

MATERIAL SAFETY DATA SHEET

Quick Identifier (In Plant Common Name): OSBORN HIGH TECH ELECTRONIC CLEANER

MANUFACTURER INFORMATION

MANUFACTURER'S NAME: OSBORN INTERNATIONAL
ADDRESS: 5401 HAMILTON AVE. CLEVELAND, OH 44114
EMERGENCY TELEPHONE NUMBER: CHEMTREC 800-424-9300
DATE PREPARED: March 2, 2010

SECTION 1 - IDENTITY

COMMON NAME (used on label)(Trade Name & Synonyms): Osborn High Tech Electronic Cleaner 76334
CAS. NUMBER: See Section 2
CHEMICAL FAMILY: Solvent Cleaner
FORMULA: N/A

SECTION 2 - HAZARDOUS INGREDIENTS

CHEMICAL AND COMMON NAME(S)	CAS. #	Principal Hazardous Component(s)		OSHA PEL	AGCIH TLV	VAPOR PRESSURE @ 25 DEG. C.	LEL	UEL	FLASH POINT DEG. F	% By Wt.
		OSHA PEL	AGCIH TLV							
N-Propyl Bromide**	106-94-5	Not Established				111mmHg	4.0	7.8	None	40-50
1,1,1,2-Tetrafluoro-ethane	811-97-2	N/A*	N/A*			96 psia	Nonflammable		None	10 - 20
Pentafluorobutane* (HFC-365mfc)	406-58-6	Not Established				366 mm Hg	n/a	n/a	-25deg C	20- 30

**Limit established for N-PB by Manufacturer is 100 ppm
*Limit established by Solvay is 1000ppm
N/A is not available or not applicable

SECTION 3 - PHYSICAL & CHEMICAL CHARACTERISTICS (Fire & Explosion Data)

BOILING POINT (Deg. F): Concentrate Range: 75
SPECIFIC GRAVITY (Water = 1): Concentrate: 1.2
Propellant: -109.2
VAPOR PRESSURE (mmHg): See Section 2
PERCENT VOLATILE BY WEIGHT (%): 100%

VAPOR DENSITY (Air = 1): >1

EVAPORATION RATE (BA = 1): >1

SOLUBILITY IN WATER: Negligible

REACTIVITY IN WATER: None

APPEARANCE AND ODOR: CONCENTRATE: Clear liquid, irritating odor at high concentrations; PROPELLANT: Colorless, odorless gas; FINISHED PACKAGE: Pressurized containers.

FLASH POINT: See Section 2

FLAMMABLE LIMITS IN AIR - % BY VOLUME: See Section 2

EXTINGUISHER MEDIA: Water fog, dry chemical, carbon dioxide

AUTO-IGNITION TEMPERATURE: Unknown

SPECIAL FIRE FIGHTING PROCEDURES: Water may be used to cool closed containers to prevent pressure build-up and possible bursting when exposed to high temperatures. Firemen should wear self-contained, positive pressure, respiratory equipment.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Contents under pressure. Self-pressurized aerosol containers. Keep temperature of containers below 120 deg. F. to prevent bursting. Hazardous decomposition products.

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SECTION 4 - PHYSICAL HAZARDS
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STABILITY: Stable

CONDITIONS TO AVOID: Avoid any excessive heat, ignition sources, open flames, or other high temperatures which induce thermal decomposition.

INCOMPATIBILITY (Materials to Avoid): Strong Oxidizers, Strong Bases.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen Bromide, Hydrofluoric acid, possibly carbonyl fluoride. Carbon Dioxide, and Carbon Monoxide. See SECTION 5 - HEALTH HAZARDS: Signs and Symptoms of Exposure.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Not Applicable

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SECTION 5 - HEALTH HAZARDS
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THRESHOLD LIMIT VALUE: See Section 2

SIGNS AND SYMPTOMS OF EXPOSURE: **EYE CONTACT:** Contact with liquid or mist may cause irritation. Vapors may irritate eyes; **SKIN CONTACT:** Prolonged contact may cause irritation, defatting of skin; **INHALATION:** Overexposure to vapor may cause dizziness, loss of concentration and irritation. Repeated inhalation of high concentrations may cause lung, kidney, liver, urinary, blood, bone marrow, central nervous system, and reproductive effects. Inhalation of high airborne concentration can also irritate mucous membranes, cause headaches, sleepiness, nausea, confusion, loss of consciousness, digestive and visual disturbances and death. Overexposure to vapor may cause dizziness, loss of concentration and irritation. With high exposure levels, effects can include central nervous system (CNS), depression (intoxication) and cardiac arrhythmia. Product vapors displace air and can cause suffocation especially in confined space. **INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS OF THE CAN MAY BE HARMFUL OR FATAL;** **INGESTION:** Swallowing even small amounts of methanol can cause blindness and death; other effects may be nausea, headache, abdominal pain, vomiting and visual disturbances ranging from blurred vision to light sensitivity. Aspiration may cause rapid absorption through the lungs, which may result in systemic effects.

