Film developer

Fine grain - Strong accutance
Suitable for push processing

BERGGER BERSPEED

1. Identification

Product identifier :	BERGGER Berspeed
Application :	Photographic developer
Supplier :	BERGGER SAS, Les plaines de Rejatas, 87260 Vicq-sur-Breuilh
Tél. :	09 66 89 50 26
Emergency (France) :	+33 (0)1 45 42 59 59

2. Hazards identification

Part 1

Classification according to Regulation (EC) No 1272/2008

Acute Tox. 4, H302 Harmful if swallowed.
Acute Tox. 4, H312 Harmful in contact with skin.
Skin Sens. 2, H315 Causes skin irritation.
Eye Dam. 2, H319 Causes serious eye irritation.
Acute Tox.3, H335 May cause respiratory irritation.
Repr. 1B, H360 May damage fertility or the unborn child.

Hazard pictograms

Signal word

Danger

Hazard-determining components of labelling
Sodium Sulphite
Sodium Tetraborate
boric acid

Hazard statements

Acute Tox. 4, H302 Harmful if swallowed.
Acute Tox. 4, H312 Harmful in contact with skin.
Skin Sens. 2, H315 Causes skin irritation.
Eye Dam. 2, H319 Causes serious eye irritation.
Acute Tox.3, H335 May cause respiratory irritation
Repr. 1B, H360 May damage fertility or the unborn child.

Precautionary statements

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust
P264 Wash … thoroughly after handling.
P270 Do no eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352 **If on skin** wash with plenty of soap and water.
P304+P340 **If inhaled** remove victim to fresh air and keep at rest in a position comfortable for breathing.
P301+P312 **If swallowed** call a POISON CENTER or doctor/physician if you feel unwell.
P305+P351+P338 **If in eyes** rinse cautiously with water for several minutes, Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 **If exposed or concerned (pregnant)** get medical advice/attention.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P330 – Rinse mouth.
P332+P313 If skin irritation occurs get medical advice/attention.
P337+P313 If eye irritation persists: get medical advice/attention.
P362+P364 Take off contaminated clothing and wash before reuse.
P403+P233 Store in a well-ventilated place & keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/ international regulations.

Part 2

Classification according to Regulation (EC) No 1272/2008

Acute Tox. 3, H301 Toxic if swallowed.
Acute Tox. 4 H312 Harmful in contact with skin.
Skin Sens. 1 H317 May cause an allergic skin reaction.
Eye Dam. 1 H318 Causes serious eye damage.

Muta. 2 H341 Suspected of causing genetic defects.
Carc. 2 H351 Suspected of causing cancer.
Aquatic Acute 1 H400 Very toxic to aquatic life.
Aquatic Long-Term 2, H411 Toxic to aquatic life with long lasting effects.

Hazard pictograms

Signal word

Danger

Hazard-determining components of labelling
1,4-dihydroxybenzene (hydroquinone)
1-Phenyl-3-pyrazolidone

Hazard statements

H301 Toxic if swallowed.
H318 Causes serious eye damage.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H341 Suspected of causing genetic defects.
H351 Suspected of causing cancer.
H400 Very toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P101 If medical advice is needed, have product container or label at hand.
P102 Keep out of reach of children.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P261 Avoid breathing dust
P264 Wash … thoroughly after handling.
P270 Do no eat, drink or smoke when using this product.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 **If in eyes**: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301+P310 **If swallowed** Immediately call a POISON CENTER/doctor.
P330 Rinse mouth.
P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/ international regulations.

Part 3

Classification according to Regulation (EC) No 1272/2008

Skin Sens. 2, H315;
Eye Dam. 2, H319;
Acute Tox.3, H335;
Aquatic Long-Term 3, H412

Hazard pictograms

Signal word

Attention

Hazard-determining components of labelling
potassium bromide

Hazard statements

H315 – Causes skin irritation.
H319 – Causes serious eye irritation.
H335 – May cause respiratory irritation.
H412 - Harmful to aquatic life with long lasting effects.

Precautionary statements

P261 Avoid breathing dust
P264 Wash … thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.
P304+P340 If inhaled remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 If in eyes rinse cautiously with water for several minutes, Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: get medical advice/attention.
P403+P233 Store in a well-ventilated place & keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3. Composition/information on ingredients

Part 1 - Mixtures

Mixture of the substances listed below with harmless additions.

