

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

| Product/Catalog | g Number(s): | | | |
|----------------------------------|--------------------------------|---|--|--|
| | 60-107.1 | 0.1 mg/ml (5 μg/50 μl), 1.8 ml/vial | | |
| | 60-107.8 | 0.0005, 0.005, 0.01, 0.02 mg/ml (0.005 μg, 0.05 μg, 0.1 μg, & 0.2 μg/10 μl); 1.8 ml/vial each | | |
| | 60-107.9 | 0.005 mg/ml, 0.05 mg/ml, 0.1 mg/ml, & 0.2 mg/ml; 1.8 ml/vial; 20 vials/pack | | |
| | 60-107A150 | 1 mg/ml, 150 μL/vial | | |
| | 60-107A500 | 1 mg/ml, 500 μL/vial | | |
| | 60-174 | 125 µg/ml, 1.8 ml/vial | | |
| | 60-178 | 0.3 mg/ml (15 μg/50 μl), 1.8 ml/vial | | |
| | 60-179 | 0.04 mg/ml (2.0 μg/50 μL), 1.8 ml/vial | | |
| Product name: | 2-Aminoanthracene | | | |
| Synonyms: | 2-Anthramine | nine, 2-Anthrylamine, Anthracen-2-amine; 2-anthracenamine | | |
| Manufacturer: | Molecular Toxicology Inc. | | | |
| Address: | 157 Industrial Boone, North | Industrial Park Drive, ne, North Carolina, 28607 | | |
| Phone: | (1) 828 264 9 | 8 264 9099 (8:30 – 17:00 EST) | | |
| Fax: | 828 264 0103 | 28 264 0103 | | |
| Emergency contact (Chemtrec): | | Contact 1800-424-9300 (USA) or 703 527 3887 (International) at other times Email: <u>chemtrec@chemtrec.com</u> ; <u>http://www.chemtrec.com/</u> | | |
| Recommended use: | | Laboratory, For Research Only | | |
| Restrictions on use: | | Not for clinical use | | |
| Section 1 notes: | : | | | |

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture per GSH and EU Directive 1272/2008

Flammable liquids (Category 4)

| | Warning | | | |
|-----------------------------|---|--------------------------------------|--|--|
| Classification | | | | |
| Physical hazards | None known | | | |
| Health Hazards | Flammable liquid (Cat 4 |), H227 | | |
| Environmental hazards | See eco-toxicity section | 12. | | |
| Labelling | | | | |
| Hazard Statements | H227 Combustible liquid. | | | |
| Precautionary Statements | P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking. | | | |
| | Version date 12/9/20 | Molecular Toxicology 828-264-9099 | | |





P280 Wear protective gloves/eye protection/face protection.
P370 + P378 In case of fire: use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403+ 235 Store in a well-ventilated place. Keep cool.
P501 Dispose of contents/container to an approved waste disposal plant.

Other hazards

HMIS Classification Health hazard: 0 Flammability: 2 Physical hazards: 0

NFPA Rating Health hazard: 0 Fire: 2 Reactivity Hazard: 0

Hazards not otherwise classified (HNOC) or not covered by GHS

Rapidly absorbed through skin and may carry other dissolved chemicals into the body.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures

| Component | Purpose | CAS-No | EC-No. | Weight % |
|-------------------|---|----------|-----------|----------|
| 2-Aminoanthracene | Biochemical used in the study of carcinogenesis | 613-13-8 | 210-330-9 | ≤ 0.03% |
| Dimethylsulfoxide | Organic solvent | 67-68-5 | 200-664-3 | ≥ 99.97% |

Hazardous Components

| Component | Classification | Concentration |
|-------------------|--------------------|---------------|
| Dimethylsulfoxide | Flam. Liq. 4; H227 | ≥ 99.97% |

SECTION 4. FIRST AID MEASURES

Description of first aid measures

| Eye Contact | Flush eyes with water as a precaution. |
|----------------------------|---|
| Skin Contact | Wash off with soap and plenty of water and rinse thoroughly. Consult a physician. |
| Ingestion | Do NOT induce vomiting. Rinse mouth with plenty of water. Never give anything by mouth to an unconscious person. Consult a physician. |
| Inhalation | If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician. |
| Protection of first-aiders | Not required |

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area. In the event that symptoms develop or persists, obtain medical attention.

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Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see Section 2) and/or in Section 11.

Indication of any immediate medical attention and special treatment needed

No data available

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media

For small (incipient) fires, use media such as "alcohol" foam, dry chemical, or carbon dioxide. For large fires, apply water from as far as possible. Use very large quantities (flooding) of water applied as a mist or spray; solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water.

