

SAFETY DATA SHEET

In accordance with 453/2010 and 1272/2008

(All references to EU regulations and directives are abbreviated into only the numeric term)

Issued 09 - 07 - 2015

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name **ST-99 FR FOAM**

1.2. Relevant identified uses of the substance or mixture and uses advised against
Identified uses For industrial use

1.3. Details of the supplier of the safety data sheet

Company Sealed Tight Solutions Ltd
Station Industrial Estate
Prudhoe, Northumberland
NE42 6NP
Telephone +44 (0)1661 830101
E-mail info@sealedtightsolutions.com

1.4. Emergency telephone number

In case of emergency contact toxicological information, emergency tel 112.

For non-emergency poison information, see http://www.who.int/gho/phe/chemical_safety/poisons_centres/en/

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance mixture

Classification in accordance with 1272/2008

Extremely flammable aerosol (Category 1 foam)
Acute toxicity (Category 4 gas)
Skin Irritant (Category 2)
Irritates eyes (Category 2)
Risk of allergic reaction or asthma if inhaled (Category 1)
May cause an allergic skin reaction (Category 1)
Suspected of causing cancer (Category 2)
Specific organ toxicity - single exposure; May cause respiratory irritation (Category 3 resp)
STOT RE 2; Specific target organ toxicity - repeated exposure (Category 2)

2.2. Label elements

Label information in accordance with 1272/2008

Hazard pictograms



Signal words Danger

Hazard statements

H222, H229	Extremely flammable aerosol. Pressurised container: May burst if heated
H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled
H335	May cause respiratory irritation
H351	Suspected of causing cancer

H373	May cause organs through prolonged or repeated exposure Contains POLY -(PHENYL ISOCYANATE)-co-FORMALDEHYDE;
Precautionary statements	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P211	Do not spray on an open flame or other ignition source
P251	Do not pierce or burn, even after use
P271	Use only outdoors or in a well-ventilated area
P280	Wear protective gloves and eye protection
P342+P311	
P405	Store locked up
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/ 122°F
P102	Keep out of reach of children
P304+P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing

2.3. Other hazards

Not relevant.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is an aerosol dispenser with a foam aerosol containing flammable gas.

3.2. Mixtures

Note that the table shows known hazards of the ingredients in a pure form. These hazards are reduced or eliminated when mixed for diluted, see Section 16d.

Constituent	Classification	Concentration
POLY -(PHENYL ISOCYANATE)-co-FORMALDEHYDE		
CAS No 9016-87-9	Acute Tox 4 <i>dust</i> , Skin Irrit 2, Eye Irrit 2, Resp Sens 1, Skin Sens 1, Carc 2, STOT SE 3 <i>resp</i> , STOT RE 2; H332, H315, H319, H334, H317, H351, H335, H373	30 - 60%
EC No 618-498-9		
TRIS(1-CHLORO-2-PROPYL) PHOSPHATE		
CAS No 13674-84-5	Acute Tox 4 <i>oral</i> ; H302	< 25%
EC No 237-158-7		
PROPAN		
CAS No 74-98-6	Flam Gas 1, Press Gas P; H220, H280	< 15%
EC No 200-827-9		
Index No 601-003-00-5		
ISOBUTANE < 0.1 % BUTADIENE		
CAS No 75-28-5	Flam Gas 1, Press Gas P; H220, H280	< 15%
EC No 200-857-2		
Index No 601-004-00-0		
BUTANE < 0.1% BUTADIENE		
CAS No 106-97-8	Press Gas P, Flam Gas 1; H280, H220	< 15%
EC No 203-448-7		
Index No 601-004-00-0		
METHYL ETHER		
CAS No 115-10-6	Flam Gas 1, Press Gas P; H220, H280	< 10%
EC No 204-065-8		
Index No 603-019-00-8		

Explanations to the classification and labelling of the ingredients are given in Section 16e. Official abbreviations are printed in normal font. Text in italics are specifications and/or complement used in the calculation of the hazards of this mixture, see Section 16b

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Generally

In case of concern, or if symptoms persist, call doctor/physician.

