

## SAFETY DATA SHEET

# Total Acid Number, Certified Reference Materials, TAN001, TAN001/3, TAN005, TAN005/3, TAN010, TAN010/3, TAN015, TAN015/3, TAN020, TAN020/3, TAN025, TAN025/3, TAN030, TAN030/3, TAN050, TAN050/3

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

### 1.1. Product identifier

#### ▼ Trade name

Total Acid Number, Certified Reference Materials, TAN001, TAN001/3, TAN005, TAN005/3, TAN010, TAN010/3, TAN015, TAN015/3, TAN020, TAN020/3, TAN025, TAN025/3, TAN030, TAN030/3, TAN050, TAN050/3

#### Product no.

TAN001, TAN001/3, TAN005, TAN005/3, TAN010, TAN010/3, TAN015, TAN015/3, TAN020, TAN020/3, TAN025, TAN025/3, TAN030, TAN030/3, TAN050, TAN050/3

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

#### Relevant identified uses of the substance or mixture

Laboratory use

Restricted to professional users.

#### Uses advised against

None known.

### 1.3. Details of the supplier of the safety data sheet

#### Company and address

##### **ARO Scientific Ltd**

Unit 1 Bridgeway Business Park,

Ditton Road

WA8 0QE Widnes

England

+44 (0)151 424 2828

#### Contact person

Technical Help

#### E-mail

technical@aroscientific.com

#### Revision

06/10/2023

#### SDS Version

2.0

#### Date of previous version

06/10/2023 (1.0)

### 1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).

See section 4 "First aid measures".

## SECTION 2: Hazards identification

Classified according to Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

### 2.1. Classification of the substance or mixture

Eye Irrit. 2; H319, Causes serious eye irritation.

Aquatic Chronic 3; H412, Harmful to aquatic life with long lasting effects.

### 2.2. Label elements

Hazard pictogram(s)



**Signal word**

Warning

**Hazard statement(s)**

Causes serious eye irritation. (H319)

Harmful to aquatic life with long lasting effects. (H412)

**Precautionary statement(s)**

**General**

-

**Prevention**

Avoid release to the environment. (P273)

Wear eye protection. (P280)

**Response**

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing. (P305+P351+P338)

If eye irritation persists: Get medical advice/attention. (P337+P313)

**Storage**

-

**Disposal**

Dispose of contents/container in accordance with local regulation (P501)

**Hazardous substances**

None known.

**Additional labelling**

Not applicable.

**2.3. Other hazards**

**Additional warnings**

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

This product does not contain any substances considered to be endocrine disruptors in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

**SECTION 3: Composition/information on ingredients**

**3.1. Substances**

Not applicable. This product is a mixture.

**3.2. Mixtures**

Product/substance	Identifiers	% w/w	Classification	Note
Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)	CAS No.: 4259-15-8 EC No.: 224-235-5 UK-REACH: Index No.:	1-3%	Eye Dam. 1, H318 Aquatic Chronic 2, H411	
2,6-di-tert-butylphenol	CAS No.: 128-39-2 EC No.: 204-884-0 UK-REACH: Index No.:	<1%	Skin Irrit. 2, H315 Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	
triphenyl phosphite	CAS No.: 101-02-0 EC No.: 202-908-4 UK-REACH: Index No.: 015-105-00-7	<0.25%	Skin Irrit. 2, H315 (SCL: 5.00 %) Eye Irrit. 2, H319 (SCL: 5.00 %) Aquatic Acute 1, H400 (M=1) Aquatic Chronic 1, H410 (M=1)	
2-ethylhexan-1-ol	CAS No.: 104-76-7 EC No.: 203-234-3 UK-REACH: Index No.:	<0.25%	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Acute Tox. 4, H332 STOT SE 3, H335	[1]

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

#### Other information

[1] European occupational exposure limit.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

##### Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.

##### Skin contact

Upon irritation: rinse with water. In the event of continued irritation, seek medical assistance.

##### Eye contact

If in eyes: Flush eyes immediately with plenty of water or isotonic water (20-30 °C) for at least 5 minutes and continue until irritation stops. Remove contact lenses. Make sure to flush under upper and lower eyelids. If irritation continues, contact a doctor. Continue flushing during transport.

