SAFETY DATA SHEET

In accordance with 1907/2006 Annex II (2015/830) and 1272/2008
(All references to EU regulations and directives are abbreviated into only the numeric term)
Issued 2016-05-12
Version number 1.0

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

1.1. Product identifier

Trade name	Alkylatbensin 4T

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

Identified uses	Fuel

1.3. Details of the supplier of the safety data sheet

Company	Rusta AB Kanalvägen 12, 4 tr. 194 95 UPPLANDS VÄSBY Sweden
Telephone	+46-8 626 43 00
E-mail	rusta.mail@rusta.se
Website	www.rusta.se

1.4. Emergency telephone number

Acute cases: Call 112, request poison information. Less acute cases: Call 111 (England, Wales and Scotland).

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Flammable liquid (Category 1), H224
Aspiration toxicity (Category 1), H304
Skin Irritant (Category 2), H315
Specific target organ toxicity - Single exposure (Category 3, Narcosis effect), H336
May cause long-lasting harmful effects to aquatic life (Category Cron 4), H413

2.2. Label elements

Hazard pictogram

Signal word	Danger
Hazard statements	
H224	Extremely flammable liquid and vapour
H304	May be fatal if swallowed and enters airways
H315	Causes skin irritation
H336	May cause drowsiness or dizziness
H413	May cause long lasting harmful effects to aquatic life
Precautionary statements	
P102	Keep out of reach of children
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P280	Wear protective gloves, protective clothing and eye or face protection
P301+P310	IF SWALLOWED: Immediately call POISON CENTER
P331	Do NOT induce vomiting
P403+P235	Store in a well-ventilated place. Keep cool

2.3. Other hazards

This product does not contain any substances that are assessed to be a PBT or a vPvB

SECTION 3: Composition/information on ingredients

3.2. Mixtures

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

Constituent	Classification	Concentration
NAFTA (PETROLEUM), FULLRANGE ALKYLAT, BUTANHALTIG		
CAS No: 68527-27-5 EC No: 271-267-0 Index No: 649-282-00-2 REACH: 01-2119471477-29	Flam Liq 1, Skin Irrit 2, STOT SE 3*drow*, Asp Tox 1, Aquatic Chronic 2; H224, H315, H336, H304, H411	80 - 97 %
NAFTA (PETROLEUM), ISOMERISERINGS-		
CAS No: 64741-70-4 EC No: 265-073-5 Index No: 649-277-00-5 REACH: 01-2119480399-24	Flam Liq 1, Skin Irrit 2, STOT SE 3*drow*, Asp Tox 1, Aquatic Chronic 2; H224, H315, H336, H304, H411	5 - 15 %
BUTANE		
CAS No: 106-97-8 EC No: 203-448-7 Index No: 601-004-00-0 REACH: 01-2119474691-32	Flam Gas 1, Press Gas *P*; H220, H280	2 - 5 %

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 complements used in the calculation of the classification of this mixture, see Section 16b.

SECTION 4: First aid measures

4.1. Description of first aid measures

Generally

Never attempt to administer liquid, or anything else, to an unconscious person via the mouth.

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

Never leave a injured person alone. Their condition may rapidly worsen, sometimes several hours after the poisoning. Always consult a physician, even if there are no apparent symptoms of poisoning.

Upon breathing in

Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Allow the injured person to rest in a warm place with fresh air, if symptoms persist seek medical advice.

Upon eye contact

Remove contact lenses immediately if possible.

Rinse the eye for several minutes with lukewarm water. If irritation persists call a doctor/ophthalmologist.

Upon skin contact

Remove contaminated clothes.

Wash the skin with soap and water.

If symptoms occur, contact a physician.

Rinse with cold water after contact with heated product and consult a doctor.

Wash/clean clothes with large amounts of water, to reduce fire hazard.

Upon ingestion

Rinse mouth out thoroughly first with water, then SPIT OUT the rinse water. Drink at least half a litre of water and seek medical advice. DO NOT INDUCE VOMITING.

Avoid that stomach content enters the lungs if vomiting occurs by holding the head low.

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

Not indicated.

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

Symptomatic treatment.

When contacting a physician, take this SDS with you.

