

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

1.1. Product identifier

Product form : Mixture
Product name : Tantec-UK Surface Energy Test Fluids 30-49

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

1.2.1. Relevant identified uses

Main use category : Professional use, Industrial use
Use of the substance/mixture : Surface Energy Test Fluids

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Tantec-UK Ltd
Unit 30, The Rubicon Centre
Broad Ground Road
B98 8YP - United Kingdom
T 01527 304 004
info@tantec-uk.com

1.4. Emergency telephone number

No additional information available

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 3 H226
Reproductive toxicity, Category 1A H360
Full text of H statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS08

Signal word (CLP) : Danger
Hazardous ingredients : 2-ETHOXYETHANOL
Hazard statements (CLP) : H226 - Flammable liquid and vapour.
H360 - May damage fertility or the unborn child.
Precautionary statements (CLP) : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources.
No smoking.
P233 - Keep container tightly closed.
P240 - Ground and bond container and receiving equipment.
P241 - Use explosion-proof equipment.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-ETHOXYETHANOL substance listed as REACH Candidate	(CAS-No.) 110-80-5 (EC-No.) 203-804-1 (EC Index-No.) 603-012-00-X	51.5 - 100	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 Repr. 1A, H360
formamide substance listed as REACH Candidate	(CAS-No.) 75-12-7 (EC-No.) 200-842-0 (EC Index-No.) 616-052-00-8 (REACH-no) 01-2119496064-35	0 - 48.5	Repr. 1B, H360D

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Never give anything by mouth to an unconscious person. IF exposed or concerned: Get medical advice/attention.
First-aid measures after inhalation	: Allow the victim to rest. Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor.
First-aid measures after skin contact	: Take off immediately all contaminated clothing. Rinse skin with water/shower.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.
First-aid measures after ingestion	: Rinse mouth. Do NOT induce vomiting. Fatal if swallowed. Immediately call a POISON CENTER/doctor.

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

Symptoms/effects	: May damage fertility or the unborn child.
Symptoms/effects after inhalation	: Toxic if inhaled. Danger of serious damage to health by prolonged exposure through inhalation.
Symptoms/effects after skin contact	: May cause irritation to skin.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: Fatal if swallowed.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Flammable liquid and vapour.
Explosion hazard	: May form flammable/explosive vapour-air mixture.

5.3. Advice for firefighters

Precautionary measures fire	: Exercise caution when fighting any chemical fire.
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Prevent fire fighting water from entering the environment.
Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures	: Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.
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6.1.1. For non-emergency personnel

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".
Emergency procedures	: Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	: Equip cleanup crew with proper protection.
Emergency procedures	: Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

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6.3. Methods and material for containment and cleaning up

For containment : Absorb spillage.
Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

For further information refer to section 8: "Exposure controls/personal protection". For disposal of solid materials or residues refer to section 13 : "Disposal considerations".

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. No open flames. No smoking. Take precautionary measures against static discharge. Use only non-sparking tools. Use only outdoors or in a well-ventilated area. Avoid breathing vapours, fume. Do not handle until all safety precautions have been read and understood. Obtain special instructions before use.
Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical equipment.
Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Sources of ignition. Keep container tightly closed.
Incompatible products : Strong bases. Strong acids.
Incompatible materials : Sources of ignition. Direct sunlight. Heat sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

2-ETHOXYETHANOL (110-80-5)		
United Kingdom	Local name	2-Ethoxyethanol
United Kingdom	WEL TWA (mg/m ³)	8 mg/m ³
United Kingdom	WEL TWA (ppm)	2 ppm
United Kingdom	Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
United Kingdom	Regulatory reference	EH40/2005 (Third edition, 2018). HSE

formamide (75-12-7)

United Kingdom	Local name	Formamide
United Kingdom	WEL TWA (mg/m ³)	37 mg/m ³
United Kingdom	WEL TWA (ppm)	20 ppm
United Kingdom	WEL STEL (mg/m ³)	56 mg/m ³
United Kingdom	WEL STEL (ppm)	30 ppm
United Kingdom	Regulatory reference	EH40/2005 (Third edition, 2018). HSE

8.2. Exposure controls

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:
Wear protective gloves.
Eye protection:
Chemical goggles or safety glasses
Skin and body protection:
Wear suitable protective clothing

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Respiratory protection:

Wear appropriate mask

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Blue. Violet.
Odour	: Mildly aromatic. Ammoniacal.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: 43 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable liquid and vapour.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: No data available
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Flammable liquid and vapour. May form flammable/explosive vapour-air mixture.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Open flame. Overheating. Heat. Sparks.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide. May release flammable gases.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

2-ETHOXYETHANOL (110-80-5)

LD50 oral rat	1746 mg/kg
LD50 dermal rabbit	3300 mg/kg
LC50 inhalation rat (Dust/Mist - mg/l/4h)	15 mg/l/4h

