

Material Safety Data Sheet

acc. to ISO/DIS 11014

Printing date 04/14/2010

Reviewed on 04/14/2010

1 Identification of substance

- **Product details**

- **Trade name:** Schmelzpulver Nr. I
- **Application of the substance / the preparation** Flux
- **Manufacturer/Supplier:**
Wieland Dental + Technik GmbH & Co.KG
Schwenninger Str. 13
75179 Pforzheim
Telefon + 49 (07231)-37050, Telefax + 49 (07231)-357959



- **Information department:**
Abteilung Umweltschutz
Marcus.Mueller@wieland-dental.de

- **Emergency information:**
+49 (07231)-37050
(Be kindly advised that this number can only be contacted at usual office hours.)

2 Composition/Data on components

- **Chemical characterization**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

7757-79-1	potassium nitrate		25-50%
24551-51-7	Natriumcarbonat	Warning:  3.3/2A	10-25%
10043-35-3	boric acid	Danger:  3.7/1B	10-25%

3 Hazards identification

- **Hazard description:**



Toxic
Oxidizing

- **Information pertaining to particular dangers for man and environment:**

May impair fertility
May cause harm to the unborn child
Contact with combustible material may cause fire.
Irritating to eyes.

- **Classification system:**

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

- **NFPA ratings (scale 0 - 4)**



Health = 1
Fire = 3
Reactivity = 0

The substance possesses oxidizing properties.

- **WHMIS-ratings (scale 0 - 4)**



Health = *1
Fire = 3
Reactivity = 0

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- **GHS label elements**

**Danger**

3.7/1B - May damage fertility or the unborn child.

**Warning**

3.3/2A - Causes serious eye irritation.

- **Prevention:**

Wear protective gloves/protective clothing/eye protection/face protection.

Use personal protective equipment as required.

- **Response:**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned: Get medical advice/attention.

- **Storage:**

Store locked up.

- **Disposal:**

Dispose of contents/container in accordance with local/regional/national/international regulations.

4 First aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Rinse out mouth and then drink plenty of water.
Seek immediate medical advice.

5 Fire fighting measures

- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards caused by the material, its products of combustion or resulting gases:**
During heating or in case of fire poisonous gases are produced.
- **Protective equipment:** Mount respiratory protective device.
- **Additional information**
Cool endangered receptacles with water spray.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Person-related safety precautions:**
Wear protective equipment. Keep unprotected persons away.
Avoid formation of dust.
Keep away from ignition sources
- **Measures for environmental protection:** Do not allow to enter sewers/ surface or ground water.

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· **Measures for cleaning/collecting:** Pick up mechanically.

7 Handling and storage

- **Handling:**
- **Information for safe handling:**
 - Prevent formation of dust.
 - Store in cool, dry place in tightly closed receptacles.
 - Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.

8 Exposure controls and personal protection

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

- **Components with limit values that require monitoring at the workplace:**

10043-35-3 boric acid

TLV	Short-term value: 6* mg/m ³ Long-term value: 2* mg/m ³ *as inhalable fraction
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- **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.
 - Avoid contact with the eyes and skin.
- **Breathing equipment:**
 - Use suitable respiratory protective device in case of insufficient ventilation.
 - Filter P2
- **Protection of hands:** Plastic gloves
- **Material of gloves**
 - Chloroprene rubber, CR
 - Butyl rubber, BR
 - Nitrile rubber, NBR
 - Natural rubber, NR

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material**
 - The determined penetration times according to EN 374 part III are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.
 - Value for the permeation: Level \geq 6
- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing

9 Physical and chemical properties

- **General Information**

Form: Solid

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Color:	Light grey
Odor:	Odorless
· Change in condition	
Melting point/Melting range:	Undetermined.
Boiling point/Boiling range:	Undetermined.
· Flash point:	Not applicable.
· Flammability (solid, gaseous):	Contact with combustible material may cause fire.
· Auto igniting:	Product is not selfigniting.
· Danger of explosion:	Product does not present an explosion hazard.
· Density:	-
· Solubility in / Miscibility with Water:	Partly soluble.
· Solvent content:	
Organic solvents:	0.0 %
· Solids content:	100.0 %

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions** Reacts with reducing agents.
- **Dangerous products of decomposition:**
Nitrogen oxides
Nitrogen oxides (NO_x)

11 Toxicological information

- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

10043-35-3 boric acid

Oral LD50 2660 mg/kg (Ratte)

- **Primary irritant effect:**
- **on the skin:** No irritant effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Irritant

Product is suspected to cause birth defects.

