R 23/24/25	10-20%
EINECS: 235-185-9				
EC Number: 009-006-00-8				

- **Additional information** For the wording of the listed risk phrases refer to section 16.

* 3 Hazards identification

- **Hazard designation:**



Xn Harmful

- **Information pertaining to particular dangers for man and environment**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

- **Classification system**

The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

* 4 First aid measures

- **General information** Instantly remove any clothing soiled by the product.
- **After inhalation** Supply fresh air or oxygen; call for doctor.
- **After skin contact**
Instantly rinse with water.
Seek immediate medical advice.
- **After eye contact**
Rinse opened eye for several minutes under running water.

(Contd. on page 2)

— GB —

Material Safety Data Sheet

According to 91/155 EEC

Printing date 10.11.2005

Reviewed on 19.10.2005

Product name: ECR-Masking RGT

(Contd. of page 1)

Call a doctor immediately.

- **After swallowing**

Rinse out mouth and then drink plenty of water.

Induce vomiting.

- **The following symptoms may occur:**

after absorption:

cramps

breathing difficulty

diarrhoea

gastric pain

sickness

vomiting

- **Danger** Danger of disturbed cardiac rhythm.

* 5 Fire fighting measures

- **Suitable extinguishing agents** Use fire fighting measures that suit the environment.

- **Special hazards caused by the material, its products of combustion or resulting gases:**

Formation of toxic gases is possible during heating or in case of fire.

Hydrogen fluoride (HF)

NH₃

nitrogen oxides

- **Protective equipment:**

Wear self-contained breathing apparatus.

Wear full protective suit.

- **Additional information**

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

Collect contaminated fire fighting water separately. It must not enter drains.

Ambient fire may liberate hazardous vapours.

* 6 Accidental release measures

- **Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

- **Measures for environmental protection:** Do not allow product to reach sewage system or water bodies.

- **Measures for cleaning/collecting:**

Ensure adequate ventilation.

Neutralize with lime sand, lime or sodium bicarbonate.

Absorb with liquid-binding material (sand, diatomite, universal binders).

Dispose of contaminated material as waste according to item 13.

* 7 Handling and storage

- **Handling**

- **Information for safe handling:** Prevent formation of aerosols.

- **Information about protection against explosions and fires:** The product is not flammable

- **Storage**

- **Requirements to be met by storerooms and containers:**

Store only in the original container.

Store in cool location.

Unsuitable material for container: glass

- **Information about storage in one common storage facility:** Store away from oxidizing agents.

- **Further information about storage conditions:**

Keep container tightly sealed.

(Contd. on page 3)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 10.11.2005

Reviewed on 19.10.2005

Product name: ECR-Masking RGT

(Contd. of page 2)

- Protect from heat and direct sunlight.
 - Protect from humidity and keep away from water.
 - Protect from the effects of light.
 - **Storage class** Not required.
-

* 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** No further data; see item 7.

- **Components with limit values that require monitoring at the workplace:**

12125-01-8 ammonium fluoride

OES (Great Britain)	Long-term value: 2.5 mg/m ³ as F
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- **Additional information:** The lists that were valid during the compilation were used as basis.

- **Personal protective equipment**

- **General protective and hygienic measures**

- Keep away from foodstuffs, beverages and food.
- Wash hands during breaks and at the end of the work.
- Avoid contact with the eyes and skin.
- Do not eat, drink or smoke while working.

- **Breathing equipment:**

In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.

- **Recommended filter device for short term use:** Filter B

- **Protection of hands:**

- Only use chemical-protective gloves with CE-labelling of category III.
- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- After use of gloves apply skin-cleaning agents and skin cosmetics.

- **Material of gloves**

- nitrile
- Recommended thickness of the material: ≥ 0.11 mm
- The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

- **Penetration time of glove material**

- Value for the permeation: Level ≥ 6 (480 min)
- The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Safety glasses

- **Body protection:** Protective work clothing.

