

# Safety Data Sheet

## SDS acc. Hazard Communication Standard

REF: 740956.10 NucleoSpin RNA Virus (10) Page: 1/12  
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### Section 1: Identification

#### 1.1 Product Identifier / Product Name

REF 740956.10  
 Product Name NucleoSpin RNA Virus (10)  
 -  
 1 x 0.09-1.0 mg Carrier RNA  
 1 x 10 mL RAV1  
 1 x 6 mL RAV3  
 1 x 6 mL RAW  
 1 x 13 mL RE  
 1 x 13 mL H<sub>2</sub>O (RNase free)

#### 1.2 Relevant identified Uses of the Substance or Mixture and Uses advised against

**Relevant identified uses**  
 Product for Analytical Use.  
 The Exposure scenario is integrated into sections 1-16.  
**Uses advised against**  
 not described

#### 1.3 Details of the Supplier and of the Safety Data Sheet

**Manufactured by:**  
 MACHEREY-NAGEL GmbH & Co. KG  
 Neumann-Neander-Str. 6-8, 52355 Dueren, GERMANY  
 Tel.: +49 2421 969 0 E-mail: sds@mn-net.com (msds@mn-net.com)

#### 1.4 Emergency Telephone Number

For Chemical Emergency  
 Spill, Leak, Fire, Exposure, or Accident  
 Call CHEMTREC Day or Night (CCN685047)  
 Within USA and Canada: **1-800-424-9300**  
 Outside USA and Canada: **+1 703-527-3887** (collect calls accepted)

You find our current versions of SDS (22 languages) in Internet: <http://www.mn-net.com/SDS>

### Section 2: Hazard(s) Identification

#### 2.0 Classification of the complete Product



GHS02 GHS07

Signal Word WARNING

Hazard Identification	Hazard Classes/Categories
H226	Flam. Liq. 3
H302	Acute Tox. 4 oral
H412	Aquatic Chronic 3

#### 2.1 Classification of the Substance(s) or Mixture(s)

0.09-1.0 mg Carrier RNA

Signal Word Do not need labelling as hazardous  
 -

No Hazard Class

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### 10 mL RAV1



GHS07

Signal Word

WARNING

#### Hazard Identification

#### Hazard Classes/Categories

H302  
H412

Acute Tox. 4 oral  
Aquatic Chronic 3

### 6 mL RAV3

Signal Word

Do not need labelling as hazardous  
-

No Hazard Class

### 6 mL RAW



GHS02



GHS07

Signal Word

WARNING

#### Hazard Identification

#### Hazard Classes/Categories

H226  
H302

Flam. Liq. 3  
Acute Tox. 4 oral

### 13 mL RE

Signal Word

Do not need labelling as hazardous  
-

No Hazard Class

### 13 mL H<sub>2</sub>O (RNase free)

Signal Word

Do not need labelling as hazardous  
-

No Hazard Class

## 2.2 Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture

According to the implementation of GHS immediate packages only must be labelled with product identifier(s), GHS symbol(s), signal word, manufacturer name and phone number (OSHA's interpretation of HCS 2012).

Harmful chemicals/mixtures with signal word: **WARNING** and highly flammable chemicals/mixtures must not be labelled with H and P phrases **until 125 mL** (EU 1272/2008 Annex I - 1.5.2) / **until 100 mL** (Canada WHMIS 2015). This labelling exemption does not apply to U.S.A.

### 0.09-1.0 mg Carrier RNA

Do not need labelling as hazardous  
Signal Word: -

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### 10 mL RAV1



GHS07

Signal Word: WARNING

### 6 mL RAV3

Do not need labelling as hazardous

Signal Word: -

### 6 mL RAW



GHS02



GHS07

Signal Word: WARNING

### 13 mL RE

Do not need labelling as hazardous

Signal Word: -

### 13 mL H<sub>2</sub>O (RNase free)

Do not need labelling as hazardous

Signal Word: -

## 2.3 Other Hazards

### Possible Hazards from physicochemical Properties

Flammable properties. For guanidine thiocyanate CAS 593-84-0: The properties H314, H332 «Causes severe skin burns and eye damage. Harmful if inhaled.» are not relevant, because the mixture solution is buffered to pH 4-9. ---

### Information pertaining to particular Risks to Human and possible Symptoms

Cause after oral intake, impairments of health when ingested in small quantities. ---

### Information pertaining to particular Risks to the Environment

---

### Other Hazards

---

## Section 3: Composition/Information on Ingredients

### 3.1 Substances or 3.2 Mixtures

#### 0.09-1.0 mg Carrier RNA

Chemical: *carrier RNA*

CAS No.: 26763-19-6

Classification: No criteria for classification or naming of chemical is not required.