Note: High Pressure Applications Injections through the skin resulting from contact with the product at high pressure constitute a major medical emergency. Injuries may not appear serious at first but within a few hours tissue becomes swollen, discoloured and extremely painful with extensive subcutaneous necrosis. Surgical exploration should be undertaken without delay. Thorough and extensive debridement of the wound and underlying tissue is necessary to minimise tissue loss and prevent or limit permanent damage. Note that high pressure may force the product considerable

distances along tissue planes.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

Recommended extinguishing agents

Extinguish with water mist, powder, carbon dioxide or alcoholresistant foam.

Unsuitable extinguishing agents

May not be extinguished with water dispersed under high pressure.

5.2. Special hazards arising from the substance or mixture

Emits flammable vapours which may form an explosive mixture with air.

Produces fumes containing harmful gases (carbon monoxide and carbon dioxide) when burning, and, in case of incomplete combustion, aldehydes and other toxic, harmful, irritant or environmentally harmful substances.

Extremely flammable.

Avoid that water used for extinguishing fire reaches drains. Water used for extinguishing fire should be handled according to current regulations.

5.3. Advice for fire-fighters

Any extinguishing should be executed from a good distance, due to the development of intense heat.

Vapors are heavier than air and may spread along floors.

Cool closed containers that were exposed to fire with water.

Evacuate all not-authorized personnel.

In case of fire use a respirator mask.

Wear full protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Ensure good ventilation.

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

Do not inhale vapours and avoid contact with skin, eyes and clothes when cleaning up the spillage. Keep unauthorized and unprotected people at a safe distance.

Note that there is a risk of slipping if product is leaking/spilling.

Switch off power at the main switch. Do not use the power switch in the room where the spillage has occurred.

Note, risk for formation of sparks due to static electricity. Do not remove clothing in a room where spillage has occurred.

Protect face and eyes with a visor or safety goggles when cleaning up spillage.

Prevent from entering sewers, basements and pits, or any place where gas accumulation could be dangerous. Protective gloves, apron and rubber boots are recommended when handling large spills.

Wear proper protective breathing equipment in case of insufficient ventilation.

Note, risk of ignition and explosion.

6.2. Environmental precautions

Avoid discharge into soil, water or sewers.

Dam up the spillage to prevent it reaching street sewers or flowing into the ground.

Always contact the fire department when accidental spillage of this product occurs. Show this safety data sheet.

6.3. Methods and material for containment and cleaning up

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.

Stop leak if safe to do so.

Cover spill with water or wet sand or soil preventing contact with the air.

Absorb the liquid with an inert absorbent, vermiculite, for example. Collect the material for disposal at a waste disposal facility.

6.4. Reference to other sections

Not indicated.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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

Handle in premises with good ventilation.

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

Use point evacuation, fume cupboard or a similar process ventilation when working with this product. Do not mix with other products.

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

Take off work clothes and protective gear before meals.
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.
Open fire, hot items, sparks or other ignition sources must not be present in the environment used for handling this product.
Handle and open container with care.
Store as flammable material.
Wash your hands after using the product.
Wash contaminated clothing before reuse.
The product may be electrostatically charged. Always ground the containers while transferring the contents from one container to another. Do not use tools that may cause sparks.
Vapors are heavier than air and may spread along floors.

7.2. Conditions for safe storage, including any incompatibilities

Store in dry and cool area.
Store in original packaging or in a suitable metal or plastic container.
Store tightly, in original packaging.
Store in a well-ventilated space.
May not be stored in unlabeled containers.
Must not be stored in low areas where vapour can accumulate or in areas exposed to heat or direct sunlight.

7.3. Specific end uses

See identified uses in Section 1.2.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National limit values

All ingredients (cf. Section 3) lack occupational exposure limit values.

DNEL

No data available.

PNEC

No data available.

8.2. Exposure controls

In terms of minimizing risks, attention must be paid to both the physical and health hazards (see Sections 2, 10 and 11) of this product according to EU directives 89/391 and 98/24 and national occupational legislation.

8.2.1. Appropriate engineering controls

Handle in premises which have modern ventilation standards.
Emergency showers and eye-rinsing facilities must be available at the workplace.

Eye/face protection

Use protective glasses, safety goggles, or a visor.

Skin protection

Do not use clothing made of synthetic material which may give rise to static electricity.
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.
Use shoes with a semiconducting sole in order to avoid the build up of a charge of static electricity. Wear suitable protective clothing when necessary.

