

1 Identification of substance:

- Product details:
- Trade name: F 45
- Article number: 30.605.3
- Manufacturer/Supplier:



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2 Composition/Data on components:

- Chemical characterization
 - Description:
Mixture of the substances listed below with nonhazardous additions.
 - Dangerous components:
- | | |
|----------------------------|---------|
| aliphatics | 25-50 % |
| Xn, F, N; R 11-38-51/53-65 | |
| 79-01-6 trichloroethylene | 25-50% |
| Xn; R 40-52/53 | |
| methylene chloride | 10-25% |
| Xn; R 40 | |

3 Hazards identification

- Hazard description:



Xn Harmful
F Highly flammable
N Dangerous for the environment

- Information pertaining to particular dangers for man and environment
- R 11 Highly flammable.
R 38 Irritating to skin.
R 40 Possible risks of irreversible effects.
R 51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R 65 Harmful: may cause lung damage if swallowed.- Classification system

The classification was made according to the latest editions of the EU-lists, and expanded upon from company and literature data.

4 First aid measures

- General information
Immediately remove any clothing soiled by the product.
- After inhalation
Supply fresh air or oxygen; call for doctor.
In case of unconsciousness place patient stably in side position for transportation.
- After skin contact
Immediately wash with water and soap and rinse thoroughly.
- After eye contact
Rinse opened eye for 15 minutes under running water.
- After swallowing If symptoms persist consult doctor.

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5 Fire fighting measures

- Suitable extinguishing agents



CO₂, sand, extinguishing powder. Do not use water.

- For safety reasons unsuitable extinguishing agents
Water with full jet.
- Special hazards caused by the material, its products of combustion or resulting gases:
Phosgene gas
Hydrogen chloride (HCl)
- Protective equipment:
Wear self-contained respiratory protective device.
Wear fully protective suit.

6 Accidental release measures

- Person-related safety precautions:



Wear protective equipment. Keep unprotected persons away.

- Ensure adequate ventilation
- Measures for environmental protection:
Prevent seepage into sewage system, workpits and cellars.
Do not allow to enter sewers/ surface or ground water.
Inform respective authorities in case of seepage into water course or sewage system.
- Measures for cleaning/collecting:
Absorb liquid components with liquid-binding material.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents

7 Handling and storage

- Handling
- Information for safe handling:
Ensure good ventilation/exhaustion at the workplace.
- Information about protection against explosions and fires:



Keep ignition sources away - Do not smoke.

Protect against electrostatic charges.

- Storage
- Requirements to be met by storerooms and receptacles:
Store in a cool location.
- Information about storage in one common storage facility:
Not required.
- Further information about storage conditions:
Store in cool, dry conditions in well sealed receptacles.

8 Exposure controls and personal protection

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

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Components with limit values that require monitoring at the workplace:

79-01-6 trichloroethylene

OEL Short-term value: 1.080 mg/m³, 200 ml/m³

Long-term value: 270 mg/m³, 50 ml/m³

methylene chloride

OEL 350 mg/m³, 100 ml/m³

Additional information:

The lists that were valid during the creation were used as basis.

Personal protective equipment

General protective and hygienic measures

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Breathing equipment: Not necessary if room is well-ventilated.

Protection of hands: Protective gloves.

Eye protection: Tightly sealed goggles.

9 Physical and chemical properties:

Form:

Fluid

Colour:

Colourless

Odour:

Characteristic

Change in condition

Melting point/Melting range: undetermined

Boiling point/Boiling range: undetermined

Flash point:

< -18°C (DIN 51755)

Ignition temperature:

410.0°C (DIN 51794)

Self igniting:

Product is not selfigniting.

Danger of explosion:

Product is not explosive. However, formation of explosive air/vapour mixtures is possible.