IMPORTANT NOTE: REPEATED AND PROLONGED OVEREXPOSURE TO SOLVENTS MAY LEAD TO PERMANENT BRAIN AND NERVOUS SYSTEM DAMAGE. EYE WATERING, HEADACHES, NAUSEA, DIZZINESS AND LOSS OF COORDINATION ARE SIGNS THAT SOLVENT LEVELS ARE TOO HIGH. INTENTIONAL MISUSE BY DELIBERATELY CONCENTRATING AND INHALING THE CONTENTS MAY BE HARMFUL OR FATAL.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN:

NATIONAL TOXICOLOGY PROGRAM: No

I.A.R.C. MONOGRAPHS: No

OSHA: No

OSHA PERMISSIBLE EXPOSURE LIMIT: See Section 2

ACGIH THRESHOLD LIMIT VALUE: See Section 2

OTHER EXPOSURE LIMIT USED: None

EMERGENCY AND FIRST AID PROCEDURES

INHALATION: Remove to fresh air. If not breathing, give mouth-to-mouth. If breathing is difficult, give oxygen. Do not give epinephrine or similar drugs. Call a physician. **EYES:**

Flush with water for at least 15 minutes. Get medical assistance if irritation persists. **SKIN:** Wash off in flowing water or shower. Remove contaminated clothing and wash before reuse. **INGESTION:** Do not induce vomiting. Call a physician immediately.

NOTE TO PHYSICIANS: BECAUSE OF POSSIBLE DISTURBANCES OF CARDIAC RHYTHM, CATECHOLAMINE DRUGS, SUCH AS EPINEPHRINE, SHOULD ONLY BE USED WITH SPECIAL CAUTION IN SITUATIONS OF EMERGENCY LIFE SUPPORT.

SECTION 6 - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION: NIOSH or Bureau of Mines approved organic vapor-type respirator is required in absence of proper environmental control.

VENTILATION:

LOCAL EXHAUST: To keep below TLV

MECHANICAL (General): To keep below TLV

SPECIAL: None

OTHER: None

PROTECTIVE GLOVES: Solvent resistant gloves - impervious gloves

EYE PROTECTION: Safety glasses or goggles

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: None reasonably foreseeable.

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SECTION 7 - SPECIAL PRECAUTIONS AND SPILL/LEAK PROCEDURES
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PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Do not store above 110 deg. F. Avoid breathing vapors. Avoid prolonged or repeated contact with skin.

OTHER PRECAUTIONS: Contents under pressure. Do not puncture or incinerate. Vapors are heavier than air and will collect in low areas.

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: **SMALL SPILLS:** Remove ignition sources. Mop up, wipe up, or soak up immediately. Use proper protective equipment. **LARGE SPILLS:** Evacuate area. Remove ignition sources. Contain liquid; transfer to closed containers; keep out of water supplies.

WASTE DISPOSAL METHODS: Dispose in accordance with Federal, State, and Local regulations. Do not incinerate closed or empty containers.

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SECTION 8 – NFPA HAZARD RATINGS
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Health = 2 Flammability = 0 Reactivity = 0

Section 9 - Other Information

TRANSPORTATION INFORMATION – DOMESTIC GROUND

Shipping Name:	Consumer Commodity
Hazard Class:	ORM-D
UN Number:	N/A
Packing Group:	N/A
Hazard Label:	None
Carton Marking:	Consumer Commodity, ORM-D

Section 10 - Regulatory Information

SUBJECT TO SECTION 313 OF SARA TITLE III: No

ALL CHEMICAL COMPONENTS ARE LISTED IN THE TSCA INVENTORY.

CHEMICAL LISTED AS CARCINOGEN OR POTENTIAL CARCINOGEN: NATIONAL TOXICOLOGY PROGRAM: No.

I.A.R.C. MONOGRAPHS: No

OSHA: No.

OSHA PERMISSIBLE EXPOSURE LIMIT: See Section 2

AGCIH THRESHOLD LIMIT VALUE: See Section 2

OTHER EXPOSURE LIMITED USED: None

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