

SAFETY DATA SHEET
R-235 ELECTRICAL CLEANING SOLVENT



1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

PRODUCT NAME R-235 ELECTRICAL CLEANING SOLVENT
 SUPPLIER Tygris
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2 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content	Classification
BUTANE	203-448-7	106-97-8	5-10%	F+;R12
ISOBUTANE	200-857-2	75-28-5	1-5%	F+;R12
PROPAN-2-OL	200-661-7	67-63-0	60-100%	F;R11 Xi;R36 R67
PROPANE	200-827-9	74-98-6	10-30%	F+;R12

The Full Text for all R-Phrases are Displayed in Section 16

3 HAZARDS IDENTIFICATION

Extremely flammable. Vapours may cause drowsiness and dizziness. Irritating to eyes.

CLASSIFICATION Xi;R36. F+;R12. R67.

4 FIRST-AID MEASURES

GENERAL INFORMATION

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

INHALATION

Move the exposed person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Keep the affected person warm and at rest. Get prompt medical attention.

INGESTION

DO NOT INDUCE VOMITING! Rinse mouth thoroughly with water and give large amounts of milk or water to people not unconscious. Get medical attention if any discomfort continues.

SKIN CONTACT

Wash the skin immediately with soap and water. Get medical attention if any discomfort continues.

EYE CONTACT

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Use: Powder. Dry chemicals, sand, dolomite etc. Water spray, fog or mist.

SPECIAL FIRE FIGHTING PROCEDURES

Containers close to fire should be removed or cooled with water. Use water to keep fire exposed containers cool and disperse vapours.

UNUSUAL FIRE & EXPLOSION HAZARDS

Aerosol cans may explode in a fire.

6 ACCIDENTAL RELEASE MEASURES

SPILL CLEAN UP METHODS

Wear necessary protective equipment. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Let evaporate. Keep out of confined spaces because of explosion risk. If leakage cannot be stopped, evacuate area.

7 HANDLING AND STORAGE

R-235 ELECTRICAL CLEANING SOLVENT**USAGE PRECAUTIONS**

Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level.

STORAGE PRECAUTIONS

Aerosol cans: Must not be exposed to direct sunlight or temperatures above 50°C.

8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Name	Std	LT - ppm	LT - mg/m3	ST - ppm	ST - mg/m3
PROPANE		Asphyxiating	Asphyxiating	Asphyxiating	Asphyxiating
BUTANE	WEL	600 ppm	1450 mg/m3	750 ppm	1810 mg/m3
PROPAN-2-OL	WEL	400 ppm	999 mg/m3	500 ppm	1250 mg/m3
ISOBUTANE	WEL	800 ppm		800 ppm	

INGREDIENT COMMENTS

WEL = Workplace Exposure Limits

PROTECTIVE EQUIPMENT**ENGINEERING MEASURES**

Provide adequate general and local exhaust ventilation.

RESPIRATORY EQUIPMENT

No specific recommendation made, but respiratory protection must be used if the general level exceeds the Recommended Workplace Exposure Limit. Use chemical cartridge protection with appropriate cartridge.

HAND PROTECTION

Use protective gloves.

EYE PROTECTION

Use approved safety goggles or face shield.

OTHER PROTECTION

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

HYGIENE MEASURES

DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Aerosol		
COLOUR	Colourless		
ODOUR	Characteristic		
SOLUBILITY	Slightly soluble in water.		
FLAMMABILITY LIMIT - LOWER(%)	0.8	FLAMMABILITY LIMIT - UPPER(%)	9.0

10 STABILITY AND REACTIVITY**STABILITY**

Stable under normal temperature conditions.

CONDITIONS TO AVOID

Avoid heat, flames and other sources of ignition. Avoid contact with: Strong oxidising agents. Strong alkalis. Strong mineral acids.

HAZARDOUS DECOMPOSITION PRODUCTS

Fire creates: Vapours/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO₂).

11 TOXICOLOGICAL INFORMATION**INHALATION**

May cause irritation to the respiratory system. Vapours may cause headache, fatigue, dizziness and nausea. Prolonged inhalation of high concentrations may damage respiratory system. Irritating to respiratory system.

R-235 ELECTRICAL CLEANING SOLVENT**INGESTION**

May cause discomfort if swallowed. May cause stomach pain or vomiting. Gastrointestinal symptoms, including upset stomach.

SKIN CONTACT

Prolonged or repeated exposure may cause severe irritation. Acts as a defatting agent on skin. May cause cracking of skin, and eczema. May cause allergic contact eczema. May cause sensitisation by skin contact. Irritating to skin.

EYE CONTACT

Irritating to eyes. May cause chemical eye burns.

ROUTE OF ENTRY

Inhalation. Skin and/or eye contact.

12 ECOLOGICAL INFORMATION**ECOTOXICITY**

Dangerous for the environment if discharged into watercourses.

13 DISPOSAL CONSIDERATIONS**DISPOSAL METHODS**

Empty containers must not be burned because of explosion hazard. Dispose of waste and residues in accordance with local authority requirements.

14 TRANSPORT INFORMATION

UK ROAD CLASS	2		
PROPER SHIPPING NAME	AEROSOLS		
UN NO. ROAD	1950	UK ROAD PACK GR.	Not Applicable
ADR CLASS NO.	2	ADR CLASS	Class 2: Gases
ADR PACK GROUP	Not Applicable	ADR LABEL NO.	2.1
RID CLASS NO.	2	RID PACK GROUP	Not Applicable
UN NO. SEA	1950	IMDG CLASS	2
IMDG PACK GR.	Not Applicable	EMS	F-D, S-U
MFAG	See Guide	MARINE POLLUTANT	No.
UN NO. AIR	1950	AIR CLASS	2.1
AIR PACK GR.	Not Applicable		

15 REGULATORY INFORMATION**LABELLING**

Irritant



Extremely Flammable

RISK PHRASES

R12	Extremely flammable.
R36	Irritating to eyes.
R67	Vapours may cause drowsiness and dizziness.

SAFETY PHRASES

S16	Keep away from sources of ignition - No smoking.
S23	Do not breathe vapour/spray.
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

R-235 ELECTRICAL CLEANING SOLVENT

S2 Keep out of the reach of children
S51 Use only in well-ventilated areas.

UK REGULATORY REFERENCES

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002.

The Control of Substances Hazardous to Health Regulations 2002.

STATUTORY INSTRUMENTS

The Control of Substances Hazardous to Health Regulations 2002.

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002.

APPROVED CODE OF PRACTICE

Classification and Labelling of Substances and Preparations Dangerous for Supply.

GUIDANCE NOTES

Workplace Exposure Limits EH40.

Introduction to Local Exhaust Ventilation HS(G)37.

CHIP for everyone HSG(108).

16 OTHER INFORMATION

REVISION DATE 07/09/2006

REV. NO./REPL. SDS GENERATED 3

RISK PHRASES IN FULL

R11 Highly flammable.
R12 Extremely flammable.
R36 Irritating to eyes.
R67 Vapours may cause drowsiness and dizziness.

DISCLAIMER

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.