

Safety Data Sheet

ZL-60D

SECTION 1: IDENTIFICATION

1.1. PRODUCT IDENTIFIER

Trade name: ZL-60D

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Relevant identified uses of the substance or mixture: Non-destructive testing
Restricted to professional users.

Uses advised against : None known.

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company and address: **Magnaflux**
155 Harlem Ave.
60025 Glenview, IL
USA
847-657-5300
www.magnaflux.com/Magnaflux

Distributor: Address:

E-mail: support@magnaflux.com

SDS date: 4/28/2025

SDS Version: 5.0

Date of previous version: 11/6/2024 (5.0)

1.4. EMERGENCY TELEPHONE NUMBER

Contact the poison control at 1-800-222-1222 (24/7) or use the webPOISONCONTROL® (triage.webpoisoncontrol.org) to get specific guidance for your case

See also section 4 "First aid measures".

Emergency number: CHEMTREC 800-424-9300

SECTION 2: HAZARD(S) IDENTIFICATION

OSHA/HCS STATUS

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)


2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Asp. Tox. 1; H304, May be fatal if swallowed and enters airways.

Skin Irrit. 2; H315, Causes skin irritation.

Eye Dam. 1; H318, Causes serious eye damage.

2.2. LABEL ELEMENTS

Hazard pictogram(s):	
Signal word:	Danger
Hazard statement(s):	May be fatal if swallowed and enters airways. (H304) Causes skin irritation. (H315) Causes serious eye damage. (H318)
Precautionary statement(s):	
General:	-
Prevention:	Wash hands and exposed skin thoroughly after handling. (P264) Wear eye protection/protective gloves/protective clothing. (P280)
Response:	IF SWALLOWED: Immediately call a POISON CENTER/doctor. (P301+P310) IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338) Immediately call a POISON CENTER/doctor. (P310) IF ON SKIN: Gently wash with plenty of soap and water. (P302+P350) Do NOT induce vomiting. (P331) If skin irritation occurs: Get medical advice/attention. (P332+P313) Take off contaminated clothing and wash it before reuse. (P362+P364)
Storage:	-
Disposal:	Dispose of contents/container in accordance with local regulation (P501)
Additional labelling:	4.47 % of the mixture consists of ingredients of unknown toxicity.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. SUBSTANCES

Not applicable. This product is a mixture.

3.2. MIXTURES

Product/substance	Identifiers	% w/w	Classification	Note
Distillates (petroleum), hydrotreated light	CAS No.: 64742-47-8	25-40%	Asp. Tox. 1, H304	[19]
Alcohols, C6-12, ethoxylated propoxylated	CAS No.: 68937-66-6	15-25%	Skin Irrit. 2, H315 Eye Irrit. 2, H319	[19]
Alcohols, C12-15, ethoxylated propoxylated	CAS No.: 68551-13-3	15-25%	Acute Tox. 4, H302 Eye Dam. 1, H318	[19]
Alcohols, C12-14-secondary, ethoxylated	CAS No.: 84133-50-6	5-10%	Skin Irrit. 2, H315 Eye Dam. 1, H318	[19]
N-(2-hydroxypropyl)oleamide	CAS No.: 111-05-7	3-5%	Skin Irrit. 2, H315 Eye Irrit. 2, H319	

Where the concentration of an ingredient is expressed as a range the exact concentration has been withheld as a trade secret.

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

OTHER INFORMATION

[19] UVCB = Unknown or variable composition, complex reaction products or of biological materials

SECTION 4: FIRST-AID MEASURES

4.1. DESCRIPTION OF FIRST AID MEASURES

General information:	If breathing is irregular, drowsiness, loss of consciousness or cramps: Call 911 and give immediate treatment (first aid). Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.
Inhalation:	Upon breathing difficulties or irritation of the respiratory tract: Bring the person into fresh air and stay with him/her.
Skin contact:	Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap. Skin cleanser can be used. DO NOT use solvents or thinners. If skin irritation occurs: Get medical advice/attention.
Eye contact:	If in eyes: Flush eyes with plenty of water or salt water (20-30 °C) for at least 30 minutes and continue until irritation stops. Remove contact lenses. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately and continue flushing during transport.
Ingestion:	IF SWALLOWED: Immediately call a POISON CENTER/doctor. Do not induce vomiting! If vomiting occurs, keep head facing down so that vomit does not get into the lungs. Call a doctor or ambulance. Symptoms of chemical pneumonia can appear after several hours. People who have swallowed the product should therefore be kept under medical attention for at least 48 hours.
Burns:	Not applicable.

