MATERIAL SAFETY DATA SHEET

XL8080NT

Date Updated: 2011-08-31
Version: 1.0/EN
Regulation: EC No 1272/2008

SECTION 1:	SUBSTANCE IDENTIFICATION
Product name:	XL8080NT
Use of the substance:	raw material for wire & cable industry
CAS #:	9002-88-4
EC #:	-
Registration #:	Ethylene : 01-2119462827-27-****

* Monomer in this substance (polymer) is registered.

COMPANY INFORMATION	
Company name:	LG Chem., Ltd.
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SECTION 2: HAZARDS IDENTIFICATION

Classification:
XL8080NT (CAS No. 9002-88-4) is not classified according to Regulation (EC) 1272/2008 and Directive 67/548/EEC.

Labelling: Not applicable

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Component	Conc^{n} / %	CAS / EC #	Classification
Low Density Poly Ethylene	<97	9002-88-4 / -	See section 15
Bis(1-methyl-1-phenylethyl) peroxide	2.5<	80-43-3 / 201-279-3	See section 15
BIS(3-tert-BUTYL-4-HYDROXY-6-METHYLPHENYL)SULFIDE	0.3<	96-69-5 / 202-525-2	-

SECTION 4: FIRST AID MEASURES

After skin contact:	- Remove contaminated clothing and shoes. - In case of contact with substance, immediately flush skin with running water for at least 20 minutes.
After eye contact:	- In case of contact with substance, immediately flush eyes with running water for at least 20 minutes. - Remove contact lenses if present and easy to do. - If irritation, edema, pain, tear and dazzling develop and persist, get medical attention.

After ingestion:	- Do NOT induce vomiting. - If swallowed, immediately call a POISON CENTER or doctor/physician.
After inhalation:	- Get medical attention immediately if irritation and symptoms persist.
Indication of immediate medical attention and notes for physician:	- Call emergency medical service. Get medical advice/attention if you needed. - Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

SECTION 5: FIREFIGHTING MEASURES

Extinguishing media:
- ○ Suitable extinguishing media: Dry chemical, CO_2, water spray, regular foam
- ○ In case of major fire and large quantities: regular extinguishing agent, fine water spray

Specific hazards arising from the chemical:
- ○ Thermal decomposition products:
  - halogen compounds, carbon oxides, hydrogen chloride, carbon monoxide, carbon dioxide, acrolein, aldehyde
- ○ Fire or explosion: It could be a slight fire hazard.

Special protective equipment and precautions for fire-fighters:
- Move containers from fire area if you can do it without risk.
- Do not scatter spilled material with high pressure water streams.
- Use extinguishing agent suitable for type of surrounding fire.
- Avoid inhalation of the substance or combustion products.
- Stay upwind.
- Keep out of low areas.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
- Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers.
- Isolate exposed area. Keep unauthorized personnel away.
- Prevent dust and scattering.
- Keep away from waterways and sewers.
- Move materials to suitable containers for later disposal.

Environmental precautions and protective procedures
- Provide local exhaust ventilation system.
- Make an embankment for further processing.
- Prevent entry into waterways or sewers.

The methods of purification and removal
- ○ Small spill:
  - Dispose of materials by mechanical means.
  - Absorb with non-combustible material.
- ○ Large spill:
  - Make an embankment for further processing.
  - Eliminate all sources of ignition.

SECTION 7: HANDLING AND STORAGE

Handling:
- Avoid breathing particulate matter and gases.
- Wash thoroughly after handling.
- Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures.
- DO NOT eat, drink or smoke in product area.
- Restrain sources of ignition, combustible materials.
- Ground for electrical spark protection. Remove dust factors.

Storage:
- Store in a closed container.
- Avoid contact with light.
- Ventilation facilities are required.
- Store in well-ventilated warehousing and SILO at room temperature.
- Call a POISON CENTER or doctor/physician if you needed.

