

# Brand och påföljande utsläpp på en kemikalielager

970717

Branden uppstod bland papptunnor med förorenat avfall. Avfallet bestod av pellets av natriumdiklorisocyanurat som förorenats av organiska föreningar. Brandens orsak var troligen självantändning. Till följd av branden spreds en del giftiga gaser, bland dem uppskattningsvis 100 kg klorgas. Räddningstjänsten larmades och gasmolnet skingrades med hjälp av vattengardiner. Branden släcktes efter två timmar. Då hade 300 kubikmeter vatten använts. De 700 byborna i det närmaste samhället evakuerades.

## Inblandade ämnen och mängder

	CAS Nr.	Mängd
klorgas	7782-50-5	ca 100 kg
natriumdiklorisocyanurat		ca 2500 ton

## Skador:

Människor:	23 personer, varav tre anställda, uppvisade förgiftningssymptom.
Materiella:	Inga skador.
Miljö/ekologi:	Försumbara effekter rapporterade.
Infrastruktur:	De 700 byborna i det närmaste samhället evakuerades.

## Erfarenheter redovisade (Ja/Nej): Ja

Mycket kortfattat anges förebyggande åtgärder

## Report Profile

### Identification of Report:

country: FA ident key: 1800\_312\_01

reported under Seveso I directive as major accident reports: SHORT+FULL

### Date of Major Occurrence: Time of Major Occurrence

start: 17/07/1997 start: 10:15:00

finish: 17/07/1997 finish:

### Establishment:

name:

address:

industry: 2001 general chemicals manufacture

Seveso II status: not applicable: No art. 6 (notification): Yes

art. 7 (MAPP): Yes

art. 9 (safety report): Yes

### Date of Report:

short: full:

### Authority Reporting:

name:

address:

### Authority Contact:

rep\_cont\_name:

rep\_cont\_phone:

rep\_cont\_fax:

**Additional Comments:**

a) - not applicable -

b) - not applicable -

c) - not applicable -

d) - not applicable -

e) - not applicable -

## Short Report

country: FA ident key: 1800\_312\_01

**Accident Types:**

release: Yes explosion: No

water contamination: No other: No

fire: Yes

**description:**

Fire in a warehouse of wastes and goods leading to an emission of dangerous chemicals

**Substance(s) Directly Involved:**

toxic: Yes explosive: No

ecotoxic: No other: No

flammable: No

**description:**

sodium dichloroisocyanurate

**Immediate Sources of Accident:**

storage: Yes transfer: No

process: No other: No

**description:**

Storage of cardboard drums filling with waste (pellet of sodium dichloroisocyanurate polluted with organic compounds).

**Suspected Causes:**

plant or equipment: No environmental: No

human: No other: Yes

**description:**

There was probably a spontaneous combustion.

**Immediate Effects:**

material loss: No

human deaths: No

human injuries: Yes community disruption: No

other: No

**ecological harm:** No

**national heritage loss:** No

**description:**

23 people included 3 workers felt unwell. About 100 kg of chlorine were emitted in the atmosphere.

### **Emergency Measures taken:**

**on-site systems:** Yes **decontamination:** Yes

**external services:** Yes **restoration:** No

**sheltering:** No **other:** No

**evacuation:** Yes

**description:**

700 inhabitants of the little village of LA CHAMBRE were evacuated. Firemen used a blower to have a wind dispersal of the smoke. The fire was extinguished 2 hrs later with 300 cubic meters of water.

### **Immediate Lessons Learned:**

**prevention:** Yes **other:** No

**mitigation:** No

**description:**

This type of accident was foreseen in the previous safety report. But some required safety measures were not abided.

## **A Occurrence Full Report**

**country:** FA **ident key:** 1800\_312\_01

### **1 Type of Accident**

**remarks:** Because of a fire ( fast selfcombustion ) and a decomposition of an oxidant mixing with organic chemicals, there was an emission of chlorinated gas.

### **2 Dangerous Substances**

**remarks:** - not applicable -

### **3 Source of Accident**

**illustration:** Please specify the attached materials illustrating the location of the establishment, relevant installation(s) and relevant surrounding geographical features.

