



KYMPE

Kymenlaakso Rescue Department

SAFETY INFORMATION BULLETIN **IN THE EVENT OF A MAJOR ACCIDENT** for the residents of the Kouvola region

This safety bulletin required by the EU's Seveso Directive describes:

- What kinds of leak and emission hazards exist in our region
- Whether your home or workplace is located in an area with the potential risk of an accident
- How the residents are alerted in different situations
- How to act in the case of a major accident
- When and where you can get information

Safety information bulletin is also available online

www.kympe.fi

Read the bulletin
frequently
and store it in a place
where it will be
easy to find!

A SAFE KYMENLAAKSO THROUGH CO-OPERATION

The inhabitants of our region must have the appropriate information about the chemical operation practitioners within the area.

This bulletin has been composed with the co-operation of said practitioners and the Kymenlaakso Rescue Department.

The content of the bulletin is conducted by the act on the safety of handling dangerous chemicals and explosives, the Government decree of the handling of dangerous chemicals and the supervision of their storage, the rescue act and the decree on external emergency plans by the Ministry of the Interior. Chemical railway yards are also led by a government decree on the transport of dangerous goods by rail.

The Finnish Safety and Chemicals Agency (Tukes) alongside other authorities regulate the activities of businesses. In addition, companies themselves continuously assess their environmental, health and safety risks. Chemical railway yards are supervised by the Finnish Transport and Communications Agency (Traficom).

We encourage you to familiarize yourself with the content of the Safety Information Bulletin just in case of an emergency. Check whether your home or workplace is located near an area of potential impact of accidents. Learn the procedures for emergency cases.

The businesses of our region have identified the risks of major accidents related to the stored and used chemicals and are doing their best to ensure the prevention of accidents and to limit their consequences. Technical procedures, and the careful use of the equipment, aim to ensure that the result of the operations pose no serious risk to the people or the environment. The key components are the high expertise of the personnel, effective monitoring, and the continuous maintenance of the equipment. The companies organize regular training in issues regarding safety.

Accidents cannot be fully ruled out. Natural phenomena can cause even surprising accidents and consequences. The same goes for equipment failures or human actions. It is our shared goal to make sure that in the event of an accident or danger, people can act as wisely as possible to avoid, or minimize, the damage.



Photo: Kouvola city

WHO IS RESPONSIBLE FOR THE EMERGENCY SERVICES?

The Kymenlaakso rescue department (KYMPE) are the ones in charge of the emergency services in Kymenlaakso.

The Kymenlaakso rescue department

- Takes care of the tasks concerning the emergency services
- Takes care of the supervisory jobs concerning the emergency services
- Provides guidance, advice, and safety communication pertaining to the emergency services
- Takes care the population is warned in the event of danger and accidents, as well as the necessary alarm system

Businesses posing a risk of major accidents are to compose and submit a safety report to the supervising authority to be assessed. This safety report describes the measures taken by the facility to prevent these major accidents. The preparation also includes an external rescue plan prepared by the rescue department based on the safety report, and the information in the internal rescue plan made by the facility.

The safety reports are available in the offices of the companies marked with a red square ■ in this bulletin. The companies' offices also provide information on the date of the last inspection of the facility, as well as information about the inspection and the inspection program concerning the facility.

The Kymenlaakso rescue department has composed external rescue plans and keep them up to date. An external rescue plan is a plan devised by the rescue department to ward off major accidents and minimize damages.

The rescue department organizes major accident rehearsals every three years in cooperation with businesses and other parties that take part in the emergency services.

The external rescue plans of this region are available for the residents at the permanent fire stations, in Kouvola Kauppakatu 45, 45100 Kouvola

**The instructions
in the case of a major accident
are on the back page!**



Juhani Carlson



Further information during office hours:

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You can never fully rule out the possibility of serious accidents. Therefore it is important to prepare for them with care.

COMPANIES AND THEIR OPERATIONS

IN THE RAILWAY AND INDUSTRIAL AREAS OF KOUVOLA

The following pages introduce the operations of those companies that handle chemicals or gasses that are classified as dangerous, as well as company-specific situations where the risk of an accident can arise in the railway and industrial areas of Kouvola.