Respiratory protection

Use proper protective breathing equipment in case of insufficient ventilation.
A breathing mask of the A filter (brown) type, may be required.
A respiratory mask may be required.

8.2.3. Environmental exposure controls

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: liquid. Colour: light yellow.
b) Odour	characteristic
c) Odour threshold	Not applicable
d) pH	Not indicated
e) Melting point/freezing point	-50 °C
f) Initial boiling point and boiling range	25 °C
g) Flash point	-40 °C

h) Evaporation rate	Not indicated
i) Flammability (solid, gas)	Not applicable
j) Upper/lower flammability or explosive limits	1 - 8 %
k) Vapour pressure	55.00 kPa
l) Vapour density	3.00 Air = 1
m) Relative density	0.68 - 0.72 kg/L
n) Solubility	Solubility in water: Partially soluble Soluble in organic solvents
o) Partition coefficient: n-octanol/water	Not applicable
p) Auto-ignition temperature	Not indicated
q) Decomposition temperature	Not indicated
r) Viscosity	0.6 - 0.9 mm²/s (15 °C)
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

May emit volatile, flammable vapours. Avoid handling close to heat or ignition sources.

10.4. Conditions to avoid

Avoid heat, sparks and open flames.

Protect from heat and direct sunlight.

10.5. Incompatible materials

Avoid contact with oxidizers.

May damage gaskets, lacquered or painted surfaces, natural rubber, certain synthetic materials and areas treated with fat.

10.6. Hazardous decomposition products

None under normal conditions.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

This product's main risk is its flammability.

Acute toxicity

Inhalation of vapors, or ingestion of the product may have harmful effects on the kidneys, liver and central nervous system. Other symptoms may include headache, dizziness, fatigue, drowsiness, vomiting, stomach pain, or in extreme cases, unconsciousness.

The product is not classified as acute toxic.

BUTANE

LC50 rat 4h: 658 mg/L Inhalation

LD50 rat 24h: 658000 mg/kg Orally

Skin corrosion/irritation

May cause skin irrition.

Serious eye damage/irritation

Not indicated.

Respiratory or skin sensitisation

Not sensitising.

Germ cell mutagenicity

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

Carcinogenicity

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

Reproductive toxicity

Not indicated.

STOT-single exposure

Anaesthetic or narcotic effect.

STOT-repeated exposure

Repeated or long term inhalation of the product cause damage to central nervous system, liver, kidneys and lungs.

Aspiration hazard

Ingestion of the product may lead to aspiration, and as a result chemical pneumonia.

SECTION 12: Ecological information

12.1. Toxicity

Prevent release on land, in water and drains.

May cause harmful long-term effects in the aquatic environment on continuous release to the environment.

12.2. Persistence and degradability

The product is not readily biodegradable.

12.3. Bioaccumulative potential

This product or some of its ingredients are suspected to accumulate in nature.

12.4. Mobility in soil

Readily absorbed into soil.

12.5. Results of PBT and vPvB assessment

This product does not contain any substances that are assessed to be a PBT or a vPvB.

12.6. Other adverse effects

Films formed on water may affect oxygen transport and can damage organisms.

The product may cause long-term adverse effects in the aquatic environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste handling of the product

Combustion is a suitable method for final disposal of this waste product.

Residual, old or contaminated product should be disposed of at a waste management facility.

The product is flammable and its waste shall therefore, if it is not treated in order to eliminate this risk, be considered to be dangerous.

Also take local regulations for dealing with waste into account.

Not completely empty packaging can contain remnants of dangerous substances and should therefore be handled as hazardous waste according to the above. Completely empty packaging can be recycled.

Avoid discharge into sewers.

May not be disposed of with household waste.

Classification according to 2006/12

Recommended LoW-code: 13 07 01 Fuel oil and diesel
13 07 02 Petrol
16 07 08 Wastes containing oil
15 01 10 Packaging containing residues of or contaminated by dangerous substances

SECTION 14: Transport information

Where not otherwise stated the information applies to all of the UN Model Regulations, i.e. ADR (road), RID (railway), ADN (inland waterways), IMDG (sea), and ICAO (IATA) (air).

