



SAFETY DATA SHEET ANTI FOG/ANTI MIST

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

1.1. Product identifier

Product name ANTI FOG/ANTI MIST
Product No. RAN250, BAM250, CRF250

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

Identified uses Window glass cleaner.

1.3. Details of the supplier of the safety data sheet

Supplier TETROSYL LIMITED
BEVIS GREEN WORKS
WALMERSLEY
BURY
BL9 6RE
0161 764 5981
0161 797 5899
info@tetrosyl.com

Manufacturer TETROSYL LIMITED
BEVIS GREEN WORKS
WALMERSLEY
BURY
BL9 6RE
0161 764 5981
0161 797 5899
info@tetrosyl.com

1.4. Emergency telephone number

0161 764 5981

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification (1999/45/EEC) Xi;R36. F;R11. R67.

2.2. Label elements

Labelling



Irritant



Highly flammable

Risk Phrases

R11 Highly flammable
R36 Irritating to eyes.
R67 Vapours may cause drowsiness and dizziness.

ANTI FOG/ANTI MIST

Safety Phrases

S2	Keep out of the reach of children.
S9	Keep container in a well-ventilated place.
S16	Keep away from sources of ignition - No smoking.
S25	Avoid contact with eyes.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S46	If swallowed, seek medical advice immediately and show this container or label.
S51	Use only in well-ventilated areas.
S56	Dispose of this material and its container to hazardous or special waste collection point.
S64	If swallowed, rinse mouth with water (only if the person is conscious).

2.3. Other hazards**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.2. Mixtures**

IPA			60-100%
CAS-No.: 67-63-0	EC No.: 200-661-7	Registration Number: 01-2119457558-25-XXXX	
Classification (EC 1272/2008) Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336		Classification (67/548/EEC) F;R11 Xi;R36 R67	
POLYETHER MODIFIED TRISILOXANE			1-5%
CAS-No.:	EC No.:		
Classification (EC 1272/2008) Not classified.		Classification (67/548/EEC) Xn;R20. Xi;R36/38. N;R51/53.	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

SECTION 4: FIRST AID MEASURES**4.1. Description of first aid measures**

General information

Remove affected person from source of contamination. NOTE! Effects may be delayed. Keep affected person under observation. Get medical attention. CAUTION! First aid personnel must be aware of own risk during rescue! Move the exposed person to fresh air at once. NOTE! Keep affected person away from heat, sparks and flames! Perform artificial respiration if breathing has stopped. Place unconscious person on the side in the recovery position and ensure breathing can take place.

ANTI FOG/ANTI MIST**Inhalation**

Remove victim immediately from source of exposure. Move injured person into fresh air and keep person calm under observation. If uncomfortable: Seek hospital and bring these instructions. Place unconscious person on the side in the recovery position and ensure breathing can take place. Perform artificial respiration if breathing has stopped.

Ingestion

Get medical attention immediately! Immediately rinse mouth and drink plenty of water or milk. Keep person under observation. Do not induce vomiting. If vomiting occurs, keep head low. Transport immediately to hospital and bring along these instructions. Do not give victim anything to drink if he is unconscious. NOTE! Keep affected person away from heat, sparks and flames! When risk of unconsciousness, place and transport the victim in secured side position.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Rinse with water. Use suitable lotion to moisturise skin. Get medical attention promptly if symptoms occur after washing.

Eye contact

Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyes wide apart. Do not rub eye. Get medical attention if any discomfort continues.

4.2. Most important symptoms and effects, both acute and delayed**General information**

The severity of the symptoms described will vary dependant of the concentration and the length of exposure. NOTE! Effects may be delayed. Keep affected person under observation.

Inhalation.

In case of overexposure, organic solvents may depress the central nervous system causing dizziness and intoxication, and at very high concentrations unconsciousness and death. Vapours may cause headache, fatigue, dizziness and nausea. In high concentrations, vapours are anaesthetic and may cause headache, fatigue, dizziness and central nervous system effects.

Ingestion

May cause discomfort if swallowed. May cause stomach pain or vomiting. May cause nausea, headache, dizziness and intoxication. May cause chemical burns in mouth and throat. Central nervous system depression. Fumes from the stomach contents may be inhaled resulting in the same symptoms as inhalation.

Skin contact

Prolonged contact may cause redness, irritation and dry skin.

Eye contact

Irritation, burning, lachrymation, blurred vision after liquid splash.

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

No recommendation given, but first aid may still be required in case of accidental exposure, inhalation or ingestion of this chemical. If in doubt, GET MEDICAL ATTENTION PROMPTLY!

SECTION 5: FIREFIGHTING MEASURES**5.1. Extinguishing media****Extinguishing media**

Use: Foam, carbon dioxide or dry powder. Water. Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture**Hazardous combustion products**

Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

Unusual Fire & Explosion Hazards

HIGHLY FLAMMABLE! Forms explosive mixtures with air. Vapours are heavier than air and may spread near ground to sources of ignition. May travel considerable distance to source of ignition and flash back.