##### Ingestion

If the person is conscious, rinse the mouth with water and stay with the person. Never give the person anything to drink.

In case of malaise, seek medical advice immediately and bring the safety data sheet or label from the product. Do not induce vomiting, unless recommended by the doctor. Have the person lean forward with head down to avoid inhalation of or choking on vomited material.

##### Burns

Not applicable.

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

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

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

If eye irritation persists: Get medical advice/attention.

#### Information to medics

Bring this safety data sheet or the label from this product.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

#### 5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

#### 5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation, especially in confined areas.

Contaminated areas may be slippery.

#### 6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc. In the event of leakage to the surroundings, contact local environmental authorities.

### 6.3. Methods and material for containment and cleaning up

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

### 6.4. Reference to other sections

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

It is recommended to install waste collection trays in order to prevent emissions to the waste water system and surrounding environment.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

### 7.2. Conditions for safe storage, including any incompatibilities

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

#### Recommended storage material

Always store in containers of the same material as the original container.

#### Storage temperature

No specific requirements

#### Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

### 7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

2-ethylhexan-1-ol

Long term exposure limit (8 hours) (ppm): 1

Long term exposure limit (8 hours) (mg/m<sup>3</sup>): 5.4

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002. EH40/2005 Workplace exposure limits (Fourth Edition 2020).

### DNEL

2-ethylhexan-1-ol

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	11.4 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	23 mg/kg bw/day
Long term – Local effects - General population	Inhalation	26.6 mg/m <sup>3</sup>
Long term – Local effects - Workers	Inhalation	53.2 mg/m <sup>3</sup>
Long term – Systemic effects - General population	Inhalation	2.3 mg/m <sup>3</sup>
Long term – Systemic effects - Workers	Inhalation	12.8 mg/m <sup>3</sup>
Short term – Local effects - General population	Inhalation	26.6 mg/m <sup>3</sup>
Short term – Local effects - Workers	Inhalation	53.2 mg/m <sup>3</sup>
Long term – Systemic effects - General population	Oral	1.1 mg/kg bw/day

2,6-di-tert-butylphenol

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	6.75 mg/kg bw/day

Long term – Systemic effects - Workers	Dermal	11.25 mg/kg bw/day
Long term – Systemic effects - General population	Inhalation	20.9 mg/m <sup>3</sup>
Long term – Systemic effects - Workers	Inhalation	70.61 mg/m <sup>3</sup>
Long term – Systemic effects - General population	Oral	6.75 mg/kg bw/day

#### triphenyl phosphite

Duration:	Route of exposure:	DNEL:
Long term – Local effects - General population	Dermal	11.7 µg/cm <sup>2</sup>
Long term – Local effects - Workers	Dermal	11.7 µg/cm <sup>2</sup>
Long term – Systemic effects - General population	Dermal	150 µg/kgbw/day
Long term – Systemic effects - Workers	Dermal	150 µg/kgbw/day
Short term – Local effects - General population	Dermal	11.7 µg/cm <sup>2</sup>
Short term – Local effects - Workers	Dermal	11.7 µg/cm <sup>2</sup>
Long term – Systemic effects - General population	Inhalation	530 µg/m <sup>3</sup>
Long term – Systemic effects - Workers	Inhalation	530 µg/m <sup>3</sup>
Long term – Systemic effects - General population	Oral	75 µg/kgbw/day

#### Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)

Duration:	Route of exposure:	DNEL:
Long term – Systemic effects - General population	Dermal	4.8 mg/kg bw/day
Long term – Systemic effects - Workers	Dermal	9.6 mg/kg bw/day
Long term – Systemic effects - General population	Inhalation	1.67 mg/m <sup>3</sup>
Long term – Systemic effects - Workers	Inhalation	6.6 mg/m <sup>3</sup>
Long term – Systemic effects - General population	Oral	190 µg/kgbw/day