TSCA Inventory: listed (CAS 9001-99-4)

RTECS: -

MFCD:

00131937

Weight Percent: 90 - <100 %

acc. GHS: The criteria for classification are not fulfilled.

### 10 mL RAV1

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Chemical: *guanidinium thiocyanate* CAS No.: 593-84-0  
 Classification: H302, Acute Tox. 4 oral, H312, Acute Tox. 4 derm., H314, Skin Corr. 1B, H332, Acute Tox. 4 inh., H412, Aquatic Chronic 3  
 Chemical Formula:  $C_2H_6N_4S$   
 Synonyms: guanidine rhodanide  
 TSCA Inventory: listed  
 RTECS: XL1225000 MFCD: 00013027  
 EC No.: 209-812-1 Indice No.: 615-004-00-3  
 Weight Percent: 45 - <60 %  
 acc. GHS: H302, Acute Tox. 4 oral, H412, Aquatic Chronic 3

### 6 mL RAV3

Chemical: *chemicals/mixture < 1%* CAS No.: -  
 Classification: No criteria for classification or naming of chemical is not required.  
 TSCA Inventory: all listed, <1%  
 Weight Percent: 0,1 - <1 %  
 acc. GHS: The criteria for classification are not fulfilled.

### 6 mL RAW

Chemical: *guanidine hydrochloride* CAS No.: 50-01-1  
 Classification: H302, Acute Tox. 4 oral, H315, Skin Irrit. 2, H319, Eye Irrit. 2  
 Chemical Formula:  $CH_6ClN_3$   
 Synonyms: guanidinium chloride  
 TSCA Inventory: listed  
 RTECS: MF4300000 MFCD: 00013026  
 EC No.: 200-002-3 Indice No.: 607-148-00-0  
 Weight Percent: 24 - <36 %  
 acc. GHS: H302, Acute Tox. 4 oral

Chemical: *ethanol* CAS No.: 64-17-5  
 (denatured with 1%IPA/1%MEK, acc.2016/1867/EU)  
 Classification: H225, Flam. Liq. 2  
 Chemical Formula:  $C_2H_6O$ ;  $C_2H_5OH$   
 Synonyms: ethyl alcohol, methylated spirit  
 TSCA Inventory: listed  
 RTECS: KQ6300000 MFCD: 00003568  
 EC No.: 200-578-6 Indice No.: 603-002-00-5  
 Weight Percent: 35 - <55 %  
 acc. GHS: H226, Flam. Liq. 3

### 13 mL RE

Chemical: *chemicals/mixture < 1%* CAS No.: -  
 Classification: No criteria for classification or naming of chemical is not required.  
 TSCA Inventory: all listed, <1%  
 Weight Percent: 0,1 - <1 %  
 acc. GHS: The criteria for classification are not fulfilled.

### 13 mL H<sub>2</sub>O (RNase free)

Chemical: *water* CAS No.: 7732-18-5  
 Classification: No criteria for classification or naming of chemical is not required.  
 Chemical Formula:  $H_2O$   
 TSCA Inventory: listed  
 RTECS: ZC0110000  
 EC No.: 231-791-2  
 Weight Percent: 90 - <100 %  
 acc. GHS: The criteria for classification are not fulfilled.

## 3.3 Remarks

When not listed, mixtures are added with water [CAS No. 7732-18-5] to 100%.

List of Hazard and Precaution phrases: see section 16.1

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### Section 4: First-Aid Measures

#### 4.1 Description of First-Aid Measures

Place insured person out of danger zone to fresh air immediately. Ensure quiet, warmth, and provide resuscitation if necessary. If necessary contact medical advice.

##### 4.1.1 After SKIN Contact

Remove contaminated clothing. Rinse the affected skin or mucous membrane thoroughly under running water. (If possible) use soap.

##### 4.1.2 After EYE Contact

After contact with the eyes rinse thoroughly under running water with the eyelid wide open with eye washing bottle, eye douche or running water (protect intact eye).

##### 4.1.3 After INHALATION of Vapors

After inhalation of foam or vapor fresh air should be inhaled. Keep airways free.