ANTI FOG/ANTI MIST**Specific hazards**

Vapours may form explosive air mixtures even at room temperature. Vapours are heavier than air and may travel along the floor and in the bottom of containers. Vapours may be ignited by a spark, a hot surface or an ember.

5.3. Advice for firefighters**Special Fire Fighting Procedures**

Avoid breathing fire vapours. Keep up-wind to avoid fumes. Be aware of risk of fire re-starting, and risk of explosion. Cool containers exposed to flames with water until well after the fire is out. Use water SPRAY only to cool containers! Do not put water on leaked material.

Protective equipment for fire-fighters

Leave danger zone immediately.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures**

Wear protective clothing as described in Section 8 of this safety data sheet. In case of inadequate ventilation, use respiratory protection. Take precautionary measures against static discharges. Do not smoke, use open fire or other sources of ignition. Do not breathe vapour. Avoid contact with skin and eyes. In case of spills, beware of slippery floors and surfaces.

6.2. Environmental precautions

Do not discharge into drains, water courses or onto the ground. Prevent entry into drains. Avoid discharge to the aquatic environment.

6.3. Methods and material for containment and cleaning up

For waste disposal, see section 13. Stop leak if possible without risk. Collect with absorbent, non-combustible material into suitable containers. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Provide ventilation and confine spill. Do not allow runoff to sewer. Cover large spillages with alcohol-resistant foam.

6.4. Reference to other sections

Wear protective clothing as described in Section 8 of this safety data sheet. For waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE**7.1. Precautions for safe handling**

Read and follow manufacturer's recommendations. Eliminate all sources of ignition. Keep away from heat, sparks and open flame. Risk of vapour concentration on the floor and in low-lying areas. Static electricity and formation of sparks must be prevented. Do not eat, drink or smoke when using the product. Avoid inhalation of vapours/spray and contact with skin and eyes. Observe good chemical hygiene practices. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Mechanical ventilation or local exhaust ventilation may be required.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from heat, sparks and open flame. Keep containers tightly closed. Keep upright. Keep in original container. Avoid contact with oxidising agents. Do not store near heat sources or expose to high temperatures. Store separated from: Oxidising material.

Storage Class

Flammable liquid storage.

7.3. Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1. Control parameters**

ANTI FOG/ANTI MIST

Name	STD	TWA - 8 Hrs		STEL - 15 Min		Notes
IPA	WEL	400 ppm	999 mg/m ³	500 ppm	1250 mg/m ³	

WEL = Workplace Exposure Limit.

8.2. Exposure controls

Protective equipment



Process conditions

Provide eyewash station.

Engineering measures

Provide explosion proof ventilation for high concentrations. Observe occupational exposure limits and minimize the risk of inhalation of vapours. All handling to take place in well-ventilated area.

Respiratory equipment

If ventilation is insufficient, suitable respiratory protection must be provided. Check that mask fits tight and change filter regularly. Use respiratory equipment with gas filter, type AX.

Hand protection

For prolonged or repeated skin contact use suitable protective gloves. The most suitable glove must be chosen in consultation with the gloves supplier, who can inform about the breakthrough time of the glove material. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

Eye protection

Wear approved, tight fitting safety glasses where splashing is probable.

Other Protection

Wear suitable protective clothing as protection against splashing or contamination.

Hygiene measures

Wash promptly with soap & water if skin becomes contaminated. When using do not eat, drink or smoke.

Isolate contaminated clothing and wash before reuse.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**9.1. Information on basic physical and chemical properties**

Appearance	Clear liquid.
Colour	Colourless.
Odour	Odour of alcohol.
Solubility	Miscible with water
Initial boiling point and boiling range	82°C
Melting point (°C)	Scientifically unjustified.
Relative density	0.790g/cm ³ 20°C
Vapour density (air=1)	Scientifically unjustified.
Vapour pressure	Scientifically unjustified.

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Evaporation rate
Scientifically unjustified.
pH-Value, Conc. Solution
Scientifically unjustified.
Viscosity <50 cps 20°C
Decomposition temperature (°C)
Scientifically unjustified.
Odour Threshold, Lower
Scientifically unjustified.
Odour Threshold, Upper
Scientifically unjustified.
Flash point 12°C
Auto Ignition Temperature (°C)
Scientifically unjustified.
Flammability Limit - Lower(%)
Scientifically unjustified.
Flammability Limit - Upper(%)
Scientifically unjustified.
Partition Coefficient
(N-Octanol/Water)
Scientifically unjustified.
Oxidising properties
Not available.

9.2. Other information

None.

