

SAFETY DATA SHEET

3-(BROMOMETHYL)FURAN 20% W/W SOLUTION IN TOLUENE

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Compilation date: 28/05/2015

Revision date: SAP

Revision No: 1

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

1.1. Product identifier

Product name: 3-(BROMOMETHYL)FURAN 20% W/W SOLUTION IN TOLUENE

CAS number: 63184-61-2

Product code: OR400006

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

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CHIP: F: R11; Xi: R36/37/38; Xn: R48/20; Xn: R63; -: R67

Classification under CLP: Acute Tox. 4: H302; Eye Irrit. 2: H319; Flam. Liq. 2: H225; Repr. 2: H361d; Skin Irrit. 2: H315; STOT RE 2: H373; STOT SE 3: H335; STOT SE 3: H336

Most important adverse effects: Highly flammable. Irritating to eyes, respiratory system and skin. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Possible risk of harm to the unborn child. Vapours may cause drowsiness and dizziness.

2.2. Label elements

Label elements:

Hazard statements: H225: Highly flammable liquid and vapour.

H302: Harmful if swallowed.

H315: Causes skin irritation.

H319: Causes serious eye irritation.

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H335: May cause respiratory irritation.

H336: May cause drowsiness or dizziness.

H361d: Suspected of damaging the unborn child.

H373: May cause damage to organs through prolonged or repeated exposure.

Signal words: Danger

Hazard pictograms: GHS02: Flame

GHS07: Exclamation mark

GHS08: Health hazard



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

P260: Do not breathe dust.

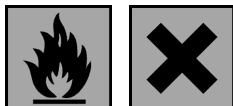
P280: Wear protective gloves/protective clothing/eye protection/face protection.

P308+313: IF exposed or concerned: Get medical advice/attention.

Label elements under CHIP:

Hazard symbols: Highly flammable.

Harmful.



Risk phrases: R11: Highly flammable.

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

R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.

R63: Possible risk of harm to the unborn child.

R67: Vapours may cause drowsiness and dizziness.

Safety phrases: S36/37: Wear suitable protective clothing and gloves.

2.3. Other hazards

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

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

Section 3: Composition/information on ingredients

3.2. Mixtures

[cont...]

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Hazardous ingredients:

TOLUENE

EINECS	CAS	CHIP Classification	CLP Classification	Percent
203-625-9	108-88-3	F: R11; Xi: R38; Xn: R48/20; Xn: R63; Xn: R65; -: R67	Flam. Liq. 2: H225; Repr. 2: H361d; Asp. Tox. 1: H304; STOT RE 2: H373; Skin Irrit. 2: H315; STOT SE 3: H336	70-90%

3-(BROMOMETHYL)FURAN

-	63184-61-2	Xn: R22; Xi: R36/37/38	Acute Tox. 4: H302; STOT SE 3: H335; Eye Irrit. 2: H319; Skin Irrit. 2: H315	10-30%
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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. Consult a doctor.

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.

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: Alcohol resistant foam. Water spray. Carbon dioxide. Dry chemical powder. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: Highly flammable. In combustion emits toxic fumes. 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. Hydrogen bromide (HBr).

[cont...]

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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.

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. Light Sensitive.

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

[cont...]

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Hazardous ingredients:

TOLUENE

Workplace exposure limits:

Respirable dust

State	8 hour TWA	15 min. STEL	8 hour TWA	15 min. STEL
UK	-	-	191 mg/m ³	384 mg/m ³

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

Flash point °C: <21

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

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.

10.4. Conditions to avoid

Conditions to avoid: Heat. Hot surfaces. Sources of ignition. Flames.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

[cont...]

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10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes of carbon dioxide / carbon monoxide. Hydrogen bromide gas (HBr).

Section 11: Toxicological information

11.1. Information on toxicological effects

Hazardous ingredients:

TOLUENE

DERMAL	RBT	LD50	12196	mg/kg
INHALATION	RAT	4H LC50	12500-28800	mg/m3
ORAL	RAT	LD50	>5580	mg/kg

Relevant effects for mixture:

Effect	Route	Basis
Irritation	OPT INH DRM	Hazardous: calculated
Repeated dose toxicity	INH	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

Hazardous ingredients:

TOLUENE

Daphnia magna	48H EC50	4.1	mg/l
FISH (<i>Oryzias latipes</i>)	96H LC50	25	mg/l
GREEN ALGA (<i>Selenastrum capricornutum</i>)	72H EC50	27	mg/l

12.2. Persistence and degradability

Persistence and degradability: No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential: No data available.

[cont...]

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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: UN1993

14.2. UN proper shipping name

Shipping name: FLAMMABLE LIQUID, N.O.S.

14.3. Transport hazard class(es)

Transport class: 3

14.4. Packing group

Packing group: III

14.5. Environmental hazards

Environmentally hazardous: No

Marine pollutant: No

14.6. Special precautions for user

Tunnel code: D/E

Transport category: 3

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.

[cont...]

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Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 453/2010.

* Data predicted using computational software. Toxtree - Toxic Hazard Estimation by decision tree approach. <http://ecb.jrc.ec.europa.eu/qsar/qsar-tools/index.php?c=TOXTREE>

~ 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: H225: Highly flammable liquid and vapour.
H302: Harmful if swallowed.
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H319: Causes serious eye irritation.
H335: May cause respiratory irritation.
H336: May cause drowsiness or dizziness.
H361d: Suspected of damaging the unborn child.
H373: May cause damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.
R11: Highly flammable.
R22: Harmful if swallowed.
R36/37/38: Irritating to eyes, respiratory system and skin.
R38: Irritating to skin.
R48/20: Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R63: Possible risk of harm to the unborn child.
R65: Harmful: may cause lung damage if swallowed.
R67: Vapours may cause drowsiness and dizziness.

Legend to abbreviations: PNEC = predicted no effect level
DNEL = derived no effect level
LD50 = median lethal dose
LC50 = median lethal concentration
EC50 = median effective concentration
IC50 = median inhibitory concentration
dw = dry weight
bw = body weight

[cont...]

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cc = closed cup

oc = open cup

MUS = mouse

GPG = guinea pig

RBT = rabbit

HAM = hamster

HMN = human

MAM = mammal

PGN = pigeon

IVN = intravenous

SCU = subcutaneous

SKN = skin

DRM = dermal

OCC = ocular/corneal

PCP = physico-chemical properties

Legal disclaimer: The material is intended for research purposes only and should be handled exclusively by those who have been fully trained in safety, laboratory and chemical handling procedures. The above information is believed to be correct to the best of our knowledge. The above information is believed to be correct to the best of our knowledge at the date of its publication, but should not be considered to be all inclusive. It should be used only as a guide for safe handling, storage, transportation and disposal. We cannot guarantee that the hazards detailed in this document are the only hazards that exist for this product. This is not a warranty and Apollo Scientific Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.