#### PNEC

##### 2-ethylhexan-1-ol

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		17 µg/L
Freshwater sediment		284 µg/kg
Intermittent release (freshwater)		170 µg/L
Marine water		1.7 µg/L
Marine water sediment		28.4 µg/kg
Predators		55 mg/kg
Sewage treatment plant		10 mg/L
Soil		47 µg/kg

##### 2,6-di-tert-butylphenol

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		700 ng/L
Freshwater sediment		317 µg/kg
Intermittent release (freshwater)		4.5 µg/L
Marine water		70 ng/L
Marine water sediment		31.7 µg/kg
Predators		60 mg/kg
Sewage treatment plant		10 mg/L
Soil		697 µg/kg

#### Zinc bis[O,O-bis(2-ethylhexyl)] bis(dithiophosphate)

Route of exposure:	Duration of Exposure:	PNEC:
Freshwater		4 µg/L
Freshwater sediment		322 µg/kg
Intermittent release (freshwater)		44 µg/L
Marine water		4.6 µg/L
Marine water sediment		32.2 µg/kg
Predators		8.33 mg/kg
Sewage treatment plant		3.8 mg/L
Soil		61.9 µg/kg

## 8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

### General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

### Exposure scenarios

There are no exposure scenarios implemented for this product.

### Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

### Appropriate technical measures

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure eyewash and emergency showers are clearly marked.

Apply standard precautions during use of the product. Avoid inhalation of vapours.

### Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

### Measures to avoid environmental exposure

Keep damming materials near the workplace. If possible, collect spillage during work.

## Individual protection measures, such as personal protective equipment

### Generally

No specific requirements

### Respiratory Equipment

No specific requirements

### Skin protection

No specific requirements.

### Hand protection

No specific requirements.

### Eye protection

No specific requirements.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

#### Physical state

Liquid

#### Colour

Testing not relevant or not possible due to the nature of the product.

#### Odour / Odour threshold

Testing not relevant or not possible due to the nature of the product.

#### pH

Testing not relevant or not possible due to the nature of the product.

#### Density (g/cm<sup>3</sup>)

Testing not relevant or not possible due to the nature of the product.

#### Kinematic viscosity

Testing not relevant or not possible due to the nature of the product.

## Particle characteristics

Does not apply to liquids.

## Phase changes

### Melting point/Freezing point (°C)

Testing not relevant or not possible due to the nature of the product.

### Softening point/range (waxes and pastes) (°C)

Does not apply to liquids.

### Boiling point (°C)

Testing not relevant or not possible due to the nature of the product.

### Vapour pressure

Testing not relevant or not possible due to the nature of the product.

### Relative vapour density

Testing not relevant or not possible due to the nature of the product.

### Decomposition temperature (°C)

Testing not relevant or not possible due to the nature of the product.

## Data on fire and explosion hazards

### Flash point (°C)

Testing not relevant or not possible due to the nature of the product.

### Flammability (°C)

Testing not relevant or not possible due to the nature of the product.

### Auto-ignition temperature (°C)

Testing not relevant or not possible due to the nature of the product.

### Lower and upper explosion limit (% v/v)

Testing not relevant or not possible due to the nature of the product.

## Solubility

### Solubility in water

Testing not relevant or not possible due to the nature of the product.

### n-octanol/water coefficient

Testing not relevant or not possible due to the nature of the product.

### Solubility in fat (g/L)

Testing not relevant or not possible due to the nature of the product.

## 9.2. Other information

### Oxidizing properties

Testing not relevant or not possible due to the nature of the product.

### Other physical and chemical parameters

No data available.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No data available.

### 10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

### 10.3. Possibility of hazardous reactions

None known.

### 10.4. Conditions to avoid

None known.

### 10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

### 10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

## SECTION 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008 as retained and amended in UK law

#### Acute toxicity

Based on available data, the classification criteria are not met.

#### Skin corrosion/irritation

Based on available data, the classification criteria are not met.

#### Serious eye damage/irritation

Causes serious eye irritation.

#### Respiratory sensitisation

Based on available data, the classification criteria are not met.

#### Skin sensitisation

Based on available data, the classification criteria are not met.

#### Germ cell mutagenicity

Based on available data, the classification criteria are not met.