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formamide (75-12-7)	
LD50 oral rat	5325 mg/kg
LD50 dermal rabbit	3000 mg/kg
LC50 inhalation rat (Dust/Mist - mg/l/4h)	21 mg/l/4h
Skin corrosion/irritation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Reproductive toxicity	: May damage fertility or the unborn child.
STOT-single exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
STOT-repeated exposure	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Aspiration hazard	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Potential adverse human health effects and symptoms	: Toxic if inhaled. Fatal if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

2-ETHOXYETHANOL (110-80-5)	
LC50 fish 1	10000 mg/l <i>Lepomis macrochirus</i> 96 h static 1
EC50 Daphnia 1	10000 mg/l
ErC50 (algae)	1000 mg/l <i>Desmodesmus subspicatus</i> 72 h

formamide (75-12-7)	
LC50 fish 1	6.569 mg/l
ErC50 (algae)	> 500 mg/l

12.2. Persistence and degradability

Tantec-UK Surface Energy Test Fluids 30-49	
Persistence and degradability	No data available.

12.3. Bioaccumulative potential

Tantec-UK Surface Energy Test Fluids 30-49	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component	
2-ETHOXYETHANOL (110-80-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
formamide (75-12-7)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

Additional information : Avoid release to the environment.

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830






SECTION 13: Disposal considerations

13.1. Waste treatment methods

- Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
- Additional information : Handle empty containers with care because residual vapours are flammable.
- Ecology - waste materials : Avoid release to the environment. Hazardous waste due to toxicity.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN 1171	UN 1171	UN 1171	UN 1171	UN 1171
14.2. UN proper shipping name				
ETHYLENE GLYCOL MONOETHYL ETHER	ETHYLENE GLYCOL MONOETHYL ETHER	Ethylene glycol monoethyl ether	ETHYLENE GLYCOL MONOETHYL ETHER	ETHYLENE GLYCOL MONOETHYL ETHER
Transport document description (ADR)				
UN 1171 ETHYLENE GLYCOL MONOETHYL ETHER (), 3, III, (D/E)	UN 1171 ETHYLENE GLYCOL MONOETHYL ETHER, 3, III (40°C c.c.)	UN 1171 Ethylene glycol monoethyl ether, 3, III	UN 1171 ETHYLENE GLYCOL MONOETHYL ETHER, 3, III	UN 1171 ETHYLENE GLYCOL MONOETHYL ETHER, 3, III
14.3. Transport hazard class(es)				
3	3	3	3	3
				
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No

No supplementary information available

14.6. Special precautions for user

Overland transport

- Classification code (ADR) : F1
- Limited quantities (ADR) : 5I
- Excepted quantities (ADR) : E1
- Packing instructions (ADR) : P001, IBC03, LP01, R001
- Mixed packing provisions (ADR) : MP19
- Portable tank and bulk container instructions (ADR) : T2
- Portable tank and bulk container special provisions (ADR) : TP1
- Tank code (ADR) : LGBF
- Vehicle for tank carriage : FL
- Transport category (ADR) : 3
- Special provisions for carriage - Packages (ADR) : V12
- Special provisions for carriage - Operation (ADR) : S2
- Hazard identification number (Kemler No.) : 30
- Orange plates :



Tunnel restriction code (ADR) : D/E

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EAC code	: •2Y
Transport by sea	
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T2
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-D
Stowage category (IMDG)	: A
Flash point (IMDG)	: 40°C c.c.
Properties and observations (IMDG)	: Colourless liquid. Flashpoint: 40°C c.c. Explosive limits: 1.7% to 15.6% Miscible with water.

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y344
PCA limited quantity max net quantity (IATA)	: 10L
PCA packing instructions (IATA)	: 355
PCA max net quantity (IATA)	: 60L
CAO packing instructions (IATA)	: 366
CAO max net quantity (IATA)	: 220L
ERG code (IATA)	: 3L

Inland waterway transport

Classification code (ADN)	: F1
Limited quantities (ADN)	: 5 L
Excepted quantities (ADN)	: E1
Carriage permitted (ADN)	: T
Equipment required (ADN)	: PP, EX, A
Ventilation (ADN)	: VE01
Number of blue cones/lights (ADN)	: 0

Rail transport

Classification code (RID)	: F1
Limited quantities (RID)	: 5L
Excepted quantities (RID)	: E1
Packing instructions (RID)	: P001, IBC03, LP01, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T2
Portable tank and bulk container special provisions (RID)	: TP1
Tank codes for RID tanks (RID)	: LGBF
Transport category (RID)	: 3
Special provisions for carriage – Packages (RID)	: W12
Colis express (express parcels) (RID)	: CE4
Hazard identification number (RID)	: 30

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains a substance on the REACH candidate list in concentration $\geq 0.1\%$ or with a lower specific limit: 2-Ethoxyethanol (EC 203-804-1, CAS 110-80-5), Formamide (EC 200-842-0, CAS 75-12-7)

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

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Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources : 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.

Other information : None.

Full text of H- and EUH-statements:

Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Flam. Liq. 3	Flammable liquids, Category 3
Repr. 1A	Reproductive toxicity, Category 1A
Repr. 1B	Reproductive toxicity, Category 1B
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H360	May damage fertility or the unborn child.
H360D	May damage the unborn child.

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.