##### 4.1.4 After ORAL Intake

After oral intake lots of water should be drunk after it has been ingested.

#### 4.2 Most important Symptoms and Effects, both acute and delayed

---

#### 4.3 Indication of any immediate Medical Attention and Special Treatment needed

No additionally recommendations. ---

### Section 5: Fire-Fighting Measures

#### 5.1 Extinguishable Media

Fire extinguishers appropriate to the fire classification, and, if applicable, a fire blanket must be available in a prominent location in the work area. All extinguishers like WATER FOG, WATER SPRAY, alcohol-resistant FOAM, DRY CHEMICAL, CARBON DIOXIDE can be used.

#### 5.2 Special Hazards arising from the Substance or Mixture

WARNING: Flammable. May form explosive vapor-air mixtures. Formation of hazardous and caustic vapor-air mixtures possible. ---

#### 5.3 Advice for Firefighters

No, for listed product. Product package burns like paper or plastic.

#### 5.4 Additional Information

---

### Section 6: Accidental Release Measures

#### 6.1 Personal Precautions, Protective Equipment and Emergency Procedure

Do not breathe vapors. Regular staff training is necessary.

#### 6.2 Environmental Precautions

not necessary, contains only small amounts of these substances

#### 6.3 Methods and Material for Containment and Cleaning up

Bind any escaping liquid with inert absorbent.  
Collect small amounts of leaked liquid and flush with water into sewer.

#### 6.4 Reference to other Sections

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### Section 7: Handling and Storage

#### 7.1 Precautions for Safe Handling

Handling in accordance with the test instruction, that comes with the product.

#### 7.2 Conditions for Safe Storage, including any Incompatibilities

The original product package of MACHEREY-NAGEL allows a safe storage.

Storage class (VCI): 3

Water hazard class (DE): 3

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**7.2.1 Conditions for Safe Storage, including any Incompatibilities**  
Keep original product packages tightly closed during handling and storage.

**7.3 Specific End Use(s)**  
Product for analytical use.

## Section 8: Exposure Controls/Personal Protection

### 8.1 Control Parameters

**0.09-1.0 mg Carrier RNA**

Chemical: *carrier RNA*

CAS No.: 26763-19-6

**10 mL RAV1**

Chemical: *guanidinium thiocyanate*

CAS No.: 593-84-0

DNEL: [inh] 1092 µg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: 42.4 µg/L

PNEC = Predicted No Effect Concentration

NIOSH: not listed

[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: not listed

**6 mL RAV3**

Chemical: *chemicals/mixture < 1%*

CAS No.: -

**6 mL RAW**

Chemical: *guanidine hydrochloride*

CAS No.: 50-01-1

DNEL: [inh] 3.5 mg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: -

PNEC = Predicted No Effect Concentration

NIOSH: not listed

[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: not listed

Chemical: *ethanol*

CAS No.: 64-17-5

DNEL: [derm] 343 mg/kg; [inh] 950 mg/m<sup>3</sup>

DNEL = Derived No-Effect Level (for workers)

PNEC<sub>(fresh water)</sub>: 0.96 mg/L

PNEC = Predicted No Effect Concentration

NIOSH: [TWA] 1000 ppm / 1900 mg/m<sup>3</sup>

[TWA] Time-weighted average to a reference period of 8 hours, [STEL] Short-term exposure limit related to a 15-minute period

OSHA: [TWA] 1000 ppm / 1900 mg/m<sup>3</sup>

**13 mL RE**

Chemical: *chemicals/mixture < 1%*

CAS No.: -

**13 mL H<sub>2</sub>O (RNase free)**

Chemical: *water*

CAS No.: 7732-18-5

### 8.2 Exposure Controls

Good ventilation and extraction system in the room, floor resistant to chemicals with floor drainage and washing facilities. The highest level of cleanliness must be maintained at the workplace.

**8.2.1 Respiratory Protection**  
No additional recommendations.

**8.2.2 Hand Protection**  
Yes, gloves (permeation time >30 min - level 2), consist of PVC, Natural latex, Neopren, or Nitril. Use for short times chemical resistant Latex gloves f.ex. with code EN 374-3 level 1.

**8.2.3 Eye/Face Protection**  
Yes, Splash Goggles.

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**8.2.4 Skin Protection**  
Not necessary.