Symptoms of poisoning may even occur after several hours; therefore keep the person under medical observation for at least 48 hours after the accident.

Upon breathing in

Allow the injured person to rest in a warm place with fresh air, seek medical advice.

Upon contact with the eyes

Flush immediately with luke-warm water for 15-20 minutes with wide-open eyes. If symptoms persist, seek medical advice.

Upon skin contact

Wipe off.

Wash the skin with soap and water.

If symptoms occur, contact a physician.

Upon ingestion

Flush nose, mouth and throat with water.

Drink a couple of glasses of water immediately.

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

Allergic reactions. Suspected of causing cancer. Irritation may occur. May cause damage to organs through prolonged or repeated exposure.

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

Not relevant.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Extinguish with water mist, powder, carbon dioxide or alcohol resistant foam.

5.2. Special hazards arising from the substance or mixture

The vapors may form explosive mixtures with air at room temperature.

Note that the extinguishing water may contain toxic substances or other hazardous substances.

The product is flammable.

5.3. Advice for fire-fighters

Protective measures should be taken regarding other material at the site of the fire.

In case of fire use a respirator mask.

Cool closed containers that were exposed to fire with water.

Wear full protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use recommended safety equipment, see section 8.

Ensure good ventilation.

Do not inhale the product and avoid exposure to skin and eyes.

Switch off equipment which has an exposed flame, glows, or has a heat source of some other kind.

Keep unauthorized and unprotected people at a safe distance.

6.2. Environmental precautions

Avoid release to drains, soil or watercourses.

6.3. Methods and material for containment and cleaning up

To be collected with caution and transported to a waste disposal facility.

Residues left behind after cleaning shall be treated as hazardous waste. For further information, contact the local authority sanitisation works. Present this safety data sheet.

6.4. Reference to other sections

See section 8 and 13 for personal protection equipment and disposal considerations

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Do not inhale the fumes and avoid exposure to skin, eyes and clothing.

Read and follow the manufacturer's instructions.

Store tightly, in original packaging.

Do not eat, drink or smoke in premises where this product is stored.

Store in a ventilated space.

Open fire, hot items, sparks or other ignition sources must not be present in the environment used for handling this product.

Work in order to avoid spillage. If spillage does occur, address it immediately in accordance with the directions specified in Section 6

of this safety data sheet.

Wash contaminated clothing before reuse.

Wash your hands after using the product.

Store this product separately from food items and keep it out of the reach of children and pets.

Take precautionary measures against static discharge.

7.2. Conditions for safe storage, including any incompatibilities

Store at 5- 30 °C.

Store in a well-ventilated space.

Keep away from heat and sunlight.

Protect from frost.

7.3. Specific end uses

Not relevant.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1. National limit values, United Kingdom

BUTANE < 0.1% BUTADIENE

Time-weighted-average exposure limit (TWA) 600ppm /1450 mg/m³ Short term exposure limit (STEL) 750 ppm / 1810 mg/m³

METHYL ETHER

Time-weighted-average exposure limit (TWA) 400ppm /766 mg/m³ Short term exposure limit (STEL) 500ppm /958 mg/m³

Other ingredients (cf. Section 3) have no occupational exposure limit values.

8.2. Exposure controls

For the safety and health protection of workers according to EU directives 89/391 , 98/24 and 98/24 and national occupational legislation, measures due to both the physical and general health hazards of this product and the carcinogenic and/or mutagenic properties of any of the ingredients (see Sections 2, 3, 10 and 11) must be considered.

Eye protection should be worn if there is any danger of direct exposure or splashing.

Use protective gloves of butyl rubber, Viton or fluorine rubber, or get advice from an occupational medical expert about alternative materials. Show this safety data sheet.

