# SAFETY DATA SHEET

## QA-600 ADHESIVE PART B

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Date of issue: 17 February 2022
Date of First Issue: 11 October 2012
Version: 2.0

### ACCORDING TO OSHA HCS (29 CFR 1910.1200)

## SECTION 1: IDENTIFICATION

**Product identifier used on the label**

| | |
|---|---|
| Product Name | QA-600 Adhesive Part B |

**Other means of identification** — Not applicable

**Recommended use of the chemical and restrictions on use**

| | |
|---|---|
| Recommended use | Adhesives |
| Restrictions on use | Anything other than the above. |

**Details of the supplier of the safety data sheet**

| | |
|---|---|
| Supplier | VISHAY MEASUREMENTS GROUP, INC. |
| Address of Supplier | Post Office Box 27777<br>Raleigh, NC 27611<br>USA |
| Telephone | +1 919-365-3800 |
| Fax | +1 919-365-3945 |
| E-Mail (competent person) | mm.us@vpgsensors.com |

**Emergency telephone number**

| | |
|---|---|
| Emergency Phone No. | +1 800-262-8200 (for spills and releases) |
| Languages spoken | English - CHEMTREC (24 hours) |

## SECTION 2: HAZARD(S) IDENTIFICATION

**Classification of the chemical in accordance with paragraph (d) of §1910.1200**

| | |
|---|---|
| Physical hazards | Flammable Liquid, Category 2 |
| Health hazards | Acute Toxicity - Oral, Category 4<br>Skin Sensitizer, Category 1<br>Eye Damage, Category 1<br>Respiratory Sensitizer, Category 1<br>STOT, Single Exposure, Category 3, Respiratory Tract Irritation<br>STOT, Single Exposure, Category 3, Narcotic Effects<br>Carcinogen, Category 2 |
| Environmental hazards | Not classified |

**Label elements**

Hazard Symbol

Signal Word(s) — Danger

Hazard Statement(s)

Highly flammable liquid and vapour.
Harmful if swallowed.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
May cause respiratory irritation.

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|---|---|
| | May cause drowsiness or dizziness.<br>Suspected of causing cancer. |
| Precautionary Statement(s) | |
| Prevention | Obtain special instructions before use.<br>Do not handle until all safety precautions have been read and understood.<br>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.<br>Ground/bond container and receiving equipment.<br>Use explosion-proof electrical/ventilating/lighting/equipment.<br>Use non-sparking tools.<br>Use only outdoors or in a well-ventilated area.<br>Take precautionary measures against static discharge.<br>Wear protective gloves/eye protection/face protection.<br>Wash hands and exposed skin thoroughly after handling.<br>Do not eat, drink or smoke when using this product.<br>Avoid breathing vapours.<br>[In case of inadequate ventilation] wear respiratory protection.<br>Contaminated work clothing must not be allowed out of the workplace. |
| Response | IF exposed or concerned: Get medical advice/attention.<br>IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/or shower. If skin irritation or rash occurs: Get medical advice/attention.<br>IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.<br>IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.<br>IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.<br>If experiencing respiratory symptoms: Call a POISON CENTER/doctor.<br>Wash contaminated clothing before reuse. |
| Storage | Store in a well-ventilated place. Keep container tightly closed. Store locked up. |
| Disposal | Dispose of contents/container to hazardous waste collection point. |
| **Other hazards** | May form explosive peroxides. |
| Percent of the mixture consists of ingredient(s) of unknown acute toxicity: | 0 percent of the mixture consists of ingredient(s) of unknown acute inhalation toxicity<br>0 percent of the mixture consists of ingredient(s) of unknown acute oral toxicity<br>0 percent of the mixture consists of ingredient(s) of unknown acute dermal toxicity |