4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

This product contains substances that can cause chemical pneumonia if swallowed. Symptoms of chemical pneumonia may appear after several hours.

The product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.

4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

IF exposed or concerned:
Get immediate medical advice/attention.

INFORMATION TO MEDICS

Bring this safety data sheet or the label from this product.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. EXTINGUISHING MEDIA

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

Unsuitable extinguishing media: Waterjets should not be used, since they can spread the fire.

5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Nitrogen oxides (NO_x)

Carbon oxides (CO / CO₂)

5.3. ADVICE FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact the Poison Help Line on 1-800-222-1222 (24/7) in order to obtain further advice.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Avoid direct contact with spilled substances.

Contaminated areas may be slippery.

6.2. ENVIRONMENTAL PRECAUTIONS

Avoid discharge to lakes, streams, sewers, etc.

Keep unauthorized persons away from the spill

6.3. METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP

Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

Wherever possible cleaning should be performed with normal cleaning agents. Avoid use of solvents.

6.4. REFERENCE TO OTHER SECTIONS

See section 13 "Disposal considerations" on handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING

Avoid direct contact with the product.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material:

Always store in containers of the same material as the original container.

Storage conditions: No specific requirements

Incompatible materials: Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. SPECIFIC END USE(S)

This product should only be used for applications quoted in section 1.2.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. CONTROL PARAMETERS

No substances are listed with a permissible exposure limit (ref: 29 CFR 1910.1000 TABLE Z-1)

8.2. EXPOSURE CONTROLS

Apply general control to prevent unnecessary exposure

General recommendations: Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios: There are no exposure scenarios implemented for this product.

Exposure limits: Occupational exposure limits have not been defined for the substances in this product.

Appropriate technical measures: Ensure that eyewash stations and safety showers are located within easy reach.

Apply standard precautions during use of the product. Avoid inhalation of vapours.

Hygiene measures: Take off contaminated clothing and wash it before reuse.

Measures to avoid environmental exposure: Keep damming materials near the workplace. If possible, collect spillage during work.

INDIVIDUAL PROTECTION MEASURES, SUCH AS PERSONAL PROTECTIVE EQUIPMENT

Generally: Use only protective equipment with a recognized certification mark, e.g. the UL mark.


Respiratory Equipment:

Type	Class	Colour	Standards
In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.			

Skin protection:

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn.	-	-	

▼ Hand protection:

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Nitrile	0,38	> 480	EN374-2, EN16523-1, EN388	

Eye protection:

Type	Standards	
Safety glasses	EN166	

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid
Color:	Green
Odor:	Mild
Odor threshold (ppm):	No data available
pH:	Neutral
▼ Density (g/cm ³):	No data available. -
Relative density:	0.918 (68 °F)
Kinematic viscosity:	9.32-11.4 centistokes
Particle characteristics:	Not applicable - product is a liquid

PHASE CHANGES

Melting point/freezing point (°F):	Not applicable - product is a liquid
Softening point/range (°F):	Does not apply to liquids.
Boiling point (°F):	No data available
Vapor pressure:	No data available
Relative vapor density:	No data available
Decomposition temperature (°F):	No data available

DATA ON FIRE AND EXPLOSION HAZARDS

Flash point (°F):	>200
Flash point (°C):	>93
Flammability (°F):	No data available

Auto-ignition temperature (°F): No data available

Explosion limits (% v/v): No data available

SOLUBILITY

Solubility in water: No data available

n-octanol/water coefficient (LogKow): No data available

Solubility in fat (g/L): No data available

9.2. OTHER INFORMATION

Evaporation rate (n-butylacetate = 100): No data available

VOC (g/L): 304

Other physical and chemical parameters: No data available.

Oxidizing properties: No data available

SECTION 10: STABILITY AND REACTIVITY

10.1. REACTIVITY

No data available.

10.2. CHEMICAL STABILITY

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. POSSIBILITY OF HAZARDOUS REACTIONS, INCLUDING THOSE ASSOCIATED WITH FORESEEABLE EMERGENCIES

None known.