Dangerous components		
CAS: 7757-83-7 EINECS: 231-821-4	**Sodium Sulphite** Acute Tox. 4, H302 ; Acute Tox. 4, H312; Acute Tox. 4, H332 ; Eye Dam. 2, H319	85-95%
CAS: 1330-43-4 EINECS: 215-540-4	**Sodium Tetraborate** Acute Tox.3, H335 ; Skin Sens. 2, H315 Eye Dam. 2, H319 ; Repr. 1B, H360	5-10%
CAS: 10043-35-3 EINECS: 233-139-2	**boric acid** Repr. 1B, H360FD	0-5%
SVHC		
CAS: 10043-35-3	**boric acid**	

Part 2 - Mixtures

Mixture of the substances listed below with harmless additions.

Dangerous components		
CAS: 123-31-9 EINECS: 204-617-8	**1,4-dihydroxybenzene (hydroquinone)** Muta. 2, H341; Carc. 2, H351 Eye Dam. 1, H318 Aquatic Acute 1, H400 Acute Tox. 4, H302; Skin Sens. 1, H317	95-100%
CAS: 92-43-3 EINECS: 202-155-1	**1-Phenyl-3-pyrazolidone** Acute Tox. 3, H301 Aquatic Acute 2, H400 Aquatic Long-Term 2, H411	0-5%

Part 3 - Mixtures

Mixture of the substances listed below with harmless additions.

Dangerous components		
CAS: 7758-02-3 EINECS: 231-830-3	**potassium bromide** Skin Sens. 2, H315; Acute Tox.3, H335; Eye Dam. 2, H319; Aquatic Long-Term 3, H412	100%

4. First aid mesures

Part 1, 2 & 3

General information
Instantly remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 24 hours after the accident.

After inhalation Unlikely route of exposure as the product does not contain volatile substances. Move the exposed person to fresh air at once. Provide rest, warmth and fresh air. Get medical attention if any discomfort continues.

After skin contact Remove affected person from source of contamination. Remove contaminated clothing. Wash skin thoroughly with soap and water. Contact physician if irritation continues.

After eye contact Remove victim immediately from source of exposure. Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Contact physician if irritation persists.

After swallowing NEVER MAKE AN UNCONSCIOUS PERSON VOMIT OR DRINK FLUIDS! Remove victim immediately from source of exposure. Rinse mouth thoroughly. Drink a few glasses of water or milk. Provide rest, warmth and fresh air. Do not induce vomiting. If vomiting occurs, the head should be kept low so that stomach vomit doesn’t enter the lungs. Get medical attention.

5. Firefighting measures

Parts 1, 2 & 3

Suitable extinguishing agents
CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.
For safety reasons unsuitable extinguishing agents Water with a full water jet.

Special hazards arising from the substance or mixture Can be released in case of fire
Carbon monoxide, Nitrogen oxides (NOx), Oxides of sulphur

Advice for firefighters
Protective equipment
Do not inhale explosion gases or combustion gases.
Wear self-contained breathing apparatus.

6. Accidental release measures

Parts 1, 2 & 3

Personal precautions, protective equipment and emergency procedures
Wear protective clothing.
Avoid causing dust.

Environmental precautions:
Inform respective authorities in case product reaches water or sewage system.
Do not allow to enter drainage system, surface or ground water.

Methods and material for containment and cleaning up:
Dispose of contaminated material as waste according to item 13.

Reference to other sections
See Section 8 for information on personal protection equipment.

7. Accidental release measures

Parts 1, 2 & 3

Precautions for safe handling
Open and handle container with care.
Prevent formation of dust.

Information about protection against explosions and fires: No special measures required.

Conditions for safe storage, including any incompatibilities
Requirements to be met by storerooms and containers: No special requirements.

Information about storage in one common storage facility:
Keep away from foodstuffs, beverages and food.

Further information about storage conditions:
Store in closed original container in a dry place. Store under well-ventilated conditions at a temperature below 25°C.

Storage class Chemical storage

Specific end use(s) No further relevant information available.

