

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

1.1. Product identifier

Product name: BORANE-TETRAHYDROFURAN COMPLEX, 1M SOLUTION IN THF, STABILISED,
ACROSEAL®

CAS number: 14044-65-6

EINECS number: 237-881-8

Product code: OR52063

Synonyms: TRIHYDRO(TETRAHYDROFURAN)BORON, 1M SOLUTION IN THF

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

1.3. Details of the supplier of the safety data sheet

Company name: Apollo Scientific Ltd

Units 3 & 4

Parkway

Denton

Manchester

M34 3SG

UK

Tel: 0161 337 9971

Fax: 0161 336 6932

Email: david.tideswell@apolloscientific.co.uk

1.4. Emergency telephone number

Emergency tel: -

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Flam. Liq. 2: H225; Water-react. 1: H260; Eye Dam. 1: H318; Carc. 2: H351; Skin Irrit. 2: H315; -: EUH014; -: EUH019

Most important adverse effects: Highly flammable liquid and vapour. In contact with water releases flammable gases which may ignite spontaneously. Suspected of causing cancer. Reacts violently with water. May form explosive peroxides. Causes serious eye damage.

2.2. Label elements

Label elements:

Hazard statements: H225: Highly flammable liquid and vapour.

H260: In contact with water releases flammable gases which may ignite spontaneously.

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H351: Suspected of causing cancer.

EUH014: Reacts violently with water.

EUH019: May form explosive peroxides.

H318: Causes serious eye damage.

Hazard pictograms: GHS02: Flame

GHS05: Corrosion

GHS07: Exclamation mark

GHS08: Health hazard



Signal words: Danger

Precautionary statements: P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P223: Do not allow contact with water.

2.3. Other hazards

Other hazards: In use, may form flammable / explosive vapour-air mixture. Stench.

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.1. Substances

Chemical identity: BORANE-TETRAHYDROFURAN COMPLEX, 1M SOLUTION IN THF, STABILISED, ACROSEAL®

CAS number: 14044-65-6

EINECS number: 237-881-8

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes. Transfer to hospital for specialist examination.

Ingestion: Wash out mouth with water. Consult a doctor.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat.

[cont...]

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Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Exposure may cause coughing or wheezing.

4.3. Indication of any immediate medical attention and special treatment needed

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Carbon dioxide. Dry chemical powder. Do not use water. Do not use foam.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Highly flammable. Forms explosive air-vapour mixture. Vapour may travel considerable distance to source of ignition and flash back. In combustion emits toxic fumes of carbon dioxide / carbon monoxide. Borane/boron oxides.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. If outside do not approach from downwind. If outside keep bystanders upwind and away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent the escape of liquid. Eliminate all sources of ignition.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method. Do not use equipment in clean-up procedure which may produce sparks.

6.4. Reference to other sections

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air. Smoking is forbidden. Use non-sparking tools. Only use in fume hood. If peroxide formation is suspected, do not open or move container.

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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed. Keep away from sources of ignition. Prevent the build up of electrostatic charge in the immediate area. Ensure lighting and electrical equipment are not a source of ignition. Air sensitive. Product reacts with water. Take precautions to avoid contact with atmospheric moisture. Store under Argon. Recommended storage temp 2-8 °C. Material should be tested periodically for the presence of peroxides.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: No data available.

DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area. Ensure lighting and electrical equipment are not a source of ignition.

Respiratory protection: Self-contained breathing apparatus must be available in case of emergency.

Hand protection: Protective gloves.

Eye protection: Safety glasses. Ensure eye bath is to hand.

Skin protection: Protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Colourless

Odour: Stench

Solubility in water: Reacts with water.

Melting point/range °C: -108

upper: 13

Autoflammability °C: 103

Relative density: 0.876

Flammability limits %: lower: 1.5

Flash point °C: -22

Vapour pressure: 145mm@20 °C

9.2. Other information

Other information: No data available.

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Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions. Reacts violently with water

10.2. Chemical stability

Chemical stability: Stable under normal conditions. Stable at room temperature.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions. Water reactive: will react with water or moisture to produce heat and flammable/toxic gases.

10.4. Conditions to avoid

Conditions to avoid: Heat. Hot surfaces. Sources of ignition. Flames. Air. Moist air. Humidity.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes of carbon dioxide / carbon monoxide. Boron Oxides.

Section 11: Toxicological information

11.1. Information on toxicological effects

Relevant hazards for product:

Hazard	Route	Basis
Acute toxicity (ac. tox. 4)	-	Hazardous: calculated
Skin corrosion/irritation	DRM	Hazardous: calculated
Serious eye damage/irritation	OPT	Hazardous: calculated
Carcinogenicity	--	Hazardous: calculated
STOT-single exposure	-	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Exposure may cause coughing or wheezing.

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values: No data available.

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12.2. Persistence and degradability

Persistence and degradability: No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential: No data available.

12.4. Mobility in soil

Mobility: No data available.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: No data available.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: MATERIAL SHOULD BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS

Disposal of packaging: Dispose of as special waste in compliance with local and national regulations Observe all federal, state and local environmental regulations.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN3399

14.2. UN proper shipping name

Shipping name: ORGANOMETALLIC SUBSTANCE, LIQUID, WATER-REACTIVE, FLAMMABLE

14.3. Transport hazard class(es)

Transport class: 4.3 (3)

14.4. Packing group

Packing group: I

14.5. Environmental hazards

Environmentally hazardous: No

Marine pollutant: No

14.6. Special precautions for user

Tunnel code: B/E

Transport category: 0

[cont...]

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Section 15: Regulatory information

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

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830.

* Data predicted using computational software. The OECD QSAR-Toolbox for grouping chemicals into categories. Developed by LMC bulgaria.

<http://echa.europa.eu/support/oeqd-qsar-toolbox>

~ Data predicted using computational software ACD/ToxSuite v 2.95.1 Copyright 1994-2009 ACD/labs, Copyright 2001-2009 Pharma Algorithms, Inc, Advanced Chemistry Development, Inc (ACD/Labs). http://www.acdlabs.com/products/pc_admet/tox/tox/

Phrases used in s.2 and s.3: EUH014: Reacts violently with water.

EUH019: May form explosive peroxides.

H225: Highly flammable liquid and vapour.

H260: In contact with water releases flammable gases which may ignite spontaneously.

H318: Causes serious eye damage.

H351: Suspected of causing cancer ({{{0||message=<state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>||filter=(_)?EXP_ROUTE_.+}}}).

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