

# SAFETY DATA SHEET

Flux-Off CZ

## 1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### Identification of the substance or mixture

**Product name** : Flux-Off CZ  
**Chemical name** : Flux-Off(R) CZ Flux Remover  
**Synonyms** : ES7200E, ES7208BE  
**Product type** : Liquid.  
**Use of the substance/mixture** : CLEANING PRODUCTS

### Company/undertaking identification

**Manufacturer** : ITW Chemtronics  
 8125 Cobb Center Drive  
 Kennesaw, GA 30152

**Distributor** :

**Importer** : ITW Contamination Control BV  
 Saffierlaan 5  
 VZ-2132 Hoofddorp  
 The Netherlands

Email: info@itw-cc.com

Tel: +31 88 1307 400  
 FAX: +31 88 1307 499

**e-mail address of person responsible for this SDS** : askchemtronics@chemtronics.com

**Emergency telephone number (with hours of operation)** : Chemtrec - 1-800-424-9300 or collect 703-527-3887

## 2. HAZARDS IDENTIFICATION

The product is classified as dangerous according to Directive 1999/45/EC and its amendments.

**Classification** : Xi; R36/38  
**Human health hazards** : Irritating to eyes and skin.  
**Environmental hazards** : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

See Section 11 for more detailed information on health effects and symptoms.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Substance/preparation** : Preparation

Ingredient name	CAS number	%	EC number	Classification
trans-dichloroethylene	156-60-5	1 - 10	205-860-2	F; R11 Xn; R20 R52/53 [1] [2]
propan-1-ol	71-23-8	1 - 10	200-746-9	F; R11 Xi; R41 R67 [1] [2]
methylcyclohexane	108-87-2	1 - 5	203-624-3	F; R11 Xn; R65 Xi; R38 R67 N; R51/53 [1] [2]
<b>See Section 16 for the full text of the R-phrases declared above.</b>				

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

[1] Substance classified with a health or environmental hazard

[2] Substance with a workplace exposure limit

Occupational exposure limits, if available, are listed in Section 8.

## 4. FIRST AID MEASURES

### First-aid measures

- Inhalation** : Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.
- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

See Section 11 for more detailed information on health effects and symptoms.

## 5. FIRE-FIGHTING MEASURES

### Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : In a fire or if heated, a pressure increase will occur and the container may burst. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. This material is harmful to aquatic organisms. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials:  
carbon dioxide  
carbon monoxide  
halogenated compounds  
carbonyl halides
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## 6. ACCIDENTAL RELEASE MEASURES

- Personal precautions** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material.
- Methods for cleaning up**
- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spill product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

## 7. HANDLING AND STORAGE

- Handling** : Do not breathe gas/fumes/vapour/spray. Use only in well-ventilated areas. Wash thoroughly after handling.
- Storage** : Do not puncture, incinerate or store the container at temperatures above 49°C (120°F) or in direct sunlight. Keep container in a cool, well-ventilated area.
- Packaging materials**
- Recommended** : Use original container.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Exposure limit values

<u>Ingredient name</u>	<u>Occupational exposure limits</u>
trans-dichloroethylene	<b>ACGIH TLV (United States, 1/2009).</b> TWA: 793 mg/m <sup>3</sup> 8 hour(s). TWA: 200 ppm 8 hour(s).
propan-1-ol	<b>ACGIH TLV (United States, 1/2009).</b> TWA: 100 ppm 8 hour(s).
methylcyclohexane	<b>ACGIH TLV (United States, 1/2009).</b> TWA: 1610 mg/m <sup>3</sup> 8 hour(s). TWA: 400 ppm 8 hour(s).

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment. Reference should be made to European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

### Exposure controls

- Occupational exposure controls** : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Respiratory protection** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Eye protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.
- Skin protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### General information

#### Appearance

- Physical state** : Liquid.
- Colour** : Colourless.
- Odour** : Characteristic.

