

Safety data sheet according to UK REACH

Printing date 20.05.2025

version nr: 1

Revision: 20.05.2025

· 1.1 Product identifier

· Trade name: **RADIFLAM® A RV250AF 375 BK**

· Article number: 5000005193

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

· Life cycle stages IS Use at industrial Sites

· Sector of Use

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU12 Manufacture of plastics products, including compounding and conversion

· Product category PC32 Polymer preparations and compounds

· Process category

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC5 Mixing or blending in batch processes

PROC14 Tableting, compression, extrusion, pelletisation, granulation

· Environmental release category ERC11a Widespread use of articles with low release (indoor)

· Article category AC13 Plastic articles

· Application of the substance / the mixture

Production of items by injection moulding or comparable processes

· 1.3 Details of the supplier of the safety data sheet

· Manufacturer/Supplier:

RADICI PLASTICS LTDA

Estrada do Gado, 1175 - Mombaça

São Roque SP 18130-970

Brazil

· Further information obtainable from: Laboratory of Research & Development and Quality Control

· 1.4 Emergency telephone number:

During regular office hours phone: +551141366500

E-mail: msds.plastics@radicigroup.com

SECTION 2: Hazards identification

· 2.1 Classification of the substance or mixture

· Classification according to Regulation (EC) No 1272/2008

The product is not classified, according to the GB CLP regulation.

· 2.2 Label elements

· Labelling according to Regulation (EC) No 1272/2008 Void

· Hazard pictograms Void

· Signal word Void

· Hazard-determining components of labelling:

boron zinc hydroxide oxide

· Hazard statements Void

· 2.3 Other hazards

The processing fumes of materials containing Red Phosphorus may release Phosphine.

Exposure to phosphine can cause lung damage.

· Results of PBT and vPvB assessment

· PBT: Not applicable.

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SECTION 3: Composition/information on ingredients

· 3.2 Mixtures

· **Description:**

Polyamide 66 glass fiber reinforced and flame retardant

Base used: Polyamide 66

Synonym: Polyamide 66- Nylon 66

CAS number: 32131-17-2

Chemical name: Polyhexamethylene adipamide

Chemical formula: $-\text{[NH}-(\text{CH}_2)_6\text{-NH-CO}-(\text{CH}_2)_4\text{-CO]}_n$

· **Dangerous components:**

CAS: 7723-14-0 red phosphorus

2.5-10%

EINECS: 231-768-7  Flam. Sol. 1, H228; Aquatic Chronic 3, H412

CAS: 138265-88-0 boron zinc hydroxide oxide

2.5-10%

EINECS: 235-804-2  Repr. 2, H361;  Aquatic Acute 1, H400; Aquatic Chronic 1, H410

CAS: 1333-86-4 Carbon black

0-≤2.5%

EINECS: 215-609-9  Self-heat. 1, H251

· **Additional information:**

Refer to Section 16 for the risk phrases concerning the above-mentioned hazards

The substances listed in this section are well incorporated into the polymer matrix and therefore not bioavailable

The processing fumes of Red Phosphorus-containing materials can release Phosphine (PH₃)

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· **General information:** No special measures required

· **After inhalation:** Product is in granular form and thus inhalation is very unlikely

· **After skin contact:** Generally the product does not irritate the skin

· **After eye contact:** Keeping the eyelids wide-open, flush eyes for several minutes under running water

· **After swallowing:**

The product is not acutely toxic. In case of ingestion of a considerable quantity of material, seek medical assistance

· **4.2 Most important symptoms and effects, both acute and delayed**

No further relevant information available.

· **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· **Suitable extinguishing agents:**

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam

Use fire extinguishing methods appropriate to surrounding area

· **5.2 Special hazards arising from the substance or mixture**

Processing fumes evolved under processing conditions (thermal decomposition >340°C) may contain trace amounts of carbon monoxide, carbon dioxide, ammonia, formaldehyde, cyanhydric acid, nitrogen oxides, acrolein and their derivatives

· **5.3 Advice for firefighters**

· **Protective equipment:**

No special measures required

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Self-contained respiratory protective device.

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SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Do not drop/scatter product granules on warehouse or workplace floors to prevent the possibility of slip and fall accidents
- **6.2 Environmental precautions:**
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water
- **6.3 Methods and material for containment and cleaning up:** No special measures required.
- **6.4 Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment
See Section 13 for disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
In processing coloured materials, particular care must be exercised not to exceed recommended processing temperatures, as thermal decomposition may generate harmful products
Do not ingest product granules: during digestion, gastric juices could hydrolyze the material releasing substances harmful in human health
Ensure that there are suitable exhaust systems in processing machine areas
- **Information about fire - and explosion protection:**
The product is not explosive (see Section 9). In case of fire see Section 5
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Do not stack up packages too high without proper support to prevent the pile from collapsing
Keep the product away from heat sources since it is combustible
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Store in a dry place
Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
7723-14-0 red phosphorus
WEL Short-term value: 0.3 mg/m³
Long-term value: 0.1 mg/m³
1333-86-4 Carbon black
WEL Short-term value: 7 mg/m³
Long-term value: 3.5 mg/m³
- **8.2 Exposure controls**
- **Appropriate engineering controls** No further data; see Section 7

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- **Individual protection measures, such as personal protective equipment**
- **General protective and hygienic measures:**
 - Product in solid state: follow the ordinary precautionary measures for non-hazardous chemicals
 - Product in molten state: avoid skin contact with the molten material and do not breathe product vapours
- **Respiratory protection:** Suitable respiratory protective device recommended.
- **Hand protection**
 - Protective gloves are not required for handling the product in a solid state
 - The use of appropriate protective gloves is required for handling the product in its molten state (see Section 9) to avoid burns
- **Material of gloves**
 - Rubber gloves
 - Leather gloves
 - Synthetic rubber gloves
- **Penetration time of glove material** Not available
- **Eye/face protection** Safety glasses

SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**
- **General Information**
- **Physical state** Solid
- **Colour:** Black
- **Odour:** Odourless
- **Odour threshold:** Not determined.
- **Melting point/freezing point:** $260 \pm 3 \text{ }^{\circ}\text{C}$
- **Boiling point or initial boiling point and boiling range** Not applicable, it's a solid.
- **Flammability** Not determined.
- **Lower and upper explosion limit**
- **Lower:** Not determined.
- **Upper:** Not determined.
- **Flash point:** $>400 \text{ }^{\circ}\text{C}$
- **Auto-ignition temperature:** $440 \text{ }^{\circ}\text{C}$
- **Decomposition temperature:** Not determined.
- **pH** Not applicable.
- **Viscosity:**
- **Kinematic viscosity** Not applicable.
- **Dynamic:** Not applicable.
- **Solubility**
- **water:** Insoluble
- **Partition coefficient n-octanol/water (log value)** Not applicable
- **Vapour pressure:** Not applicable.
- **Density and/or relative density**
- **Density at $20 \text{ }^{\circ}\text{C}$:** 1.35 g/cm^3
- **Relative density** Not determined.
- **Vapour density** Not applicable.
- **9.2 Other information**
- **Appearance:**
- **Form:** Chips
- **Important information on protection of health and environment, and on safety.**
- **Ignition temperature:** Product is not self-igniting

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· Explosive properties:	Product is not explosive Explosive when mixed with oxidising substances.
· Solvent content:	
· Solids content:	100.0 %
· Change in condition	
· Evaporation rate	Not applicable.
· Information with regard to physical hazard classes	
· Explosives	Void
· Flammable gases	Void
· Aerosols	Void
· Oxidising gases	Void
· Gases under pressure	Void
· Flammable liquids	Void
· Flammable solids	Void
· Self-reactive substances and mixtures	Void
· Pyrophoric liquids	Void
· Pyrophoric solids	Void
· Self-heating substances and mixtures	Void
· Substances and mixtures, which emit flammable gases in contact with water	Void
· Oxidising liquids	Void
· Oxidising solids	Void
· Organic peroxides	Void
· Corrosive to metals	Void
· Desensitised explosives	Void

SECTION 10: Stability and reactivity

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
At temperatures >340°C the product undergoes thermal decomposition/degradation releasing fumes that may contain traces of cyanhydric acid, ammonia, acrylonitrile, formaldehyde, nitrogen oxides and their derivatives
Processing fumes of products containing Red Phosphorus may develop Phosphine (PH₃)
- **10.3 Possibility of hazardous reactions**
Reacts with strong acids
Reacts with oxidizing agents
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:**
At temperatures > 340°C the product undergoes thermal decomposition/degradation releasing fumes that may contain traces of cyanhydric acid, ammonia, acrylonitrile, formaldehyde, nitrogen oxides and their derivatives.
Phosphine (PH₃)

SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **Primary irritant effect:**
- **Skin corrosion/irritation**
Irritation could be caused by dust formed during product handling
Based on available data, the classification criteria are not met.

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- **Serious eye damage/irritation**
Irritation could be caused by dust formed during product handling
Based on available data, the classification criteria are not met.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties**
None of the ingredients is listed.

SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2 Persistence and degradability** Product is not biodegradable
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.
- **12.6 Endocrine disrupting properties**
The product does not contain substances with endocrine disrupting properties.
- **12.7 Other adverse effects**
- **Remark:** Toxic for fish
- **Additional ecological information:**
- **General notes:**
Negative ecological effects are, according to the current state of knowledge, not expected.
Not hazardous for water.
Water hazard 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.
Toxic for aquatic organisms

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods** Authorized discovery
- **Recommendation**
This product can be recycled and used for other appropriate applications
This product is not considered hazardous waste. Eliminate the waste according to local rules and regulations
- **Uncleaned packaging:**
- **Recommendation:** Not hazardous according to the above regulations

SECTION 14: Transport information

- **14.1 UN number or ID number**
- **ADR, IMDG, IATA** Void

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- **14.2 UN proper shipping name**
- **ADR, IMDG, IATA** Void
- **14.3 Transport hazard class(es)**
- **ADR, ADN, IMDG, IATA**
- **Class** Void
- **14.4 Packing group**
- **ADR, IMDG, IATA** Void
- **14.5 Environmental hazards:**
- **Marine pollutant:** No
- **14.6 Special precautions for user** Not applicable.
- **14.7 Maritime transport in bulk according to IMO instruments** Not applicable.
- **Transport/Additional information:** Not dangerous according to the above regulations
- **UN "Model Regulation":** Void

SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**
- **Regulated explosives precursors**
None of the ingredients is listed.
- **Regulated poisons**
None of the ingredients is listed.
- **Reportable explosives precursors**
None of the ingredients is listed.
- **Reportable poisons**
None of the ingredients is listed.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

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

- **Relevant phrases**
H228 Flammable solid.
H251 Self-heating: may catch fire.
H361 Suspected of damaging fertility or the unborn child.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
- **Abbreviations and acronyms:**
Flam. Sol. 1: Flammable solids – Category 1
Self-heat. 1: Self-heating substances and mixtures – Category 1
Repr. 2: Reproductive toxicity – Category 2
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3