**remarks:** - not applicable -

### **4 Meteorological Conditions**

**precipitation none: fog: rain: hail: snow:**

No No Yes No No

**wind speed (m/s):**

**direction (from):**

**stability (Pasquill):**

**ambient temperature (°C):**

**remarks:** - not applicable -

## 5 Causes of Major Occurrence

### main causes

**technical / physical** 5107 operation: unexpected reaction/phase-transition

- not applicable -

- not applicable -

- not applicable -

- not applicable -

**human / organizational** - not applicable -

- not applicable -

- not applicable -

- not applicable -

- not applicable -

**remarks:** Selfcombustion of an oxidant polluted with organic chemicals.

## 6 Discussion about the Occurrence

- not applicable -

**Type of Accident** country: FA ident key: 1800\_312\_01

### event:

**major occurrence** - not applicable -

**initiating event** - not applicable -

**associated event** - not applicable -

## Dangerous substances

country: FA ident key: 1800\_312\_01

### a) total establishment inventory

**CAS number: identity:** dichloroisocyanurate de sodium

**name from Seveso I Directive:** - not applicable -

**name from Seveso II Directive:** - not applicable -

**category from Seveso II:** oxidising

**other hazards (1):** - not applicable -

**other hazards (2):** - not applicable -

**maximum quantity (tonnes):** 2500

**use of substance as:** normal finished product

**b) substance belongs to relevant inventory directly involved:** Yes

**actual quantity:** 2500 **potential quantity:** 2500

**c) substance belongs to relevant inventory indirectly involved:** No

**actual quantity:** 0 **indir\_pot\_quant:** 0

### a) total establishment inventory

**CAS number:** 7782-50-5 **identity:**

**name from Seveso I Directive:** Chlorine

**name from Seveso II Directive:** Chlorine

**category from Seveso II:** toxic

**other hazards (1):** - not applicable -

**other hazards (2):** - not applicable -

**maximum quantity (tonnes):** 0.1

**use of substance as:** possible abnormal product

**b) substance belongs to relevant inventory directly involved:** Yes

**actual quantity:** 0.1 **potential quantity:** 0

**c) substance belongs to relevant inventory indirectly involved:** No

**actual quantity:** 0 **indir\_pot\_quant:** 0

**Source of Accident - Situation** country: FA ident key: 1800\_312\_01

### **situation**

**industry**

**initiating event** - not applicable -

**associated event** - not applicable -

**activity/unit**

**major occurrence** 3201 storage: process-associated (stockholding, etc. on-site of manufacture)

**initiating event** - not applicable -

**associated event** - not applicable -

**component**

**major occurrence** 4003 container; non-pressurised (hopper, tank, drum, bag, etc.)

**initiating event** - not applicable -

**associated event** - not applicable -

## **B Consequences Full Report**

country: FA ident key: 1800\_312\_01

### **1 Area concerned**

**affected**

**extent of effects installation:** Yes

**establishment:** Yes

**off-site; local:** Yes

**off-site; regional:** Suspected

**off-site; transboundary:** Suspected

**illustration of effects** please specify the attached materials illustrating the geographical extent

of th... see Appendix Full Report B / area concerned - illustration of

effects

**remarks** - not applicable -

### **2 People**

**establishment popul. emergency personnel off-site population**

**total at risk** 40 90 700

**immediate fatalities** 3 20 0

**subsequent fatalities** 0 0 0

**hospitalizing injuries** 0 0 0

**other serious injuries** 0 0 0

**health monitoring** 0 0 0

**remarks** 23 people felt unwell.

### **3 Ecological Harm**

**pollution/contamination/damage of:**

- residential area (covered by toxic cloud) Suspected

- common wild flora/fauna (death or elimination) No

- rare or protected flora/fauna (death or elimination) No

- water catchment areas and supplies for consumption or recreation No

- land (with known potential for long term ecological harm or No

preventing human access or activities)