### Important health, safety and environmental information

- Boiling point** : Lowest known value: 47.2°C (117°F) (trans-dichloroethylene). Weighted average: 78.33°C (173°F)
- Melting point** : May start to solidify at the following temperature: -49.4°C (-56.9°F) This is based on data for the following ingredient: trans-dichloroethylene. Weighted average: -96.12°C (-141°F)
- Explosive properties** : Not considered to be a product presenting a risk of explosion.
- Relative density** : Weighted average: 0.92 (Water = 1)
- Vapour density** : >1 (Air = 1)
- Evaporation rate (butyl acetate = 1)** : >1 compared with butyl acetate

## 10. STABILITY AND REACTIVITY

<b>Stability</b>	: The product is stable.
<b>Conditions to avoid</b>	: No specific data.
<b>Materials to avoid</b>	: No specific data.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## 11. TOXICOLOGICAL INFORMATION

### Potential acute health effects

<b>Inhalation</b>	: Inhalation of vapours may cause dizziness, an irregular heartbeat, narcosis, nausea or asphyxiation.
<b>Ingestion</b>	: No known significant effects or critical hazards.
<b>Skin contact</b>	: Repeated exposure may cause skin dryness or cracking.
<b>Eye contact</b>	: May cause slight transient irritation.

### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
trans-dichloroethylene	LD50 Dermal	Rabbit	>5 g/kg	-
	LD50 Intrapéritoneal	Rat	7411 mg/kg	-
	LD50 Oral	Rat	1235 mg/kg	-
	LD50 Dermal	Rabbit	5040 mg/kg	-
propan-1-ol	LD50	Rat	2164 mg/kg	-
	Intrapéritoneal			
	LD50	Rat	590 mg/kg	-
	Intravenous			
	LD50 Oral	Rat	2200 mg/kg	-
	LD50 Oral	Rat	1870 mg/kg	-
methylcyclohexane	LD Dermal	Rabbit	>86700 mg/kg	-
	LD50 Oral	Rat	>3200 mg/kg	-

### Potential chronic health effects

<b>Chronic effects</b>	: No known significant effects or critical hazards.
<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: No known significant effects or critical hazards.

### Over-exposure signs/symptoms

<b>Inhalation</b>	: No specific data.
<b>Ingestion</b>	: No specific data.
<b>Skin</b>	: No specific data.
<b>Eyes</b>	: Adverse symptoms may include the following: irritation watering redness

<b>Target organs</b>	: Contains material which causes damage to the following organs: eye, lens or cornea. Contains material which may cause damage to the following organs: gastrointestinal tract, upper respiratory tract, skin, central nervous system (CNS).
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## 12. ECOLOGICAL INFORMATION

<b>Environmental effects</b>	: Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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### Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
trans-dichloroethylene	-	Acute LC50 220000 to 290000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <=24 hours	48 hours
	-	Chronic NOEC <110000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <=24 hours	48 hours
	-	Acute EC50 4620000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - Neonate - <24 hours	48 hours
	-	Acute EC50 3644000 to 3977000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - 6 to 24 hours	48 hours
propan-1-ol	-	Acute LC50 7820000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <1 days	48 hours
	-	Acute LC50	Daphnia - Water	48 hours
	-	Acute LC50	Daphnia - Water	48 hours