Liquid raw materials are brought into warehouse storages by railway wagons or by road transport. The chemicals are stored in tanks built for them, which are placed in protective basins or protective bulwarks. The finished products are taken from the warehouses by ships, railroad or by road transport.

The guidelines for emergency services (TOKEVA) define the accident situations caused by dangerous substances, as well as **the limits within which the area must be isolated, and the limits within which the public must be warned.** These limits are also visible on the map on the pages 10 - 11.



ISOLATION LIMIT = Within which a 30-minute stay outside without a respiration filter can cause permanent or severe health impacts or symptoms that make leaving the area difficult.



WARNING LIMIT = Within which a 30-minute stay outdoors without a respiration filter can cause temporary health hazards. The symptoms possibly caused by the gas, however, do not complicate leaving the area.

A fire is possible everywhere and the combustion gases formed in a fire are always toxic. The size of the area to be isolated below the wind could be hundreds of metres, even kilometres.

A natural gas pipeline runs all throughout Kymenlaakso. In the case of a natural gas leakage, the risk of ignition is in the immediate vicinity of the leak. If such a leak causes a fire the impact of the accident can extend as much as hundreds of metres, depending on the diameter of the pipe. Outside factory areas the natural gas pipelines are clearly marked.

Environmental impacts occur alongside material and personal hazards in just about all accident situations. However, those are not listed in detail in this summary. Information on the environmental impacts caused by different chemicals can be found in the OVA guidelines at: www.ttl.fi/ova

Identify
chemicals
and gases
page 8



The red squares in this bulletin indicate the companies whose activities may cause a particular risk of major accidents and from which the Finnish decree of the industrial handling and storage of dangerous chemicals, drawn up in accordance with the EU directive, requires a safety report. These companies have delivered the required safety report and chemical listing to the supervising authority. These are available to be seen by the public in the offices of said companies. Other companies do not have this obligation.

INDUSTRIAL OPERATORS

CH POLYMERS

Siilotie 7, The industrial area of Kaipiainen

CH-Polymers Oy manufactures polymer-based adhesives for the paper, cardboard, paint, and nonwoven industry.

Many flammable and toxic chemicals are handled in the closed production process.

Potential hazards:

A danger of accidents outside the factory area can be caused by a chemical leak, a car accident or toxic gases released into the environment during a fire. Chemicals of interest include: Vinyl acetate, acrylate and styrene monomers, as well as acrylonitrile which is used in the manufacturing of some products.

The warning limits for these chemicals vary from the 900 meters for acrylonitrile, to the 50 meters for styrene.

Additional information about the activity:
Production manager Timo Heimola, tel. +358 400 960 778

Kemira

Where water
meets chemistry™

Patosillantie 5, Kuusankoski

Kemira Chemicals Oy manufactures chlorine dioxide, which is delivered as an aqueous solution along the pipeline to UPM Kymi's pulp mill. Sodium chlorate and hydrochloric acid are prepared as intermediate. In addition, sodium hydroxide and hydrochloric acid are processed and stored in the area.

Potential hazards:

Toxic chlorine dioxide or hydrochloric acid can cause a danger of accident outside the factory area. The breakage of the chlorine dioxide tube or the hydrochloric acid tank may result in the leakage of the solutions, the release of which will irritate the respiratory system.

Gases spreading with the wind may cause irritation more than a kilometre away. In case of a leakage, the immediate area of danger is limited to a few hundred metres below the wind.

Additional information about the activity:
Operations Manager Jari Lyytikäinen, tel. +358 50 531 4414





Nevantie 2, Tornionmäki

Recticel Oy manufactures polyurethane foam for industrial and consumer goods. Toluene diisocyanate (TDI), which is classified as highly toxic, is used and stored on the factory site.



Potential hazards:

In the event of a fire, harmful flue gases can, according to modeling, spread to the surrounding area within a radius of 110m. In the event of a chemical leakage, TDI evaporating into the air will cause irritation in the eyes and the respiratory system in the vicinity of the spill. Higher concentrations can cause bronchitis and asthmatic effects. These respiratory symptoms may begin with a delay even hours after the exposure. TDI has been classified dangerous for the environment. The criteria for said classification are its harmfulness to aquatic organisms and its slow degradation.

