

SAFETY DATA SHEET

Creation Date 21-May-2012

Revision Date 14-Feb-2020

Revision Number 3

1. Identification

Product Name 2-Ethyl-4-methylimidazole

Cat No. : A15798

CAS-No 931-36-2
Synonyms No information available

Recommended Use Laboratory chemicals.
Uses advised against Food, drug, pesticide or biocidal product use.
Details of the supplier of the safety data sheet

Company

Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Emergency Telephone Number

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.
After normal business hours, call Carechem 24 at (866) 928-0789.

2. Hazard(s) identification

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

| | |
|-----------------------------------|------------|
| Acute oral toxicity | Category 4 |
| Skin Corrosion/Irritation | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 1 |
| Skin Sensitization | Category 1 |
| Carcinogenicity | Category 2 |

Label Elements

Signal Word

Danger

Hazard Statements

Harmful if swallowed
Causes skin irritation
May cause an allergic skin reaction
Causes serious eye damage

May cause respiratory irritation
Suspected of causing cancer

**Precautionary Statements****Prevention**

Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing dust/fume/gas/mist/vapors/spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves

Response

IF exposed or concerned: Get medical attention/advice

Skin

IF ON SKIN: Wash with plenty of soap and water
Take off contaminated clothing and wash before reuse
If skin irritation or rash occurs: Get medical advice/attention

Eyes

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 or doctor/physician

Ingestion

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Storage

Store locked up

Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

None identified

WARNING. Cancer - <https://www.p65warnings.ca.gov/>.

3. Composition/Information on Ingredients

| Component | CAS-No | Weight % |
|---------------------------------|----------|----------|
| 1H-Imidazole, 2-ethyl-4-methyl- | 931-36-2 | 98.5 |
| 4-Methylimidazole | 822-36-6 | 1.5 |

4. First-aid measures

General Advice

If symptoms persist, call a physician.

Eye Contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

Skin Contact

Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.

Inhalation

Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if

symptoms occur.

Ingestion

Clean mouth with water and drink afterwards plenty of water.

Most important symptoms and effects

Causes eye burns. May cause allergic skin reaction. Causes severe eye damage. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

Notes to Physician

Treat symptomatically

5. Fire-fighting measures

Suitable Extinguishing Media

Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam.

Unsuitable Extinguishing Media

No information available

Flash Point

160 °C / 320 °F

Method -

No information available

Autoignition Temperature

450 °C / 842 °F

Explosion Limits**Upper**

1.5

Lower

13

Sensitivity to Mechanical Impact No information available

Sensitivity to Static Discharge No information available

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition. Thermal decomposition can lead to release of irritating gases and vapors.

Hazardous Combustion Products

Nitrogen oxides (NO_x). Carbon monoxide (CO). Carbon dioxide (CO₂).

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA

Health
3

Flammability
1

Instability
0

Physical hazards
N/A

6. Accidental release measures

Personal Precautions

Use personal protective equipment as required. Ensure adequate ventilation.

Environmental Precautions

Should not be released into the environment. See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up Keep in suitable, closed containers for disposal. Soak up with inert absorbent material.

7. Handling and storage

Handling

Ensure adequate ventilation. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation.

Storage

Keep containers tightly closed in a dry, cool and well-ventilated place.

8. Exposure controls / personal protection

Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure

limits established by the region specific regulatory bodies.

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal Protective Equipment**Eye/face Protection**

Tight sealing safety goggles. Face protection shield.

Skin and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice.

9. Physical and chemical properties

| | |
|---|---|
| Physical State | Viscous liquid Liquid |
| Appearance | Yellow |
| Odor | No information available |
| Odor Threshold | No information available |
| pH | No information available |
| Melting Point/Range | 36 - 42 °C / 96.8 - 107.6 °F |
| Boiling Point/Range | No information available - 295 °C / - 563 °F @ 760 mmHg |
| Flash Point | 160 °C / 320 °F |
| Evaporation Rate | No information available |
| Flammability (solid,gas) | Not applicable |
| Flammability or explosive limits | |
| Upper | 1.5 |
| Lower | 13 |
| Vapor Pressure | 1 mbar @ 106 °C |
| Vapor Density | No information available |
| Specific Gravity | 0.972 |
| Solubility | < 210 g/1000 ml @ 20 °C |
| Partition coefficient; n-octanol/water | No data available |
| Autoignition Temperature | 450 °C / 842 °F |
| Decomposition Temperature | > 350°C |
| Viscosity | No information available |
| Molecular Formula | C6 H10 N2 |
| Molecular Weight | 110.16 |