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Substances** Not applicable

**Mixtures** Substances in preparations / mixtures

Classification: OSHA HCS (29 CFR 1910.1200)

| Chemical identity of the substance | %W/W | Synonym(s) | CAS No. | Hazard classification |
|---|---|---|---|---|
| Tetrahydrofuran | 75-80 | Furan, tetrahydro- | 109-99-9 | Flammable Liquid, Category 2<br>Acute Toxicity - Oral, Category 4<br>Eye Irritant, Category 2, (SCL ≥ 25%)<br>STOT, Single Exposure, Category 3, Respiratory Tract Irritation (SCL ≥ 25%)<br>STOT, Single Exposure, Category 3, Narcotic Effects |

| | | | | |
|---|---|---|---|---|
| | | | | Carcinogen, Category 2 |
| Trimellitic Anhydride | 20 - 25 | benzene-1,2,4-tricarboxylic acid 1,2-anhydride | 552-30-7 | Skin Sensitizer, Category 1<br>Eye Damage, Category 1<br>Respiratory Sensitizer, Category 1<br>Single Exposure , Category 3 - Respiratory Tract Irritation |

## SECTION 4: FIRST AID MEASURES

**Description of first aid measures**

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|---|---|
| Self-protection of the first aider | Use personal protective equipment as required. Wear appropriate personal protective equipment, avoid direct contact. Ensure adequate ventilation. Avoid breathing vapours. Avoid all contact. Contaminated clothing should be laundered before reuse. |
| Inhalation | IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor. If unconscious, place in recovery position and get medical attention immediately. Apply artificial respiration if necessary (do not employ mouth-to-mouth method). |
| Skin Contact | IF ON SKIN: Remove contaminated clothing and wash all affected areas with plenty of water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical advice/attention. IF exposed or concerned: Get medical advice/attention. |
| Eye Contact | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Hold eye open and rinse slowly and gently with water for 15-20 minutes. If eye irritation persists: Get medical advice/attention. |
| Ingestion | IF SWALLOWED: Rinse mouth. Make victim drink plenty of water. Do not give anything by mouth to an unconscious person. Do not induce vomiting unless instructed to do so by medical personnel. Call a POISON CENTER/doctor if you feel unwell. IF exposed or concerned: Get medical advice/attention. |
| **Most important symptoms and effects, both acute and delayed** | Harmful if swallowed. May cause an allergic skin reaction. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness. Suspected of causing cancer. |
| **Indication of any immediate medical attention and special treatment needed** | Treat symptomatically. Treatment by an ophthalmologist due to possible caustic burn of the eyes may be required. |

## SECTION 5: FIRE-FIGHTING MEASURES

**Extinguishing media**

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| Suitable Extinguishing Media | As appropriate for surrounding fire. Extinguish with carbon dioxide, dry chemical, foam or waterspray. |
| Unsuitable extinguishing Media | Do not use water jet. Direct water jet may spread the fire. |
| **Special hazards arising from the substance or mixture** | Highly flammable liquid and vapour. May decompose in a fire giving off toxic fumes. Carbon monoxide, Carbon dioxide, Phenolic and Explosive Peroxides. Vapours are heavier than air and may travel considerable distances to a source of ignition and flashback. Prevent liquid entering sewers, basements and workpits; vapour may create explosive atmosphere. May form explosive peroxides. |

| | |
|---|---|
| **Special protective equipment and precautions for fire fighters** | Fire fighters should wear complete protective clothing including self-contained breathing apparatus. Do not breathe fumes. Keep containers cool by spraying with water if exposed to fire. Avoid run off to waterways and sewers. |

## SECTION 6: ACCIDENTAL RELEASE MEASURES

| | |
|---|---|
| **Personal precautions, protective equipment and emergency procedures** | Ensure adequate ventilation. Stop leak if safe to do so. Eliminate all ignition sources if safe to do so. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use personal protective equipment as required. See Section: 8. Avoid breathing vapours. |
| Environmental precautions | Avoid release to the environment. Do not allow to enter drains, sewers or watercourses. Spillages or uncontrolled discharges into watercourses must be alerted to the Environment Agency or other appropriate regulatory body. |
| **Methods and material for containment and cleaning up** | Use non-sparking equipment when picking up flammable spill. Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Ventilate the area and wash spill site after material pick-up is complete. Dispose of this material and its container as hazardous waste |

