DALIAN F.T.Z. GREAT INDUSTRY&TRADE CO., LTD.

ADD: 1207A HUINENG BUILDING DALIAN F.T.Z.CHINA
TEL: 0086-411-3955-2835 FAX: 0086-411-3926-6880

SAFETY DATA SHEET
BENOX L-40LV

SECTION 1. IDENTIFICATION

Product name : BENOX L-40LV

Manufacturer or supplier's details

Company name of supplier : DALIAN F.T.Z.GREAT INDUSTRY & TRADE CO.,LTD.

Address : 1207A HUINENG BUILDING DALIAN F.T.Z. CHINA

Telephone : 0086-411-39552935

Telefax : 0086-411-39266880

Emergency telephone : 0086-411-39552935

E-mail address of person responsible for the SDS : Great@dlwawoo.com

Recommended use of the chemical and restrictions on use

Recommended use : Curing chemical

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with 29 CFR 1910.1200

Organic peroxides : Type E

Eye irritation : Category 2B

Skin sensitization : Category 1

Acute aquatic toxicity : Category 1

Chronic aquatic toxicity : Category 1

GHS label elements

Hazard pictograms :

Signal Word : Warning

Hazard Statements : H242 Heating may cause a fire.
H317 May cause an allergic skin reaction.
H320 Causes eye irritation.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary Statements :

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P220 Keep/Store away from clothing/ strong acids, bases, heavy metal salts and other reducing substances /combustible materials.
P234 Keep only in original container.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P264 Wash skin thoroughly after handling.
P272 Contaminated work clothing must not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves/ eye protection/ face protection.

Response:

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337 + P313 If eye irritation persists: Get medical advice/ attention.
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.

Storage:

P410 Protect from sunlight.
P411 + P235 Store at temperatures not exceeding 30 °C/ 86 °F. Keep cool.
P420 Store away from other materials.

Disposal:

P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

Chemical nature : Organic Peroxide
Liquid mixture

Hazardous ingredients

Chemical name	CAS-No.	Concentration (% w/w)
Dibenzoyl peroxide	94-36-0	>= 35 - < 40

SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.
Show this material safety data sheet to the doctor in

		attendance. Do not leave the victim unattended. Call a physician immediately.
If inhaled	:	If unconscious, place in recovery position and seek medical advice. If symptoms persist, call a physician. If breathed in, move person into fresh air.
In case of skin contact	:	In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash contaminated clothing before re-use. If on skin, rinse well with water. If on clothes, remove clothes. If symptoms persist, call a physician.
In case of eye contact	:	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Remove contact lenses. Protect unharmed eye. Keep eye wide open while rinsing. If eye irritation persists, consult a specialist.
If swallowed	:	Keep respiratory tract clear. Call a physician immediately. Rinse mouth thoroughly with water.
Most important symptoms and effects, both acute and delayed	:	May cause an allergic skin reaction. Causes eye irritation.
Protection of first-aiders	:	First Aid responders should pay attention to self-protection and use the recommended protective clothing
Notes to physician	:	Treat symptomatically and supportively.

SECTION 5. FIRE-FIGHTING MEASURES

Suitable extinguishing media	:	Water spray Alcohol-resistant foam Carbon dioxide (CO2) Dry chemical
Unsuitable extinguishing media	:	High volume water jet
Specific hazards during fire fighting	:	Contact with incompatible materials or exposure to temperatures exceeding SADT may result in a self-accelerating decomposition reaction with release of flammable vapors which may auto-ignite. Flash back possible over considerable distance. Vapors may form explosive mixtures with air.

		The product will float on water and can be reignited on surface water. Cool closed containers exposed to fire with water spray.
Specific extinguishing methods	:	Do not use a solid water stream as it may scatter and spread fire. Remove undamaged containers from fire area if it is safe to do so. Use water spray to cool unopened containers.
Further information	:	Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Special protective equipment for fire-fighters	:	Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	:	Use personal protective equipment. Remove all sources of ignition. Follow safe handling advice and personal protective equipment recommendations. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas. Never return spills in original containers for re-use. Treat recovered material as described in the section "Disposal considerations".
Environmental precautions	:	Prevent product from entering drains. Prevent further leakage or spillage if safe to do so. If the product contaminates rivers and lakes or drains inform respective authorities.
Methods and materials for containment and cleaning up	:	Contact with incompatible substances can cause decomposition at or below SADT. Clear spills immediately. Suppress (knock down) gases/vapors/mists with a water spray jet. To clean the floor and all objects contaminated by this material, use plenty of water. Soak up with inert absorbent material. Isolate waste and do not reuse. Non-sparking tools should be used. Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.