**8.2.5 Hygiene Measures**  
Eating, drinking, smoking, taking snuff and storage of food in work areas and at outdoor workplaces is prohibited. Avoid contact with the skin, eyes and clothing. Rinse any clothing on which the substance has been spilled, and soak it in water. Wash hands thoroughly with soap and water when stopping work and before eating, and then apply protective skin cream.

## Section 9: Physical and Chemical Properties

### 9.1 Information on Basic Physical and Chemical Properties

**0.09-1.0 mg Carrier RNA**

- |  |                    |                   |
|--|--------------------|-------------------|
| a) Appearance: solid (lyoph.)              | Color: colorless   | b) Odor: odorless |
| c) Odor Threshold:                         | data not available |                   |
| d) pH:                                     | data not available |                   |
| e) Melting Point:                          | data not available |                   |
| f) Boiling Point:                          | data not available |                   |
| g) Flash Point:                            | data not available |                   |
| h) Evaporation Rate <sub>(ether=1)</sub> : | data not available |                   |
| i) Flammability (solid, gas):              | data not available |                   |
| j) Explosive Limits:                       | data not available |                   |
| k) Vapor Pressure (68°F):                  | data not available |                   |
| l) Vapor Density <sub>(air=1)</sub> :      | data not available |                   |
| m) Specific Gravity:                       | data not available |                   |
| n) Soluble in Water:                       | data not available |                   |
| o) Partition Coefficient (o-w):            | data not available |                   |
| p) Autoignition Temperature:               | data not available |                   |
| q) Decomposition temperature:              | data not available |                   |
| r) Viscosity:                              | data not available |                   |
| s) Explosive properties:                   | data not available |                   |
| t) Oxidizing properties:                   | ---                |                   |

**10 mL RAV1**

- |  |                        |                   |
|--|------------------------|-------------------|
| a) Appearance: liquid                      | Color: colorless       | b) Odor: odorless |
| c) Odor Threshold:                         | data not available     |                   |
| d) pH:                                     | 7.0-7.5                |                   |
| e) Melting Point:                          | data not available     |                   |
| f) Boiling Point:                          | data not available     |                   |
| g) Flash Point:                            | data not available     |                   |
| h) Evaporation Rate <sub>(ether=1)</sub> : | data not available     |                   |
| i) Flammability (solid, gas):              | data not available     |                   |
| j) Explosive Limits:                       | data not available     |                   |
| k) Vapor Pressure (68°F):                  | data not available     |                   |
| l) Vapor Density <sub>(air=1)</sub> :      | data not available     |                   |
| m) Specific Gravity:                       | 1.12 g/cm <sup>3</sup> |                   |
| n) Soluble in Water:                       | data not available     |                   |
| o) Partition Coefficient (o-w):            | data not available     |                   |
| p) Autoignition Temperature:               | data not available     |                   |
| q) Decomposition temperature:              | data not available     |                   |
| r) Viscosity:                              | data not available     |                   |
| s) Explosive properties:                   | data not available     |                   |
| t) Oxidizing properties:                   | ---                    |                   |

**6 mL RAV3**

- |  |                        |                   |
|--|------------------------|-------------------|
| a) Appearance: liquid                      | Color: colorless       | b) Odor: odorless |
| c) Odor Threshold:                         | data not available     |                   |
| d) pH:                                     | 7-8                    |                   |
| e) Melting Point:                          | data not available     |                   |
| f) Boiling Point:                          | data not available     |                   |
| g) Flash Point:                            | data not available     |                   |
| h) Evaporation Rate <sub>(ether=1)</sub> : | data not available     |                   |
| i) Flammability (solid, gas):              | data not available     |                   |
| j) Explosive Limits:                       | data not available     |                   |
| k) Vapor Pressure (68°F):                  | data not available     |                   |
| l) Vapor Density <sub>(air=1)</sub> :      | data not available     |                   |
| m) Specific Gravity:                       | 1.00 g/cm <sup>3</sup> |                   |
| n) Soluble in Water:                       | data not available     |                   |





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- o) Partition Coefficient (o-w): data not available
- p) Autoignition Temperature: data not available
- q) Decomposition temperature: data not available
- r) Viscosity: data not available
- s) Explosive properties: data not available
- t) Oxidizing properties: ---