Work without protective gloves should only occur when very small amounts are handled.

Protect all exposed skin from coming into contact with the product.

Use proper protective breathing protection.

For limitation of environmental exposure, see Section 12.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a) Appearance	Form: aerosol Colour: grey
b) Odour	Karaktäristisk
c) Odour threshold	Not applicable
d) pH	Not applicable
e) Melting point/freezing point	Not applicable
f) Initial boiling point and boiling range	Not applicable
g) Flash point	0 °C
h) Evaporation rate	Not applicable
i) Flammability (solid, gas)	Not applicable
j) Upper/lower flammability or explosive limits	Lower explosion limit 1.5% Upper explosion limit 11%
k) Vapour pressure	Not applicable
l) Vapour density	Not applicable
m) Relative density	1.3 kg/L
n) Solubility	Solubility in water: Insoluble

o) Partition coefficient: n-octanol/water	Not applicable
p) Auto-ignition temperature	350 °C
q) Decomposition temperature	Not applicable
r) Viscosity	Not applicable
s) Explosive properties	Not applicable
t) Oxidising properties	Not applicable

9.2. Other information

No data available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

The product contains no substances which can lead to hazardous reactions at normal use.

10.2. Chemical stability

The product is stable at normal storage and handling conditions.

10.3. Possibility of hazardous reactions

No hazardous reactions known during normal use.

10.4. Conditions to avoid

Avoid sources of ignition and excessive temperatures.

The product is sensitive to light.

10.5. Incompatible materials

Avoid contact with water.

10.6. Hazardous decomposition products

None under normal conditions.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

General or unspecific toxicity

Note that the product is carcinogenic, or contains carcinogenic substance(s).

This product's main risk is its flammability.

Acute effects

Not classified as an acutely toxic substance.

Harmfulness

Harmful if inhaled.

The product is a health hazard.

Repeated dose toxicity

Prolonged exposure to the substance is dangerous.

Carcinogenicity

Is suspected to be carcinogenic.

CMR effects

The criteria for classification cannot be considered fulfilled based on available data.

Sensibilisation

The product contain allergenic substances.

Corrosive and irritating effects

This product may irritate eyes, skin, mucous membranes and respiratory tract.

Synergism and antagonism

The criteria for classification cannot be considered fulfilled based on available data.

Effect on judgment and other psychological effects

The criteria for classification cannot be considered fulfilled based on available data.

Effect on human micro flora

No information is available.

Relevant toxicological properties

TRIS(1-CHLORO-2-PROPYL) PHOSPHATE

LD50 rat (Orally) 24h = 630 mg/kg

ISOBUTANE < 0.1 % BUTADIENE

LC50 rat (Inhalation) 4h = 658 mg/L

BUTANE < 0.1% BUTADIENE

LC50 rat (Inhalation) 4h = 658 mg/L

METHYL ETHER

LC50 rat (Inhalation) 4h = 308 mg/L inhalation

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

METHYL ETHER

LC50 Freshwater water flea (*Daphnia magna*) 48h = 2390 mg/L

LC50 Fish 96h = 1474 mg/L

IC50 Algae 72h = 1986 mg/L

The product is an allergenic substance, or contains an allergenic substance. Ecological effects cannot be ruled out.

12.2. Persistence and degradability

There is no information regarding persistence or degradability.

12.3. Bioaccumulative potential

Neither this product, nor its contents, accumulates in nature.

12.4. Mobility in soil

Information about mobility in nature is not available.

12.5. Results of PBT and vPvB assessment

No chemical safety report has been executed.

12.6. Other adverse effects

Data lacking.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste handling for the product

Discarded products must be disposed of as hazardous waste in accordance with regulations.

Classification according to 2006/12

Recommended LoW-code: 07 02 08 other still bottoms and reaction residues.

Recycling of the product

Not indicated

SECTION 14: TRANSPORT INFORMATION

This product is only supposed to be transported by road or railway and just the transport regulations ADR/RID thus apply. If other means of transport are to be used, contact the publisher of this safety data sheet.

