

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Mixture
PRODUCT NAME : DYNE TEST SOLUTIONS ISO TYPE 30-33 DYNES/cm2(mN/m)

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
Use of the substance/mixture : Ink
Dyne Testing

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Intertronics
Unit 12a Station Field Industrial Estate, Banbury Road
OX5 1JD Kidlington – Oxfordshire
United Kingdom
T +44 (0)1865 842842
orders@intertronics.co.uk - <https://www.intertronics.co.uk>

1.4. Emergency telephone number

Emergency number : +44 (0)1865 842842
Office hours only.

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to GB CLP (SI 2019:720 as amended)**

Flammable liquids, Category 3	H226
Acute toxicity (oral), Category 4	H302
Acute toxicity (inhalation:dust,mist) Category 3	H331
Reproductive toxicity, Category 1B	H360FD
Full text of H- and EUH-statements: see section 16	

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements**Labelling according to GB CLP (SI 2019:720 as amended)**

Hazard pictograms (GB CLP) :



GHS02



GHS06



GHS08

Signal word (GB CLP) : Danger
Contains : 2-ethoxy Ethanol
Hazard statements (GB CLP) : H226 - Flammable liquid and vapour.
H302 - Harmful if swallowed.
H331 - Toxic if inhaled.
H360FD - May damage fertility. May damage the unborn child.

DYNE TEST SOLUTIONS ISO TYPE 30-33 DYNES/cm2(mN/m)

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Precautionary statements (GB 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 electrical, ventilating and lighting equipment.
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2.3. Other hazards

Component	
Substance(s) not meeting the PBT criteria of UK REACH regulation, in accordance with Annex XIII	2-ethoxy Ethanol (110-80-5), formamide (75-12-7)
Substance(s) not meeting the vPvB criteria of UK REACH regulation, in accordance with Annex XIII	2-ethoxy Ethanol (110-80-5), formamide (75-12-7)
Component	
Substance(s) not included in the list established in accordance with Article 59(1) of UK REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in GB BPR and GB PPP	2-ethoxy Ethanol(110-80-5), formamide(75-12-7)

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Labelling according to GB CLP (SI 2019:720 as amended)
2-ethoxy Ethanol substance listed as UK REACH candidate (2-ethoxyethanol)	CAS-No.: 110-80-5 EC-No.: 203-804-1 UK Index-No.: 603-012-00-X	≥ 80	Flam. Liq. 3, H226 Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Acute Tox. 3 (Inhalation), H331 (ATE=0.5 mg/l/4h) Repr. 1B, H360FD
formamide substance listed as UK REACH candidate	CAS-No.: 75-12-7 EC-No.: 200-842-0 UK Index-No.: 616-052-00-8	20 – 50	Repr. 1B, H360D

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

No additional information available

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

Symptoms/effects	: Toxic if inhaled. Harmful if swallowed. May damage fertility. May damage the unborn child.
Symptoms/effects after inhalation	: May be fatal if inhaled. Irritation to the respiratory tract.
Symptoms/effects after skin contact	: May be harmful in contact with skin. May cause irritation to skin.
Symptoms/effects after eye contact	: May cause eye irritation.
Symptoms/effects after ingestion	: Harmful if swallowed. Swallowing a small quantity of this material will result in serious health hazard.

DYNE TEST SOLUTIONS ISO TYPE 30-33 DYNES/cm2(mN/m)

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Explosion hazard : Heating may cause an explosion. Vapours may form explosive mixture with air.

5.3. Advice for firefighters

Precautionary measures fire : Exercise caution when fighting any chemical fire.
Firefighting instructions : Fight fire with normal precautions from a reasonable distance. Avoid fire-fighting water entering the environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Ventilate area.

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".

6.1.2. For emergency responders

Emergency procedures : Ventilate area. Evacuate unnecessary personnel.

6.2. Environmental precautions

No additional information available

6.3. Methods and material for containment and cleaning up

For containment : Absorb spillage.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed : Flammable vapours may accumulate in the container.

7.2. Conditions for safe storage, including any incompatibilities

Incompatible products : Strong acids. Strong bases. Strong oxidizing agents.
Incompatible materials : Heat sources.
Heat and ignition sources : No flames, no sparks. Eliminate all sources of ignition.
Packaging materials : Keep only in original container.