## SECTION 7: HANDLING AND STORAGE

| | |
|---|---|
| **Precautions for safe handling** | Ensure operatives are trained to minimise exposures. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid all contact. Avoid breathing vapours. Ensure adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. May form explosive peroxides. Take precautionary measures against static discharges. Use personal protective equipment as required. See Section: 8. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. |
| **Conditions for safe storage, including any incompatibilities** | Ground/bond container and receiving equipment. Keep only in original container. Store in a well-ventilated place. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. May form explosive peroxides. Keep away from direct sunlight. |
| Storage temperature | Ambient. Keep at temperature not exceeding (℃): 32 |
| Incompatible materials | Stable under normal conditions. |

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**Occupational Exposure Limits**

| Substances | CAS No. | LTEL (8 hr TWA ppm) | LTEL (8 hr TWA mg/m³) | STEL (ppm) | STEL (mg/m³) | Note | Source |
|---|---|---|---|---|---|---|---|
| Tetrahydrofuran | 109-99-9 | 50 | - | 100 | - | Skin; A3 | ACGIH |
| | | 200 | 590 | 250 | 735 | - | NIOSH |
| | | 200 | 590 | - | - | - | OSHA (Z-1) |
| Trimellitic Anhydride | 552-30-7 | - | 0.0005 | - | 0.002 | Skin, DSEN, RSEN | ACGIH |

**Source**:
ACGIH: American Conference of Governmental Industrial Hygienists - Threshold limit values (TLV) 2019
NIOSH: National Institute for Occupational Safety and Health (NIOSH) Recommended exposure limits (RELs)
OSHA: Occupational Safety and Health Standards - Permissible Exposure Limit (PEL), 1910.1000 TABLE Z-1

Skin: Danger of cutaneous absorption (skin, mucous membranes and eyes) by contact with vapors, liquids and solids;
A3: Confirmed Animal Carcinogen with Unknown Relevance to Humans. See “Appendix A: Carcinogenicity” of ACGIH book.
DSEN: Dermal Sensitization
RSEN: Respiratory Sensitization

| | |
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| **Biological Exposure Indices** | None assigned. |
| **Appropriate engineering controls** | Ensure operatives are trained to minimise exposures. Ensure adequate ventilation. Atmospheric levels should be controlled in compliance with the occupational exposure limit. A washing facility/water for eye and skin cleaning purposes should be present. |
| **Individual protection measures, such as personal protective equipment (PPE)** | General hygiene measures for the handling of chemicals are applicable. Keep good industrial hygiene. Avoid all contact. Avoid breathing vapours. Wash hands before breaks and after work. Keep work clothes separately. Do not eat, drink or smoke at the work place.<br>IF exposed: Flush with fresh water if contact with skin or eyes. |

Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.

Eye/face protection

Wear protective eye glasses for protection against liquid splashes. Wear eye protection with side protection (EN166).

Skin protection

**Hand protection:**
Wear impervious gloves (EN374). Protective index 6, corresponding > 480 minutes of permeation time according to EN 374.
Gloves should be changed regularly to avoid permeation problems. Breakthrough time of the glove material: refer to the information provided by the gloves' producer. Protective clothing should be selected specifically for the working place, depending on concentration and quantity of the hazardous substances handled. The resistance of the protective clothing to chemicals should be ascertained with the respective supplier.
Recommended:: Polyethylene-Nylon Laminate Gauntlet

**Body protection:**
Wear impervious protective clothing, including boots, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. A suitable mask with filter type A (EN141 or EN405) may be appropriate.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

| | |
|---|---|
| Appearance | Almost colourless to pale yellow Liquid |
| Odor | Ether-like Odour |
| Odor Threshold | Not available. |
| pH | Not established. |
| Melting Point/Freezing Point | -108.44 ℃ (Tetrahydrofuran) |
| Initial boiling point and boiling range | 65℃ (Tetrahydrofuran) |
| Flash Point | -14℃ (Tetrahydrofuran) [Closed cup] |
| Evaporation rate (Butyl acetate = 1) | 8 (BuAc = 1) (Tetrahydrofuran) |

| | |
|---|---|
| Flammability (solid, gas) | Flam. Liq. 2; Highly flammable liquid and vapour. |
| Upper/lower flammability or explosive limits | Flammable Limits (Lower) (%v/v): 2.0 Flammable Limits (Upper) (%v/v): 11.8 |
| Vapour pressure | 129 (mmHg) @ (20℃) |
| Vapour density | 2.4 (Air = 1) |
| Relative density | 0.9 g/cm$^3$ (H2O = 1) (Mixture) |
| Solubility(ies) | >50% (Water) (Mixture) |
| Partition coefficient: n-octanol/water | 0.45 log Pow (25 ℃) |
| Auto-ignition temperature | 320 ℃ (Tetrahydrofuran) |
| Decomposition Temperature | Not available. |
| Viscosity | Not available. |

