

SAFETY DATA SHEET

In accordance with 1907/2006 annex II and 1272/2008
(All references to EU regulations and directives are abbreviated into only the numeric term)

Issued 2024-04-16

Version number 1.0



SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Trade name	RFA-10
CAS No	7550-45-0
EC No	231-441-9
Index No	022-001-00-5

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Detection of air flows in ventilation systems
-----------------	---

1.3. Details of the supplier of the safety data sheet

Company	AB Regin Bangårdsvägen 35 428 36 Kålleröd Sweden
Telephone	+46 31 720 02 00
E-mail	info@regin.se

1.4. Emergency telephone number

Phone number for emergencies: 999 or 112. The numbers are available 24/7.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Skin Corr. 1B, H314

Eye Dam. 1, H318

(See section 16)

2.2. Label elements

Hazard pictogram



Signal word	Danger
Hazard statements	
H314	Causes severe skin burns and eye damage
Precautionary statements	
P260	Do not breathe gas, mist, vapours, or spray
P280	Wear protective gloves, protective clothing and eye or face protection
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P310	Immediately call a doctor

Supplemental hazard information

EUH014 Reacts violently with water.

2.3. Other hazards

The product does not contain any substances identified as having endocrine disruptive properties in accordance with the criteria set out in (EU) 2017/2100 or (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1. Substances

Constituent	Classification	Concentration
TITANIUM TETRACHLORIDE		
CAS No: 7550-45-0 EC No: 231-441-9 Index No: 022-001-00-5	Skin Corr. 1B; H314	99,9 %

Explanations to the classification and labelling of the ingredients are given in Section 16e. Official abbreviations are printed in normal font. Text in italics are specifications and/or complements used in the calculation of the classification of this mixture, see Section 16b.

SECTION 4: First aid measures

4.1. Description of first aid measures

Generally

In case of concern, or if symptoms occur, call a doctor/physician.

Never attempt to administer liquid, or anything else, to an unconscious person via the mouth.

Do not use mouth to mouth or mouth to nose resuscitation. Use a suitable device or apparatus to give artificial respiration if breathing has stopped.

Upon breathing in

Bring the injured person out into fresh air. Give artificial respiration if breathing has stopped. If breathing is difficult let trained personnel administer oxygen. Let the injured person rest in a warm place with fresh air and seek medical advice immediately.

Upon eye contact

Remove contact lenses immediately if possible.

Rinse immediately with tepid water for 15 - 20 minutes with eyes wide open. Immediately transport the injured person to a hospital.

Important! Also flush during transport to hospital (eye specialist).

Upon skin contact

Remove contaminated clothing.

Wash with large quantities of water (emergency shower) and seek medical assistance.

Upon ingestion

Rinse mouth out thoroughly first with water, then SPIT OUT the rinse water. Drink at least half a litre of water and seek medical advice. DO NOT INDUCE VOMITING.

4.2. Most important symptoms and effects, both acute and delayed

Upon breathing in

May cause corrosive lesions in the nose and throat and cause coughing when inhaled. When inhaling high concentrations, breathing difficulties may occur.

Upon eye contact

Causes severe eye burns.

Upon skin contact

Chemical burns may occur.

Upon ingestion

Ingestion triggers corrosion in oral cavity and pharynx, nausea and abdominal pain.

4.3. Indication of any immediate medical attention and special treatment needed

Symptomatic treatment.

Upon contact with a doctor, make sure to have the label or this safety data sheet with you.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Recommended extinguishing agents

Extinguish with powder or carbon dioxide.

Unsuitable extinguishing agents

May not be extinguished with water.

5.2. Special hazards arising from the substance or mixture

On contact with certain metals and in the presence of moist air, hydrogen gas may form, which may form explosive mixtures.

Corrosive gases can be dispersed in case of fire.

In the event of fire, hydrogen chloride may be formed.

In the event of fire toxic metal oxides may be spread.

Note that the extinguishing water may be corrosive.

Avoid that water used for extinguishing fire reaches drains. Water used for extinguishing fire should be handled according to current regulations.

