

# MATERIAL SAFETY DATA SHEET

PRODUCT: *RATIONAL SPECIAL DETERGENT*

COMPANY:  
RATIONAL Grosskuechentechnik GmbH  
Iglinger Str.62 D-8910a  
Landsberg / Lech Germany

U.S. DISTRIBUTOR:  
RATIONAL Cooking Systems Inc.  
Commerce Tech Center  
50 East Commerce Drive Suite D  
Schaumburg, IL 60173  
708-834-9944 or 1-800-728-RCSI

## 24-HOUR EMERGENCY PHONE NUMBER:

International Toxic Central  
D-8000 Munich Germany  
DIAL: 011 49 8941402211  
Product No. 201  
ENGLISH SPOKEN

1. Chemical Characteristics: Alkaline solution, contains sodium hydroxide (approx. 8%), surface active agent, soap with ammonia.

1.2 Type: liquid      1.3 Color: blue      1.4 Odor: similar to ammonia

## 2. Physical and safety technical data:

2.1 Change condition: (Distillation temperature) Boiling point (98.5°C) 209.3°F  
2.2 Density: at (20°C) 68°F (1.09 g/cm<sup>2</sup>) .630 oz/in<sup>3</sup> DIN 51 757  
2.3 Vapor pressure: (25mbar at 20°C) .36 psi at 68°F  
2.4 Viscosity: 11 sec beaker 4 at (20° C) 68° F    2.5 Dissolution factor with water: mixable  
2.6 pH - factor : at (10 g/l) 1.33 oz/gal water (20°C) 68°F    Approx. 12  
2.7 Combustion / Ignition: None    2.8 Flash point: None    2.9 Explosion limit: None  
2.10 Evaporation Rate: High

Warning!!

2.11 Dangerous gas by-products: In case of fire nitrogen gas and ammonia gas may be emitted.

2.12 Dangerous reaction: Strong heat production when reacting with acid.

## 3. Transportation regulations:

GGVSee/IMDG-Code: class 8	EMS: 8-06	MFAG: 705
UN-No.: 1719	Inco-class: class 8	
GGVE/S: cl. 3, No. 42 b	RID/ADR: cl. 3, NO. 42 b	
ICAO/IATA-DGR: 1719/8/II	ADNR:	
Special Information: packing group II	Kemler-No.: 30	



**PRODUCT: RATIONAL SPECIAL DETERGENT**

**4. Regulations:** According to the regulation dated 8-26-86 the product must be labeled with the "DANGER SYMBOL C" meaning "CORROSIVE".  
R-line: 35 Causes serious irritation of the nose, mouth and bronchial area.  
S-line: 2 Keep out of reach of children.  
26 In case the solution should come in contact with the eyes: flush thoroughly with water and consult an eye specialist.  
27 Contaminated clothing must be changed immediately.  
28 In case of skin contact flush well with water.  
57/39 Protective clothing, gloves and glasses should be worn when working with this solution.

**5. Protective measures for storing and handling:**

- 5.1 Technical safety measures:** Prevention of dust and aerosol build up must be observed.
- 5.2 Personal safety protection:** Eye protection, Hand protection.
- 5.3 Industrial hygiene:** Prevent contact with skin, nose and throat.
- 5.4 Fire and explosion protection:**
- 5.5 Disposal:** After neutralization and adequate thinning process dispose in a biological purification plant. Industrial sewage regulations must be observed.

**6. Actions to be taken in case of accidents/fire:**

- 6.1 In case of accidental spills, leaks and gas build-up:** Thin concentrated product with water until dissolved.
- 6.2 Extinguish material:** Suitable: water, dry-powder, carbonic acid, foam or spray water.
- 6.3 First aid:** Bring injured person to open air, remove contaminate clothing, flush contaminated area with water.  
Transportation of injured person should be in the side position.  
After eye contact flush the open eye thoroughly with water and contact an eye specialist.

**7. Toxicology:** Inhalation: Burning / irritation to the upper and / or lower respiratory tract.  
Body contact: Strong irritation of the skin, eyes, nose and throat.  
Swallowed: Burning or irritation of the esophagus  
eye contact: Burning of the eye.

**8. Ecological information:** Water contamination hazard: Class 1  
The regulations governing detergent disposal over 90% degradable must be adhered to.

**9. Additional information:** This information is based on the latest technical standard, adheres to the product characteristics and meets the present safety and transportation requirements.