- marine or fresh water habitat No

- areas of high conservation value or given special protection No

**remarks** There were very little consequences on the environment ( 1 to 3 mg of free chlor... see Appendix

Full Report B / ecological harm

### **4 National Heritage Loss**

**effects on:**

- historical sites None - historic monuments None

- historic buildings None - art treasures None

**remarks** - not applicable -

### **5 Material Loss**

**establishment losses off site losses**

**costs (direct costs to operator) (social costs)**

**in ECU FRF ECU FRF**

**material losses** -1 -1 -1 -1

**response, clean up, restoration** -1 -1 -1 -1

**remarks** The costs are not known yet.

### **6 Disruption of Community Life**

**establishment/plant evacuated disabled/unoccupiable destroyed**

- nearby residences/hotels Yes No No

- nearby factories/offices/small shops No No No

- schools, hospitals, institutions No No No

- other places of public assembly No No No

**interruption of utilities etc. no / yes duration**

- gas No
- electricity No
- water No
- sewage treatment works No
- telecommunications No
- main roads Yes
- railways No
- waterways No
- air transport No

**significant public concern none local level national level**

- off site populations No Yes No
- media interest No Yes No
- political interest Yes No No

remarks - not applicable -

**7 Discussion of Consequences**

- not applicable -

**Ecological Components involved**

country: FA ident key: 1800\_312\_01

type: 6105 inland: grassland/pasture/meadow

threatened: Yes affected: Suspected

**C Response Full Report**

country: FA ident key: 1800\_312\_01

**1 Emergency Measures**

taken - on site - not applicable - - not applicable -

- not applicable - - not applicable -

- not applicable - - not applicable -

- off site - not applicable - - not applicable -

- not applicable - - not applicable -

- not applicable - - not applicable -

still - on site - not applicable - - not applicable -

**required**

- not applicable - - not applicable -

- not applicable - - not applicable -

- off site - not applicable - - not applicable -

- not applicable - - not applicable -

- not applicable - - not applicable -

**continuing contamination or danger**

**-on site** not applicable

**-off site** not applicable

**remarks** - not applicable -

## **2 Seveso II Duties**

### **pre-accident evaluation**

**Article item not due yet not done done/submitted evaluated**

**6 notification** No No No No

**7 policy (MAPP)** No No No No

**9 safety report** No No No No

**9, 10, 11 update** No No No No

**11 internal plan** No No No No

**11 external plan** No No No No

**13 informing public** No No No No

**9, 12 siting policy** No No No No

### **post-accident evaluation**

**Seveso II duty was actual were actual compared with actual**

**contingency consequences consequences, the**

**addressed? addressed? predicted extent was?**

**Article item**

**7 policy (MAPP)** not applicable not applicable not applicable

**9 current safety report** not applicable not applicable not applicable

**11 internal plan** not applicable not applicable not applicable

**11 external plan** not applicable not applicable not applicable

**13 informing public** not applicable not applicable not applicable

**9, 12 siting policy** not applicable not applicable not applicable

### **evaluation of safety organisation**

**organisational element element existed did element relate to actual circumstances of**

**yes / no no / partly / yes adequate?**

**- written policy objectives** No

**- specified management** No

**structure**

**- specified responsibilities** No

**- specified working procedures** No

**- specified procedures for** No

**assessment/auditing of**

**management system**

**- specified procedures for** No

**review and update of**



**management policy**

- specified general training No

**procedures**

- specified emergency No

**training procedures**

**evaluation of ecological impact control**

**organisational element element existed did element relate to actual circumstances of**

yes / no no / partly / yes adequate?

- ecological status review No

**before incident**

- potential ecological No

**consequences assessment**

- ecological impact review No

**after incident**

- ecological restoration No

**procedures**

- subsequent review of No

**restoration success**

remarks - not applicable -

### **3 Official Action Taken**

**legal action**

- not applicable -

**other official action**

- not applicable -

### **4 Lessons Learned**

**measures to prevent recurrence**

Don't forget the risks of mixt... see Appendix Full Report C / lesson learned - prevent

**measures to mitigate consequences:**

Take account of the opacity of... see Appendix Full Report C / lesson learned - mitigate

**useful references:**

Nothing to report

### **5 Discussion about Response**

- not applicable -

## **Appendices for the FA / 1800\_312\_01 report**

**Appendix Full Report B / area concerned - illustration of effects:**

please specify the attached materials illustrating the geographical extent of the effects.

**Appendix Full Report B / ecological harm:**

There were very little consequences on the environment ( 1 to 3 mg of free chlorine per kg of soil under the plum).

**Appendix Full Report C / lesson learned - prevent:**

Don't forget the risks of mixture of organic compounds and oxidants.

**Appendix Full Report C / lesson learned - mitigate:**

Take account of the opacity of the smoke emitted by such a fire.