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

1.1 Product identifier

Trade name Abietic acid

Stock number: L13770
CAS Number: 514-10-3
EC number: 208-178-3

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

Identified use: SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Thermo Fisher (Kandel) GmbH
Zeppelinstr. 7b
76185 Karlsruhe / Germany
Tel: +49 (0) 721 84007 280
Fax: +49 (0) 721 84007 300
Email: tech@alfa.com
www.alfa.com

Informing department: Product safety Tel + +049 (0) 7275 988687-0

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

- Skin Irrit. 2 H315 Causes skin irritation.
- Eye Irrit. 2 H319 Causes serious eye irritation.
- STOT SE 3 H335 May cause respiratory irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC

Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.

Information concerning particular hazards for human and environment: Not applicable

Other hazards that do not result in classification No information known.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008 The substance is classified and labelled according to the CLP regulation.

Hazard pictograms

- GHS07

Signal word Warning

Hazard statements

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment

PBT: Not applicable.
vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances

CAS# Designation:
514-10-3 Abietic acid

Identification number(s):
EC number: 208-178-3

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
Seek immediate medical advice.

After skin contact
Instantly wash with water and soap and rinse thoroughly.
Seek immediate medical advice.

After eye contact
Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing
Seek medical treatment.

4.2 Most important symptoms and effects, both acute and delayed No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing agents CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture

If this product is involved in a fire, the following can be released:
SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation.

6.2 Environmental precautions: Do not allow material to be released to the environment without proper governmental permits.

6.3 Methods and material for containment and cleaning up: Ensure adequate ventilation. Prevention of secondary hazards: No special measures required.

6.4 Reference to other sections
See Section 7 for information on safe handling
See section 8 for information on personal protection equipment.
See Section 13 for information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Handle under dry protective gas.
Handle under dry argon.
Keep containers tightly sealed.
Ensure good ventilation/exhaustion at the workplace.

7.2 Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and containers: Refrigerate
Information about storage in one common storage facility:
Store away from oxidising agents.
Store away from air.
Protect from heat.

Further information about storage conditions:
Store under dry inert gas.
This product is air sensitive.
Keep container tightly sealed.
Refrigerate

7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters
Components with critical values that require monitoring at the workplace:
514-10-3 Abietic acid (100.0%)
MAK (Germany) vgl.Abschn.IIb

Additional information: No data

8.2 Exposure controls
Personal protective equipment
General protective and hygienic measures
The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Avoid contact with the eyes and skin.
Maintain an ergonomically appropriate working environment.

Breathing equipment: Use breathing protection with high concentrations.

Protection of hands: Check protective gloves prior to each use for their proper condition.
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Eye protection:
Safety glasses

Face protection

Body protection:
Protective work clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information
Appearance:
Form: Crystalline
Colour: Colourless
Smell: Characteristic
Odour threshold: Not determined.

pH-value: Not applicable.

Change in condition
Melting point/Melting range: 139-142 °C
Boiling point/Boiling range: 250 °C
Sublimation temperature / start: Not determined

Flash point: Not applicable
Inflammability (solid, gaseous) Product is not inflammable.
Ignition temperature: Not determined
Decomposition temperature: Not determined
Self-inflammability: Not determined.

Danger of explosion: Product is not explosive.
Critical values for explosion:
Lower: Not determined
Upper: Not determined

Steam pressure: Not applicable.
Density: Not determined
Relative density: Not determined.
SECTION 8: Physical/Chemical properties

8.1 Physical state: Solid
8.2 Colour: White
8.3 Odour: Odourless
8.4 Melting point: Not determined
8.5 Boiling point: Not determined
8.6 Density: Not determined
8.7 Vapour pressure: Not determined
8.8 Partition coefficient (octanol/water): Not determined
8.9 Solubility in / Miscibility with:
   - Water: Not determined
   - Alcohols: Not determined
   - Aprotic solvents: Not determined
8.10 Specific gravity (relative to water): Not determined
8.11 Refractive index: Not determined
8.12 Flash point: Not determined
8.13 Autoignition temperature: Not determined
8.14 Vapour density: Not applicable
8.15 Evaporation rate: Not applicable
8.16 Solubility in / Miscibility with:
   - Water: Not determined
8.17 Partition coefficient (octanol/water): Not determined
8.18 Viscosity:
   - dynamic: Not applicable
   - kinematic: Not applicable
8.19 Other information
   - No further relevant information available.