10. Stability and reactivity

| | |
|---|--|
| Reactive Hazard | None known, based on information available |
| Stability | Stable under normal conditions. |
| Conditions to Avoid | Incompatible products. Excess heat. |
| Incompatible Materials | Strong oxidizing agents, Strong acids |
| Hazardous Decomposition Products | Nitrogen oxides (NOx), Carbon monoxide (CO), Carbon dioxide (CO ₂) |
| Hazardous Polymerization | Hazardous polymerization does not occur. |
| Hazardous Reactions | None under normal processing. |

11. Toxicological information

Acute Toxicity

Product Information Component Information

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--|--------------------------|-----------------------------|-----------------|
| 1H-Imidazole, 2-ethyl-4-methyl-4-Methylimidazole | 731 mg/kg | >400 mg/kg | >0.03 mg/L 8h |
| | LD50 = 751 mg/kg (Rat) | LD50 = 440 mg/kg (Rabbit) | Not listed |

Toxicologically Synergistic Products No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation Risk of serious damage to eyes Irritating to skin

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

| Component | CAS-No | IARC | NTP | ACGIH | OSHA | Mexico |
|--|----------|------------|------------|------------|------------|------------|
| 1H-Imidazole, 2-ethyl-4-methyl-4-Methylimidazole | 931-36-2 | Not listed | Not listed | Not listed | Not listed | Not listed |
| | 822-36-6 | Group 2B | Not listed | Not listed | X | Not listed |

IARC (International Agency for Research on Cancer)

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Group 1 - Carcinogenic to Humans

Group 2A - Probably Carcinogenic to Humans

Group 2B - Possibly Carcinogenic to Humans

Mutagenic Effects Not mutagenic in AMES Test

Reproductive Effects No information available.

Developmental Effects No information available.

Teratogenicity No information available.

STOT - single exposure None known

STOT - repeated exposure None known

Aspiration hazard No information available

Symptoms / effects, both acute and delayed Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

Endocrine Disruptor Information No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

12. Ecological information

Ecotoxicity

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|--|---|--|----------------------|---------------------------------------|
| 1H-Imidazole, 2-ethyl-4-methyl-4-Methylimidazole | Not listed | 68.1 mg/L 96h | Not listed | Not listed |
| | EC50: = 2 mg/L, 72h (Desmodesmus subspicatus) | LC50: = 34 mg/L, 96h static (Leuciscus idus) | EC50 = 440 mg/L 17 h | EC50: = 180 mg/L, 48h (Daphnia magna) |

Persistence and Degradability Soluble in water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation No information available.

Mobility . Will likely be mobile in the environment due to its water solubility.

| Component | log Pow |
|-------------------|---------|
| 4-Methylimidazole | 0.35 |

13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOT Not regulated
TDG Not regulated
IATA Not regulated
IMDG/IMO Not regulated

15. Regulatory information

United States of America Inventory

| Component | CAS-No | TSCA | TSCA Inventory notification - Active/Inactive | TSCA - EPA Regulatory Flags |
|---------------------------------|----------|------|---|-----------------------------|
| 1H-Imidazole, 2-ethyl-4-methyl- | 931-36-2 | X | ACTIVE | - |
| 4-Methylimidazole | 822-36-6 | X | ACTIVE | - |

Legend:

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export Not applicable

International Inventories

Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

| Component | CAS-No | DSL | NDL | EINECS | PICCS | ENCS | AICS | IECSC | KECL |
|---------------------------------|----------|-----|-----|-----------|-------|------|------|-------|----------|
| 1H-Imidazole, 2-ethyl-4-methyl- | 931-36-2 | X | - | 213-234-5 | X | X | X | X | KE-13920 |
| 4-Methylimidazole | 822-36-6 | - | X | 212-497-3 | X | X | X | X | KE-24300 |

U.S. Federal Regulations

SARA 313 Not applicable

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

OSHA - Occupational Safety and Health Administration Not applicable

CERCLA Not applicable

California Proposition 65 This product contains the following Proposition 65 chemicals.

| Component | CAS-No | California Prop. 65 | Prop 65 NSRL | Category |
|-----------|--------|---------------------|--------------|----------|
|-----------|--------|---------------------|--------------|----------|

| | | | | |
|-------------------|----------|------------|-----------|------------|
| 4-Methylimidazole | 822-36-6 | Carcinogen | 29 µg/day | Carcinogen |
|-------------------|----------|------------|-----------|------------|

U.S. State Right-to-Know Regulations

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|-------------------|---------------|------------|--------------|----------|--------------|
| 4-Methylimidazole | - | - | - | X | - |

U.S. Department of Transportation

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade Slight risk, Grade 1

16. Other information

Prepared By Health, Safety and Environmental Department
Email: tech@alfa.com
www.alfa.com

Creation Date 21-May-2012
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Revision Summary SDS authoring systems update, replaces ChemGes SDS No. 931-36-2.

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of SDS