SECTION 7. HANDLING AND STORAGE

Technical measures	:	See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.
Advice on protection against fire and explosion	:	Keep away from heat and sources of ignition. Use only explosion-proof equipment. Keep away from combustible material.
Advice on safe handling	:	Do not swallow. Do not breathe vapors/dust. Avoid exposure - obtain special instructions before use. Avoid contact with skin and eyes. Avoid formation of aerosol. Take precautionary measures against static discharges. Never return any product to the container from which it was originally removed. Provide sufficient air exchange and/or exhaust in work rooms. Avoid confinement. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Smoking, eating and drinking should be prohibited in the application area. Wash thoroughly after handling. For personal protection see section 8. Persons susceptible to skin sensitization problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. Protect from contamination.
Conditions for safe storage	:	Avoid impurities (e.g. rust, dust, ash), risk of decomposition. Electrical installations / working materials must comply with the technological safety standards. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in original container. Keep containers tightly closed in a cool, well-ventilated place. Store in accordance with the particular national regulations.
Materials to avoid	:	Keep away from strong acids, bases, heavy metal salts and other reducing substances.
Recommended storage temperature	:	0 - 30 °C 32 - 86 °F

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Ingredients with workplace control parameters

Ingredients	CAS-No.	Value type (Form of	Control parameters / Permissible	Basis

		exposure)	concentration	
Dibenzoyl peroxide	94-36-0	TWA	5 mg/m3	ACGIH
		TWA	5 mg/m3	NIOSH REL
		TWA	5 mg/m3	OSHA Z-1
		TWA	5 mg/m3	OSHA P0
Zinc stearate	557-05-1	TWA (Respirable)	5 mg/m3	NIOSH REL
		TWA (total)	10 mg/m3	NIOSH REL
		TWA (total dust)	15 mg/m3	OSHA Z-1
		TWA (respirable fraction)	5 mg/m3	OSHA Z-1
		TWA (Total dust)	10 mg/m3	OSHA P0
		TWA (respirable dust fraction)	5 mg/m3	OSHA P0
		TWA	10 mg/m3	ACGIH

Engineering measures : Minimize workplace exposure concentrations.

Personal protective equipment

Respiratory protection : In the case of dust or aerosol formation use respirator with an approved filter.

Filter type : ABEK-filter

Hand protection
Material : butyl-rubber
Break through time : >= 480 min
Glove thickness : 0.5 mm

Remarks : Choose gloves to protect hands against chemicals depending on the concentration and quantity of the hazardous substance and specific to place of work.
For special applications, we recommend clarifying the resistance to chemicals of the aforementioned protective gloves with the glove Wash hands before breaks and at the end of workday.

Eye protection : Tightly fitting safety goggles
Please wear suitable protective goggles. Also wear face protection if there is a splash hazard.
Ensure that eyewash stations and safety showers are close to the workstation location.

Skin and body protection : Select appropriate protective clothing based on chemical resistance data and an assessment of the local exposure potential.

Hygiene measures : Keep away from food and drink.

When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and immediately after handling the product.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Emulsion
Color	:	white
Odor	:	characteristic
pH	:	Not applicable
Melting point/range	:	No data available
Boiling point/boiling range	:	Decomposition: Decomposes below the boiling point.
Flash point	:	Not applicable
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	does not ignite
Self-ignition	:	
Upper explosion limit	:	Not applicable
Lower explosion limit	:	Not applicable
Vapor pressure	:	Not applicable
Density	:	1.2 g/cm3 (25 °C)
Solubility(ies)		
Water solubility	:	insoluble
Partition coefficient: n-octanol/water	:	Not applicable
Self-Accelerating decomposition temperature (SADT)	:	50 °C SADT-Self Accelerating Decomposition Temperature. Lowest temperature at which the tested package size will undergo a self-accelerating decomposition reaction.
Viscosity		
Viscosity, dynamic	:	1 mPa.s
Viscosity, kinematic	:	Not applicable
Explosive properties	:	Not explosive