14.1. UN number

1950

14.2. UN proper shipping name

AEROSOLS

14.3. Transport hazard class

(es) Class

2: Gases

Classification code (ADR/RID)

5A:

Subsidiary risk (IMDG)

Labels



14.4. Packing group

Packing group: Not applicable

14.5.Environmental hazards

Not applicable

14.6.Special precautions for user

Tunnel restrictions

Tunnel category: E.

14.7.Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

14.8 Other transport information

Transport category: 3; Maximum total quantity per transport unit: 1000 kgs or litres.

SECTION 15: REGULATORY INFORMATION

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

Not applicable.

15.2.Chemical safety assessment

Assessment and chemical safety report in accordance with 1907/2006 Annex I has not yet been performed.

SECTION 16: OTHER INFORMATION

16a. Indication of where changes have been made to the previous version of the safety data sheet

Revisions of this document

This is the first version.

16b. Legend to abbreviations and acronyms used in the safety data sheet

Full texts for Hazard Class and Category Code mentioned in section 3

<i>No phys haz</i>	Non-assigned physical hazard
<i>Acute Tox 4dust</i>	Acute toxicity (Category 4 dust)
<i>Skin Irrit 2</i>	Skin Irritant (Category 2)
<i>Eye Irrit 2</i>	Irritates eyes (Category 2)
<i>Resp Sens 1</i>	Risk of allergic reaction or asthma if inhaled (Category 1)
<i>Skin Sens 1</i>	May cause an allergic skin reaction (Category 1)
<i>Carc 2</i>	Suspected of causing cancer (Category 2)
<i>STOT SE 3resp</i>	Specific organ toxicity - single exposure; May cause respiratory irritation (Category 3 resp)
<i>STOT RE 2</i>	STOT RE 2; Specific target organ toxicity - repeated exposure (Category 2)
<i>Acute Tox 4oral</i>	Acute toxicity (Category 4 oral)
<i>Flam Gas 1</i>	Extremely flammable gas (Category 1)
<i>Press GasP</i>	Compressed gas
<i>No tox haz</i>	Not classified as toxic

Comprehensive definition of the hazards mentioned in Section 2

Flam Aerosol 1foam

Foam aerosol category 1. Containing $\geq 85\%$ flammable components and having a heat combustion level of ≥ 30 kJ/g. The foam test shows a flame height of ≥ 20 cm and the flame duration of ≥ 2 s or a flame height of ≥ 4 cm and flame duration of ≥ 7 s in

Acute Tox 4gas

ATE (acute toxicity estimate) 2,500-20,000 ppmV

Skin Irrit 2

One or more criteria 1-3 for irritation of skin is applicable

Eye Irrit 2

If, when applied to the eye of an animal, a substance produces at least in 2 of 3 tested animals, a positive response of:

- corneal opacity ≥ 1 and/or
- iritis ≥ 1 , and/or
- conjunctival redness ≥ 2 and/or
- conjunctival oedema (chemosis) ≥ 2

calculated as the mean scores following grading at 24, 48 and 72 hours after installation of the test material, and which fully reverses within an observation period of 21 days

Resp Sens 1

Substances shall be classified as respiratory sensitisers (Category 1) in accordance with the following criteria:

- if there is evidence in humans that the substance can lead to specific respiratory hypersensitivity and/or
- if there are positive results from an appropriate animal test

The concentration limit 0.1% for elicitation is used for the application of the special labelling requirements of 1272/2008 Title 2.8

to protect already sensitised individuals

Skin Sens 1

Substances shall be classified as skin sensitisers (Category 1) in accordance with the criteria given below: (i) if there is evidence in humans that the substance can induce sensitisation by contact with the skin in a significant number of people, or (ii) where there are positive results from an appropriate animal test. The concentration limit 0.1% for elicitation is used for the application of the special labeling requirements of 1272/2008 Title 2.8 to protect sensitised individuals

Carc 2

Suspected human carcinogens. The placing of a substance in Category 2 is done on the basis of evidence obtained from human, and/or animal studies, but which is not sufficiently convincing to place the substance in Category 1A or 1B, based on strength of evidence together with additional considerations. Such evidence may be derived either from limited (1) evidence of carcinogenicity in human studies or from limited evidence of carcinogenicity in animal studies.