SECTION 8: EXPOSURE CONTROL / PERSONAL PROTECTION

Exposure limits / standards:

Specific exposure limits have not been established or are not applicable unless listed below.

- **LDPE :**
  - ○ Regulation in Korean: Not available
  - ○ US (NIOSH/OSHA AGGIH):
    - NIOSH- TWA: Not available
    - OHSA- TWA: Not available
    - ACGIH- TWA: Not available
  - ○ EU Regulation: Not available
  - ○ Other:
    - Bulgaria: OEL-TWAs=10.0mg/m^3 (dust)
    - Czech Republic: OEL-TWAs= 5.0 mg/m^3 (dust)
    - Latvia: OEL-TWAs (AERs)= 5 mg/m^3
    - Lithuania: OEL-TWAs (IPRVs)=10 mg/m^3, MAC=0.1 mg/m^3
    - Slovak Republic: OEL-TWAs= 5.0 mg/m^3 (total solid aerosol)
    - China: OEL- STEL=10 mg/m3 (total dust), TWA=5 mg/m3 (total dust)
    - Russia: OEL-MACs=10 mg/m3 (aerosol)
  - ○ Biological Exposure Index: Not available

Engineering Controls:

- Provide local exhaust ventilation system or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.
- Check legal suitability of exposure level.
- Separate from ignition or heat sources. Ground for electrical spark protection.

Personal Protection:

Respiratory Protection:
- Wear NIOSH or European Standard EN 149 approved full or half face piece (with goggles) respiratory protective equipment when necessary.

Eye Protection:

- An eye wash unit and safety shower station should be available nearby work place.
- Wear safety glasses to protect eyes from scattering toxic substance.

Skin Protection
- Wear chemical resistant gloves to avoid direct contact with chemical substance.
- Wear appropriate protective chemical resistant clothing to prevent exposure of skin.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Physical state: solid (pellet of 3~5 mm) Color: white or milky
Odor	Odorless
pH:	Not available
Melting / freezing point:	100 ~ 125 °C
Initial boiling point and boiling range:	> 85 ℃
Flash point	> 231 ℃
Flammability:	Not available
Evaporation rate	Not available
Upper/lower flammability or explosive limits:	Not available
Vapor pressure:	Not available
Vapor density:	Not available
Water solubility:	Insoluble
Density:	Not available
Specific gravity:	0.910 ~ 0.925
Log partition coefficient (n-octanol/water):	Not available
Auto ignition temperature:	349 °C
Decomposition temperature:	Not available
Viscosity:	Not available
Molecular weight	tens of thousands ~ hundreds of thousands

SECTION 10: STABILITY AND REACTIVITY

Chemical stability
- Stable under normal temperatures and pressures.

Possibility of hazardous reactions
- No dangerous reaction known under conditions of normal use.

Conditions to avoid
- Avoid heat, flames, sparks and other sources of ignition.
- Avoid contact with incompatible materials.
- Avoid release to the environment.

Incompatible materials
- strong oxidizing agents

Hazardous decomposition product
- halogen compounds, carbon oxides, hydrogen chloride, carbon monoxide, carbon dioxide, acrolein, aldehyde