Additional information about the activity:
Factory Manager Sami Huusari tel. +358 40 726 8521
Security Manager Sari Turunen tel. +358 50 326 8735



Yrjönojentie 2, Voikkaa

Solvay Chemicals Finland Oy manufactures hydrogen peroxide for industrial use. The hydrogen gas required to produce the hydrogen peroxide is produced from natural gas at the factory site. In the manufacturing process of hydrogen peroxide, a working solution which contains flammable liquids is used. Large amounts of hydrogen peroxide and small amounts of peracetic acid are stored on the site.



Potential hazards:

In the event of an accident natural gas, hydrogen gas or the uncontrolled decomposition of hydrogen peroxide may cause an explosion.

The insulation limit is a maximum of 300 meters.

Additional information about the activity:
Plant Manager Teppo Myöhänen tel. +358 20 7459 430
Protection Manager Nina Salmela-Mäkelä tel. +358 20 7459 441



storaENSO Anjalankoski factories

Anjala Paper Factory, Ensontie 1, Inkeroinen
Inkeroinen Cardboard Factory, Etelätie 3, Inkeroinen

The factories produce mechanical pulp-bearing folding boxboard, book paper, special newsprint paper and magazine paper. Several hazardous chemicals are stored and used on the factory site. The most important ones are sulfur dioxide, chlorine, caustic soda, hydrogen peroxide, liquified oxygen and natural gas. The most significant danger is posed by sulfur dioxide and chlorine, which are used and stored in the Anjala paper mill area.



Potential hazards:

In the event of a large emission, chlorine and sulfur dioxide gases are dangerous in the nearest residential areas, and in the case of sulfur dioxide leakage, irritation symptoms can occur within 4 km of the Anjala paper mill. The substance that evaporates from the released solution in the event of a leak forms a gas cloud, the rate of development of which depends strongly on the outside air temperature. Cloud propagation and dilution are significantly affected by prevailing wind conditions.

The chlorine and sulfur dioxide insulation limit are 300 meters and the warning limit is 1000 meters below wind.

Additional information about the activity:
Fire and Protection Manager Erkkä Lämsimies, tel. +358 40 350 3698



Selluntie 1, Kuusanniemi factory area

UPM's Kymi mill produces bleached sulphate pulp as well as coated and uncoated fine paper. The plant uses chemicals classified as hazardous, which include chlorine dioxide, liquid oxygen, turpentine, hydrogen peroxide, and natural gas.



Potential hazards:

The risk of an accident is due to the possible rupture of pipelines or tanks for hazardous chemicals. Liquid oxygen is limited to the immediate vicinity of the Kuusanniemi factory area and the main gate.

The warning limit for chlorine dioxide water is 1000 meters.

Additional information about the activity:
Security Manager Tuomo Lindén, tel. +358 204 152 902

LOGISTICS



Väylävirasto Trafikledsverket

The Finnish Transport Infrastructure Agency is responsible for the development and maintenance of the state road network, railways, and waterways. The Finnish Transport Infrastructure Agency is the operator of the railway network intended for the transport of dangerous goods in the designated VAK railway yards, responsible for the navigability of the railway yards as well as the fulfillment of the safety and quality requirements.

There are several operators in the multifunctional environment of the network. Some operators transport dangerous goods on the network. Operators responsible for the transport of dangerous goods from the yard shall strive to transfer them as soon as possible to the unloading tracks or further transport of the recipient companies.



Potential hazards:

There is a risk of a major accident in the event of a major leak, accident, or fire. The distance between the isolation and evacuation boundaries varies from tens of meters to kilometers, depending on the substance being transported.


Additional information about the activity:
Project Manager Arto Muukkonen, tel. +358 29 534 3069
Expert Atte Kanerva, tel. +358 29 534 3848




IDENTIFY CHEMICALS AND GASES

The following highly flammable, harmful, irritating and toxic chemicals and gases, including those hazardous to the environment, are stored and handled in the port and industrial area of Kouvola and transported by rail. The transport of dangerous goods is marked with warning labels and identification plates. Based on these, the authorities can identify the substance being transported.