SECTION 10: STABILITY AND REACTIVITY**10.1. Reactivity**

The product may form explosive vapours/air mixtures even at normal room temperatures.

10.2. Chemical stability

Stable under normal temperature conditions and recommended use.

10.3. Possibility of hazardous reactions

Not relevant

10.4. Conditions to avoid

Avoid heat, flames and other sources of ignition. Avoid exposure to high temperatures or direct sunlight.

10.5. Incompatible materials

Materials To Avoid

Strong oxidising substances.

10.6. Hazardous decomposition products

None at ambient temperatures. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: TOXICOLOGICAL INFORMATION**11.1. Information on toxicological effects**

Toxic Dose 1 - LD 50
5840 (IPA) mg/kg (oral rat)

ANTI FOG/ANTI MIST**General information**

Prolonged and repeated contact with solvents over a long period may lead to permanent health problems. Contains small amounts of organic solvents. Extensive use of the product in areas with inadequate ventilation may result in hazardous vapour concentrations.

Inhalation

Vapours may irritate throat and respiratory system and cause headache, dizziness and dullness. Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia. Contains organic solvents which in case of overexposure may depress the central nervous system causing dizziness and intoxication.

Ingestion

May cause internal injury. May cause nausea, headache, dizziness and intoxication. Harmful: may cause lung damage if swallowed. Pneumonia may be the result if vomited material containing solvents reaches the lungs.

Skin contact

Prolonged contact may cause dryness of the skin. Repeated exposure may cause skin dryness or cracking.

Eye contact

Irritating and may cause redness and pain. Spray and vapour in the eyes may cause irritation and smarting.

Health Warnings

Prolonged and repeated contact with solvents over a long period may lead to permanent health problems.

Route of entry

Inhalation. Skin absorption. Ingestion. Skin and/or eye contact.

Medical Symptoms

Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo.

Medical Considerations

Risk of chemical pneumonia after aspiration.

SECTION 12: ECOLOGICAL INFORMATION**Ecotoxicity**

The product contains a substance which has a photochemical ozone creation potential.

12.1. Toxicity**Acute Toxicity - Fish**

Not available.

Acute Toxicity - Aquatic Invertebrates

Not available.

12.2. Persistence and degradability**Degradability**

There are no data on the degradability of this product.

12.3. Bioaccumulative potential**Bioaccumulative potential**

No data available on bioaccumulation.

Partition coefficient

Scientifically unjustified.

12.4. Mobility in soil

ANTI FOG/ANTI MIST**Mobility:**

The product is miscible with water. May spread in water systems.

Adsorption/Desorption Coefficient

Not available.

12.5. Results of PBT and vPvB assessment

Not Classified as PBT/vPvB by current EU criteria.

12.6. Other adverse effects

Not available.

SECTION 13: DISPOSAL CONSIDERATIONS**General information**

Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority. Do not puncture or incinerate even when empty.

13.1. Waste treatment methods

Confirm disposal procedures with environmental engineer and local regulations. Make sure containers are empty before discarding (explosion risk). Empty containers must not be burned because of explosion hazard. Recover and reclaim or recycle, if practical.

SECTION 14: TRANSPORT INFORMATION**14.1. UN number**

UN No. (ADR/RID/ADN) 1219

UN No. (IMDG) 1219

UN No. (ICAO) 1219

14.2. UN proper shipping name

Proper Shipping Name ISOPROPANOL (ISOPROPYL ALCOHOL)

14.3. Transport hazard class(es)

ADR/RID/ADN Class 3

ADR/RID/ADN Class Class 3: Flammable liquids.

ADR Label No. 3

IMDG Class 3

ICAO Class/Division 3

Transport Labels

**14.4. Packing group**

ADR/RID/ADN Packing group II

IMDG Packing group II

ICAO Packing group II

14.5. Environmental hazards

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Environmentally Hazardous Substance/Marine Pollutant
No.

14.6. Special precautions for user

EMS F-E, S-D
Emergency Action Code •2YE
Hazard No. (ADR) 33
Tunnel Restriction Code (D/E)

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**SECTION 15: REGULATORY INFORMATION****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

EU Legislation

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, including amendments.

15.2. Chemical Safety Assessment

No chemical safety assessment has been carried out.

SECTION 16: OTHER INFORMATION

Revision Comments

NOTE: Lines within the margin indicate significant changes from the previous revision.

Revision Date 24/10/2012
Revision 2
Supersedes date 28/03/2012 V1
Safety Data Sheet Status Approved.

Risk Phrases In Full

R20 Harmful by inhalation.
R11 Highly flammable
R36/38 Irritating to eyes and skin.
R36 Irritating to eyes.
R51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
R67 Vapours may cause drowsiness and dizziness.

Hazard Statements In Full

H319 Causes serious eye irritation.
H225 Highly flammable liquid and vapour.
H336 May cause drowsiness or dizziness.