Material Safety Data Sheet

AVASTIN(R) Vials (400 mg)

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name		AVASTIN(R) Vials (400 mg)
Product code		SAP-10062575
Synonyms	-	AVASTIN(R) Vials (400 mg/16 ml)

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

Use	-	formulated pharmaceutical active substance (antineoplastic)

1.3. Details of the supplier of the safety data sheet

Company information

Enquiries:
Hoffmann-La Roche Inc.
340 Kingsland Street
USA-Nutley, N.J. 07110-1199
United States of America

Phone 001-973/235 50 00
E-Mail info.sds@roche.com

US Emergency phone: (800)-827-6243
US Chemtrec phone: (800)-424-9300

Local representation:

1.4. Emergency telephone number

Emergency telephone number	US emergency phone: (800)-827-6243

SECTION 2: Hazards identification

Emergency Overview

Form		aqueous solution sterile liquid
Color		colorless
Hazard Overview	-	May cause allergic reactions. - May cause birth defects based on animal data.

Potential Health Effects	- Exposure: Inhalation, Ingestion, Skin contact, Eye contact - Target Organs: Hematopoietic/blood system, Immune System - Acute Effects: May cause allergic reactions., This material is not likely to be significantly absorbed via occupational routes of entry due to its chemical structure and large molecular weight. - Chronic Effects: May cause blood system effects. - Carcinogenicity: not listed by NTP, IARC or OSHA

Classification of the substance or mixture / Label elements

GHS Classification	no classification and labelling according to GHS

Other hazards

Additional Health Information	- Conditions aggravated: Hypersensitivity to this material and other materials in its chemical class. - Reproductive toxicity: May cause birth defects. Since this material may effect the developing fetus, females planning to have a child and pregnant women should exercise caution regarding exposure. - It is also advisable for nursing mothers to exercise caution regarding exposure.

SECTION 3: Composition/information on ingredients

Characterization	bevacizumab and other inactive ingredients

Ingredients	**Concentration**
Bevacizumab CAS: 216974-75-3	~ 2 %

SECTION 4: First aid measures

4.1. Description of first aid measures

Eye contact	- rinse immediately with tap water for 10 minutes - open eyelids forcibly
Skin contact	- remove immediately contaminated clothes, wash affected skin with water and soap - do not use any solvents
Inhalation	- remove the casualty to fresh air and keep him/her calm - in the event of symptoms get medical treatment

4.2. Most important symptoms and effects, both acute and delayed

Note	- no information available

4.3. Indication of any immediate medical attention and special treatment needed

Note to physician	-	treat symptomatically

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	-	water spray jet, dry powder, foam, carbon dioxide - adapt extinguishing media to surrounding fire conditions
Flash point (liquid)		not applicable

5.2. Special hazards arising from the substance or mixture

Specific hazards	-	no particular hazards known

5.3. Advice for firefighters

Protection of fire-fighters	-	precipitate gases/vapours/mists with water spray

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	-	no special precautions required

6.2. Environmental precautions

Environmental protection	-	no special environmental precautions required

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	-	collect spilled solutions with inert adsorbent and hand over to waste removal

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Suitable materials	-	aluminium, glass, enamel, stainless steel
Note	-	do not shake solution

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	- 2 - 8 °C - do not freeze - protected from light
Validity	- 2 to 8 °C, in the unopened original container, see "best use before" date stated on the label
Packaging materials	- vials

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Threshold value (Roche) air	- IOEL (Internal Occupational Exposure Limit): 0.05 mg/m3	*1

8.2. Exposure controls

Respiratory protection	- Respiratory protection is recommended as a precaution to minimize exposure. Effective engineering controls are considered to be the primary means to control worker exposure. Respiratory protection should not substitute for feasible engineering controls. - respiratory protection not necessary during normal operations
Hand protection	- protective gloves (eg made of neoprene, nitrile or butyl rubber)
Eye protection	- safety glasses

*1 referring to: Bevacizumab

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Color	colorless
Form	aqueous solution sterile liquid
Density	1.031 g/ml
pH value	5.9 to 6.3
Boiling temperature	~ 100 °C

9.2. Other information

Note	- no information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Note	-	no information available

10.2. Chemical stability

Stability	-	does not contain any antimicrobial preservative; therefore, care must be taken to ensure the sterility of the prepared solution

10.3. Possibility of hazardous reactions

Note	-	no information available

10.4. Conditions to avoid

Note	-	no information available

10.5. Incompatible materials

Note	-	no information available

10.6. Hazardous decomposition products

Note	-	no information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	-	not bioavailable by oral administration	*1
	-	NOEL 50 mg/kg (i.v., cynomolgus monkey)	*1
Chronic toxicity	-	LOAEL 2 mg/kg/w (i.v., cynomolgus monkey; 26 weeks)	*1
Reproductive toxicity	-	teratogenic and embryotoxic (i.v., rabbit)	*1
	-	should be administered during pregnancy only if the potential benefit justifies the potential risk to the fetus	*1
Note	-	humanized monoclonal antibody which binds to and inactivates the vascular endothelial growth factor (VEGF)	*1
	-	bevacizumab is effective in the treatment of advanced stages of colon and rectum carcinoma	*1
	-	therapeutic dose: 5 mg/kg/2w	*1
	-	elimination half-life: 20 d	*1
	-	side effect(s) during therapy: tendency to bleeding, thrombophlebitis, proteinuria	*1

*1 referring to: Bevacizumab

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity

- no adverse influence on substrate biodegradation (activated sludge)
  concentration (14 d) 100 mg active substance/l
  (Manometric Respirometry Test, OECD No. 301 F)
- barely toxic for algae (nominal concentration = 100 mg/l), growth inhibition possibly due to turbidity caused by test substance (Scenedesmus (=Desmodesmus) subspicatus)
  ErC_{50} (72 h) > 100 mg active substance/l
  EbC_{50} (72 h) ~ 100 mg active substance/l
  NOEC (72 h) < 100 mg active substance/l
  (OECD No. 201)
- barely toxic for planktonic crustaceans (nominal concentration = 100 mg/l) (Daphnia magna)
  EC_{50} (48 h) > 100 mg active substance/l
  NOEC (48 h) 100 mg active substance/l
  (OECD No. 202)

12.2. Persistence and degradability

Ready biodegradability

- readily biodegradable
  78 % BOD/ThOD, 28 d
  96 % DOC, 28 d
  (Manometric Respirometry Test, OECD No. 301 F)

12.3. Bioaccumulative potential

Note

- no information available

12.4. Mobility in soil

Note

- no information available

12.5. Results of PBT and vPvB assessment

Note

- no information available

12.6. Other adverse effects

Note

- no information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues

- observe local/national regulations regarding waste disposal

SECTION 14: Transport information

Note	- not classified by transport regulations, proper shipping name non-regulated

SECTION 15: Regulatory information

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

TSCA Status	- FDA Exemption - not on inventory
Reporting Requirements	- The United States Environmental Protection Agency (USEPA) has not established a Reportable Quantity (RQ) for releases of this material. - In New Jersey, report all releases which are likely to endanger the public health, harm the environment or cause a complaint to the NJDEPE Hotline (1-609-292-5560) and to local officials. - State and local regulations vary and may impose additional reporting requirements.

SECTION 16: Other information

Edition documentation	- changes from previous version in sections 1

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Note	- no information available

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Note to physician	-	treat symptomatically

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