



NHT609 Ninhydrin HT Pump Spray for Heat-Transfer Papers

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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

1.1. Product identifier

Product form : Mixture
Product name : NHT609 Ninhydrin HT Pump Spray for Heat-Transfer Papers
Product code : NHT609

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

Use of the substance/mixture : Insulation/heat transfer

1.3. Details of the supplier of the safety data sheet

SIRCHIE Finger Print Laboratories
100 Hunter Place
Youngsville, NC 27596 - USA
T 919-554-2244; 800-356-7311 - F 919-554-2266; 800-899-8181
<http://www.sirchie.com>

1.4. Emergency telephone number

Emergency number : 1.800.424.9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Flam. Liq. 2 H225

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard pictograms (GHS-US) :



GHS02

Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : H225 - Highly flammable liquid and vapor
Precautionary statements (GHS-US) : P210 - Keep away from heat, hot surfaces, open flames, sparks. - No smoking
P233 - Keep container tightly closed
P240 - Ground/bond container and receiving equipment
P241 - Use explosion-proof electrical, lighting, ventilating equipment
P242 - Use only non-sparking tools
P243 - Take precautionary measures against static discharge
P280 - Wear eye protection, protective gloves
P303+P361+P353 - If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower
P370+P378 - In case of fire: Use CO₂, dry chemical, foam, water spray to extinguish
P403+P235 - Store in a well-ventilated place. Keep cool
P501 - Dispose of contents/container to local/regional/national/international regulations

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

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| Name | Product identifier | % | Classification (GHS-US) |
|---------------------------------|----------------------|---------------|--------------------------------------------------------------------------------------------|
| Methyl nonafluorobutyl ether | (CAS No) 163702-07-6 | 26.43 - 44.05 | Not classified |
| Methyl nonafluoroisobutyl ether | (CAS No) 163702-08-7 | 26.43 - 44.05 | Not classified |
| 2-propanol | (CAS No) 67-63-0 | 1.6 | Flam. Liq. 2, H225 Eye Irrit. 2A, H319 STOT SE 3, H336 |
| ninhydrine | (CAS No) 485-47-2 | 0.3 | Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335 |

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
- First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.
- First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.
- First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

- Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

- Reactivity : No data available.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| 2-propanol (67-63-0) | |
|----------------------|----------------|
| OSHA | Not applicable |

| ninhydrine (485-47-2) | |
|-----------------------|----------------|
| ACGIH | Not applicable |
| OSHA | Not applicable |

| Methyl nonafluorobutyl ether (163702-07-6) | |
|--------------------------------------------|----------------|
| ACGIH | Not applicable |
| OSHA | Not applicable |

| Methyl nonafluoroisobutyl ether (163702-08-7) | |
|-----------------------------------------------|----------------|
| ACGIH | Not applicable |
| OSHA | Not applicable |

8.2. Exposure controls

Personal protective equipment : Dust/aerosol mask. Gloves. Safety glasses. Avoid all unnecessary exposure.



Hand protection : Wear protective gloves.
Eye protection : Chemical goggles or safety glasses.
Respiratory protection : Wear appropriate mask.
Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid
Appearance : Clear, colorless liquid.
Color : Colorless
Odor : Alcohol odour
Odor threshold : No data available
pH : No data available
Melting point : No data available
Freezing point : No data available
Boiling point : No data available
Flash point : No data available
Relative evaporation rate (butyl acetate=1) : No data available

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| | |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| Flammability (solid, gas) | : No data available |
| Explosion limits | : No data available |
| Explosive properties | : No data available |
| Oxidizing properties | : No data available |
| Vapor pressure | : No data available |
| Relative density | : No data available |
| Relative vapor density at 20 °C | : No data available |
| Solubility | : Soluble in water. Literature reports: moderately soluble in water. Water: Solubility in water of component(s) of the mixture : •: •: 2 g/100ml |
| Log Pow | : No data available |
| Log Kow | : No data available |
| Auto-ignition temperature | : No data available |
| Decomposition temperature | : No data available |
| Viscosity | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions. Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

| 2-propanol (67-63-0) | |
|------------------------------|-------------------------------------------------------------------------------------------------|
| LD50 oral rat | 5045 mg/kg (Rat; OECD 401: Acute Oral Toxicity; Experimental value; 5840 mg/kg bodyweight; Rat) |
| LD50 dermal rabbit | 12870 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402; 16.4; Rabbit) |
| LC50 inhalation rat (mg/l) | 73 mg/l/4h (Rat) |
| ATE US (oral) | 5045.000 mg/kg body weight |
| ATE US (dermal) | 12870.000 mg/kg body weight |
| ATE US (vapors) | 73.000 mg/l/4h |
| ATE US (dust, mist) | 73.000 mg/l/4h |
| ninhydrine (485-47-2) | |
| LD50 oral rat | 600 mg/kg (Rat) |
| ATE US (oral) | 600.000 mg/kg body weight |