This list indicates the most essential hazards of the substance by means of labeling in accordance with EC Regulation No 1272/2008:




explosives




highly flammable




oxidizing




corrosive, causing serious eye damage




hazardous to (aquatic) environments




gas under pressure















acutely toxic


















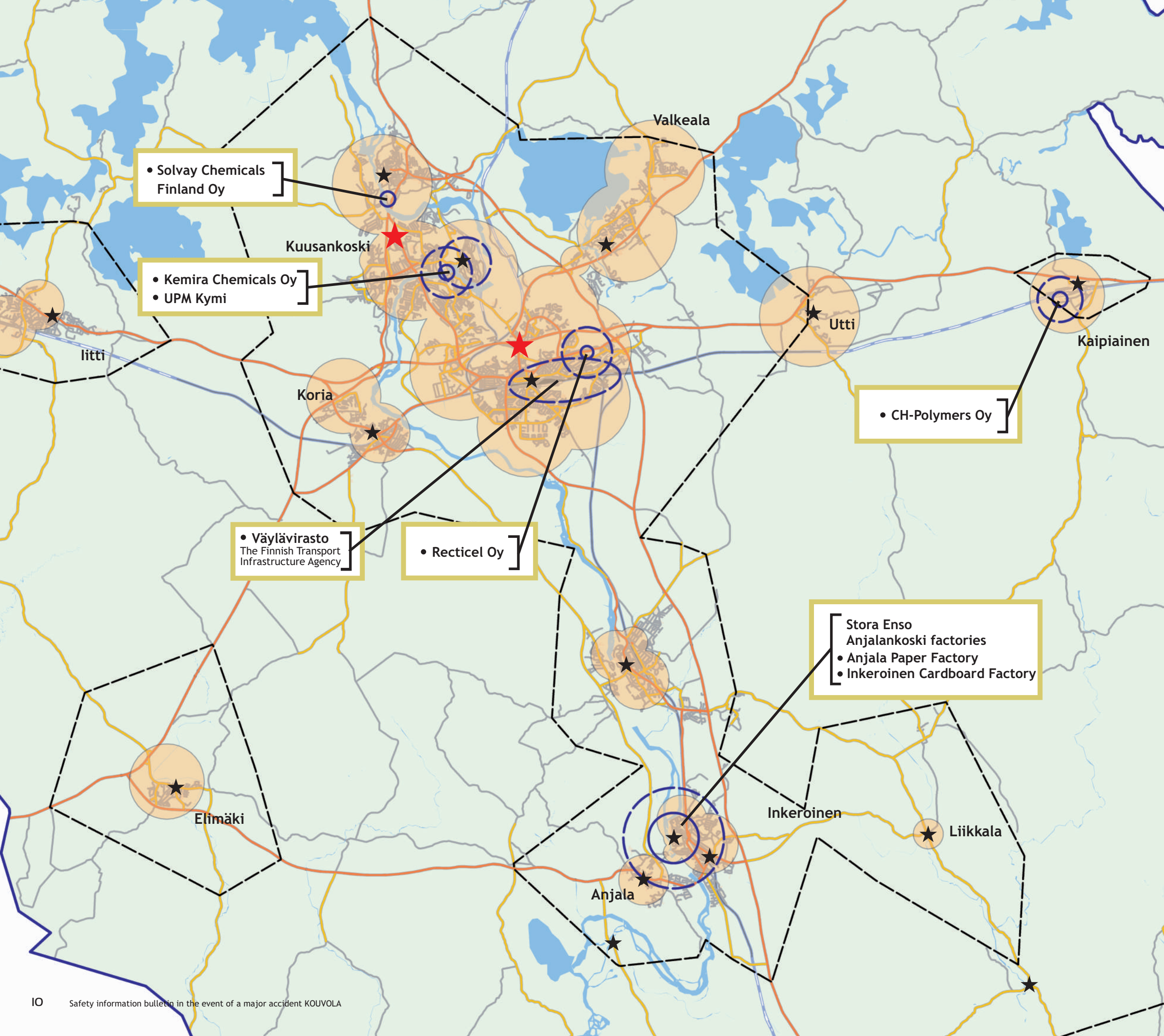
acutely toxic, inducing skin, eye or respiratory tract irritation, narcotic, skin sensitizers



carcinogenic, mutagenic, toxic to reproduction, causing damage to organs, respiratory tract sensitizers