7.3. Specific end use(s)

No additional information available

DYNE TEST SOLUTIONS ISO TYPE 30-33 DYNES/cm2(mN/m)

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

2-ethoxy Ethanol (110-80-5)

United Kingdom - Occupational Exposure Limits

Local name	2-Ethoxyethanol
WEL TWA (OEL TWA)	8 mg/m ³
	2 ppm
Remark	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)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

formamide (75-12-7)

United Kingdom - Occupational Exposure Limits

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

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment:

Avoid all unnecessary exposure. PPE compliant to the recommended EN/ISO or equivalent standards should be selected.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection

Type	Field of application	Characteristics	Standard
Safety glasses, Safety goggles	Droplet, mist	Clear, With side shields	EN 166

DYNE TEST SOLUTIONS ISO TYPE 30-33 DYNES/cm²(mN/m)

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

8.2.2.2. Skin protection

Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Disposable gloves, Reusable gloves	Nitrile rubber (NBR)	4 (> 120 minutes)	0.5	2 (< 1.5)	EN ISO 374

Other skin protection

Materials for protective clothing:

Wear suitable coveralls to prevent exposure to the skin

8.2.2.3. Respiratory protection

No additional information available

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Colour	: Colourless.
Odour	: Odourless.
Odour threshold	: Not available
pH	: Not available
Melting point	: -90 °C
Freezing point	: Not available
Boiling point	: 135 °C
Flash point	: 42 °C
Lower explosion limit	: 1.8 vol %
Upper explosion limit	: 14 vol %
Vapour pressure	: 5.1 hPa at 20 °C
Vapour pressure at 50°C	: Not available
Relative vapour density at 20°C	: Not available
Relative density	: Not available
Density	: Not available
Solubility	: completely miscible.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Auto-ignition temperature	: Not available
Decomposition temperature	: Not available
Viscosity, kinematic	: Not available
Explosive properties	: Not available

9.2. Other information

Particle characteristics	: Not applicable
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SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

No additional information available

DYNE TEST SOLUTIONS ISO TYPE 30-33 DYNES/cm2(mN/m)

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. copper.

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Inhalation:dust,mist: Toxic if inhaled.

DYNE TEST SOLUTIONS ISO TYPE 30-33 DYNES/cm2(mN/m)	
ATE UK (oral)	625 mg/kg bodyweight
ATE UK (dust,mist)	0.625 mg/l/4h

formamide (75-12-7)	
LD50 oral rat	5325 mg/kg
LD50 dermal rabbit	3000 mg/kg
LC50 Inhalation - Rat (Dust/Mist)	21 mg/l/4h

Skin corrosion/irritation : Not classified

formamide (75-12-7)	
pH	4 – 10 at 200 g/l at 20 C

Serious eye damage/irritation : Not classified

formamide (75-12-7)	
pH	4 – 10 at 200 g/l at 20 C

Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : May damage fertility. May damage the unborn child.
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met

DYNE TEST SOLUTIONS ISO TYPE 30-33 DYNES/cm2(mN/m)

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

formamide (75-12-7)

LC50 - Fish [1]	6.569 mg/l
ErC50 algae	> 500 mg/l

12.2. Persistence and degradability

DYNE TEST SOLUTIONS ISO TYPE 30-33 DYNES/cm2(mN/m)

Persistence and degradability	Not established.
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2-ethoxy Ethanol (110-80-5)

Persistence and degradability	Rapidly degradable
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formamide (75-12-7)

Persistence and degradability	Rapidly degradable
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12.3. Bioaccumulative potential

DYNE TEST SOLUTIONS ISO TYPE 30-33 DYNES/cm2(mN/m)

Bioaccumulative potential	Not established.
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

Component

2-ethoxy Ethanol (110-80-5)	This product does not contain substances at $\geq 0.1\%$ that meet the PBT criteria of UK REACH regulation, annex XIII This product does not contain substances at $\geq 0.1\%$ that meet the vPvB criteria of UK REACH regulation, annex XIII
formamide (75-12-7)	This product does not contain substances at $\geq 0.1\%$ that meet the PBT criteria of UK REACH regulation, annex XIII This product does not contain substances at $\geq 0.1\%$ that meet the vPvB criteria of UK REACH regulation, annex XIII

12.6. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional waste regulation : Disposal should be according to local, state or national legislation.
Product/Packaging disposal recommendations : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

DYNE TEST SOLUTIONS ISO TYPE 30-33 DYNES/cm2(mN/m)

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Ecological waste information

HP Code

: Avoid release to the environment.