**Other information**

| | |
|---|---|
| Volatile Organic Compound Content (%) | 77.8 % (Mixture) |
| Explosive properties | Not explosive. |
| Oxidising properties | Not oxidising. |

## SECTION 10: STABILITY AND REACTIVITY

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|---|---|
| **Reactivity** | Stable under normal conditions. May form peroxides on prolonged storage if air is present. |
| **Chemical stability** | Stable under normal conditions. |
| **Possibility of hazardous reactions** | Highly flammable liquid and vapour. The vapour may be invisible, heavier than air and spread along ground. May form explosive peroxides. Contact with aliphatic amines will cause irreversible polymerization with considerable heat build-up. May polymerise on prolonged heating. |
| **Conditions to avoid** | Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from direct sunlight. Keep at a temperature not exceeding (℃): 32. Avoid contact with air. Avoid contact wit h heat and ignition sources and oxidizers. Avoid distillation to dryness, which can form explosive peroxides. |
| **Incompatible materials** | Oxidizing agents, Corrosive Substances, Reducing agent, Strong Acids and Alkalis. Mild steel. Reacts violently with - Oxidizing agents and Acids. |
| **Hazardous decomposition product(s)** | May decompose in a fire giving off toxic fumes. Carbon monoxide, Carbon dioxide, Phenolic and Explosive Peroxides. |

## SECTION 11: TOXICOLOGICAL INFORMATION

**Information on toxicological effects (Substances in preparations / mixtures)**

| | | |
|---|---|---|
| **Acute toxicity - Ingestion** | | Mixture: Acute Toxicity (oral), Category 4; Harmful if swallowed.<br>Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 500 mg/kg bw/day. |
| | Tetrahydrofuran | Acute Toxicity (oral), Category 4; Harmful if swallowed.<br>Test Result: LD50 <1 mg/kg bw (Standard acute method) (Unnamed publication, 1971). |
| **Acute toxicity - Inhalation** | | Mixture: Based upon the available data, the classification criteria are not met.<br>Acute Toxicity Estimate Mixture Calculation: Estimated LC50 >20.0 mg/l. |
| **Acute toxicity - Skin Contact** | | Mixture: Based upon the available data, the classification criteria are not met.<br>Acute Toxicity Estimate Mixture Calculation: Estimated LC50 > 2000 mg/kg bw/day. |
| **Skin corrosion/irritation** | | Mixture: Based upon the available data, the classification criteria are not met. |
| **Serious eye damage/irritation** | | Mixture: Serious eye damage, Category 1; Causes serious eye damage. |
| | Tetrahydrofuran | Eye irritation, Category 2; Causes eye irritation. (SCL ≥ 25%).<br>EU Harmonised Classification.<br>Test Result: Corrosive to eyes. (rabbit) (Unnamed publication, 1971). |
| | Trimellitic Anhydride | Serious eye damage, Category 1; Causes serious eye damage. |