STOT SE 3resp

Transient target organ effects: Respiratory tract irritation. These are target organ effects for which a substance does not meet the criteria to be classified in Categories 1 or 2. These are effects which adversely alter human function for a short duration after exposure and from which humans may recover in a reasonable period without leaving significant alteration of structure or function

STOT RE 2

Substances that, on the basis of evidence from studies in experimental animals can be presumed to have the potential to be harmful to human health following repeated exposure.

Substances are classified in category 2 for target organ toxicity (repeat exposure) on the basis of observations from appropriate studies in experimental animals in which significant toxic effects, of relevance to human health, were produced at generally moderate exposure concentrations.

In exceptional cases human evidence can also be used to place a substance in Category 2

Explanations of the abbreviations in Section 14

ADR European Agreement concerning the International Transport of Dangerous Goods by Road

RID Regulations concerning the International Transport of Dangerous Goods by Rail

Tunnel restriction code: E; Passage through category E tunnels is strictly forbidden.

Transport category: 3; Maximum total quantity per transport unit: 1000 kgs or litres.

16c. Key literature references and sources for data

Sources for data

Primary data for the calculation of the hazards has preferentially been taken from the official European classification list, 1272/2008 Annex I, as updated to 09 - 07 - 2015

Where such data was lacking, on the second hand the documentation on which this official classification is based was used, e.g. IUCLID (International Uniform Chemical Information Database). On the third hand, information was used from reputable international chemical suppliers, and on the fourth hand from other available information, e.g. safety data sheets from other suppliers or information from non - profit associations, whereby the reliability of the source was judged by an expert. If in spite of this, reliable information was not found, the hazards were judged by expert opinions based on the known of similar substances, and according to the principles in 1907/2006 and 1272/2008.

Full texts for Regulations mentioned in this Safety Data Sheet

- 453/2010 COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of chemicals (REACH)
- 1272/2008 REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
- 89/391 COUNCIL DIRECTIVE (89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work
- 98/24 COUNCIL DIRECTIVE 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC)
- 2006/12 DIRECTIVE 2006/12/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 5 April 2006 on waste
- 1907/2006 REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC Annex I

16d. Methods of evaluating information referred to in 1272/2008 Article 9 which was used for the purpose of classification

The calculation of the hazards of this mixture has been performed as an evaluation by applying a weight of evidence determination using expert judgement in accordance with 1272/2008 Annex I, weighing all available information having a bearing on the determination of the hazards of the mixture, and in accordance with 1907/2006 Annex XI.

16e. List of relevant hazard statements and/or precautionary statements

Full texts for hazard statements mentioned in section 3

- H332 Harmful if inhaled
- H315 Causes skin irritation
- H319 Causes serious eye irritation
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
- H317 May cause an allergic skin reaction
- H351 Suspected of causing cancer
- H335 May cause respiratory irritation
- H373 May cause organs through prolonged or repeated exposure
- H302 Harmful if swallowed
- H220 Extremely flammable gas
- H280 Contains gas under pressure; may explode if heated

16f. Advice on any training appropriate for workers to ensure protection of human health and the environment

Warning for misuse

This product can cause injuries if not used properly. The manufacturer, the distributor or the supplier are not responsible for adverse effects if the product is not handled in accordance with its intended use.

Other relevant information

Editorial information

This safety data sheet has been generated by the program KemRisk®, KemRisk Sweden AB, Teknikringen 10, SE- 583 30 Linköping, Sweden.