Explosion limits:

Lower: 1.1 Vol %

Upper: 90.0 Vol %

Vapour pressure at 20°C:

77.0 hPa (DIN 51754)

Density at 20°C:

0.935 g/cm³ (DIN 51757)

Solubility in / Miscibility with

Water: Not miscible or difficult to mix

pH-value:

not applicable

Solvent content:

Organic solvents: 100.0 %

10 Stability and reactivity

Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

Dangerous reactions Reacts with alkaline metals

Dangerous products of decomposition:

Hydrogen chloride (HCl)

Phosgen

Carbon monoxide and carbon dioxide

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11 Toxicological information

- Acute toxicity:
- LD/LC50 values that are relevant for classification:

79-01-6 trichloroethylene

Oral LD50 >2000 mg/kg (rat)
Dermal LD50 >2000 mg/kg (rabbit)
Inhalative LC50/4 h 67 mg/l (rat)

methylene chloride

Oral LD50 1600 mg/kg (rat)
Inhalative LC50/6h 52 mg/l (mouse)
56 mg/l (rat)

- Primary irritant effect:
- on the skin: Irritant to skin and mucous membranes.
- on the eye: No irritating effect.
- Sensitization: No sensitizing effects known.

Additional toxicological information:

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

Irritant
Harmful

12 Ecological information:

- Ecotoxicological effects:
- Acquatic toxicity:

79-01-6 trichloroethylene

EC0 6 mg/l (*Pseudomonas putida*)
LC50/48h 18 mg/l (*Daphnia magna*)
LC50/96h 96 mg/l (algae)
16-30 mg/l (fish)

methylene chloride

EC0 125 mg/l (*Scenedesmus quadricauda*)
EC0/16h 500 mg/l (*Pseudomonas putida*)
EC50/48h 135-220 mg/l (*Daphnia magna*)
EC50/96h > 660 mg/l (algae)
LC50 528 mg/l (*Leuciscus idus*)
LC50/96h 193-510 mg/l (fish)

General notes:



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

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

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

Also poisonous for fish and plankton in water bodies.

13 Disposal considerations

- Product:
- Recommendation



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

- Uncleaned packagings:
- Recommendation:

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14 Transport information

- Land transport ADR/RID (cross-border)
- ADR/RID class: 3 Flammable liquids.
- Item: 19b
- Danger code (Kemler): 336
- UN-Number: 1992
- Label: 3+6.1
- Description of goods: Flammable liquid, toxic, n.o.s., contains isohexanes and n-hexanes, trichloroethylene

- Maritime transport IMDG:
- IMDG Class: 3.1
- Page: 3139
- UN Number: 1992
- Packaging group: II
- EMS Number: 3-07
- MFAG: 310
- Marine pollutant: No
- Proper shipping name: Flammable liquid, toxic, n.o.s., contains isohexanes and n-hexanes, trichloroethylene

- Air transport ICAO-TI and IATA-DGR:
- ICAO/IATA Class: 3
- UN/ID Number: 1992
- Packaging group: II
- Proper shipping name: Flammable liquid, toxic, n.o.s., contains isohexanes and n-hexanes, trichloroethylene

15 Regulations

- Markings according to EU guidelines:
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials
- Code letter and hazard designation of product:



Xn Harmful
F Highly flammable
N Dangerous for the environment

- Hazard-determining components of labelling:
Petroleum 60/95
trichloroethylene
methylene chloride
- Risk phrases:
11 Highly flammable.
38 Irritating to skin.
40 Possible risks of irreversible effects.
51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
65 Harmful: may cause lung damage if swallowed.
- Safety phrases:
3/9 Keep in a cool, well-ventilated place.
16 Keep away from sources of ignition - No smoking.
23 Do not breathe fumes.
24/25 Avoid contact with skin and eyes.
37 Wear suitable gloves.
43 In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

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Material Safety Data Sheet
According to 91/155 EC

Printing date 03.09.2001

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- National regulations

Swiss Legislation:

BAGT-Nr./BAG-EDV-Nr. : 610 184

class of toxicity : 4

- Classification according to VbF: A I

- Technical instructions (air):

- Class Share in %

I 50-100

III 25-50

- Water hazard class:

Water danger class 3 (Self-assessment): extremely hazardous for water.

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Department issuing MSDS: KK