### 6 mL RAW

- a) Appearance: liquid Color: colorless b) Odor: alcoholic
- c) Odor Threshold: data not available
- d) pH: 5-5.5
- e) Melting Point: data not available
- f) Boiling Point: data not available
- g) Flash Point: 23 °C
- h) Evaporation Rate<sub>(ether=1)</sub>: data not available
- i) Flammability (solid, gas): data not available
- j) Explosive Limits: data not available
- k) Vapor Pressure (68°F): data not available
- l) Vapor Density<sub>(air=1)</sub>: data not available
- m) Specific Gravity: 0.98 g/cm<sup>3</sup>
- n) Soluble in Water: data not available
- o) Partition Coefficient (o-w): data not available
- p) Autoignition Temperature: data not available
- q) Decomposition temperature: data not available
- r) Viscosity: data not available
- s) Explosive properties: data not available
- t) Oxidizing properties: ---

### 13 mL RE

- a) Appearance: liquid Color: colorless b) Odor: odorless
- c) Odor Threshold: data not available
- d) pH: 8-9
- e) Melting Point: data not available
- f) Boiling Point: data not available
- g) Flash Point: data not available
- h) Evaporation Rate<sub>(ether=1)</sub>: data not available
- i) Flammability (solid, gas): data not available
- j) Explosive Limits: data not available
- k) Vapor Pressure (68°F): data not available
- l) Vapor Density<sub>(air=1)</sub>: data not available
- m) Specific Gravity: 1.0 g/cm<sup>3</sup>
- n) Soluble in Water: data not available
- o) Partition Coefficient (o-w): data not available
- p) Autoignition Temperature: data not available
- q) Decomposition temperature: data not available
- r) Viscosity: data not available
- s) Explosive properties: data not available
- t) Oxidizing properties: ---

### 13 mL H<sub>2</sub>O (RNase free)

- a) Appearance: liquid Color: colorless b) Odor: odorless
- c) Odor Threshold: data not available
- d) pH: 6-8
- e) Melting Point: data not available
- f) Boiling Point: data not available
- g) Flash Point: data not available
- h) Evaporation Rate<sub>(ether=1)</sub>: data not available
- i) Flammability (solid, gas): data not available
- j) Explosive Limits: data not available
- k) Vapor Pressure (68°F): data not available
- l) Vapor Density<sub>(air=1)</sub>: data not available
- m) Specific Gravity: 1.0 g/cm<sup>3</sup>
- n) Soluble in Water: data not available
- o) Partition Coefficient (o-w): data not available
- p) Autoignition Temperature: data not available
- q) Decomposition temperature: data not available
- r) Viscosity: data not available



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- s) Explosive properties: data not available
- t) Oxidizing properties: ---

### 9.2 Other Information

Data for the other parameters of the mixtures are not available.

Relevant Properties of Substance Group

---

## Section 10: Stability and Reactivity

### 10.1 Reactivity

No further data available.

### 10.2 Chemical Stability

No known instability.

### 10.3 Possibility of Hazardous Reactions

Can form very reactive substances with oxidizing agents. Possibility: Contact with acids liberates toxic gas. No further data available.

### 10.4 Conditions to avoid

---

### 10.5 Incompatible Materials

Not necessary. Avoid contact with strong acids or alkalines. ---

### 10.6 Hazardous Decomposition Products

In the original package all parts/all reagents are safety and separated stored. Decompositions are not observed during the expiration period under recommended conditions.

## Section 11: Toxicological Information

### 11.1 Information on Toxicological Effects

Following information is valid for pure chemicals. Quantitative data on the toxicity of this product are not available.

#### 0.09-1.0 mg Carrier RNA

Chemical: *carrier RNA* CAS No.: 26763-19-6  
 TSCA Inventory: listed (CAS 9001-99-4)

#### 10 mL RAV1

Chemical: *guanidinium thiocyanate* CAS No.: 593-84-0  
 TSCA Inventory: listed California Prop. 65 List: not listed  
 Canada CEPA 1999: DSL yes  
 LD50<sub>orl rat</sub>: 593 mg/kg  
 LC50<sub>drm rbt</sub>: >2000 mg/m<sup>3</sup>  
 LC50<sub>ihl rat</sub>: [4h] 5.319 mg/L  
 LD50<sub>ipr mus</sub>: 300 mg/kg  
 Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.