SUBSTANCE	IDENTIFIERS	IMPACTS
Acrylonitrile 	Liquid: Colourless, delicate in mobility, volatile, lighter than water, may turn yellow in light. Vapors: Heavier than air, odor sweet-ish, pungent, pyridine or onion-like. Odor does not warn of health hazards.	Highly flammable, vapours very susceptible to ignition. Polymerises very easily under the influence of heat, light or bases, and the reaction may cause an explosion. Toxic on the skin and if swallowed and inhaled. Life-threatening in high concentrations. Dangerous to the environment, may cause long-term adverse effects in an aquatic environment.
Ammonia 	Gas: Colourless, strongly pungent in odor. Can be liquefied easily to become a colourless liquid	May form an explosive mixture with air. Reacts vehemently. Develops heat with acids and oxidants. Toxic by inhalation, very irritating to the respiratory tract, eyes and skin. Corrodes mucous membranes and retinas. Toxic to aquatic organisms.
Benzene 	Liquid: Clear, colourless, lighter than water, aromatic odor. Vapors: Heavier than air.	Highly flammable. Toxic on the skin and if swallowed or inhaled. In high concentrations, may cause loss of consciousness or loss of life (20,000 ppm / 2 vol%).
Butane 	Gas: Colourless, invisible, almost odorless, heavier than air.	Extremely flammable. Suffocating in high concentrations.
Butadiene 	Gas: Colourless, mildly aromatic odor.	Extremely flammable. Toxic, a long-term exposure causes a risk of cancer. In high concentrations, irritates the upper respiratory tract and causes slight eye irritation, blurred vision and distortion of perceptions.
Butyl acrylate 	Liquid: Colourless, pungent odor.	Extremely volatile, flammable. Irritating to the eyes, skin and respiratory system.
Epichlorohydrin 	Liquid: Colourless, sensitive, volatile. Vapors: heavier than air, odor resembling chloroform, slightly irritating. Odor does not warn of health hazards.	Flammable, corrosive. In a fire it releases toxic and irritating gases: phosgene, hydrogen chloride and carbon monoxide. May polymerize under the influence of heat, acids, bases or water, causing containers to rupture. Toxic in contact with skin, if swallowed and if inhaled. Causes cancer.
Phenol 	Solid in railroad cars and molten at 50 to 55°C in tanker trucks: at a normal temperature colourless, pungent odor, turns reddish by the effect of air and light.	Strong oxidizing acids can cause an explosion with phenol. Calcium hypochlorite reacts with phenol, releasing heat and toxic flammable vapors. Isocyanates cause violent polymerization and heat generation with phenol. Corrosive. Toxic on the skin and if swallowed. Vapors cause nausea, dizziness and headache. High concentrations may cause liver and kidney damage. Large splashes on the skin (400 cm2) can cause death. Toxic to aquatic organisms.
Formalin 	Liquid: Colorless, formaldehyde content does not exceed 55%.	Corrosive, toxic by inhalation, ingestion and on the skin, also sensitization. Risk of severe permanent damage as a result of long-term exposure. Suspected of causing cancer. Harmful to aquatic organisms.
Oxygen, liquefied 	Liquid: Blueish, odorless, tasteless, extremely cold.	Accelerates combustion, reacts easily with fats, oils and flammable materials. Symptoms resembling burns on the skin, risk of serious eye damage.
Hydrochloric acid 	Gas: Colourless or slightly yellowish gas, with a pungent suppressive odor. Solution: clear, colorless to pale yellow, a pungent liquid.	Severely corrosive to the skin and damages the eyes. Causes nasal irritation, choking, coughing and difficulty breathing. Prolonged exposure may cause corrosion and ulceration of the nose and throat. Hydrogen chloride reacts strongly with strong oxidants and in which case chlorine gas is released. Reacts with metals and reducing agents to release flammable hydrogen gas.
Chlorine 	Liquid: Orange. Gas: Pungent in odor, yellowish in large quantities, suffocating, heavier than air.	Toxic when inhaled, suffocating. Irritating to eyes, respiratory system and skin. Dangerous for the environment, very toxic to aquatic organisms.