Oxidizing properties	:	The substance or mixture is not classified as oxidizing. Organic peroxide

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable under recommended storage conditions.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	Vapors may form explosive mixture with air.
Conditions to avoid	:	Protect from contamination. Contact with incompatible substances can cause decomposition at or below SADT. Heat, flames and sparks. Avoid confinement.
Incompatible materials	:	Accelerators, strong acids and bases, heavy metals and heavy metal salts, reducing agents

SECTION 11. TOXICOLOGICAL INFORMATION

Acute toxicity

Not classified based on available information.

Product:

Acute oral toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute dermal toxicity	:	Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method

Ingredients:

Dibenzoyl peroxide:

Acute oral toxicity	:	LD50 (Rat): > 5,000 mg/kg Method: OECD Test Guideline 401 Assessment: The substance or mixture has no acute oral toxicity
Acute inhalation toxicity	:	LC50 (Rat): > 24.3 mg/l Exposure time: 4 h Test atmosphere: vapor Method: OECD Test Guideline 403 Assessment: The substance or mixture has no acute inhalation toxicity
Acute dermal toxicity	:	Remarks: No data available

Skin corrosion/irritation

Not classified based on available information.

Product:

Remarks: May cause skin irritation and/or dermatitis.

Ingredients:

Dibenzoyl peroxide:

Species: Rabbit
Result: No skin irritation

Serious eye damage/eye irritation

Causes eye irritation.

Product:

Remarks: Vapors may cause irritation to the eyes, respiratory system and the skin.

Ingredients:

Dibenzoyl peroxide:

Species: Rabbit
Result: Irritation to eyes, reversing within 7 days

Respiratory or skin sensitization

Skin sensitization

May cause an allergic skin reaction.

Respiratory sensitization

Not classified based on available information.

Product:

Remarks: Causes sensitization.

Ingredients:

Dibenzoyl peroxide:

Routes of exposure: Skin contact
Species: Mouse
Method: Local lymph node assay (LLNA)
Result: May cause sensitization by skin contact.

Germ cell mutagenicity

Not classified based on available information.

Ingredients:

Dibenzoyl peroxide:

Genotoxicity in vitro	:	Result: negative Remarks: In vitro tests did not show mutagenic effects
Genotoxicity in vivo	:	Result: negative Remarks: In vivo tests did not show mutagenic effects

Carcinogenicity

Not classified based on available information.

Ingredients:

Dibenzoyl peroxide:

Remarks: Not classified due to data which are conclusive although insufficient for classification.

IARC	No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Not classified based on available information.

Ingredients:

Dibenzoyl peroxide:

Effects on fertility	:	Species: Rat, male Application Route: Oral General Toxicity Parent: NOAEL: 1,000 mg/kg body weight Method: OECD Test Guideline 422 Species: Rat, female Application Route: Oral General Toxicity Parent: NOAEL: 500 mg/kg body weight Method: OECD Test Guideline 422
Reproductive toxicity - Assessment	:	No evidence of adverse effects on sexual function and fertility, or on development, based on animal experiments.

STOT-single exposure

Not classified based on available information.

Ingredients:

Dibenzoyl peroxide:

Routes of exposure: Ingestion
Assessment: The substance or mixture is not classified as specific target organ toxicant, single exposure.

STOT-repeated exposure

Not classified based on available information.

Ingredients:

Dibenzoyl peroxide:

Routes of exposure: Ingestion
Assessment: The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity

Not classified based on available information.