Special hazards arising from the substance or mixture

Carbon oxides, Sulphur oxides

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

Further information

Use water spray to cool unopened containers

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Avoid breathing vapors, mist or gas. Remove all sources of ignition. For personal protection see Section 8.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Methods and material for containment and cleaning up

Contain spillage, and then collect by wet-brushing and place in container for disposal according to local regulations (see Section 13). Keep in suitable, closed containers for disposal.

Reference to other sections

Refer to Sections 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

Avoid inhalation of vapor or mist.

Keep away from sources of ignition – No smoking. Take measures to prevent the buildup of electrostatic charge. For precautions see Section 2.

Conditions for safe storage, including any incompatibilities

Storage - Store according to product packaging, tightly sealed. Keep in a dry, well-ventilated place. Hygroscopic.

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Specific end use(s)

Apart from the uses mentioned in Section 3 no other specific uses are stipulated.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Components with workplace control parameters

| Component | CAS-No. | Value | Control Parameters | Basis |
|--------------------|---------|-------|---------------------------|--|
| Dimethyl sulfoxide | 67-68-5 | TWA | 250.000000 ppm | USA. Workplace Environmental Exposure Levels (WEEL) |

Exposure controls

Engineering Measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye Protection: Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Hand Protection

Handle with gloves. Glove must be inspected prior to use. Use proper glove removal technique (without touching glove's out surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Splash contact Material: Nitrile rubber Minimum layer thickness: 0.2 mm Break through time: 38 min Material tested: Dermatril® P (KCL) 743 / Aldrich Z677388, Size M)

Data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used under conditions which differ from EM 374, contact the suppler of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering and approval for any specific use scenario.

Skin and body protection

Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory Protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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Hygiene Measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Control of Environmental exposure – Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| Appearance | Liquid, light – dark yellow |
|---|---|
| Odor threshold | No data available |
| рН | No data available |
| Melting point/freezing point | Melting point/range: 16 – 19°C |
| Initial boiling point and boiling range | 189°C (372°C) |
| Flash point | 87°C – closed cup – ASTM D 93 |
| Evaporation rate | No data available |
| Flammability (solid, gas) | No data available |
| Upper/lower flammability or explosive limits | Upper explosion Limit: 42% (V) Lower explosion limit: 3.5% (V) |
| Vapor pressure | 0.55 hPa (0.41 mmHg) at 20°C 4hPa (3 mmHg) at 50°C |
| Vapor density | 2.70 - (Air = 1.0) |
| Relative density | No data available |
| Water solubility | Completely miscible |
| Partition coefficient: n- octanol/water | Log Pow: -2.03 |
| Auto-ignition temperature | 300 – 302°C |
| Decomposition temperature | > 190°C |
| Viscosity | No data available |
| Explosive properties | Not explosive |
| Oxidizing properties | The substance or mixture is not classified as oxidizing |

Other information safety information

Solubility in other solvents

Alcohol – soluble Diethylether – soluble

SECTION 10. STABILITY AND REACTIVITY

Reactivity

No data available

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Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

No hazardous reactions known.

Conditions to avoid

Heat, flames and sparks

Incompatible materials

Strong oxidizing agents, strong acids, acid chlorides, phosphorus halides, strong reduction agents.

Hazardous decomposition products

Other decomposition products – no data available In the event of fire: see Section 5

SECTION 11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute toxicity No data available

Skin corrosion/irritation Mild skin irritation

Serious eye damage/eye irritation No data available

Respiratory or skin sensitization No data available

Germ cell mutagenicity No data available

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure No data available

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard No data available

Additional Information RTECS: PV6210000

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To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available.

Mobility in soil No data available.

Results of PBT and vPvB Assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

Stability in water:

-0.12 – 1.2 h at 30°C. Remarks: Hydrolyses readily.

General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course, or sewage system. Do not allow material to be released to the environment without proper governmental permits.

SECTION 13. DISPOSAL CONSIDERATIONS

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

SECTION 14. TRANSPORT INFORMATION

Not a hazardous material for transportation

DOT (US) regulations:

Not dangerous goods.

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IMDG

Not dangerous goods.

IATA

Not dangerous goods.

Further information

N/A

SECTION 15. REGULATORY INFORMATION

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Fire Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right To Know Components

| 2-Anthrylamine | CAS-No. | |
|------------------------------------|----------|---------------|
| | 613-13-8 | |
| Dimethyl sulfoxide | CAS-No. | Revision Date |
| | 67-68-5 | 2007-03-01 |
| New Jersey Right To Know Component | nts | |
| 2-Anthrylamine | CAS-No. | |
| | 613-13-8 | |
| Dimethyl sulfoxide | CAS-No. | Revision Date |
| - | 67-68-5 | 2007-03-01 |

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Molecular Toxicology, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. See www.moltox.com and/or the invoice or packing slip for additional terms and conditions of sale.