



# MERCK

Merck Animal Health  
One Merck Dr.  
Whitehouse Station, NJ 08889

## MATERIAL SAFETY DATA SHEET

Merck Animal Health urges each user or recipient of this MSDS to read the entire data sheet to become aware of the hazards associated with this material.

### SECTION 1. IDENTIFICATION OF SUBSTANCE AND CONTACT INFORMATION

**MSDS NAME:** Rabies Vaccine, Killed Virus

**SYNONYM(S):** Rabies Vaccine, Killed Virus  
Nobivac 1 Rabies  
Nobivac 3 Rabies  
Nobivac 3 Rabies CA  
Rabdomun Rabies Vaccine  
Quantum Rabies  
Fiovax T

**MSDS NUMBER:** SP001206

**EMERGENCY NUMBER(S):** (908) 423-6000 (24/7/365) English Only

Transportation Emergencies - CHEMTREC:  
(800) 424-9300 (Inside Continental USA)  
(703) 527-3887 (Outside Continental USA)  
Rocky Mountain Poison Center (For Human Exposure):  
(303) 595-4869

Animal Health Technical Services:  
For Animal Adverse Events: Small Animals and Horses: (800) 224-5318  
For Animal Adverse Events: Livestock: (800) 211-3573  
For Animal Adverse Events: Poultry: (800) 219-9286

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**MERCK MSDS HELPLINE:** (800) 770-8878 (US and Canada)  
(908) 473-3371 (Worldwide)  
Monday to Friday, 9am to 5pm (US Eastern Time)

### SECTION 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

Suspension  
Colorless with a white precipitate  
Odor unknown  
May cause allergic reactions in susceptible individuals.

#### POTENTIAL HEALTH EFFECTS:

The toxicological properties of this material have not been characterized in humans. Therefore, laboratory or process control systems and appropriate work practices should be in place to minimize the potential for inhalation exposure, skin contact, eye contact, or ingestion when working with this material.

This product is a vaccine for use in animals. This vaccine is not pathogenic to humans or animals. Local irritation to the eyes, skin, or respiratory tract may occur following direct contact or inhalation of the product. As with any vaccine, exposure may cause hypersensitivity reactions.

## LISTED CARCINOGENS

No carcinogens or potential carcinogens listed by OSHA, IARC, NTP or ACGIH are present in concentrations >0.1% in this mixture.

**ADDITIONAL INFORMATION:** The preservatives in the product(s) may cause allergic-type reactions, including anaphylactic shock, in susceptible individuals. Individuals allergic or sensitive to antibiotics similar to those used as preservatives in the formulation(s) may also be sensitive to the product(s).

## SECTION 3. COMPOSITION AND INFORMATION ON INGREDIENTS

**PRODUCT USE:** Vaccine

**CHEMICAL FORMULA:** Mixture.

The formulations for these products are proprietary information. These formulations have the same hazardous profile; however, the presence of hazardous ingredients may vary by formulation. Only hazardous ingredients in concentrations of 1% or greater and/or carcinogenic ingredients in concentrations of 0.1% or greater are listed in the Chemical Composition table. Active ingredients in any concentration are listed. For additional information about carcinogenic ingredients see Section 2.

The product(s) may contain preservatives, as listed, in concentrations less than 1%.

## CHEMICAL COMPOSITION

INGREDIENT	CAS NUMBER	PERCENT
Neomycin Sulfate (Preservative)	1405-10-3	< 1
Preservative (Thimerosal)	54-64-8	< 1

**ADDITIONAL INFORMATION:** This MSDS is written to provide health and safety information for individuals who will be handling the final product formulation during research, manufacturing, and distribution. For health and safety information for individual ingredients used during manufacturing, refer to the appropriate MSDS for each ingredient. Refer to the package insert or product label for handling guidance for the consumer.

## SECTION 4. FIRST AID MEASURES

**INHALATION:** Remove to fresh air. If any trouble breathing, get immediate medical attention. Administer artificial respiration if breathing has ceased. If irritation or symptoms occur or persist, consult a physician.

**SKIN CONTACT:** In keeping with good hygienic practices, wash exposed areas thoroughly with soap and water.

**EYE CONTACT:** As with any material contacting the eye, it is recommended to rinse eyes with water.

**INGESTION:** Rinse mouth and drink a glass of water. Do not induce vomiting unless under the direction of a qualified medical professional or Poison Control Center. If symptoms persist, consult a physician.