Skin corrosion/irritation : Not classified

Serious eye damage/irritation : Not classified

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| | |
|-----------------------------------|------------------------------------------------------------------|
| Respiratory or skin sensitization | : Not classified |
| Germ cell mutagenicity | : Not classified |
| | Based on available data, the classification criteria are not met |
| Carcinogenicity | : Not classified |

| | |
|-----------------------------|----------------------|
| 2-propanol (67-63-0) | |
| IARC group | 3 - Not classifiable |

| | |
|-----------------------|------------------------------------------------------------------|
| Reproductive toxicity | : Not classified |
| | Based on available data, the classification criteria are not met |

| | |
|--------------------------------------------------|------------------|
| Specific target organ toxicity (single exposure) | : Not classified |
|--------------------------------------------------|------------------|

| | |
|----------------------------------------------------|------------------|
| Specific target organ toxicity (repeated exposure) | : Not classified |
|----------------------------------------------------|------------------|

| | |
|-------------------|------------------|
| Aspiration hazard | : Not classified |
|-------------------|------------------|

| | |
|-----------------------------------------------------|---------------------------------------------------------------------|
| Potential Adverse human health effects and symptoms | : Based on available data, the classification criteria are not met. |
|-----------------------------------------------------|---------------------------------------------------------------------|

SECTION 12: Ecological information

12.1. Toxicity

| | |
|-----------------------------|-------------------------------------------------------------|
| 2-propanol (67-63-0) | |
| LC50 fish 1 | 4200 mg/l (96 h; Rasbora heteromorpha; Flow-through system) |
| EC50 Daphnia 1 | > 10000 mg/l (48 h; Daphnia magna) |
| LC50 fish 2 | 9640 mg/l (96 h; Pimephales promelas; Lethal) |
| EC50 Daphnia 2 | 13299 mg/l (48 h; Daphnia magna) |
| Threshold limit algae 1 | > 1000 mg/l (72 h; Scenedesmus subspicatus; Growth rate) |
| Threshold limit algae 2 | 1800 mg/l (72 h; Algae; Cell numbers) |

12.2. Persistence and degradability

| | |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NHT609 Ninhydrin HT Pump Spray for Heat-Transfer Papers | |
| Persistence and degradability | Not established. |
| 2-propanol (67-63-0) | |
| Persistence and degradability | Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No (test)data on mobility of the substance available. |
| Biochemical oxygen demand (BOD) | 1.19 g O ₂ /g substance |
| Chemical oxygen demand (COD) | 2.23 g O ₂ /g substance |
| ThOD | 2.40 g O ₂ /g substance |
| BOD (% of ThOD) | 0.49 % ThOD |
| ninhydrine (485-47-2) | |
| Persistence and degradability | Biodegradability in water: no data available. |
| ThOD | 1.53 g O ₂ /g substance |

12.3. Bioaccumulative potential

| | |
|----------------------------------------------------------------|--------------------------------------------------|
| NHT609 Ninhydrin HT Pump Spray for Heat-Transfer Papers | |
| Bioaccumulative potential | Not established. |
| 2-propanol (67-63-0) | |
| Log Pow | 0.05 (Experimental value) |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |
| ninhydrine (485-47-2) | |
| Bioaccumulative potential | No bioaccumulation data available. |

12.4. Mobility in soil

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2-propanol (67-63-0)

| | |
|-----------------|-------------------|
| Surface tension | 0.021 N/m (25 °C) |
|-----------------|-------------------|

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

No additional information available

15.2. International regulations

CANADA

No additional information available

EU-Regulations

No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]

No additional information available

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

F; R11

Full text of R-phrases: see section 16

National regulations

No additional information available

15.3. US State regulations

No additional information available

SECTION 16: Other information

Indication of changes : Revision - See : *.

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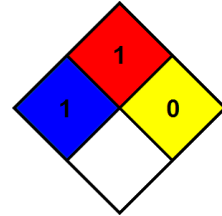
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- Data sources : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.
- Training advice : Normal use of this product shall imply use in accordance with the instructions on the packaging.
- Other information : None.

Full text of H-phrases:

| | |
|---------------------|-------------------------------------------------------------|
| Acute Tox. 4 (Oral) | Acute toxicity (oral) Category 4 |
| Eye Irrit. 2A | Serious eye damage/eye irritation Category 2A |
| Flam. Liq. 2 | Flammable liquids Category 2 |
| Skin Irrit. 2 | Skin corrosion/irritation Category 2 |
| STOT SE 3 | Specific target organ toxicity (single exposure) Category 3 |
| STOT SE 3 | Specific target organ toxicity (single exposure) Category 3 |
| H225 | Highly flammable liquid and vapor |
| H302 | Harmful if swallowed |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |
| H335 | May cause respiratory irritation |
| H336 | May cause drowsiness or dizziness |

- NFPA health hazard : 1 - Exposure could cause irritation but only minor residual injury even if no treatment is given.
- NFPA fire hazard : 1 - Must be preheated before ignition can occur.
- NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



- HMIS III Rating
- Health : 1 Slight Hazard - Irritation or minor reversible injury possible
- Flammability : 1 Slight Hazard - Materials that must be preheated before ignition will occur. Includes liquids, solids and semi solids having a flash point above 200 F. (Class IIIB)
- Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.
- Personal Protection : G
G - Safety glasses, Gloves, Vapor respirator

SDS US (GHS HazCom 2012)

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