OZ BIOSCIENCES
The art of delivery systems

MATERIAL SAFETY DATA SHEET

PRODUCT AND COMPANY INFORMATION

- **Product name:** Ab-DeliverIN™ - Antibody Delivery Reagent.
- **Catalog number:** AI20100, AI20250, AI20500, AI21000
- **Chemical name or synonyms:** none

- **Contact:**

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HAZARDS IDENTIFICATION

Ingredients:
80% Ethanol (CAS: 64-17-5, EINECS: 200-578-6); F; R 11; S7-S16
20% Water (CAS: 7732-18-5, EINECS: 231-791-2)

Risk advice to man and the environment: Is to be classified according to EEC directive 67/548 and 99/45 as hazardous.
Classification: Highly flammable.
Warnings: R11, Highly flammable.
Note: slightly hazardous to water and ground.

HEALTH HAZARD DATA

- **Health Effects:**
  Adverse health effects are not expected from the recommended use of this product. Some people may be allergic to the material. Symptoms of exposure may include: fatigue, coughing, weight loss and shortness of breath.
- **Primary Routes of Entry:** Skin or eye contact from splashes
- **Medical Conditions Aggravated by Exposure:** not known
- **Emergency First Aid Procedures:**
  - **Skin contact**- Flush contaminated areas with large volume of water for at least 15 minutes. Remove contaminated clothing. Get medical attention if the skin remains irritated.
  - **Eye contact**- Flush contaminated eye(s) with large volume of water for at least 15 minutes. Get medical attention if eye(s) remain irritated.
  - **Ingestion-** No adverse effects are reasonably anticipated. If any symptoms occur, keep victim warm and calm and get medical attention immediately.
  - **Inhalation-** Move victim to fresh air. If breathing becomes difficult, seek medical assistance immediately.

PHYSICAL AND CHEMICAL PROPERTIES

- **Appearance and odor information:** Colorless liquid, alcoholic odor.
- **Boiling point:** 78°C
- **Flash point:** 12°C (53.6°F)
- **Fire promoting:** substance does not have any oxidizing properties.

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- **Ignition temperature:** 425 °C.
- **Lower Explosion Limit (% by volume):** 3.5%
- **Upper Explosion Limit (% by volume):** 15%
- **Vapour pressure at 20°C:** 57 hPa
- **Vapour density:** N/A
- **Solubility in water:** fully miscible

PHYSICAL HAZARD DATA

- **Special Fire Fighting Procedures:**
  Wear self-contained breathing apparatus and protective garments. Remove this product from fire scene.
- **Unusual Fire and Explosion Hazard:**
  Heating leads to increase in pressure, danger of bursting and explosion.
- **Extinguishing Media:**
  Dry powder, carbonic acid or foam extinguisher (water is having a small efficiency factor).

REACTIVITY DATA

- **Incompatibility (material to avoid):**
  None.
- **Hazardous Decomposition Products:**
  No dangerous decomposition products known.
- **Will Hazardous Polymerization Occur:**
  None.
- **Is the product stable(y; n; n/a; n/i):**
  Yes, under normal handling and storage conditions.
- **Condition to avoid:**
  Vapour forms explosive mixture with air. Keep away from source of heat or ignition.

SPILL AND LEAK PROCEDURES

- **Steps to be taken in Case Material is Released or Spilled:**
  Absorb spilled substance with fluid binders. Contain and collect spillage with non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite). Once spent, place all the contaminated disposables into a suitable container, seal, label and dispose.
- **Waste Disposal Method:**
  Contact a licensed professional waste disposal service to dispose of this material. Dispose in accordance with governmental environmental regulations. Prevent discharge of the liquid into the sewage system, cess pits and cellars. Vapours produce potentially explosive atmosphere.

EXPOSURE CONTROL INFORMATION

- **Ventilation Data:**
  Provide adequate general exhaust ventilation.
- **Respiratory Protection:**
  None required if ventilation is adequate.
- **Protective Gloves:**
  Rubber or chemical resistant gloves should be worn.
- **Other Protective Equipment:**
  Safety glasses with side shields are advised. Eye wash stations and deluge showers should also be available. Finally, a lab coat should be worn.
- **Other Engineering Controls:**
  None
- **Work Practices:**
  Good laboratory technique should be used when handling this product. Do not pipette with mouth. Observe appropriate chemical hygiene. Avoid contact with skin or eyes
- **Hygienic Practices:**
  Do not eat, drink or smoke while working with reagents. Upon completion of work activities involving this product, wash any exposed body areas thoroughly with soap and water.

TOXILOGICAL INFORMATION

- **Ethanol**

Oral toxicity:	LD50 rat 7.060 mg / kg
Toxicity (inhalation):	LD50 mouse 19000 ppm (4h)
Toxicity (others):	LD50 intraperitoneal rat 4.070 mg / kg

- **Toxicological information for the product**
  Intoxication has so far not become known.

ENVIRONMENTAL INFORMATION

- **Ethanol:**

Toxicity to fish:	LC50 Leuciscus idus 8.000 mg / L (48 h)
Toxicity to algae:	EC50 chlorella pyrenoidosa 9.000 mg / L
Toxicity to bacteria:	LOEC Pseudomonas putida 6.000 mg / L (16 h)
Toxicity to daphnia:	EC50 Daphnia magna 14-26 mg / L

REGULATORY INFORMATION

- **Labelling according to EC-Directives**

Note:	This product must be labeled in accordance with EEC directive 67/548 and 99/45.	
Hazard symbol:	F	Highly flammable
Warnings:	R11	Highly flammable
Safety advice:	S7	Keep container tightly closed.
	S16	Keep away from sources of ignition. No smoking.

SPECIAL PRECAUTIONS

- **Precaution to be taken in Handling and Storage:** Exhaust fumes at source. Store between +2°C and +8°C. Do not freeze. .Do not store with toxic and fire-promoting substances.

- **Maintenance Precautions:** None.

- **Other Precautions:** None.

- **Other Comments:**
  N-No, Y-Yes, N/A-Not Applicable or no information.
  The information provided is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. OZ Biosciences shall not be held liable for any damage resulting from handling or from contact with the product.
  Special permission has been granted in accordance with EU Directive 99/45, Article 10, which permit small packages of less to 125mL containing materials that are highly flammable to be unlabelled with the hazard identification information given in the safety data sheet.