14.1. UN number

1203

14.2. UN proper shipping name

BENSIN

14.3. Transport hazard class(es)

Class

3: Flammable liquids

Classification code (ADR/RID)

F1: Flammable liquids having a flash-point of or below 60 °C

Subsidiary risk (IMDG)

No subsidary risk according to IMDG

Labels

14.4. Packing group

Packing group II

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user
Tunnel restrictions
Tunnel category: D/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: 2; Highest total quantity per transported unit 333 kg or liters
Stowage category E(IMDG)
Emergency Schedule (EmS) for FIRE (IMDG) F-E
Emergency Schedule (EmS) for SPILLAGE (IMDG) S-E

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture
Not indicated.

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

Flam Liq 1	Flammable liquid (Category 1)
Skin Irrit 2	Skin Irritant (Category 2)
STOT SE 3*drow*	Specific target organ toxicity - Single exposure (Category 3, Narcosis effect)
Asp Tox 1	Aspiration toxicity (Category 1)
Aquatic Chronic 2	Toxic to aquatic life with long lasting effects (Category Cron 2)
Flam Gas 1	Extremely flammable gas (Category 1)
Press Gas *P*	Compressed gas

Comprehensive definition of the hazards mentioned in Section 2
Flam Liq 1
Flash point < 23 C and initial boiling point <= 35 C; Flammable liquid Category 1.
Skin Irrit 2
One or more criteria 1-3 for irritation of skin is applicable.
STOT SE 3*drow*
Transient target organ effects: Narcotic effects. 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.
Asp Tox 1
Substances known to cause human aspiration toxicity hazards or to be regarded as if they cause human aspiration toxicity hazard, based on reliable and good quality human evidence.
Aquatic Chronic 2
Chronic (long-term) aquatic hazard:
96 hr LC50 (for fish) 1-10 mg/l and/or
48 hr EC50 (for crustacea) 1-10 mg/l and/or
72 or 96 hr ErC50 (for algae or other aquatic plants) 1-10 mg/l and the substance is not rapidly biodegradable and/or the experimentally determined BCF >= 500 (or, if absent, the log Kow >= 4), unless the chronic toxicity NOECs are > 1 mg/l. **Flam Gas 1**
Gases, which at 20 °C and a standard pressure of 101,3 kPa:
(a) are ignitable when in a mixture of 13 % or less by volume in air; or
(b) have a flammable range with air of at least 12 percentage points regardless of the lower flammable limit.
Press Gas *P*
A gas which when packaged under pressure is entirely gaseous at -50 C including all gases with a critical temperature <= -50 C.

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
IMDG	International Maritime Dangerous Goods Code
ICAO	International Civil Aviation Organization (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada)

IATA The International Air Transport Association
Tunnel restriction code: D/E; Transport by bulk or via tank: Passage forbidden through tunnels of category D and E, Other transportation means: Passage forbidden through tunnels of category E
Transport category: 2; Highest total quantity per transported unit 333 kg or liters

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 2016-05-12.
Where such data was not available, alternative documentation used to establish the official classification was used, e.g. IUCLID (International Uniform Chemical Information Database). As a second alternative, information was used from reputable international chemical industries, and as a third alternative other available information was used, e.g. material safety data sheets from other suppliers or information from non-profit associations, where reliability of the source was assessed by expert opinion. If, in spite of this, reliable information could not be sourced, the hazards were assessed by expert opinions based on the known hazards of similar substances, and according to the principles in 1907/2006 and 1272/2008.

Full texts for Regulations mentioned in this Safety Data Sheet

1907/2006 Annex II (2015/830)	COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 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

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

Hazard calculation for this mixture has been performed as a cumulative assessment with the aid of expert assessments in accordance with 1272/2008 Annex I , where all available information which may be significant to establishing the hazards of the mixture was assessed together, 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

H224 Flammable liquid (Category 1)
H315 Skin Irritant (Category 2)
H336 Specific target organ toxicity - Single exposure (Category 3, Narcosis effect)
H304 Aspiration toxicity (Category 1)
H411 Toxic to aquatic life with long lasting effects (Category Cron 2)
H220 Extremely flammable gas (Category 1)
H280 Compressed gas

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

Warning for misuse

Not indicated.

Other relevant information

Editorial information

This material safety data sheet has been prepared and checked by KemRisk®, KemRisk Sweden AB, Teknikringen 10, SE-583 30 Linköping, Sweden, www.kemrisk.se