SECTION 11: TOXICOLOGICAL INFORMATION

	Conclusion / Remarks
(a) Acute toxicity;	
By oral route (ATEmix>2,001 mg/kg bw)	**LDPE :** LD50 >2,000 mg/kg bw (rat) **DCP :** LD50 >2,000 mg/kg bw (rat)
By dermal route	**DCP :** LD50 > 2,000 mg/kg bw (rat)
By inhalation route	**DCP:** LC50 > 224 mg/l (rat)
(b) Skin corrosion/irritation;	**LDPE :** Tested the acute dermal irritation of polyethylene on three New Zealand White rabbits, Polyethylene caused a primary irritation index of 0.0, according to the Draize index. No corrosive effects were noted. **DCP:** In test on skin irritation with rabbits, very slight oedema and erythema was observed. (OECD TG 404, GLP)
(c) Serious eye damage/irritation;	**LDPE :** Polyethylene caused a maximum group mean score of 11.0 and was classified as a mild irritant. **DCP:** In test on eyes irritations with rabbits, eyes irritations were not observed. (OECD TG 405, GLP)
(d) Respiratory or skin sensitization;	**LDPE :** No reactions were observed after any of the inductions or after the challenge. Polyethylene did not cause sensitization in any of the guinea pigs tested. **DCP :** In a skin sensitization study by the Local Lymph Node Assay, a test substance is considered negative for sensitization (OECD TG 429 ,GLP)
(e) Germ cell mutagenicity;	**LDPE :** In vitro: Ames test(S. typhimurium): Negative **DCP :** Mutagenic reactions were not observed in in vitro (Ames test, Chromosome Aberrations assay, mammalian cell gene mutation assay, bacterial reverse mutation assay).
(f) Carcinogenicity;	**LDPE :** - IARC 3 - Albino (Longacre) mice given subcutaneous implants of a pure, plain film, 3/29 survivors developed malignant tumours at the site of implantation. Among 102 female Wistar rats that received intrauterine insertions of a 10 mm portion of a polyethylene intrauterine contraceptive device,five developed epidermoid carcinomas and one a sarcoma of the uterus within two years; all animals that had epidermoid carcinomas also had pyometra, which is associated with squamous metaplasia.
(g) Reproductive toxicity;	Not available
(h) STOT-single exposure;	**LDPE :** Acute Exposure investigated the acute oral toxicity of polyethylene (average molecular weight of 450) in ten male and female Sprague-Dawley CD strain rats(201-223g). During the experimental period, no rats died or had signs of systemic toxicity. **DCP :** In a study with rats, no deaths occurred in either sex of rats during the observation period. Abnormalities of general

	condition were not observed in any males or females during the observation period. (OECD TG 401, GLP)
(i) STOT-repeated exposure;	**LDPE :** In a 90-day study, rats fed at levels of 2700 and 540ppm and dogs fed 2700 ppm showed no adverse effects. **DCP :** Repeated oral toxicity was investigated in a study according to OECD Guideline 407 over 28d. Rats were exposed to 60, 200 and 600 mg/kg. Increased relative liver weights and histopathologically, hypertrophy of hepatocytes. (OECD TG 407, GLP)
(j) Aspiration hazard.	Not available

SECTION 12: ECOLOGICAL INFORMATION

	Conclusion / Remarks
12.1 Toxicity	Not classified
Acute toxicity	**DCP :** Fish : 96hr-LC50(Pimelhales promelas) = 15.6 mg/l (GLP) Crustacea : 48hr-EC50(Daphnia magna) > 100 mg/l (OECD TG 202, GLP) Algae : 72hr-EC50(Pseudokirchnerella subcapitata) > 20 mg/l (OECD TG 201, GLP)
Chronic toxicity	**DCP:** NOEC(Daphnia magna)=0.117 mg/l (OECD TG 211, GLP)
12.2 Persistence and degradability	**• Persistence :** **LDPE :** Polymers are not degradable; therefore, it represents a potential for persistence in the environment. **DCP :** High persistency (LogKow is more than 4 (logkow=5.6)) **• Biodegradation:** **LDPE :** Polymers are not degradable.
12.3 Bioaccumulative potential	**• Bioaccumulation:** **LDPE :** Polymers are not degradable; therefore a potential for bioaccumulation has to be expected. **DCP :** Bioaccumulation is expected according to the BCF>500 (BCF=137~1,470) **• Biodegradation:** **LDPE :** Polymers are not biodegradable. **DCP :** 18% biodegradable after 28 day
12.4 Mobility in soil	**LDPE :** Low potency of mobility to soil. (Koc values = 9.42 L/kg) **DCP :** High potency of mobility to soil. (Koc values = 3,700 L/kg)
12.5 Results of PBT and vPvB assessment	Not available
12.6 Other adverse effects	Not available

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal method

• Method for disposing waste synthetic polymer compounds
- Thermosetting waste synthetic resins and other waste synthetic polymer compounds shall be crushed, cut or melted to a size at which the maximum diameter is 15 cm or less and thereafter be disposed in a stable landfill facility.
- Non-thermosetting waste synthetic resins and other waste synthetic polymer compounds shall be incinerated.