5.3. Advice for firefighters

Protective measures to be taken with regard to other materials at the scene of the fire.

Evacuate all not-authorized personnel.

In case of fire use proper breathing apparatus.

Wear full protective clothing.

Cool closed containers that were exposed to fire with water.

Contain and collect extinguishing liquid.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

In case of spillage in protected water, call the emergency services immediately, tel. 112 (in Europe).

Keep unauthorized and unprotected people at a safe distance.

Evacuate the accident area and call an ambulance, if relevant.

Avoid inhalation and exposure to skin and eyes.

Ensure good ventilation.

Note that there is a risk of slipping if product is leaking/spilling.

Use recommended safety equipment, see section 8.

Chemical protection suits should be worn for all salvage and decontamination work.

6.2. Environmental precautions

Avoid release to drains, soil or watercourses.

Please contact involved authorities if unintended release occurs.

6.3. Methods and material for containment and cleaning up

Absorb the liquid with an inert absorbent, vermiculite, for example. Collect the material for disposal at a waste disposal facility.

Do not use water for the sanitizing.

Ensure good ventilation after sanitation.

6.4. Reference to other sections

See section 8 and 13 for personal protection equipment and disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Take the necessary preventive and protective measures for safe handling.
- Store this product separately from food items and keep it out of the reach of children and pets.
- Avoid spillage, inhalation and contact with eyes and skin.
- Work in order to avoid spillage. If spillage does occur, address it immediately in accordance with the directions specified in Section 6 of this safety data sheet.
- Do not eat, drink or smoke in premises where this product is handled.
- Wash your hands after using the product.
- Remove contaminated clothing.
- Wash contaminated clothing before reuse.
- Do not mix with other products.
- Keep away from incompatible products.
- Use recommended safety equipment, see section 8.
- Implement appropriate engineering controls if necessary, see Section 8.

7.2. Conditions for safe storage, including any incompatibilities

- Take the necessary preventive and protective measures for safe storage.
- The product should be stored in a manner which prevents hazards to health and the environment. Avoid exposure to humans and animals and do not discharge the product in a sensitive environment.
- Keep out of reach for children.
- To be stored away from food and animal fodder and away from devices or surfaces that are in contact with those items.
- Always use sealed and visibly labeled packages.
- Store tightly, in original packaging.
- Store in a well-ventilated area, not above eye-level.
- Store in a cool and dry place (above freezing temperature and not greater than 30°C).
- The package should be kept in plastic bins in order to prevent corrosive injuries from spillage.
- Do not store close to incompatible materials (see section 10.5).

7.3. Specific end use(s)

- See identified uses in Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National limit values

- All ingredients (cf. Section 3) lack occupational exposure limit values.

DNEL

- No data available.

PNEC

- No data available.

8.2. Exposure controls

- The risks posed by the product or its constituents must be considered in the task specific risk assessment, in accordance with current working environment legislation. The risk assessment should be reviewed regularly and updated if necessary.

8.2.1. Appropriate engineering controls

- The ventilation in the workplace must ensure an air quality that meets the requirements of the current working environment legislation. Local exhaust ventilation should be used to remove airborne contaminants at the source.
- Emergency showers and eye-rinsing facilities must be available at the workplace.

Eye/face protection

- Use protective glasses with tight seals according to standard EN166.

Skin protection

Use suitable total cover protective clothes.

Use protective gloves fulfilling the standard EN374 if there is a risk of direct contact.

During continuous contact use gloves with a minimum breakthrough time of at least 240 minutes, preferably over 480 minutes.

The most suitable protective glove should be chosen in consultation with the glove supplier, taking into account the risk assessment for the specific task and the properties of the chemicals involved. Note that the breakthrough time of the material is affected by the duration of the exposure, temperature conditions, abrasion, etcetera.

Based on the chemical properties of the product, the following glove materials are recommended (EN 374):.

- Nitrile rubber.
- Fluoro rubber FKM.
- Chloroprene (CR).