* 9 Physical and chemical properties:

- | | |
|--|---------------------------|
| · Form: | Fluid |
| · Colour: | Colourless |
| · Odour: | Odourless |
| · Melting point/Melting range: | Not determined |
| · Boiling point/Boiling range: | 100°C |
| · Flash point: | Not applicable |
| · Danger of explosion: | Product is not explosive. |
| · Density at 20°C | 1.108 g/cm ³ |
| · Solubility in / Miscibility with Water: | Fully miscible |
| · pH-value at 20°C: | 5.1 |

(Contd. on page 4)

Material Safety Data Sheet

According to 91/155 EEC

Printing date 10.11.2005

Reviewed on 19.10.2005

Product name: ECR-Masking RGT

(Contd. of page 3)

· Solvent content:	
Organic solvents:	0.0 %
Water:	< 70 %
· Solids content:	
	< 40 %

*10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** To avoid thermal decomposition do not overheat.
- **Materials to be avoided:**
 - acids
 - metals
 - halogen compounds
- **Dangerous reactions**
 - Contact with strong acids releases hydrogen fluoride
 - Attacks materials containing glass and silicate
- **Dangerous products of decomposition:**
 - Poisonous gases/vapours
 - Corrosive gases/vapours
 - ammonia
 - Nitrogen oxides (NO_x)
 - see chapter 5

*11 Toxicological information

- **Acute toxicity:** Quantitative data on the toxicity of the preparation are not available.

· LD/LC50 values that are relevant for classification:

12125-01-8 ammonium fluoride

LD50 IPR 32 mg/kg (rat)

- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritant effect.
- **Sensitization:** No sensitizing effect known.
- **Additional toxicological information:**
 - The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:
 - Harmful

*12 Ecological information:

- **Information about elimination (persistence and degradability):**
- **Other information:** Quantitative data on the ecological effect of this product are not available.
- **Ecotoxicological effects:**

· Aquatic toxicity:

12125-01-8 ammonium fluoride

LC 50 (NaF) 660 mg/l (Leuciscus idus)

LC50 3638 mg/l/96h (Pimephales promelas)
--

- **General notes:**
 - Water hazard class 1 (German Regulation) (Self-assessment acc. VwVwS Annex 4): slightly hazardous for water.
 - Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.

(Contd. on page 5)

Material Safety Data Sheet

According to 91/155 EEC

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Product name: ECR-Masking RGT

(Contd. of page 4)

 Must not reach sewage water or drainage ditch undiluted or unneutralized.

* 13 Disposal considerations

- **Product:**
- **Recommendation** Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

European waste catalogue	
16 05 06	laboratory chemicals, consisting of or containing dangerous substances, including mixtures of laboratory chemicals

- **Uncleaned packagings:**
 - **Recommendation:** Disposal must be made according to official regulations.
 - **Recommended cleaning agent:** Water, if necessary with cleaning agent.
-

14 Transport information

- | | |
|--|---|
| Land transport ADR/RID (cross-border) | |
| ADR/RID-GGVS/E Class: | - |

- | | |
|---------------------------------|----|
| Maritime transport IMDG: | |
| IMDG Class: | - |
| Marine pollutant: | No |

- | | |
|--|---|
| Air transport ICAO-TI and IATA-DGR: | |
| ICAO/IATA Class: | - |

- **Transport/Additional information:** Not dangerous according to the above specifications.
-

* 15 Regulatory information

- **Designation according to EC guidelines:**
The product has been classified and labelled in accordance with EC Directives / Ordinance on Hazardous Materials (GefStoffV)
 - **Code letter and hazard designation of product:**
Xn Harmful
 - **Hazard-determining components of labelling:**
ammonium fluoride
 - **Risk phrases:**
20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
 - **Safety phrases:**
9 Keep container in a well-ventilated place.
23 Do not breathe fumes/aerosol.
36/37 Wear suitable protective clothing and gloves.
60 This material and its container must be disposed of as hazardous waste.
-

16 Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant R-phrases**
23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
 - **Department issuing data specification sheet:** Technical Department
 - *** Data compared to the previous version altered.**
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