8. Exposure controls/personal protection

Parts 1, 2 & 3

Control parameters

Components with limit values that require monitoring at the workplace:
123-31-9 1,4-dihydroxybenzene (hydroquinone)
WEL Long-term value: 0.5 mg/m³

Sodium Tetraborate
WEL Long-term value: 1 mg/m³

Additional information:
The lists that were valid during the compilation were used as basis.

Exposure controls

General protective and hygienic measures
The usual precautionary measures should be adhered to general rules for handling chemicals.
Keep away from foodstuffs, beverages and food.
Take off immediately all contaminated clothing.
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.
Do not eat, drink or smoke while working.

Personal protective equipment

Breathing equipment: Not required.

Protection of hands:
Protective gloves. The protective gloves to be used must comply with the specifications of

the EC directive 89/686/EEC and the resultant standard EN 374.
This recommendation applies only to the product stated in the Safety Data Sheet and supplied by us as well as to the purpose specified by us.
Only use chemical-protective gloves with CE-labelling of category III.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves
Nitrile rubber, NBR
Butyl rubber, BR
Fluorocarbon rubber (Viton)
Chloroprene rubber, CR
Recommended thickness of the material: >= 0.5 mm

Penetration time of glove material
Value for permeation: Level £ <= (480 min)
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.

For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:
Synthetic gloves

Value for permeation: Level:
>= 3 (60 min)

Not suitable are gloves made of the following materials:
Natural rubber, NR

Eye protection: Tightly sealed safety glasses or face shield.

Body protection: Protective work clothing.

9. Physical and chemical properties

Information on basic physical and chemical properties			
	Part 1	**Part 2**	**Part 3**
Appearance			
Form	**Solid**	**Solid**	**Solid**
Colour	**Whitish**	**Whitish**	**Whitish**
Odour	**Odourless**	**Odourless**	**Odourless**
Ignition temperature	**Not determinated**		
Self-inflammability	**Product is not selfigniting.**		
Danger of explosion	**Product is not explosive.**		
Solubility in / Miscibility with			
Water	**100%**	**100%**	**100%**
Solvent content			
Solids content	**100.0%**	**100.0%**	**100.0%**
Other information	**No further relevant information available.**		

10. Stability and reactivity

Parts 1, 2 & 3

Reactivity

Chemical stability
Stable under the prescribed storage conditions. No particular stability concerns.

Possibility of hazardous reactions No dangerous reactions known

Conditions to avoid Avoid contact with acids. Avoid excessive heat for prolonged periods of time.

Materials to avoid Strong acids. Strong oxiziders. Avoid contact with other photographic solutions and/or cleaning compounds.

Hazardous decomposition products:
Fire or high temperatures create: Vapors/gases/fumes of: Oxides of: Sulphur, borate/boron oxides, lithium oxides, hydrogen bromide.

Sodium sulfite may, in acidic solutions, release toxic and hazardous fumes of sulfur oxides, including sulfur dioxide.

11. Toxicological information

Parts 1, 2 & 3

Information on toxicological effects
This chemical formulation has not been tested for health effects. Exposure effects listed are based on existing health data for the individual components which comprise the mixture.

Acute toxicity **LD/LC50 values that are relevant for classification:**		
Sodium Sulphite		
Oral	LD 50	2610 mg/kg (rat)
Sodium Tetraborate		
Oral	LD50	2660 mg/kg (rat)
123-31-9 1,4-dihydroxybenzene (hydroquinone)		
Oral Dermal	LD50 LD50	320 mg/kg (rat) >900 mg/kg (rat)
1-PHENYL-3-PYRAZOLIDONE		
Oral	LD50	320 mg/kg (rat)
Potassium bromide		
Oral	LD50	500-5000 mg/kg (rat)
10043-35-3 boric acid		
Oral	LD50	2660 mg/kg (rat)

Subacute to chronic toxicity:
Limited evidence of a carcinogenic effect.
Possible risk of irreversible effects.

Additional toxicological information:
Hydroquinone has been included in the German «TRGS 905» (Technical Rules for Dangerous Substances/Index of carcinogen and mutagen substances or substances dangerous to reproductive systems), and has been classified as «Category 3» of carcinogen and mutagen substances (3 = category of lowest dangerousness). The according EU committees have not yet evaluated this classification.