Respiratory protection

Use appropriate respiratory protective equipment in case of insufficient ventilation.

The most appropriate respiratory protective equipment should be decided in consultation with the appointed safety representative, taking into account the risk assessment for the specific task.

8.2.3. Environmental exposure controls

Work with the product should take place in such a way that the product does not get into soils and waterways.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

(a) Physical state	liquid
	Form: liquid
(b) Colour	colourless
(c) Odour	Not indicated
(d) Melting point/freezing point	-25 °C
(e) Boiling point or initial boiling point and boiling range	136 - 137 °C
(f) Flammability	Not indicated
(g) Lower and upper explosion limit	Not indicated
(h) Flash point	Not indicated
(i) Auto-ignition temperature	Not indicated
(j) Decomposition temperature	Not indicated
(k) pH	Not indicated
(l) Kinematic viscosity	Not indicated
(m) Solubility	Solubility in water: Reacts
(n) Partition coefficient n-octanol/water (log value)	Not indicated
(o) Vapour pressure	Not indicated
(p) Density and/or relative density	Not indicated
(q) Relative vapour density	1.726 g/cm ³
(r) Particle characteristics	Not indicated

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Not indicated

9.2.2. Other safety characteristics

Not indicated

SECTION 10: Stability and reactivity

10.1. Reactivity

Reacts with metals and then forms hydrogen gas which can be explosive when being mixed with air.
Reacts strongly with water.

10.2. Chemical stability

The product is stable at normal storage and handling conditions.

10.3. Possibility of hazardous reactions

Reacts with oxidising agents.
Reacts with water/moisture.

10.4. Conditions to avoid

Protect from moisture.

10.5. Incompatible materials

Avoid contact with:
Bases.
Water.
Oxidizing substances.

10.6. Hazardous decomposition products

Emits hydrogen on contact with some metals.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Information on possible health hazards are based on experience and / or toxicological properties of several components in the product.

Acute toxicity

The product is not classified as acutely toxic.

TITANIUM TETRACHLORIDE

LD50 rabbit 24h: 3160 mg/kg Dermally
LC50 rat 4h: 0.46 mg/L Inhalation

Skin corrosion/irritation

Causes severe skin burns.

Serious eye damage/irritation

Causes severe eye burns.

Respiratory or skin sensitisation

The product is not classified as sensitising.

Germ cell mutagenicity

The product is not classified as mutagen.

Carcinogenicity

The product is not classified as carcinogenic.

Reproductive toxicity

The product is not classified as a reproductive toxicant.

STOT-single exposure

The product is not classified for specific organ toxicity after single exposure.

STOT-repeated exposure

The product is not classified for specific organ toxicity after repeated exposure.

Aspiration hazard

The product is not classified as being toxic for aspiration.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

The product does not contain any substances identified as having endocrine disruptive properties in accordance with the criteria set out in (EU) 2017/2100 or (EU) 2018/605.

11.2.2. Other information

Not indicated.

SECTION 12: Ecological information

12.1. Toxicity

The product is not to be labelled as a environmental hazard. However, it is not inconceivable that large emissions, or repeated small emissions, can have a harmful effect on the environment.

Prevent release on land, in water and drains.

12.2. Persistence and degradability

There is no information regarding persistence or degradability.

12.3. Bioaccumulative potential

Neither this product, nor its contents, accumulates in nature.

12.4. Mobility in soil

The product is miscible with water and is therefore variable in soil and water.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Endocrine disrupting properties

The product does not contain any substances identified as having endocrine disruptive properties in accordance with the criteria set out in (EU) 2017/2100 or (EU) 2018/605.

12.7. Other adverse effects

Data lacking.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste handling of the product

Discarded products must be disposed of as hazardous waste in accordance with regulations.

Not completely emptied packaging can contain remnants of dangerous substances and should therefore be handled as hazardous waste according to the above. Completely emptied packaging can be recycled.

Avoid discharge into sewers.

Residual, old or contaminated product should be disposed of at a waste management facility.

See directive 2008/98/EC on waste. Observe national or regional provisions on waste management.