| | | |
|---|---|---|
| | | Test Result: Severe irritant to the eye. (Rabbit) (Hatoum & Johnson, 1991) |
| **Respiratory or skin sensitization** | | Mixture: Skin sensitizer, Category 1; May cause an allergic skin reaction. Respiratory sensitizer, Category 1; May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| | Trimellitic Anhydride | Skin sensitizer, Category 1; May cause an allergic skin reaction. Respiratory sensitizer, Category 1; May cause allergy or asthma symptoms or breathing difficulties if inhaled. Test Result: Skin sensitisation has been reported in humans. (OECD 442A) Test Result: Severely irritating to respiratory system. (Unnamed publication) |
| **Germ cell mutagenicity** | | Mixture: Based upon the available data, the classification criteria are not met. |
| **Carcinogenicity** | | Mixture: Carcinogen, Category 2; Suspected of causing cancer. |
| | Tetrahydrofuran | Carcinogen, Category 2; Suspected of causing cancer. EU Harmonised Classification. Test Result: NOAEC 1800 ppm Suspected carcinogen (Unnamed, 1998) |
| **Reproductive toxicity** | | Mixture: Based upon the available data, the classification criteria are not met. |
| **STOT - single exposure** | | Mixture: STOT-single exposure, Category 3; May cause respiratory irritation. STOT-single exposure, Category 3; May cause drowsiness or dizziness. |
| | Tetrahydrofuran | STOT-single exposure, Category 3; May cause respiratory irritation. (SCL ≥ 25%). EU Harmonised Classification. STOT-single exposure, Category 3; May cause drowsiness or dizziness. Test Result: Irritation to respiratory tract (Rat), LC50: 375mg/L air (Unnamed publication, 1979). Test Result: Central nervous depression, NOEC (rats): 500ppm (Malley et al, 2001) |
| | Trimellitic Anhydride | STOT-single exposure, Category 3; May cause respiratory irritation. EU Harmonised Classification. Test Result: Irritation to respiratory tract (Human), Concentration: 10-40 µg/m$^3$ air (WHO, 2009). |
| **STOT - repeated exposure** | | Mixture: Based upon the available data, the classification criteria are not met. |
| **Aspiration hazard** | | Mixture: Based upon the available data, the classification criteria are not met. |

**Information on likely routes of exposure**

| | |
|---|---|
| Inhalation | Possible – accidental exposure |
| Ingestion | Unlikely – accidental exposure |
| Skin Contact | Possible – accidental exposure |
| Eye Contact | Unlikely – accidental exposure |

**Early onset symptoms related to exposure**

Harmful if swallowed. May cause an allergic skin reaction. Causes serious eye damage. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause drowsiness or dizziness.

**Delayed health effects from exposure**

Suspected of causing cancer.

**Other information**

| | |
|---|---|
| NTP Report on Carcinogens | Not listed |
| IARC Monographs | Tertahydrofuran: Group 2B. |
| OSHA Designated Carcinogen | Not listed |

## SECTION 12: ECOLOGICAL INFORMATION

| | |
|---|---|
| **Ecotoxicity** | Based upon the available data, the classification criteria are not met. Estimated Mixture LC50 >100 mg/l (Fish) |
| **Persistence and degradability** | This product is readily biodegradable in water. |
| **Bioaccumulative potential** | The product has low potential for bioaccumulation. |
| **Mobility in soil** | The product is predicted to have high mobility in soil. (Water Soluble) |
| **Other adverse effects** | None known. |

## SECTION 13: DISPOSAL CONSIDERATIONS

**Waste treatment methods**

Dispose of this material and its container as hazardous waste. Send after pre-treatment to a appropriate hazardous waste incinerator facility according to legislation. Dispose of contents in accordance with local, state or national legislation.

## SECTION 14: TRANSPORT INFORMATION

| | ADR/RID | IMDG | IATA |
|---|---|---|---|
| **UN number** | UN 1133 | UN 1133 | UN 1133 |
| **UN proper shipping name** | ADHESIVES containing flammable liquid | ADHESIVES containing flammable liquid | ADHESIVES containing flammable liquid |
| **Transport hazard class(es)** | 3 | 3 | 3 |
| **Packing group** | II | II | II |
| **Environmental hazards** | Not classified | Not classified as a Marine Pollutant. | Not classified |
| **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** | See Section: 2 | | |
| **Special precautions for user** | Not applicable. | | |

## SECTION 15: REGULATORY INFORMATION

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

**US Federal Regulations**

| | |
|---|---|
| TSCA (Toxic Substance Control Act) | Tertahydrofuran: Listed<br>Trimellitic Anhydride: Listed |
| EPCRA/ SARA 302 - Extremely Hazardous Substances | Not listed |
| SARA Title III Section 313 Toxic Release Inventory | Not listed |
| NIOSH Occupational Carcinogen List | Not listed |
| OSHA (List of Highly Hazardous Chemicals, Toxics and Reactives) | Not listed |
| NTP Report on Carcinogens | Not listed |
| Poison Prevention Packaging Act | Not listed |