CMR effects (carcinogenity, mutagenicity and toxicity for reproduction)
Muta. 2, Carc. 2 for Hydroquinone

12. Ecological informations

Parts 1,2 & 3

Toxicity

Dangerous for the environment: May cause long-term adverse effects in the aquatic environment.

Sodium Sulphite
LC 50, 96 hrs, Fish mg/l 220 - 460
EC 50, 48 hrs, Daphnia, mg/l 69

HYDROQUINONE
EC 50, 48 hrs, Daphnia, mg/l 0.05
IC 50, 72 hrs, Algae, mg/l 1.0
LC 50, 96 hrs, Fish mg/l 0.10-0.18 (Fathead Minnow)

1-PHENYL-3-PYRAZOLIDONE
LC 50, 96 hrs, Fish mg/l >1

Name Boric Acid
EC 50, 48 hrs, Daphnia, mg/l 115-153
LC 50, 96 hrs, Fish mg/l 600

Persistence and degradability Not determined

Bioaccumulative potential Not determined

Behaviour in environmental systems: Not determined

Mobility in soil No further relevant information available.

Ecotoxical effects: No further relevant information available.

Remark: Very toxic for fish

Other adverse effects No further relevant information available.

13. Disposal considerations

Parts 1, 2 & 3

Waste treatment methods
Recommendation
Must not be disposed of together with household garbage. Do not allow product to reach sewage system. Must be specially treated under adherence to official regulations.

European waste catalogue
09 01 01* water-based developer and activator solutions

Uncleaned packagings
Recommendation:
Non contaminated packagings can be used for recycling.
Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.

14. Transport information

Parts 1,2 & 3

UN-Number **ADR, IMDG, IATA**	UN2811 UN3077
UN proper shipping name **ADR** **IMDG, IATA**	TOXIC SOLID ORGANIC, N.O.S. (1-Phenyl-3-pyrazolidone) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (1,4-dihydroxybenzene (hydroquinone)) TOXIC SOLID ORGANIC, N.O.S. (1-Phenyl-3-pyrazolidone) ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (hydroquinone)
Transport hazard class(es) **ADR, IMDG, IATA**  **Class**	6 Toxic and Infectious Substances 9 Miscellaneous dangerous substances and articles.
Packing group **ADR, IMDG, IATA**	III

Environmental hazards **Marine pollutant** **Special Marking (ADR)** **Special Marking (IATA)**	 Symbol (fish and tree) Symbol (fish and tree) Symbol (fish and tree)
Special precautions for user **Kemler number**	Warning: Toxic substances. Miscellaneous dangerous substances and articles. 90
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable
Transport/Additional information: **ADR** **IMDG** **IATA**	These substances when transported in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids or having a net mass of 5 kg or less for solids, are not subject to any other provisions of these Regulations provided the packagings meet the general. See the following notes. Goods are not subject to the provisions in accordance with the special provision 375 ADR. Goods are not subject to the provisions in accordance with 2.10.2.7 IMDG-Code. Goods are not subject to the provisions in accordance with the special provision 197 IATADGR.

15. Regulatory information

Parts 1, 2 & 3

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

Information about limitation of use
Employment restrictions concerning pregnant and lactating women must be observed.

Class	Share in %
I	95.2

Water hazard class: Water danger class 3 (Self-assessment): highly water-endangering.

Other regulations, limitations and prohibitive regulations
Substances of very high concern (SVHC) according to REACH, Article 57
10043-35-3 boric acid

Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing data specification sheet:
BERGGER SAS, Les Plaines de Réjatas, 87260 Vicq Sur Breuilh, France.
Tel. +33 (0)9 66 89 50 26;
email: info@bergger.com
www.bergger.com

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)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonised System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
Repr. 1B: Reproductive toxicity, Hazard Category 1B

Sources
applicable EEC directives: 1907/2006, 1272/2008
European Photographic Chemical Industry Code of Practice For Classification And Labelling Material Safety Data
Sheet, Misc. manufacturers. Dangerous Properties of Industrial Chemicals, 6.edition, N.Sax, 1984.