#### Carcinogenicity

Based on available data, the classification criteria are not met.

#### Reproductive toxicity

Based on available data, the classification criteria are not met.

#### STOT-single exposure

Based on available data, the classification criteria are not met.

#### STOT-repeated exposure

Based on available data, the classification criteria are not met.

#### Aspiration hazard

Based on available data, the classification criteria are not met.

### 11.2. Information on other hazards

#### Long term effects

Irritation effects: This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

#### Endocrine disrupting properties

This mixture/product does not contain any substances considered to have hormone-disrupting properties in relation to health.

#### Other information

None known.

## SECTION 12: Ecological information

### 12.1. Toxicity

Harmful to aquatic life with long lasting effects.

### 12.2. Persistence and degradability

No data available.

### 12.3. Bioaccumulative potential

No data available.

### 12.4. Mobility in soil

No data available.

### 12.5. Results of PBT and vPvB assessment

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

### 12.6. Endocrine disrupting properties

This mixture/product does not contain any substances considered to have endocrine-disrupting properties in relation to the environment.

### 12.7. Other adverse effects

This product contains substances that are toxic to the environment. May result in adverse effects to aquatic organisms.

This product contains substances, which may cause adverse long-term effects to the aquatic environment.

## SECTION 13: Disposal considerations

### Waste treatment methods

Product is covered by the regulations on hazardous waste.

HP 14 – Ecotoxic

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

## EWC code

Not applicable.

## Specific labelling

### Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

## SECTION 14: Transport information

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other information:
ADR	-	-	-	-	-	-
IMDG	-	-	-	-	-	-
IATA	-	-	-	-	-	-

\* Packing group

\*\* Environmental hazards

### Additional information

Not dangerous goods according to ADR, IATA and IMDG.

### 14.6. Special precautions for user

Not applicable.

### 14.7. Maritime transport in bulk according to IMO instruments

No data available.

## SECTION 15: Regulatory information

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

#### Restrictions for application

Restricted to professional users.

#### Demands for specific education

No specific requirements.

#### SEVESO - Categories / dangerous substances

Not applicable.

#### Additional information

Not applicable.

#### Sources

Regulation (EU) No 1357/2014 of 18 December 2014 on waste as retained and amended in UK law.

Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures (CLP) as retained and amended in UK law.

Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) as retained and amended in UK law.

### 15.2. Chemical safety assessment

No

## SECTION 16: Other information

### Full text of H-phrases as mentioned in section 3

H315, Causes skin irritation.

H318, Causes serious eye damage.

H319, Causes serious eye irritation.

H332, Harmful if inhaled.

H335, May cause respiratory irritation.

H400, Very toxic to aquatic life.

H410, Very toxic to aquatic life with long lasting effects.

H411, Toxic to aquatic life with long lasting effects.

### Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
CAS = Chemical Abstracts Service  
CE = Conformité Européenne (European conformity)  
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]  
CSA = Chemical Safety Assessment  
CSR = Chemical Safety Report  
DMEL = Derived Minimal Effect Level  
DNEL = Derived No Effect Level  
EINECS = European Inventory of Existing Commercial chemical Substances  
ES = Exposure Scenario  
EUH statement = CLP-specific Hazard statement  
EuPCS = European Product Categorisation System  
EWC = European Waste Catalogue  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IARC = International Agency for Research on Cancer (IARC)  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
OECD = Organisation for Economic Co-operation and Development  
PBT = Persistent, Bioaccumulative and Toxic  
PNEC = Predicted No Effect Concentration  
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail  
RRN = REACH Registration Number  
SCL = A specific concentration limit  
SVHC = Substances of Very High Concern  
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure  
STOT-SE = Specific Target Organ Toxicity - Single Exposure  
TWA = Time weighted average  
UN = United Nations  
UVBC = Unknown or variable composition, complex reaction products or of biological materials  
VOC = Volatile Organic Compound  
vPvB = Very Persistent and Very Bioaccumulative

#### Additional information

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

The classification of the substance/mixture in regard of environmental hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP) as retained and amended in UK law.

#### ▼ The safety data sheet is validated by

Technical Help

#### Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en