

EEC-Safety data sheet
PHASE CHANGE MATERIAL

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1. Chemical product and company identification

RUBITHERM® RT -4

Manufacturer/supplier:

Rubitherm Technologies GmbH
Sperenberger Str. 5a, 12277 Berlin
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Emergency telephone:

Tel.: +49 30/720004-62

2. Potential hazards

EEC-labelling: Xn, harmful

Potential dangers to health and environment:

In case of swallowing product lung damage can be caused.

Danger of fire and explosion:

Low risk. Product creates only ignitable mixtures or burns, if temperature exceeds flash point.

3. Composition/information of ingredients

Chemical characterisation:

Liquid saturated hydrocarbons,
molecular formula C_nH_{2n+2}

CAS-No: 64771-72-8

EINECS-No: 265-233-4

4. First-aid measures

Inhalation:

Take concerned person to fresh air. In case of lasting aches and pains take medical advices.

Eye contact:

In case of eyes contact rinse out eyes. In case of irritation take medical advices.

Skin contact:

In case of skin contact wash concerned area with water and soap. In case of irritation take medical advices.

In case of swallowing:

Drink water and rinse out mouth. Don't induce vomiting, risk of aspiration. Take medical advices immediately.

5. Fire-fighting measures

Suitable means for extinguishing:

Carbon dioxide, foam, powder, sand, water mist

Unsuitable means for extinguishing:

water jet

Special hazards caused by the substance, its combustion products or arising gases:

Product fumes and air can cause explosive conglomerates heavier than air. Inflammation by hot surfaces, unshielded flames and sparks.

Don't inhale combustion gases and suspended matter which formed at combustion. Carbon monoxide, carbon dioxide and soot can also develop.

Special protective equipment in closed rooms:

Use breathing apparatus independent from ambient air.

Additional information:

Cool endangered containers externally with water

Fire class according to DIN-EN 2: B

6. Measures in case of unintended release

Personal precautions:

Caution of wet floor by leaking product. Slip hazard.

Avoid inhalation of product fumes. Keep product away from ignition sources, don't smoke.

Environmental precautions:

It's not allowed to drain into environment, into bodies of water or savage system.

Avoid soil contamination.

Methods for cleaning:

Solid: remove product mechanically

Liquid: use binder to bind liquid product and than remove it mechanically.

7. Handling and storage

Handling

Advices for safe handling:

No special measures necessary while using product correctly.

Avoid skin- and eyescontact.

Advices for protection against fire and explosion:

Product mist and air can cause explosive conglomerate.

Storage

Requirements for storerooms and containers:

Store the product cool, dry and in closed barrels devoid of light. Avoid storage in near from ignition or heat sources.

Take measure against electrostatic charging. Earth appliances.

Information for storage together with other products:

Avoid storage together with strong oxidising agents.

8. Exposure controls / personal protection

Ingredients with occupational exposure limits which should be monitored:

1. **Germany/Switzerland/Austria**

There is no AGW-value for paraffin wax.

2. **Germany:**

For aerosols and fine dust AGW-value of 3 mg/m³ has to be kept to.

3. **USA**

TLV-value for paraffin vapour: 2 mg/m³

Technical measures of control and air ventilation

Ensure good ventilation at workplace in case of handling the product in closed rooms with higher temperature. Product concentration is to be kept exposition threshold values.

Personal protective equipment:

Hand protection: protective gloves made of rubber

Eye protection: safety goggles

Body protection: protective clothes

Breathing protection: In case of arising gases and inadequately ventilation at workplace use breath apparatus.

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9. Physical and chemical properties

Physical state:	at room temperature liquid
Colour:	clear (liquid), whitish (solid)
Odour:	odourless
pH-value at 20°C:	n.e.
Melting point (OECD 103):	-7 - -3 °C
Typical:	-4 °C
Boiling range (OECD 103):	228 - 245°C
Flash point:	approx. 96°C
Auto flammability:	> 200°C
Explosive limit in air:	0.5 – 5 Vol.-%
Vapour pressure at 50°C (OECD104):	0.04 – 0.11 hPa
Vapour density:	6.5
Density at 20°C (DIN 51 757):	0.76 g/ml
Solubility at 20°C - in water:	0.05 mg/l
Viscosity at 25°C (Brookfield):	17.81 mm ² /s
	n.a. = not applicable; n.e. = not established

10. Stability / reactivity

Conditions to avoid:
No hazard reactions under normal conditions.
Avoid high thermal load.

Material to avoid:
Strong oxidising agents.

Decomposition products:
None.

11. Toxicological information

Acute toxicity :	
Orale LD50:	> 5000 mg/kg (Rat)
Dermale LD50:	>2000 mg/kg (Rat)
Chronically toxicity:	LOEL = 9600 mg/kg (skin, mouse, 140 days) (C14)
Skin irritation:	slightly irritant
Eye irritation:	slightly irritant
Sensitisation:	not available
Mutagenic:	not mutagenic
Carcinogenic:	not carcinogen

12. Environmental details

Avoid drain into environment.

Elimination/persistence and degradability:
Easy biological degradable (OECD 301 F).

Aquatic toxicity:

LC50 / fish:	no reaction
EC50 / daphnia (2 days):	no reaction
EC50 / algae (3 days):	no reaction

13. Disposal considerations

After reprocessing, the product can get used again or utilised thermally, otherwise it can be disposed off after consulting with authorities according to the following waste disposal code (European Waste Catalogue):

<u>EWC-Code</u>	<u>Description</u>
07 01 04	other organic solvent washing liquids and mother liquors
07 01 99	wastes not otherwise specified

Packaging:

Drums: can be returned to supplier or producer

14. Transport information

Product is not a hazardous good according to ADR/RID; GGVs/ GGVE, ADN/ADN; IMDG/ GGVSee; ICAO-TI and IATA-DGR).
No dangerous good.

15. Statutory provisions

Labelling in accordance with the EEC directives:
Xn harmful

Risk-phrase, R-phrase:

R 65 Harmful. In case of swallowing product lung damaged can be caused.

Safety advice, S-phrase:

S 2 keep away from children
S 23 Do not inhale gas/smoke/fumes/aerosol
S 24 Avoid contact with skin
S 62 In case of swallowing, do not induce vomiting!
Take medical advice and show packaging and label.

Classification according to VbF: Not applicable

TA-Luft: Substance class 3.1.7.III

Waterhazard class (WGK): 1

StörfallVo: Not applicable

Swiss: BAG-T-Nr.610200;
Poison class: 0

16. Other information

Literature:

Ullmanns Encyclopädie der technischen Chemie
4. Auflage, Band 24, Kapitel "Wachse aus Erdöl",
Verlag Chemie GmbH, 1983.

This safety data sheet contains only safety related information.
For specific data see product data sheet.

The information on this data sheet is gathered to the best of RUBITHERMS knowledge and belief and fits as the experiences stand at the moment.
RUBITHERM doesn't guarantee the adherence of certain features in sense of legally binding.

In case of questions please call number given in point 1..

Rubitherm-Technologies GmbH