

What are ICSC?

The International Chemical Safety Cards (ICSC) are data sheets intended to provide essential safety and health information on chemicals in a clear and concise way.

The primary aim of the Cards is to promote the safe use of chemicals in the workplace and the main target users are workers.

The ICSC project is a joint venture between the World Health Organization (WHO) and the International Labour Office (ILO), with the cooperation of the European Commission.

More than
1700 Cards
available in
HTML and PDF

ICSC are prepared
in English.

National institutions
translate ICSC into
different languages:

Finnish, French, Hungarian, Italian,
Japanese, Polish, Spanish and others.

www.ilo.org/icsc

How are ICSC produced?

ICSC are prepared in English by a group of experts that meets regularly to review the Cards before making them public.

Existing Cards are updated periodically to take account of the latest scientific developments.

New Cards are proposed by countries or stakeholder groups.

Are ICSC authoritative?

- The International peer-review process followed in the preparation of ICSC ensures the authoritative nature of the Cards and represents a significant asset.
- ICSC complement any available chemical safety data sheet.
- ICSC are made available free-of-charge.
- ICSC have no legal status.

The information provided in the Cards is in line with:

- ILO Chemicals Convention, 1990 (No. 170)
- ILO Chemicals Recommendation, 1990 (No. 177)

- European Union Council Directive 98/24/EC
- United Nations Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

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ICSC

International Chemical Safety Cards



International
Labour
Organization



World Health
Organization



European
Union

What information is provided in ICSC?

- 1 Identity of the chemical
- 2 Fire and explosion hazards
- 3 Fire fighting
- 4 Acute health hazards
- 5 Preventive measures
- 6 First aid
- 7 Spillage disposal, storage and packaging
- 8 Classification and labelling

ICSC are a support tool for the implementation of the ILO Chemicals Convention

- 9 Physical and chemical properties and dangers
- 10 Short-term and long-term health effects
- 11 Regulatory information
- 12 Environmental data

1		NITRIC ACID Concentrated Nitric Acid (>70%)		ICSC: 0183	
		Date of Peer Review: October 2013			
CAS #		7697-37-2		HNO ₃	
UN #		2031		Molecular mass: 63.0	
EINECS/ELINCS		231-714-2			
EC Annex 1 Index #		007-004-00-1			
2		ACUTE HAZARDS		5	
FIRE & EXPLOSION		Not combustible but enhances combustion of other substances. Gives off irritating or toxic fumes (or gases) in a fire. Heating will cause rise in pressure with risk of bursting. Risk of fire and explosion on contact with many common organic compounds.		NO contact with flammable substances. NO contact with combustibles or organic chemicals.	
		PREVENTION		3	
		Ventilation, local exhaust, or breathing protection.		In case of fire in the surroundings: NO foam. In case of fire: keep drums, etc., cool by spraying with water.	
4		6			
AVOID ALL CONTACT! IN ALL CASES CONSULT A DOCTOR!					
		SYMPTOMS		FIRST AID	
INHALATION		Burning sensation. Cough. Laboured breathing. Shortness of breath. Sore throat. Symptoms may be delayed (see Notes).		Fresh air, rest. Half-upright position. Artificial respiration may be needed. Refer immediately for medical attention.	
SKIN		Serious skin burns. Pain. Yellow discolouration.		Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention.	
EYES		Redness. Pain. Burns.		First rinse with plenty of water (remove contact lenses if easily possible). Refer immediately for medical attention.	
INGESTION		Sore throat. Abdominal pain. Burning sensation in the throat and chest. Shock or collapse. Vomiting.		Do NOT induce vomiting. Give one or two glasses of water to drink. Rest. Refer for medical attention.	
7		SPILLAGE DISPOSAL		8	
		Evacuate danger area! Consult an expert! Personal protection: complete protective clothing including self-contained breathing apparatus. Ventilation. Collect leaking liquid in sealable containers. Cautiously neutralize remainder with sodium carbonate. Then wash away with plenty of water. Do NOT absorb in saw-dust or other combustible absorbents.		According to UN GHS Criteria	
		STORAGE			
		Separated from combustible and reducing substances, bases, organics food and feedstuffs. Cool. Dry. Keep in a well-ventilated room.		DANGER	
		PACKAGING		May be corrosive to metals Fatal if swallowed Causes severe skin burns and eye damage Causes damage to respiratory tract if inhaled Causes damage to digestive tract if swallowed Causes damage to respiratory tract and teeth through prolonged or repeated exposure if inhaled	
		Unbreakable packaging; put breakable packaging into closed unbreakable container. Do not transport with food and feedstuffs.		Transportation UN Classification UN Hazard Class: 8 UN Subsidiary Risks: 5.1 UN Pack Group: I	
		Prepared by an international group of experts on behalf of ILO and WHO, with the financial assistance of the European Union. © ILO and WHO 2013			

NITRIC ACID Concentrated Nitric Acid (>70%)		ICSC: 0183	
		Date of Peer Review: October 2013	
PHYSICAL & CHEMICAL INFORMATION			
PHYSICAL STATE; APPEARANCE: COLOURLESS TO YELLOW LIQUID, WITH PUNGENT ODOUR.		Boiling point: 121°C Melting point: -41.6°C Relative density (water = 1): 1.4 Solubility in water: miscible Vapour pressure, kPa at 20°C: 6.4 Relative vapour density (air = 1): 2.2 Relative density of the vapour/air-mixture at 20°C (air = 1): 1.07 Octanol/water partition coefficient as log Pow: -0.21	
CHEMICAL DANGERS: The substance decomposes on warming producing nitrogen oxides. The substance is a strong oxidant and reacts violently with combustible and reducing materials, e.g., turpentine, charcoal, alcohol. The substance is a strong acid, it reacts violently with bases and is corrosive to metals forming flammable/explosive gas (hydrogen - see ICSC0001). Reacts violently with organic compounds.			
EXPOSURE & HEALTH EFFECTS			
ROUTES OF EXPOSURE: Serious local effects by all routes of exposure.		INHALATION RISK: A harmful contamination of the air can be reached very quickly on evaporation of this substance at 20°C.	
EFFECTS OF SHORT-TERM EXPOSURE: The substance is corrosive to the eyes, the skin and the respiratory tract. Corrosive on ingestion. Inhalation may cause lung oedema (see Notes). The effects may be delayed (See Notes).		EFFECTS OF LONG-TERM OR REPEATED EXPOSURE: Lungs may be affected by repeated or prolonged exposure to the vapour. The substance may have effects on the teeth, resulting in teeth erosion.	
OCCUPATIONAL EXPOSURE LIMITS			
TLV: 2 ppm as TWA, 4 ppm as STEL; (ACGIH 2006). MAK: 1lb (not established but data is available) (DFG 2008).			
ENVIRONMENT			
NOTES			
Depending on the degree of exposure, periodic medical examination is suggested. The symptoms of lung oedema do not become manifest until a few hours or even a few days have passed and they are aggravated by physical effort.			
ADDITIONAL INFORMATION			
EU Classification & Labelling		Symbol: O, C R: 8, 35 S: (1/2)-23-26-36-45 Note: B	
Neither ILO nor WHO nor the European Union shall be responsible for the use which might be made of this information.			