10.4. CONDITIONS TO AVOID

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

10.5. INCOMPATIBLE MATERIALS

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. ▼ HAZARDOUS DECOMPOSITION PRODUCTS

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

▼ ACUTE TOXICITY

Product/substance	Distillates (petroleum), hydrotreated light
Species:	Rat
Route of exposure:	Oral
Test:	LD50
Result:	> 5000 mg/kg

Product/substance	Distillates (petroleum), hydrotreated light
Species:	Rabbit
Route of exposure:	Dermal

Test: LD50
 Result: > 5000 mg/kg

Product/substance: Distillates (petroleum), hydrotreated light
 Species: Rat
 Route of exposure: Inhalation
 Test: LC50 (4 hours)
 Result: > 5000 mg/m³

Product/substance: Alcohols, C12-15, ethoxylated propoxylated
 Species: Rat
 Route of exposure: Oral
 Test: LD50
 Result: > 2000 mg/kg

Product/substance: Alcohols, C12-15, ethoxylated propoxylated
 Species: Rat
 Route of exposure: Dermal
 Test: LD50
 Result: 2000 mg/kg

Product/substance: Alcohols, C12-14-secondary, ethoxylated
 Species: Rat
 Route of exposure: Oral
 Test: LD50
 Result: 8270 mg/kg

Product/substance: Alcohols, C12-14-secondary, ethoxylated
 Species: Rabbit
 Route of exposure: Dermal
 Test: LD50
 Result: > 2000 mg/kg

Product/substance: 2-butyl-6-(butylamino)-1H-benz[de]isoquinoline-1,3(2H)-dione
 Species: Rat
 Route of exposure: Oral
 Test: LD50
 Result: >10000 mg/kg bw

Product/substance: 2-butyl-6-(butylamino)-1H-benz[de]isoquinoline-1,3(2H)-dione
 Species: Rabbit
 Route of exposure: Dermal
 Test: LD50
 Result: >2000 mg/kg bw

Based on available data, the classification criteria are not met.

▼ SKIN CORROSION/IRRITATION

Product/substance: Alcohols, C12-14-secondary, ethoxylated
 Causes skin irritation.

▼ SERIOUS EYE DAMAGE/IRRITATION

Product/substance: Alcohols, C12-14-secondary, ethoxylated
 Causes serious eye damage.

RESPIRATORY SENSITISATION

Based on available data, the classification criteria are not met.

SKIN SENSITISATION

Based on available data, the classification criteria are not met.

GERM CELL MUTAGENICITY

Based on available data, the classification criteria are not met.

CARCINOGENICITY

Based on available data, the classification criteria are not met.

REPRODUCTIVE TOXICITY

Based on available data, the classification criteria are not met.

STOT-SINGLE EXPOSURE

Based on available data, the classification criteria are not met.

STOT-REPEATED EXPOSURE

Based on available data, the classification criteria are not met.

ASPIRATION HAZARD

May be fatal if swallowed and enters airways.

LONG TERM EFFECTS

The product contains substances that cause serious eye damage. Contact with these substances can cause irreversible effects on the eye / serious eye damage.

OTHER INFORMATION

None known.

SECTION 12: ECOLOGICAL INFORMATION

12.1. ▼ TOXICITY

Product/substance	Alcohols, C12-15, ethoxylated propoxylated
Species:	Fish, Brachydanio rerio
Duration:	96 hours
Test:	LC50
Result:	1.4 mg/L

Product/substance	Alcohols, C12-15, ethoxylated propoxylated
Species:	Daphnia, Daphnia magna
Duration:	48 hours
Test:	EC50
Result:	3 mg/L

Product/substance	Alcohols, C12-15, ethoxylated propoxylated
Species:	Algae
Test:	NOEC
Result:	0.1-1 mg/L

Product/substance	Alcohols, C12-15, ethoxylated propoxylated
Species:	Daphnia, Daphnia magna
Test:	NOEC
Result:	0.1-1 mg/L

Product/substance	Alcohols, C12-14-secondary, ethoxylated
Species:	Pimephales promelas
Duration:	96 hours
Test:	LC50
Result:	1 - < 10 mg/L

Product/substance	Alcohols, C12-14-secondary, ethoxylated
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Test method:	OECD 202
Species:	Daphnia magna
Duration:	48 hours
Test:	EC50
Result:	1 - < 10 mg/L

Product/substance	Alcohols, C12-14-secondary, ethoxylated
Species:	Algae
Test:	ErC50
Result:	2.01 mg/L

Product/substance	Alcohols, C12-14-secondary, ethoxylated
Species:	Fish
Test:	NOEC
Result:	0.87 mg/L

Product/substance	Alcohols, C12-14-secondary, ethoxylated
Species:	Daphnia magna
Test:	NOEC
Result:	0.2 mg/L

Product/substance	7-(diethylamino)-4-methyl-2-benzopyrone
Species:	Fish
Duration:	96 hours
Test:	LC50
Result:	15.3 mg/L

