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

1.1 Product identifier

Trade name 1-Naphthyl isocyanate

Stock number: A17200, L15771

CAS Number: 86-84-0

EC number: 201-703-7

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:
Alfa Aesar
Avocado Research Chemicals, Ltd.
Shore Road
Port of Heysham Industrial Park
Heysham Lancashire LA3 2XY
United Kingdom

Office Tel: +44 (0) 1524 850506
Office Fax: +44 (0) 1524 850608
Email: uktech@alfa.com

Informing department: Product safety department.

1.4 Emergency telephone number:

Call Carechem 24 at +44 (0) 1865 407333 (English only); +44 (0) 1235 239670 (Multi-language)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS06 skull and crossbones
Acute Tox. 3 H331 Toxic if inhaled.

GHS08 health hazard
Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

GHS07
Skin Irrit. 2 H315 Causes skin irritation.
Eye Irrit. 2 H319 Causes serious eye irritation.
STOT SE 3 H335 May cause respiratory irritation.

Other hazards that do not result in classification Lachrymator

2.2 Label elements

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

Signal word Danger

Hazard statements
H331 Toxic if inhaled.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 May cause respiratory irritation.

Precautionary statements
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves / protective clothing.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P309 IF exposed or if you feel unwell:
P310 Immediately call a POISON CENTER/doctor/…

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:
86-84-0 1-Naphthyl isocyanate

Identification number(s):
EC number: 201-703-7

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, sand, extinguishing powder. Do not use water.

5.2 Special hazards arising from the substance or mixture
Reacts with water. If this product is involved in a fire, the following can be released:
- Carbon monoxide and carbon dioxide
- Hydrogen cyanide (HCN)
- Nitrogen oxides (NOx)

5.3 Advice for firefighters
Protective equipment:
- Wear self-contained breathing apparatus.
- Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
- Wear protective equipment. Keep unprotected persons away.
- Ensure adequate ventilation.
- Protect from heat.
- Store away from water.

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:
- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- Dispose of contaminated material as waste according to section 13.

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.
- Keep containers tightly sealed.
- Ensure good ventilation/exhaustion at the workplace.
- Prevent formation of aerosols.
- Information about protection against explosions and fires: No information known.

7.2 Conditions for safe storage, including any incompatibilities
- Store away from oxidising agents.
- Protect from heat.
- Store away from water.
- Further information about storage conditions:
  - Store under dry inert gas.
  - This product is moisture sensitive.
  - Keep container tightly sealed.
  - Protect from humidity and keep away from water.
  - 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:

86-84-0 1-Naphthyl isocyanate (100.0%)
- WEL () Short-term value: 0.07 mg/m³
- Long-term value: 0.02 mg/m³
- Sen; as -NCO

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.
  - Do not inhale gases / fumes / aerosols.
  - 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.
  - Material of gloves: Impervious gloves
  - 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: Liquid
- Colour: Colourless
- Smell: Irritant
- Odour threshold: Not determined.
- pH-value: Not determined.
- Change in condition: Melting point/Melting range: 4 °C
Trade name 1-Naphthyl isocyanate

Boiling point/Boiling range: 269 °C
Sublimation temperature / start: Not determined

Flash point: 135 °C
Inflammability (solid, gaseous) Not determined
Ignition temperature: Not determined
 Decomposition temperature: Not determined
Self-ignitability: Not determined.

Danger of explosion: Product is not explosive.
Critical values for explosion:
Lower: Not determined
Upper: Not determined
Steam pressure:
Density at 20 °C 1.177 g/cm³
Relative density Not determined.
Vapour density Not determined.
Evaporation rate Not determined.
Solubility in / Miscibility with Water: Hydrolyzes.
Partition coefficient (n-octanol/water): Not determined.
Viscosity:
dynamic: Not determined.
kinematic: Not determined.

9.2 Other information
No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity No information known.
10.2 Chemical stability Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions Isocyanates may react exothermically with NH, OH or SH groups
10.4 Conditions to avoid No further relevant information available.
10.5 Incompatible materials:
Oxidizing agents
Alcohols
Amines
Heat
Water/moisture
10.6 Hazardous decomposition products:
Carbon monoxide and carbon dioxide
Hydrogen cyanide (prussic acid)
Nitrogen oxides (NOx)

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity: Toxic if inhaled.
LD/LC50 values that are relevant for classification: No data
Skin irritation or corrosion: Causes skin irritation.
Eye irritation or corrosion:
Causes serious eye irritation.
This product is a lacrymator.
Sensitization: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Reproductive toxicity: No effects known.
Specific target organ system toxicity - repeated exposure: No effects known.
Specific target organ system toxicity - single exposure: May cause respiratory irritation.
Aspiration hazard: No effects known.
Subacute to chronic toxicity: No effects known.
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
Aquatic toxicity: No further relevant information available.
12.2 Persistence and degradability No further relevant information available.
12.3 Bioaccumulative potential No further relevant information available.
12.4 Mobility in soil No further relevant information available.
Additional ecological information:
General notes: Do not allow material to be released to the environment without proper governmental permits. Generally not hazardous for water. Avoid transfer into the environment.
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
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

UN-Number ADR, IMDG, IATA UN2206
14.2 UN proper shipping name
ADR 2206 ISOCYANATES, TOXIC, N.O.S. (1-Naphthyl isocyanate)
IMDG, IATA ISOCYANATES, TOXIC, N.O.S. (1-Naphthyl isocyanate)
14.3 Transport hazard class(es)

ADR

Class
Label
IMDG, IATA

Class
Label
6.1 Toxic substances.
6.1

Packing group
ADR, IMDG, IATA
III

14.5 Environmental hazards:
Not applicable.

14.6 Special precautions for user
Warning: Toxic substances.

Kemler Number:
60

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code
Not applicable.

Transport/Additional information:

ADR
Excepted quantities (EQ):
E1

Limited quantities (LQ):
5L

Transport category:
2

Tunnel restriction code:
E

UN "Model Regulation":
UN2206, ISOCYANATES, TOXIC, N.O.S. (1-Naphthyl isocyanate), 6.1, III

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Australian Inventory of Chemical Substances Substances are listed.

Standard for the Uniform Scheduling of Drugs and Poisons Substance is not listed.

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: Generally not hazardous for water.

Other regulations, limitations and prohibitive regulations
ELINCS (European List of Notified Chemical Substances) 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-DR: 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)
ADE: Accord européen sur le transport des marchandises dangereuses par Route (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)