**US State Regulations**

| | |
|---|---|
| California Proposition 65 list of chemicals | Tertahydrofuran: Listed (Listing by the Labour Code mechanism, Group member list: 2-Ethylhexyl acrylate, Methy acrylate, Trimethylolpropane triacrylate) |
| California State Safer Consumer Products Regulations | Trimellitic Anhydride: Yes (Candidate Chemicals List) |
| Maine State, Toxic Chemicals in Children's Products Act | Not listed |
| New Jersey State Worker and Community RTK Act | Tertahydrofuran: Listed |
| Pennsylvania State, Worker and Community RTK Act | Tertahydrofuran: Listed |
| Rhode Island State, Hazardous Substances RTK Act | Tertahydrofuran: Listed |

**Non-Regional**

| | |
|---|---|
| IARC Monographs - List of Classifications | Tertahydrofuran: Group 2B. |

## SECTION 16: OTHER INFORMATION

**The following sections contain revisions or new statements:** Updated substance / mixture classification. New SDS Regulation Hazcom 2012 format, all sections have been updated to include new information. Please review SDS with care.

**Version** 2.0
**Revision date** 17 February 2022
**Date of First Issue** 11 October 2012

**References:**
Existing Safety Data Sheet (SDS).
EU data: Existing ECHA registration(s) for and Harmonised Classification(s) for Tetrahydrofuran (CAS No. 109-99-9) and 1,2,4,5-Benzenetetracarboxylic Dianhydride (CAS No. 89-32-7). Existing ECHA registration(s) for Tetrahydrofuran (CAS No. 109-99-9).

**Literature References:**


1. Hatoum, N. and Johnson, W. 1991. Primary eye irritation study of trimellitic anhydride in rabbits. IITRI Study No. 1693, Test Article No. 128H.
2. Malley, L.A., Christoph G.R., Stadler, J.C., Hansen, J.F., Biesemeir, J.A. and Jasti, S. (2001). Acute and subchronic neurotoxicology evaluation of tetrahydrofuran by inhalation in rats. Drug Chem. Toxicol., 24(3): 201-219


| GHS Classification of the substance or mixture | Classification Procedure |
|---|---|
| Flammable Liquid, Category 2 | Flash Point Test Result |
| Acute Toxicity - Oral, Category 4 | Acute Toxicity Estimate (ATE) Calculation. |
| Skin Sensitizer, Category 1 | Threshold Calculation |
| Eye Damage, Category 1 | Threshold Calculation |
| Respiratory Sensitizer, Category 1 | Threshold Calculation |
| STOT, Single Exposure, Category 3 - Respiratory Tract Irritation | Threshold Calculation |
| STOT, Single Exposure, Category 3 - Narcotic Effects | Threshold Calculation |
| Carcinogen, Category 2 | Threshold Calculation |

**LEGEND**

| | |
|---|---|
| ACGIH | American Conference of Governmental Industrial Hygienists |
| ADR/RID | European Agreement concerning the International Carriage of Dangerous Goods by Road/ Regulations concerning the International Carriage of Dangerous Goods by Rail |
| CAS | Chemical Abstracts Service |
| EC | European Community |
| EU | European Union |
| ICAO/IATA | International Civil Aviation Organization / International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| IARC | International Agency for Research on Cancer |
| NIOSH | National Institute for Occupational Safety & Health |
| NOAEC | No observed adverse effect concentration |
| NTP | National Toxicology Program |
| OSHA | Occupational Safety & Health Administration |
| PEL | Permissible Exposure Limit |
| REL | Recommended exposure limit |
| SCL | Specific Concentration Limit |
| STEL | Short-term Exposure Limit |
| TLV | Threshold Limit Value |
| TSCA | Toxic Substance Control Act |
| TWA | Time Weighted Average |
| UN | United Nations |

Training advice: Consideration should be given to the work procedures involved and the potential extent of exposure as they may determine whether a higher level of protection is required.

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