Ingredients:

Dibenzoyl peroxide:

No aspiration toxicity classification

Further information

Product:

Remarks: No data available

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Ingredients:

Dibenzoyl peroxide:

Toxicity to fish	:	EC50 (Oncorhynchus mykiss (rainbow trout)): 0.06 mg/l Exposure time: 96 h Method: OECD Test Guideline 203
Toxicity to daphnia and other aquatic invertebrates	:	EC50 (Daphnia magna (Water flea)): 0.11 mg/l Exposure time: 48 h Method: OECD Test Guideline 202
Toxicity to algae	:	EC50 (Pseudokirchneriella subcapitata (green algae)): 0.06 mg/l Exposure time: 72 h Method: OECD Test Guideline 201
M-Factor (Acute aquatic toxicity)	:	10
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	EC10 (Daphnia magna (Water flea)): 0.001 mg/l Exposure time: 21 d Test Type: semi-static test Method: OECD Test Guideline 211
M-Factor (Chronic aquatic toxicity)	:	10
Toxicity to microorganisms	:	EC50 (Bacteria): 35 mg/l

Ecotoxicology Assessment

Acute aquatic toxicity	:	Very toxic to aquatic life.
Chronic aquatic toxicity	:	Very toxic to aquatic life with long lasting effects.

Persistence and degradability

Ingredients:

Dibenzoyl peroxide:

Biodegradability	:	Result: Inherently biodegradable.

Bioaccumulative potential

Ingredients:

Dibenzoyl peroxide:

Partition coefficient: n-octanol/water	:	log Pow: 3.2 (20 °C)

Mobility in soil

No data available

Other adverse effects

Product:

Ozone-Depletion Potential	:	Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
Additional ecological information	:	An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life with long lasting effects.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

Waste from residues	:	The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of wastes in an approved waste disposal facility.
Contaminated packaging	:	Empty remaining contents. Dispose of as unused product. Do not re-use empty containers. Do not burn, or use a cutting torch on, the empty drum. Dispose of in accordance with local regulations.

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

UN number	:	UN 3107
Proper shipping name	:	ORGANIC PEROXIDE TYPE E, LIQUID (DIBENZOYL PEROXIDE)
Class	:	5.2
Packing group	:	Not assigned by regulation
Labels	:	5.2

IATA-DGR

UN/ID No.	:	UN 3107
Proper shipping name	:	Organic peroxide type E, liquid (Dibenzoyl peroxide)
Class	:	5.2
Packing group	:	Not assigned by regulation
Labels	:	Organic Peroxides, Keep Away From Heat
Packing instruction (cargo aircraft)	:	570
Packing instruction (passenger aircraft)	:	570

IMDG-Code

UN number	:	UN 3107
Proper shipping name	:	ORGANIC PEROXIDE TYPE E, LIQUID (DIBENZOYL PEROXIDE)
Class	:	5.2
Packing group	:	Not assigned by regulation
Labels	:	5.2
EmS Code	:	F-J, S-R
Marine pollutant	:	yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

Domestic regulation

49 CFR

UN/ID/NA number	:	UN 3107
Proper shipping name	:	Organic peroxide type E, liquid (Dibenzoyl peroxide, <=42%)
Class	:	5.2
Packing group	:	Not assigned by regulation
Labels	:	ORGANIC PEROXIDE
ERG Code	:	145
Marine pollutant	:	yes

SECTION 15. REGULATORY INFORMATION

EPCRA - Emergency Planning and Community Right-to-Know

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 311/312 Hazards : Reactivity Hazard
Acute Health Hazard

SARA 302 : No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

Dibenzoyl peroxide	94-36-0
Zinc stearate	557-05-1

Clean Air Act

This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).
This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 112(r) for Accidental Release Prevention (40 CFR 68.130, Subpart F).
This product does not contain any chemicals listed under the U.S. Clean Air Act Section 111 SOCMI Intermediate or Final VOC's (40 CFR 60.489).

Clean Water Act

This product does not contain any Hazardous Substances listed under the U.S. CleanWater Act, Section 311, Table 116.4A.
This product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3.
This product contains the following toxic pollutants listed under the U.S. Clean Water Act Section 307

Zinc stearate 557-05-1

California Prop. 65 This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

The ingredients of this product are reported in the following inventories:

DSL (CA)	:	All components of this product are on the Canadian DSL
AICS (AU)	:	On the inventory, or in compliance with the inventory
NZIoC (NZ)	:	On the inventory, or in compliance with the inventory
KECI (KR)	:	On the inventory, or in compliance with the inventory
IECSC (CN)	:	On the inventory, or in compliance with the inventory
TCSI (TW)	:	On the inventory, or in compliance with the inventory
TSCA (US)	:	On TSCA Inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Revision Date : 05/11/2018

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The 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, unless specified in the text.

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