## 12. ECOLOGICAL INFORMATION

		6980000 ug/L Fresh water	flea - Daphnia magna - <1 days	
	-	Acute LC50 6700000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <1 days	48 hours
	-	Acute LC50 6540000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <1 days	48 hours
	-	Acute LC50 6300000 ug/L Fresh water	Daphnia - Water flea - Daphnia magna - <1 days	48 hours
	-	Acute LC50 5820000 ug/L Fresh water	Daphnia - Water flea - Daphnia cucullata - 11 days	48 hours
	-	Acute LC50 4630000 to 5000000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 29 days - 23.8 mm - 0.21 g	96 hours
	-	Acute LC50 4480000 to 4880000 ug/L Fresh water	Fish - Fathead minnow - Pimephales promelas - 30 days - 21.3 mm - 0.16 g	96 hours
	-	Acute LC50 3800000 ug/L Marine water	Fish - Bleak - Alburnus alburnus - 8 to 10 cm	96 hours
	-	Acute LC50 3100000 ug/L Fresh water	Daphnia - Water flea - Daphnia pulex - <1 days	48 hours
	-	Acute LC50 3000000 to 4000000 ug/L Marine water	Fish - Bleak - Alburnus alburnus - 8 cm	96 hours
	-	Acute LC50 2950000 ug/L Fresh water	Daphnia - Water flea - Daphnia pulex - <1 days	48 hours
	-	Acute LC50 2500000 ug/L Fresh water	Crustaceans - Aquatic sowbug - Asellus aquaticus	48 hours
methylocyclohexane	-	Acute LC50 180000 to 230000 ug/L Fresh water	Fish - Golden shiner - Notemigonus crysoleucas	96 hours
	-	Acute LC50 62000 to 80000 ug/L Fresh water	Fish - Golden shiner - Notemigonus crysoleucas	96 hours
	-	Acute LC50 55000 to 73000 ug/L Fresh water	Fish - Golden shiner - Notemigonus crysoleucas	96 hours
	-	Acute LC50 41000 to 65000 ug/L Fresh water	Fish - Golden shiner - Notemigonus crysoleucas	96 hours
	-	Acute LC50 5800 ug/L Marine water	Fish - Striped bass - Morone saxatilis - Juvenile (Fledgling, Hatchling, Weanling) - 9.2 cm - 8.5 g	96 hours
	-	Acute LC50 235000 to 295000 ug/L Fresh water	Fish - Golden shiner - Notemigonus crysoleucas	96 hours

**Conclusion/Summary** : Not available.

**Biodegradability**

**Conclusion/Summary** : Not available.

**Other adverse effects** : No known significant effects or critical hazards.





## 13. DISPOSAL CONSIDERATIONS

**Methods of disposal** : The generation of waste should be avoided or minimised wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

**Hazardous waste** : The classification of the product may meet the criteria for a hazardous waste.

## 14. TRANSPORT INFORMATION

### International transport regulations

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
<b>ADR/RID Class</b>	1950	Aerosol. Non-flammable.	ADR Class: Non-flammable gas.	-		-
<b>ADN/ADNR Class</b>	1950	Aerosol. Non-flammable.	ADN/ADNR Class: Non-flammable gas.	-		-
<b>IMDG Class</b>	1950	Aerosol. Class 2 Limited quantity	IMDG Class 2.2: Non-flammable, non-poisonous, non-corrosive gas.	-		-
<b>IATA Class</b>	1950	Aerosol. Non-flammable.	IATA Class 2.2: Non-flammable, non-poisonous, non-corrosive gas.	-		-

PG\* : Packing group

## 15. REGULATORY INFORMATION

### EU regulations

Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.

**Hazard symbol or symbols** :



Irritant

**Risk phrases** : R36/38- Irritating to eyes and skin.

**Safety phrases** : R36/38- Irritating to eyes and skin. S24/25- Avoid contact with skin and eyes. S23- Do not breathe gas/fumes/vapour/spray. S51- Use only in well-ventilated areas. S2- Keep out of the reach of children.

**Product use** : Classification and labeling have been determined according to EU Directives 67/548/EEC and 1999/45/EC (including amendments) and take into account the intended product use.  
- Industrial applications

**Europe inventory** : Not determined.

## 16. OTHER INFORMATION

**Full text of R-phrases referred to in sections 2 and 3 - Europe** : R11- Highly flammable.  
R20- Harmful by inhalation.  
R65- Harmful: may cause lung damage if swallowed.  
R41- Risk of serious damage to eyes.  
R36- Irritating to eyes.  
R38- Irritating to skin.  
R67- Vapours may cause drowsiness and dizziness.  
R51/53- Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**16. OTHER INFORMATION**

**Full text of classifications referred to in sections 2 and 3 - Europe** : F - Highly flammable  
Xn - Harmful  
Xi - Irritant  
N - Dangerous for the environment

**History**

**Date of printing** : 12/12/2011.  
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**Version** : 1  
**Prepared by** : Not available.

Indicates information that has changed from previously issued version.

**Notice to reader**

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.