Link Technologies Ltd
3 Mallard Way
Strathclyde Business Park
Bellshill,
Lanarkshire, ML4 3BF, Scotland
Tel:+44 (0)1698 849911
Fax:+44 (0) 1698 849922

Material Safety Data Sheet. No: SD4132-R00

Issued 21-May-10

Section 1 : Chemical Identification

Catalogue No.:	4132-XXXX	**Name:**	Oxidiser (0.02M Iodine in tetrahydrofuran/pyridine/water)

Section 2 : Hazards Identification

Main Hazard	Highly Flammable
Other Specific Hazards	Corrosive

Section 3 : Composition/information on Ingredients

Chemical Name	**Composition**	**CAS No.**	**EINECS No.**
Iodine	0.02M (<0.5%)	7553-56-2	231-442-4
Tetrahydrofuran	89%	109-99-9	20-3-726-8
Pyridine	0.4%	110-86-1	203-809-9
Water	10%		

Section 4 : First Aid Measures

Eyes	In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes. OBTAIN MEDICAL ATTENTION
Skin	In case of contact, remove contaminated clothing, immediately wash skin with soap and copious amounts of water. OBTAIN MEDICAL ATTENTION
Ingestion	Induce vomiting and washout mouth with water provided the person is conscious. OBTAIN MEDICAL ATTENTION
Inhalation	Immediately remove to fresh air. If not breathing, give artificial respiration. OBTAIN MEDICAL ATTENTION

Section 5 : Fire Fighting Measures

Extinguishing Media	Carbon dioxide, dry chemical powder or appropriate foam
Special Hazards of Product	Explosive peroxides can form on standing or on exposure to air or direct sunlight. Volatile and flammable liquid. Heat will build up pressure in closed storage containers. Vapour may travel some distance to points of ignition and cause flash back.
Protective Equipment for Fire Fighting	Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Section 6 : Accidental Release Measures

Personal Protection	Wear protective clothing, respirator, chemical safety goggles, rubber gloves and rubber boots
Leaks and Spills	Ventilate area and remove all sources of ignition. Clean the contaminated area thoroughly with a suitable solvent and absorbent material taking care to avoid breathing fumes. Dispose of all cleaning materials with care (see section 13). Use non-sparking tools.

Section 7 : Handling and Storage

Handling	Wear protective clothing, gloves and safety goggles. Use in a fume extraction cabinet. Avoid contact with eyes, skin and clothing. Avoid inhalation. Wash thoroughly after handling. Avoid heat, sparks and open flames. Keep containers closed when not in use. Earth metal containers when in use. Can form explosive peroxides which could explode during concentration or evaporation. Do not concentrate if peroxide concentrations are above 5ppm or 0.05%. Periodically check for peroxides in stored material before use.
Storage	Protect from extremes of temperature and direct sunlight. Store in sealed containers in an appropriately protected and secure flammable liquid store. Proper storage should be determined based on other materials stored and their hazards and chemical incompatibilities

Section 8 : Exposure controls/Personal Protection

Exposure Controls	Always use adequate fume extraction and keep storage vessels closed when not in use. See also sections 6 and 7 above.
Personal Protection	Protective gloves, goggles or laboratory spectacles and clothing are recommended. See also sections 6 and 7 above.

Section 9 : Physical and Chemical Properties

Physical State	Brown liquid		
Melting Point	N/A	**Boiling Point**	65-67^{0}C
Flash Point	-17^{0}C	**Explosion Limits**	Lower:1.8% in air by volume Upper:11.8% in air by volume
Solubility (Water)	Miscible	**Solubility (Org. Solvents)**	N/A
Chemical Formula	N/A	**Molecular Weight**	N/A
Other Information	Vapour Pressure at 20^{o}C = 143mmHg; Freezing Point –108.5^{o}C; Auto ignition temperature = 321^{o}C		

Section 10 : Stability and Reactivity

Chemical Stability	Stable..
Incompatibilities	Oxidising agents and strong acids and bases
Hazardous Decomposition or Combustion Products	Incomplete combustion can generate carbon monoxide and other toxic vapours. May form peroxides on storage and exposure to air or direct sunlight
Hazardous Polymerisation	Hazardous polymerisation may occur

Section11 : Toxicological Data

Toxic Effects	Inhalation: Exposure can cause nausea, dizziness, headache and central nervous system depression. Vapours can be irritating to the mucous membranes and upper respiratory tract. Eye contact: Liquid and high vapour concentration can cause irritation Skin Contact: prolonged and repeated contact can cause irritation and dermatitis Ingestion: Systemic effects similar to inhalation Effects of over-exposure: Nausea, dizziness, headache, and narcosis. Liver and kidney damage can occur from chronic exposure.
Other Toxicological Data	The toxicological effects of this preparation have not been fully investigated. Information for the components are given below: Exposure Limits (for THF): Time weighted average (8Hr): 50ppm or 150mg/m^3 Short Term Exposure Level100ppm or 300mg/m^3 ORL-RAT LD50 (pyridine) >2000mg/kg

Section 12 : Ecological Information

In use, caution should be exercised to minimise release into the environment by using appropriate containment procedures. Product not inherently biodegradable.

Section 13 : Disposal Information

Dispose by incineration at high temperature in an approved incinerator fitted with appropriate environmental protection equipment. Dispose of in accordance with all applicable Local, National, State and Federal regulations. Labels should not be removed from containers until they have been thoroughly cleaned in an appropriate manner. Containers should not be treated as domestic waste and disposed of appropriately. Always use an approved disposal company.

Section 14 : Transport Information

UN No.	2924	**UN Class**	3	**UN Packing Gp.**	II

Road Freight	ADR/RID Hazard ID: 33
Sea Freight	EmS: F-E S-D
Air Freight	IATA-DGR Packaging: 307

Section 15 : Regulatory Information

European Information:

R Phrases	R11 – Highly flammable R19 – May form explosive peroxides R36/37 – Irritating to eyes and respiratory system
S Phrases	S16 – Keep away from sources of ignition – No smoking S29 – Do not empty into drains S33 - Take precautionary measures against static discharges

Section 16 : Other information

MSDS First Issued	May-10	**MSDS Last Revision**	May-10	**MSDS Version**	R00