SECTION 14: Transport information

Where not otherwise stated the information applies to all of the UN Model Regulations, i.e. ADR (road), RID (railway), ADN (inland waterways), IMDG (sea), and ICAO (IATA) (air).

14.1. UN number or ID number

1838

14.2. UN proper shipping name

-

14.3. Transport hazard class(es)

Class

6.1: Toxic substances

Classification code (ADR/RID)

TC3: Toxic substances, corrosive: Inorganic, liquid

Subsidiary risk (IMDG)

IMDG-class 8 (Corrosive substances)

Labels



14.4. Packing group

Packing group I

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Tunnel restrictions

Tunnel category: C/D

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

14.8 Other transport information

Transport category: 1; Maximum total quantity per transport unit 20 kg or liters

Stowage category D (IMDG)

Emergency Schedule (EmS) for FIRE (IMDG) F-A

Emergency Schedule (EmS) for SPILLAGE (IMDG) S-B

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Not indicated.

15.2. Chemical safety assessment

Assessment and chemical safety report in accordance with 1907/2006 Annex I has not yet been performed.

SECTION 16: Other information

16a. Indication of where changes have been made to the previous version of the safety data sheet

Revisions of this document

This is the first version

16b. Legend to abbreviations and acronyms used in the safety data sheet

Full texts for Hazard Class and Category Code mentioned in section 3

Skin Corr. 1B Skin corrosion/irritation, Hazard Category 1B - Skin Corr. 1B, H314 - Causes severe skin burns and eye damage

Eye Dam. 1 Serious eye damage/eye irritation, Hazard Category 1 - Eye Dam. 1, H318 - Causes serious eye damage

Explanations of the abbreviations in Section 14

ADR European Agreement concerning the International Transport of Dangerous Goods by Road

RID Regulations concerning the International Transport of Dangerous Goods by Rail

IMDG International Maritime Dangerous Goods Code

ICAO International Civil Aviation Organization (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada)

IATA The International Air Transport Association

Tunnel restriction code: C/D; Tank carriage: Passage forbidden through tunnels of category C, D, and E; Other carriage:

Passage forbidden through tunnels of category D and E

Transport category: 1; Maximum total quantity per transport unit 20 kg or liters

16c. Key literature references and sources for data

Sources for data

Primary data for the calculation of the hazards has preferentially been taken from the official European classification list, 1272/2008 Annex I, as updated to 2024-04-16.

Where such data was not available, alternative documentation used to establish the official classification was used, e.g. IUCLID (International Uniform Chemical Information Database). As a second alternative, information was used from reputable international chemical industries, and as a third alternative other available information was used, e.g. material safety data sheets from other suppliers or information from non-profit associations, where reliability of the source was assessed by expert opinion. If, in spite of this, reliable information could not be sourced, the hazards were assessed by expert opinions based on the known hazards of similar substances, and according to the principles in 1907/2006 and 1272/2008.

Full texts for Regulations mentioned in this Safety Data Sheet

1907/2006 REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

1272/2008 REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

2008/98/EC DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19

16d. Methods of evaluating information referred to in 1272/2008 Article 9 which was used for the purpose of classification

Hazard calculation for this mixture has been performed as a cumulative assessment with the aid of expert assessments in accordance with 1272/2008 Annex I , where all available information which may be significant to establishing the hazards of the mixture was assessed together, and in accordance with 1907/2006 Annex XI .

**16e. List of relevant hazard statements and/or precautionary statements
Full texts for hazard statements mentioned in section 3**

H314 Causes severe skin burns and eye damage

**16f. Advice on any training appropriate for workers to ensure protection of human health and the environment
Warning for misuse**

This product can cause severe harm if used improperly. Read and follow the directions of use carefully. At professional use the employer is responsible for the staff being well aware of the risks.

Other relevant information

Not indicated

Editorial information



This material safety data sheet has been prepared and checked by KemRisk®, KemRisk Sweden AB, Platensgatan 8, SE-582 20 Linköping, Sweden, www.kemrisk.se