12 Ecological information

- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

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13 Disposal considerations

- **Product:**
- **Recommendation:** Must be specially treated adhering to official regulations.
- **Uncleaned packagings:**
- **Recommendation:**
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.
- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **DOT regulations:**
- **Hazard class:** 5.1
- **Identification number:** UN1486
- **Packing group:** III
- **Proper shipping name (technical name):** POTASSIUM NITRATE, mixture

- **Land transport ADR/RID (cross-border):**



- **ADR/RID class:** 5.1 (O2) Oxidizing substances
- **Danger code (Kemler):** 50
- **UN-Number:** 1486
- **Packaging group:** III
- **Description of goods:** 1486 POTASSIUM NITRATE, mixture

- **Maritime transport IMDG:**

- **IMDG Class:** 5.1
- **UN Number:** 1486
- **Packaging group:** III
- **EMS Number:** F-A,S-Q
- **Marine pollutant:** No
- **Proper shipping name:** POTASSIUM NITRATE, mixture

- **Air transport ICAO-TI and IATA-DGR:**



- **ICAO/IATA Class:** 5.1
- **UN/ID Number:** 1486
- **Label:** 5.1
- **Packaging group:** III
- **Proper shipping name:** POTASSIUM NITRATE, mixture

- **UN "Model Regulation":** UN1486, POTASSIUM NITRATE, mixture, 5.1, III

15 Regulations

- **Sara**
- **Section 355 (extremely hazardous substances):**
None of the ingredient is listed.

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· Section 313 (Specific toxic chemical listings):	
None of the ingredients is listed.	

· TSCA (Toxic Substances Control Act):	
7757-79-1	potassium nitrate
10043-35-3	boric acid

· Proposition 65	
· Chemicals known to cause cancer:	
None of the ingredients is listed.	

· Chemicals known to cause reproductive toxicity for females:	
None of the ingredients is listed.	

· Chemicals known to cause reproductive toxicity for males:	
None of the ingredients is listed.	

· Chemicals known to cause developmental toxicity:	
None of the ingredients is listed.	

· Cancerogenity categories	
· EPA (Environmental Protection Agency)	
None of the ingredients is listed.	

· IARC (International Agency for Research on Cancer)	
None of the ingredients is listed.	

· NTP (National Toxicology Program)	
None of the ingredients is listed.	

· TLV (Threshold Limit Value established by ACGIH)	
10043-35-3	boric acid
	A4

· MAK (German Maximum Workplace Concentration)	
None of the ingredients is listed.	

· NIOSH-Ca (National Institute for Occupational Safety and Health)	
None of the ingredients is listed.	

· OSHA-Ca (Occupational Safety & Health Administration)	
None of the ingredients is listed.	

· Product related hazard informations:	
The product has been classified and marked in accordance with directives on hazardous materials.	

· Hazard symbols:	
Toxic	
Oxidizing	

· Hazard-determining components of labelling:	
boric acid	

· Risk phrases:	
May impair fertility	
May cause harm to the unborn child	
Contact with combustible material may cause fire.	
Irritating to eyes.	

· Safety phrases:	
Avoid exposure - obtain special instructions before use.	
Keep away from sources of ignition - No smoking.	
Keep away from combustible material.	
When using do not eat or drink.	
Do not breathe dust.	
Avoid contact with eyes.	

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In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Wear suitable protective clothing.
In case of accident or if you feel unwell, seek medical advice immediately.
This material and its container must be disposed of as hazardous waste.

· **National regulations:**

· **Water hazard class:** Water hazard class 1 (Self-assessment): slightly 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:** Abteilung Umweltschutz

· **Contact:** Herr Marcus Müller

· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

ACGIH: American Conference of Governmental Industrial Hygienists

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

· *** Data compared to the previous version altered.**

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