**NOTE TO PHYSICIAN:** This product is a rabies vaccine. Accidental injection may cause local swelling. This preparation contains preservatives (neomycin sulfate and thimerosal) which may cause allergic reactions in susceptible individuals.

## SECTION 5. FIRE FIGHTING MEASURES

### FLAMMABILITY DATA:

Flash Point: Not determined (liquids) or not applicable (solids).

### SPECIAL FIRE FIGHTING PROCEDURES:

Wear full protective clothing and self-contained breathing apparatus (SCBA).

### SUITABLE EXTINGUISHING MEDIA:

Carbon dioxide (CO<sub>2</sub>), extinguishing powder or water spray.

See Section 9 for Physical and Chemical Properties.

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### PERSONAL PRECAUTIONS:

Wear appropriate personal protective equipment as specified in Section 8. Keep personnel away from the clean-up area.

### SPILL RESPONSE / CLEANUP:

All spills should be handled according to site requirements and based on precautions cited in the MSDS. In the case of liquids, use proper absorbent materials. For laboratories and small-scale operations, incidental spills within a hood or enclosure should be cleaned by using a HEPA filtered vacuum or wet cleaning methods as appropriate. For large dry or liquid spills or those spills outside enclosure or hood, appropriate emergency response personnel should be notified. In manufacturing and large-scale operations, HEPA vacuuming prior to wet mopping or cleaning is required.

See Sections 9 and 10 for additional physical, chemical, and hazard information.

## SECTION 7. HANDLING AND STORAGE

### HANDLING:

Keep containers adequately sealed during material transfer, transport, or when not in use. Wash face, hands, and any exposed skin after handling. Do not eat, drink, or smoke when using this substance or mixture.

Appropriate handling of this material is dependent on many factors, including physical form, duration and frequency of process or task, and effectiveness of engineering controls. Site-specific risk assessments should be conducted to determine the feasibility and the appropriateness of all exposure control measures. See Section 8 (Exposure Controls) for additional guidance.

### STORAGE:

Store between 2 and 8 deg C. Do not freeze. Store in dark container or away from light.

See Section 8 for exposure controls and additional safe handling information.

## SECTION 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

### OCCUPATIONAL EXPOSURE BAND (OEB):

Neomycin: OEB 1:  $\geq 1000$  mcg/m<sup>3</sup>. Materials in an OEB 1 category are considered to be relatively non-hazardous. The OEB is a range of airborne concentrations expressed as an 8-hour Time Weighted Average (8-hr. TWA) and is intended to be used with Industrial Hygiene Risk Assessment to assist with industrial hygiene sampling and selection of proper controls for worker protection. Consult your site safety and industrial hygiene staff for guidance on handling and control strategies..

### INTERNAL OCCUPATIONAL EXPOSURE LIMIT (8-hr TWA):

2000 mcg/m<sup>3</sup>

### Wipe Limit:

100 mcg/100 cm<sup>2</sup>

### EXPOSURE CONTROLS

The health hazard risks of handling this material are dependent on many factors, including physical form, duration and frequency of process or task, and effectiveness of engineering controls. Site-specific risk assessments should be conducted to determine the feasibility and the appropriateness of all exposure control measures. Exposure controls for normal operating or routine procedures follow a tiered strategy. Engineering controls are the preferred means of long-term or permanent exposure control. If engineering controls are not feasible, appropriate use of personal protective equipment (PPE) may be considered as alternative control measures. Exposure controls for non-routine operations must be evaluated and addressed as part of the site-specific risk assessment.

### RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT (PPE):

Respiratory Protection:	Respiratory protective equipment (RPE) may be required for certain laboratory and large-scale manufacturing tasks if potential airborne breathing zone concentrations of substances exceed the relevant exposure limit(s). Workplace risk assessment should be completed before specifying and implementing RPE usage. Potential exposure points and pathways, task duration and frequency, potential employee contact with the substance, and the ability of the substance to be rendered airborne during specific tasks should be evaluated. Initial and ongoing strategies of quantitative exposure measurement should be obtained as required by the workplace risk assessment. All RPE must conform to local and regional specifications for efficacy and performance. Consult your site or corporate health and safety professional for additional guidance.
Skin Protection:	Gloves that provide an appropriate barrier to the skin are recommended if there is potential for contact with this material. Consult your site safety staff for guidance.
Eye Protection:	Safety glasses with side shields. Use of goggles or full face protection may be required based on hazard, potential for contact, or level of exposure. Consult your site safety staff for guidance.