SECTION 9: Fire and explosion hazard

9.1 Flammability: Not flammable
9.2 Flame propagation rate: Not determined
9.3 Reaction exothermicity: Not determined
9.4 Reactivity: No reaction known
9.5 Heat of reaction: Not determined
9.6 Stability: Stable
9.7 Ignition temperature: Not determined
9.8 Maximum unconfined explosion pressure: Not determined
9.9 Minimum ignition energy: Not determined
9.10 Maximum explosion pressure: Not determined
9.11 Thermal stability: Stable
9.12 Flash point: Not determined
9.13 Lower explosive limit: Not determined
9.14 Upper explosive limit: Not determined
9.15 Explosive lower limit: Not determined
9.16 Explosive upper limit: Not determined
9.17 Heat of combustion: Not determined
9.18 Heat of explosion: Not determined
9.19 Bond energy: Not determined
9.20 Energy of detonation: Not determined
9.21 Sensitivity to initiation:
   - friction: Not determined
   - impact: Not determined
   - shock: Not determined
9.22 Conditions to avoid:
   - No further relevant information available.
9.23 Incompatibility
   - Air: Not determined
   - Heat: Not determined
9.24 Hazardous decomposition products:
   - Carbon monoxide and carbon dioxide

SECTION 10: Stability and reactivity

10.1 Reactivity: No reaction known
10.2 Chemical stability: Stable under recommended storage conditions
10.3 Possibility of hazardous reactions: No hazardous reactions known
10.4 Conditions to avoid:
   - No further relevant information available.
10.5 Incompatible materials:
   - Air
   - Heat
10.6 Hazardous decomposition products:
   - Carbon monoxide and carbon dioxide

SECTION 11: Toxicological information

11.1 Information on toxicological effects
11.2 Acute toxicity:
   - LD/LC50 values that are relevant for classification: Not determined
11.3 Skin irritation or corrosion: Causes skin irritation
11.4 Eye irritation or corrosion: Causes serious eye irritation
11.5 Sensitization: No sensitizing effect known
11.6 Germ cell mutagenicity: No effects known
11.7 Reproductive toxicity: No effects known
11.8 Specific target organ system toxicity - repeated exposure:
   - No effects known
11.9 Specific target organ system toxicity - single exposure:
   - May cause respiratory irritation
11.10 Aspiration hazard: No effects known
11.11 Subacute to chronic toxicity:
   - No effects known
11.12 Additional toxicological information:
   - To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information

12.1 Toxicity
12.2 Aquatic toxicity:
   - No further relevant information available
12.3 Persistence and degradability:
   - No further relevant information available
12.4 Mobility in soil:
   - No further relevant information available
12.5 Additional ecological information:
   - General notes:
     - Do not allow material to be released to the environment without proper governmental permits.
     - Water hazard class 1 (Self-assessment): slightly hazardous for water.
     - Do not allow undiluted product or large quantities to reach ground water, water course or sewage system.
     - Avoid transfer into the environment.
12.6 Results of PBT and vPvB assessment
   - PBT: Not applicable
   - vPvB: Not applicable
12.7 Other adverse effects:
   - No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
13.2 Recommendation:
   - Hand over to disposers of hazardous waste.
   - Must be specially treated under adherence to official regulations.
   - Consult state, local or national regulations for proper disposal.
   - Uncleaned packagings:
     - Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number
   - ADR, IMDG, IATA: None
14.2 UN proper shipping name
   - ADR, IMDG, IATA: None
14.3 Transport hazard class(es)
   - ADR, IMDG, IATA: None
14.4 Packing group
   - ADR, IMDG, IATA: None
14.5 Environmental hazards:
   - Not applicable
14.6 Special precautions for user:
   - Not applicable
14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:
   - Not applicable
14.8 Transport/Additional information:
   - Not dangerous according to the above specifications.

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
15.2 Australian Inventory of Chemical Substances:
   - Substance is listed
15.3 Standard for the Uniform Scheduling of Drugs and Poisons:
   - Substance is not listed
15.4 National regulations
   - Information about limitation of use:
     - Employment restrictions concerning young persons must be observed.
     - For use only by technically qualified individuals.
   - Water hazard class:
     - Water hazard class 1 (Self-assessment): slightly hazardous for water.
Other regulations, limitations and prohibitive regulations

ELINCS (European List of Notified Chemical Substances) Substance is not listed.

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing SDS: Global Marketing Department

Abbreviations and acronyms:
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
ADR: Accord européen sur le transport des marchandises dangereuses par Rout (European Agreement concerning the International Carriage of Dangerous Goods by Road)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
EINECS: European Inventory of Existing Commercial Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
vPvB: very Persistent and very Bioaccumulative
ACGIH: American Conference of Governmental Industrial Hygienists (USA)
OSHA: Occupational Safety and Health Administration (USA)
NTP: National Toxicology Program (USA)
IARC: International Agency for Research on Cancer
EPA: Environmental Protection Agency (USA)