#### 6 mL RAV3

Chemical: *chemicals/mixture < 1%* CAS No.: -  
 TSCA Inventory: all listed, <1%

#### 6 mL RAW

Chemical: *guanidine hydrochloride* CAS No.: 50-01-1  
 TSCA Inventory: listed California Prop. 65 List: not listed  
 Canada CEPA 1999: DSL yes  
 LD50<sub>orl rat</sub>: 475-907 mg/kg  
 LC50<sub>ihl rat</sub>: [4h] 3181-7655 µg/m<sup>3</sup>  
 LD50<sub>drm rbt</sub>: 2000 mg/kg  
 Acute Effects: Cause after oral intake, impairments of health when ingested in small quantities.  
 Chemical: *ethanol* CAS No.: 64-17-5  
 TSCA Inventory: listed California Prop. 65 List: not listed  
 ACGIH: 1000 ppm  
 Exposure Routes: inhalation, ingestion, skin and/or eye contact  
 Target Organs: Eyes, skin, respiratory system, central nervous system, liver, blood, reproductive system

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Symptoms: irritation eyes, skin, nose; headache, drowsiness, lassitude (weakness, exhaustion), narcosis; cough; liver damage; anemia; reproductive, teratogenic  
 Canada CEPA 1999: DSL yes  
 LD50<sub>orl rat</sub>: 6200 mg/kg  
 LC<sub>50</sub><sub>ihl gpg</sub>: 21.9 g/m<sup>3</sup>  
 LC<sub>50</sub><sub>ihl hm</sub>: 1400 mg/kg  
 LC50<sub>ihl mouse</sub>: [4h] 39 g/m<sup>3</sup>  
 LC50<sub>ihl rat</sub>: [10h] 20 g/m<sup>3</sup>  
 LD50<sub>drm rbt</sub>: 20 000 mg/kg  
 LD50<sub>oral mouse</sub>: 3450 mg/kg

### 13 mL RE

Chemical: *chemicals/mixture < 1%*  
 TSCA Inventory: all listed, <1%

CAS No.: -

### 13 mL H<sub>2</sub>O (RNase free)

Chemical: *water*  
 TSCA Inventory: listed

CAS No.: 7732-18-5

## Section 12: Ecological Information

### 12.1 Toxicity

Following information is valid for pure chemicals.

#### 0.09-1.0 mg Carrier RNA

Chemical: *carrier RNA*

CAS No.: 26763-19-6

#### 10 mL RAV1

Chemical: *guanidinium thiocyanate*

CAS No.: 593-84-0

Harmful to aquatic life with long lasting effects. Avoid contact of chemical/mixture to environment.

Environmental hazards must not be labelled with P phrases until 125 mL (EU-CLP 1272/2008 Annex I - 1.5.2).

PNEC<sub>(fresh water)</sub>: 42.4 µg/L

PNEC = Predicted No Effect Concentration

LC50<sub>fish/96h</sub>: [4d] 89.1 mg/L

EC50<sub>daphnia/48h</sub>: 42.4 mg/L

IC50<sub>scenedesmus quadricauda/72h</sub>: 130 mg/L

EC10<sub>pseudomonas putita/16h</sub>: [10d] 200 mg/L

Partition Coefficient (o-w): [pH 5.1] -1.11

#### 6 mL RAV3

Chemical: *chemicals/mixture < 1%*

CAS No.: -

#### 6 mL RAW

Chemical: *guanidine hydrochloride*

CAS No.: 50-01-1

PNEC<sub>(fresh water)</sub>: -

PNEC = Predicted No Effect Concentration

LC50<sub>leuciscus idus/96h</sub>: 1759 mg/L

LC50<sub>fish/96h</sub>: [4d] 690-1850; [48h] 1758-2420 mg/L

EC50<sub>daphnia/48h</sub>: 70.2 mg/L

EC10<sub>pseudomonas putita/16h</sub>: [72h] 11.8-33.5 mg/L

Chemical: *ethanol*

CAS No.: 64-17-5

PNEC<sub>(fresh water)</sub>: 0.96 mg/L

PNEC = Predicted No Effect Concentration

LC50<sub>daphnia magna/48h</sub>: >100 mg/L

LC50<sub>pimephales promelas/96h</sub>: 13400 - 15100 mg/L

LC50<sub>leuciscus idus/96h</sub>: [48h] 8140 mg/L

LC50<sub>fish/96h</sub>: 13 g/L

EC50<sub>daphnia/48h</sub>: 9.3-14.2 g/L

IC50<sub>scenedesmus quadricauda/72h</sub>: [7d] 5000 mg/L

EC10<sub>pseudomonas putita/16h</sub>: [EC5] 6500 mg/L

Partition Coefficient (o-w): -0.31

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**13 mL RE**Chemical: *chemicals/mixture < 1%*