AINE	TUNNISTEET	VAIKUTUKSET
Chlorine dioxide 	Aqueous solution: Yellowish, clear, pungent in odor. Gas: Yellowish green, irritating.	Solution: Irritant, the solution may release chlorine dioxide gas, which is toxic when inhaled. Gas: In high concentrations may decompose in explosive fashion. Toxic by inhalation. Corrosive, irritating to skin, eyes and respiratory system. Very toxic to aquatic life. Dangerous for the environment.
Natural gas 	Gas: Scented for consumer use.	Extremely flammable. High concentrations displace oxygen, resulting in a risk of suffocation. Frostbite is also possible.
Methanol 	Liquid: Colourless, clear, mild alcoholic odor.	Highly flammable, explosive when gaseous. Vapours in low concentrations cause headache, fatigue and dizziness. Causes a risk of very serious, permanent damage by inhalation, skin contact and ingestion. Very small swallowed doses may cause death (80 - 150 millilitres) or blindness (4 millilitres).
Motor petrol 	Liquid: Yellowish, aromatic and ethereal in odor.	Extremely flammable. Toxic, causes a risk of cancer. Environmentally hazardous due to its toxicity to aquatic organisms and poor degradation. Additive MTBE is harmful to groundwater.
Sodium hydroxide (caustic soda) 	In solid state white, odourless and non-volatile, or lye.	May react strongly with many substances, generating so much heat that the nearby flammable materials will ignite. When diluted with water, so much heat may be generated that the solution begins to boil. Corrodes metals such as zinc, magnesium and aluminum, releasing flammable hydrogen gas. Dust and a diluted solution irritate the respiratory tract. A strong solution is corrosive and causes ulcerations. Risk of shock in the abdomen, risk of loss of eyesight in the eyes. A solution of less than 50% can migrate and dissolve various detrimental substances from the soil to groundwater. Harmful to aquatic organisms.
Orthoxylene and paraxylene 	Liquid: Colourless, a benzene-like odor.	Flammable. May form a flammable mixture with air, risk of explosion indoors. Harmful by inhalation and in contact with skin, irritates skin.
Peracetic acid 	Liquid: Strongly effervescent, a pungent odor of vinegar.	Oxidizing. It may ignite combustible material. Corrosive, irritating to eyes and respiratory system. Dangerous for the environment. Very toxic to aquatic life.
Sulphur dioxide 	Colourless when gaseous, pungent smell.	Toxic and corrosive by inhalation, irritating to the eyes and respiratory organs, life-threatening in high concentrations. Harmful to aquatic organisms.
Sulfuric acid 	Liquid: Colourless or brownish in colour, odorless or slightly a pungent odor, oily. A strong acid that generates heat when dissolved into water.	Reacts violently with water and several metals. Quickly corrodes aluminum, copper and alloys containing these. Flammable gas may be created in a reaction with metal. Organic substances such as paper and cotton may ignite by the effect of sulfuric acid.
Hydrogen sulfide 	Gas: Colourless, a strong smell of rotten egg.	Leakage causes a risk of ignition outdoors and a risk of explosion indoors. A mixture of hydrogen sulfide and air can ignite anywhere. Reacts violently with strong oxidants and metal oxides and may ignite by itself. In a hot environment, hydrogen sulfide disintegrates into hydrogen and sulphur. The combustion and decomposition products are toxic. Dangerous to the environment. Very toxic to aquatic organisms.
Styrene 	Liquid: Colourless, syrupy, volatile, pungent in odor. Vapors: Heavier than air.	Flammable, combustion products are carbon dioxide and toxic carbon monoxide. Harmful by inhalation, irritating to the eyes and skin. Corrodes copper, may react violently with oxidants and strong acids. May polymerize by heat, light and peroxides, resulting in an explosion hazard. Toxic to aquatic organisms, may migrate to groundwater.
TDL 	Toluene diisocyanate liquid: Clear, colourless or yellowish, odor is sharp. Odor threshold 0.1-0.2 ppm / above the HTP limit. Insoluble in water. Forms a water-insoluble polyurea.	Very toxic by inhalation. Irritating to eyes, respiratory system and skin. Inhalation exposure. May cause sensitization by skin contact. In hyperactive and hypersensitive people, low concentrations may lead to asthma-like symptoms. Risk of permanent damage. Hazardous combustion products may include amines, carbon monoxide and carbon dioxide, hydrogen cyanide and organic nitrogen compounds. Harmful to aquatic organisms. Long-term adverse effects in the aquatic environment.
Toluene 	Liquid: Colourless, a sweetish and slightly pungent odor, benzene-like.	Highly flammable, corrodes some plastics and rubber, not metal. Harmful by inhalation. Toxic to aquatic organisms, may migrate to groundwater.
Hydrogen peroxide 	Liquid: Odorless, tasteless, strongly foaming, steaming.	Strongly oxidizing, does not burn but accelerates, and maintains, combustion. Disintegrates into water and oxygen forming heat that can ignite a burning material. Corrosive, irritating to the eyes, skin and respiratory organs. Toxic to aquatic organisms.
Vinyl acetate 	Liquid: Colourless, odor is pleasantly fruity, ethereal, but the sensation quickly becomes pungent and irritating.	Highly flammable, vapors are highly volatile. Can react in an explosion with hydrogen peroxides or oxygen and form an explosive mixture with vinyl acetate ozone and ozone. Harmful to aquatic organisms.