**Body Protection:**

In small-scale or laboratory operations, lab coats or equivalent protection is required. Disposable Tyvek or other dust impermeable suit should be considered based on procedure or level of exposure. Use of additional PPE such as shoe coverings, gauntlets, hood, or head covering may be necessary. Consult your site safety staff for guidance.

In large-scale or manufacturing operations, disposable Tyvek or other dust impermeable suit is recommended and based on level of exposure. Use of additional PPE such as shoe coverings, gauntlets, hood, or head covering may be necessary. Consult your site safety staff for guidance.

**EXPOSURE LIMIT VALUES**

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

**FORM:** Suspension  
**COLOR:** Colorless with a white precipitate  
**ODOR:** Odor unknown  
**pH:** 7.3 to 7.9  
**SOLUBILITY:**  
Water: Not determined

See Section 5 for flammability/explosivity information.

**SECTION 10. STABILITY AND REACTIVITY**

**STABILITY/ REACTIVITY:**  
Stable under normal conditions.

**INCOMPATIBLE MATERIALS / CONDITIONS TO AVOID:**  
Extremes of temperature. Direct light.

**HAZARDOUS DECOMPOSITION PRODUCTS / REACTIONS:**  
No dangerous decomposition is expected if used according to manufacturer's specifications.

**SECTION 11. TOXICOLOGICAL INFORMATION**

The toxicological properties of the mixture(s) have not been fully characterized in humans or animals.

**ACUTE TOXICITY DATA**

**SKIN:**  
Practically not irritating.

Rabies Vaccine, Killed Virus did not produce any signs of toxicity in dogs, cats, calves or cattle injected with 1 to 2 ml. The only effect observed was a local reaction to treatment (swelling at the injection site).

**EYE:**  
Practically not irritating.

**REPEAT DOSE TOXICITY DATA**

**SUBCHRONIC / CHRONIC TOXICITY:**  
Rabies Vaccine, Killed Virus caused no local or systemic effects in guinea pigs or mice treated for 14 days.

**REPRODUCTIVE / DEVELOPMENTAL TOXICITY:**  
Rabies Vaccine, Killed Virus had no effect on parturition when pregnant cows were injected with 2 ml.

**CARCINOGENICITY:**  
This material or product has not been evaluated for carcinogenicity.

**SECTION 12. ECOLOGICAL INFORMATION**

**ECOTOXICITY DATA**

There are no ecotoxicity data available for this product or its components.

## ENVIRONMENTAL DATA

There are no environmental data available for this product or its components.

### SECTION 13. DISPOSAL CONSIDERATIONS

#### MATERIAL WASTE:

Disposal must be in accordance with applicable federal, state/provincial, and/or local regulations. Incineration is the preferred method of disposal, when appropriate. Operations that involve the crushing or shredding of waste materials or returned goods must be handled to meet the recommended exposure limit(s).

#### PACKAGING AND CONTAINERS:

Disposal must be in accordance with applicable federal, state/provincial, and/or local regulations.

### SECTION 14. TRANSPORT INFORMATION

This biological is not subject to the transportation regulations of DOT, IATA, IMO, or ADR.

### SECTION 15. REGULATORY INFORMATION

#### TSCA LISTING

INGREDIENT	TSCA
Neomycin Sulfate (Preservative)	X
Preservative (Thimerosal)	X

#### U.S. STATE REGULATIONS

INGREDIENT	California Proposition 65	CARTK	NJRTK	CTRTK	MARTK
Neomycin Sulfate (Preservative)	D				
Preservative (Thimerosal)	D	X			

INGREDIENT	PARTK	MNRTK	MIRTK	RIRTK
Preservative (Thimerosal)	X		X	

Fields in the above tables that do not contain data indicate that those materials have not been listed by local regulations.

### SECTION 16. OTHER INFORMATION

Although reasonable care has been taken in the preparation of this document, we extend no warranties and make no representations as to the accuracy or completeness of the information contained therein, and assume no responsibility regarding the suitability of this information for the user's intended purposes or for the consequence of its use. Each individual should make a determination as to the suitability of the information for their particular purpose(s).

#### DEPARTMENT ISSUING MSDS:

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Whitehouse Station, NJ 08889

#### MERCK MSDS HELPLINE:

(800) 770-8878 (US and Canada)  
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Monday to Friday, 9am to 5pm (US Eastern Time)

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