: HP3 - "Flammable:"

– flammable liquid waste: liquid waste having a flash point below 60 °C or waste gas oil, diesel and light heating oils having a flash point > 55 °C and ≤ 75 °C;

– flammable pyrophoric liquid and solid waste: solid or liquid waste which, even in small quantities, is liable to ignite within five minutes after coming into contact with air;

– flammable solid waste: solid waste which is readily combustible or may cause or contribute to fire through friction;

– flammable gaseous waste: gaseous waste which is flammable in air at 20 °C and a standard pressure of 101.3 kPa;

– water reactive waste: waste which, in contact with water, emits flammable gases in dangerous quantities;

– other flammable waste: flammable aerosols, flammable self-heating waste, flammable organic peroxides and flammable self-reactive waste.

HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.

SECTION 14: Transport information

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

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				
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: False	Dangerous for the environment: False Marine pollutant: No	Dangerous for the environment: False	Dangerous for the environment: False	Dangerous for the environment: False
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

DYNE TEST SOLUTIONS ISO TYPE 30-33 DYNES/cm2(mN/m)

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Portable tank and bulk container special provisions : TP1

(ADR)

Tank code (ADR) : LGBF

Vehicle for tank carriage : FL

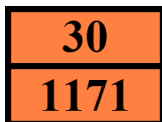
Transport category (ADR) : 3

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

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

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

(RID)

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

DYNE TEST SOLUTIONS ISO TYPE 30-33 DYNES/cm2(mN/m)

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

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

UK REACH Annex XVII (Restriction List)

This product contains no substance(s) listed on UK REACH Annex XVII (Restriction List) equal to or above the level of SDS disclosure

UK REACH Annex XIV (Authorisation List)

This product contains no substance(s) listed on UK REACH Annex XIV (Authorisation List) equal to or above the 0.1% level of disclosure

UK REACH Candidate List (SVHC)

Contains substance(s) listed on the UK REACH Candidate List in concentrations $\geq 0.1\%$ or SCL: 2-ethoxyethanol (EC 203-804-1, CAS 110-80-5), Formamide (EC 200-842-0, CAS 75-12-7)

GB PIC regulation (Prior Informed Consent)

This product contains no substance(s) listed on the GB PIC List equal to or above the level of SDS disclosure

POP Regulation (Persistent Organic Pollutants)

This product contains no substance(s) listed on the GB POP List equal to or above the level of SDS disclosure

Ozone Regulation (S.I. No. 168 of 2015)

This product contains no substance(s) listed on the GB Ozone Depletion List equal to or above the level of SDS disclosure

Control of Poisons and Explosives Precursors Act

This product contains no substance(s) listed as a reportable poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This product contains no substance(s) listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This product contains no substance(s) listed as a reportable explosive precursor on the Control of Poisons and Explosives Precursors Regulations equal to or above the level of SDS disclosure

This substance is not listed as a regulated poison on the Control of Poisons and Explosives Precursors Regulations

Drug Precursors Regulation (273/2004)

This product contains no substance(s) listed on the GB Drug Precursors List equal to or above the level of SDS disclosure

15.1.2. Other information

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Indication of changes (UK)		
Section	Changed item	Comments
	Supersedes	Added
	Revision date	Added
1.1	Name	Modified

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.

DYNE TEST SOLUTIONS ISO TYPE 30-33 DYNES/cm2(mN/m)

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006, as retained and amended in UK law.

Full text of H- and EUH-statements:	
Acute Tox. 3 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Flam. Liq. 3	Flammable liquids, Category 3
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H331	Toxic if inhaled.
H360	May damage fertility or the unborn child.
H360D	May damage the unborn child.
H360FD	May damage fertility. May damage the unborn child.
Repr. 1B	Reproductive toxicity, Category 1B

Safety Data Sheet (SDS), UK

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.