KOUVOLA 2020

Map legend:

-  Permanent fire station
-  Contract fire department
-  High-power alarm device/
coverage area

Rescue area reach - 10 min

Company-specific alert limits:

-  Isolation limit
-  Warning limit



KYMPE
Kymenlaakso Rescue Department

INSTRUCTIONS IN THE EVENT OF AN ACCIDENT

Everyone in the region must obey the instructions and regulations given by the authorities in the event of an accident.

An accident is notified by means of the GENERAL DANGER SIGNAL.



This is a rising and descending sound signal which lasts a minute, which is REPEATED SEVERAL TIMES IN A REAL SITUATION.

A danger bulletin is always associated with the general danger signal. The bulletin is read on all radio channels and displayed in TV-programmes as a ribbon of text running at the top of the screen. Also, on the teletext page 112. The danger bulletins will also appear in the smartphone application 112 Suomi if it is downloaded. If necessary, sound trucks are also used.

DANGER OVER -SIGNAL

A continuous steady sound with the length of ONE MINUTE.

TEST SIGNAL

is a 7-second-long, steady sound. There may be a rise in the beginning of the sound and a descent at the end. This test signal can be heard in Kymenlaakso

on the FIRST MONDAY OF EACH MONTH AT 12.00.

Additionally, the rescue officials and industrial plants in the region test their alarm systems regionally by using the test signal.

IF YOU ARE INSIDE



- 1 Close the doors, windows and stop the air conditioning.



- 2 Switch on the radio or tv and follow the instructions given.



- 3 Use the telephone only if you need immediate help.



- 4 If you sense the odor of gas, breathe through a damp cloth.

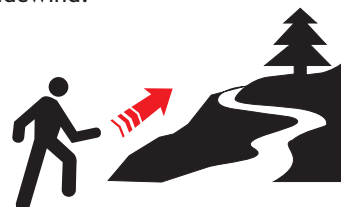


- 5 Try to get to the upper floors of the building if possible.

IF YOU ARE OUTSIDE



- 1 Go indoors and follow the adjacent instructions. If you cannot get indoors, check the direction of the wind and try to avoid the gas by moving to the direction of the sidewind.



- 2 Try to get to a higher ground. It is safer higher up.



- 3 If you are exposed to gaseous air, move calmly. Protect yourself by inhaling through damp clothing.

Do not leave the area without permission from the authorities. Follow the instructions and wait until the danger is over



Suosittellemme lataamaan älypuheliimme 112 Suomi -sovelluksen.

Viranomaisten vaaratiedotteet julkaistaan sovelluksen kautta. Alueelliset vaaratiedotteet voidaan lähettää puhelimen sijaintitietoon perustuen. Vaaratiedotteiden lisäksi sovelluksella välitetään viranomaistiedotteita.

Lisätietoa hätänumeroon soittamisesta www.112.fi

HÄTÄNUMERO
SUOMI

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