CAS No.: -

**13 mL H<sub>2</sub>O (RNase free)**Chemical: *water*

CAS No.: 7732-18-5

**12.2 Persistence and Degradability**

not necessary

**12.3 Bioaccumulative Potential**

not necessary

**12.4 Mobility in Soil**

not necessary

**12.5 Results of PBT and vPvB Assessment**

no data available

**12.6 Other Adverse Effects**

no additional data available

## Section 13: Disposal Considerations

Do not collect in acidic waste. May form toxic gases.

Please observe local regulations for collection and disposal of hazardous waste and contact waste disposal company, where you will obtain information on laboratory waste disposal (RCRA Code D002/D003, EU waste code number 16 05 06).

**13.1 Waste Treatment Methods**

Normally it is possible to empty small amounts (diluted!) into drains.

## Section 14: Transport Information

UN/NA 1993 Class 3 III, **Excepted Quantities** ( $\leq 30 \text{ mL} / \sum \leq 1 \text{ L}$ ) = ADR/ IATA E1

or

**14.1. UN/NA: 1993 14.2. Proper Shipping Name: Flammable liquid, n.o.s. (ethanol mixture)****14.3. Hazard Class: 3 14.4. Packing Group: III***Transportation by Road*

Classification code: F1

Limited Quantity: 5 L

Excepted Quantity: E 1

Tunnel restriction code: E

Special instructions: 640E

*Air Transportation*

PAX: 355

CAO: 366

max. weight PAX: 60 L

max. weight CAO: 220 L

*Maritime Transport*

EmS: F-E, S-E

Storage Category: A

**14.5 Environmental Hazards**

none, contains only small quantities of hazardous substances, contains only small amounts of these substances

**14.6 Special Precautions for User**

not necessary

**14.7 Transport in Bulk according to Annex II of MARPOL and the IBC Code**

not applicable

## Section 15: Regulatory Information

**15.1 Safety, Health and Environmental Regulations/Legislation specific for the Substance or Mixture****U.S. Federal Regulations**

OSHA "A Guide to The Globally Harmonized System of Classification and Labelling of Chemicals (GHS)"

<https://www.osha.gov/dsg/hazcom/ghs.html>

29 CFR 1910.1200 Hazard communication.

NIOSH Pocket Guide to Chemical Hazards

NIOSH Workplace Safety &amp; Health Topics

TSCA Inventory

**U.S. State Regulations**

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986

**Canada**

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Canada CEPA 1999 - Domestic Substances List (DSL), List of Toxic Substances (Schedule 1)

MN Leaflet/User manual, also see [www.mn-net.com](http://www.mn-net.com)

### 15.2 Chemical Safety Assessment

not necessary for these small amounts ---

## Section 16: Other Information

### 16.1 List of Hazard and Precaution Phrases

#### 16.1.1 List of relevant H Phrases

H226 Flammable liquid and vapor.  
H302 Harmful if swallowed.  
H412 Harmful to aquatic life with long lasting effects.

#### 16.1.2 List of relevant P Phrases

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
P264W Wash with water thoroughly after handling.  
P273 Avoid release to the environment.  
P301+312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
P330 Rinse mouth.

### 16.2 Training Advice

Regular safety training.

### 16.3 Recommended Restriction on Use

Only for Professional User.

An individual package of this product or test kit has a moderate hazardous potential.

### 16.4 Further Information

MACHEREY-NAGEL GmbH & Co. KG provides the information contained herein in good faith being up-to-date of own realizations at revision time. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgement in determining its appropriateness for a particular purpose.

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### 16.5 Sources of Key Data

GHS: EU Regulation 1272/2008/EC on Classification, Labelling and Packaging of Substances and Mixtures, amending and repealing

EU Directives 67/548/EEC and 1999/45/EC, and amending EU Regulation 1907/2006/EC

SDS: EU Regulation 453/2010/EU REACH - Requirements for the Compilation of Safety Data Sheets

KÜHN, BIRETT (German), Data Sheets of Hazardous Substances

#### Revisions/Updates

Reason for Revision: 2016-03 Adaptation of European Regulation 1221/2015/EU

You find our current Versions of SDS in Internet:

<http://www.mn-net.com/SDS> [U.S. English]