Disposal precaution

• Standard and method for disposing the designated waste
- All the generated waste shall be disposed in accordance with the specific standard and method prescribed in the Act so that the environmental pollution may be minimized in the course of collecting, carrying, keep and disposing the waste.
- The waste shall not flutter or flow out, and a bad smell shall not be diffused.
- The pollutants shall be disposed below the allowable exhaust standard.
- Without just reason, the waste shall not be discarded in a place other than the designated places.
- The waste shall be disposed in the waste disposal facility.

SECTION 14: TRANSPORT INFORMATION

UN #:	Not classified with dangerous goods
Class:	Not applicable
Proper shipping name:	Not applicable
Packing group:	Not applicable
Marine pollutant	Not applicable
Other information:	Not applicable

SECTION 15: REGULATORY INFORMATION

○ **EU classification:**

• DCP :
- Classification: O; R7 - Xi; R36/38 - N; R51-53
- Risk phrases: R7, R36/38, R51/53
- Safety phrases: S2, S3/7, S14, S36/37/39, S61
- EU REACH SVHC Free Certified(Candidate list Updated by ECHA on 30th March, 2010)

○ **U.S.A management information**

• LDPE :
- OSHA: Not regulated
- CERCLA: Not regulated
- EPCRA 302: Not regulated
- EPCRA 304: Not regulated
- EPCRA 313: Not regulated
- TSCA Section 8(b) Inventory : XU
- FDA - Direct Food Additives: 21 CFR 172.615 (MW 2000-21000)

○ **Other Information:**

• LDPE :
○ Japan management information
- Existing and New Chemical Substances (ENCS): (6)-1; (6)-120; (6)-402

○ China management information

- Inventory of Existing Chemical Substances (IECSC): Present
  - ○ Canada management information
    - Domestic Substances List (DSL): Present
  - ○ New zealnad management information
    - Inventory of Chemicals (NZIoC): May be used as a single component chemical under an appropriate group standard.
  - ○ Philippines management information
    - Inventory of Chemicals and Chemical Substances (PICCS): Present
- **DCP :**
  - ○ Japan management information
    - Existing and New Chemical Substances (ENCS): Present
  - ○ China management information
    - Inventory of Existing Chemical Substances (IECSC): Present
  - ○ Canada management information
    - Domestic Substances List (DSL): Present
  - ○ Australia management information:
    - Inventory - Inventory of Chemical Substances (AICS): Present
  - ○ New zealnad management information
    - Inventory of Chemicals (NZIoC): Present
  - ○ Philippines management information
    - Inventory of Chemicals and Chemical Substances (PICCS): Present

○ Substance of Roterdame Protocol: Not regulated

○ Substance of Stockholme Protocol: Not regulated

○ Substance of Montreal Protocol: Not regulated

SECTION 16: OTHER INFORMATION

Product safety data sheet for XL8080NT prepared in accordance with Annex II of the REACH Regulation EC 1907/2006, Regulation (EC) 1272/2008.

Version: 1.0/EN
Revision date: 31 August 2011

This safety data sheet (SDS) is based on the legal provisions of the REACH Regulation (EC 1907/2006; article 31 and Annex II), as amended. Its contents are intended as a guide to the appropriate precautionary handling of the material. It is the responsibility of recipients of this SDS to ensure that the information contained therein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. Information and instructions provided in this SDS are based on the current state of scientific and technical knowledge at the date of issue indicated. It should not be construed as any guarantee of technical performance, suitability for particular applications, and does not establish a legally valid contractual relationship. This version of the SDS supersedes all previous versions.