Product/substance	7-(diethylamino)-4-methyl-2-benzopyrone
Species:	Daphnia, Daphnia magna
Duration:	48 hours
Test:	LC50
Result:	9.7 mg/L

Product/substance	2-butyl-6-(butylamino)-1H-benz[de]isoquinoline-1,3(2H)-dione
Species:	Fish, Danio rerio
Duration:	96 hours
Test:	LC50
Result:	172.247 mg/L

Product/substance	2-butyl-6-(butylamino)-1H-benz[de]isoquinoline-1,3(2H)-dione
Test method:	OECD 202
Species:	Daphnia, Daphnia magna
Duration:	48 hours
Test:	EC50
Result:	0.17 mg/L

Product/substance	2-butyl-6-(butylamino)-1H-benz[de]isoquinoline-1,3(2H)-dione
Test method:	OECD 201
Species:	Algae, Desmodesmus subspicatus
Duration:	72 hours
Test:	EC50
Result:	381.3 mg/L

Based on available data, the classification criteria are not met.

12.2. PERSISTENCE AND DEGRADABILITY

Based on available data, the classification criteria are not met.

12.3. BIOACCUMULATIVE POTENTIAL

Based on available data, the classification criteria are not met.

12.4. MOBILITY IN SOIL

No data available.

12.5. RESULTS OF PBT AND VPVB ASSESSMENT

This mixture/product does not contain any substances known to fulfil the criteria for PBT and vPvB classification.

12.6. OTHER ADVERSE EFFECTS

None known.

SECTION 13: DISPOSAL CONSIDERATIONS

RCRA HAZARDOUS WASTE ("P" AND "U" LIST) (40 CFR 261)

None of the components are listed

SPECIFIC LABELLING
CONTAMINATED PACKING

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: TRANSPORT INFORMATION

	14.1 UN / ID	14.2 UN proper shipping name	14.3 Hazard class(es)	14.4 PG*	14.5 Env**	Other informat ion:
DOT	-	-	Transport hazard class: Not regulated for transport	-	No	See below for additional information.
IMDG	-	-	Transport hazard class: Not regulated for transport	-	No	See below for additional information.
IATA	-	-	Transport hazard class: Not regulated for transport	-	No	See below for additional information.

* Packing group

** Environmental hazards

ADDITIONAL INFORMATION

DOT / See § 172.101 Hazardous Materials Table for any information on special provisions,

requirements, or warnings in connection with transport. See § 172.602, for instructions in writing regarding mitigation of damages in relation to incidents or accidents during transport.

IMDG / See section 3.2.1, for any information on special provisions, requirements, or warnings in connection with transport.

IATA / See Table 4.2 for any information on special provisions, requirements, or warnings in connection with transport.

14.6. SPECIAL PRECAUTIONS FOR USER

Not applicable.

14.7. TRANSPORT IN BULK ACCORDING TO IMO INSTRUMENTS

No data available.

SECTION 15: REGULATORY INFORMATION

15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS/LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

15.2. U.S. FEDERAL REGULATIONS

TSCA (the non-confidential portion): Distillates (petroleum), hydrotreated light is listed
Alcohols, C6-12, ethoxylated propoxylated is listed
Alcohols, C12-15, ethoxylated propoxylated is listed
Alcohols, C12-14-secondary, ethoxylated is listed
N-(2-hydroxypropyl)oleamide is listed
7-(diethylamino)-4-methyl-2-benzopyrone is listed
2-butyl-6-(butylamino)-1H-benz[de]isoquinoline-1,3(2H)-dione is listed

Clean Air Act: None of the components are listed
EPCRA Section 302: None of the components are listed
EPCRA Section 304: None of the components are listed
EPCRA section 313: None of the components are listed
CERCLA: None of the components are listed
Hazardous chemical inventory reporting: This product is subject to Tier II reporting.

STATE REGULATIONS

California / Prop. 65: See product label for Prop 65 Statement (if applicable)
Massachusetts / Right To Know Act: None of the components are listed
New Jersey / Right To Know Act: None of the components are listed
New York / Right To Know Act: None of the components are listed
Pennsylvania / Right To Know Act: None of the components are listed

NFPA

Health hazard: 2
Fire hazard: 1
Instability hazard: 0

15.4. RESTRICTIONS FOR APPLICATION

Restricted to professional users.

15.5. DEMANDS FOR SPECIFIC EDUCATION

No specific requirements.

15.6. ADDITIONAL INFORMATION

Not applicable.

15.7. CHEMICAL SAFETY ASSESSMENT

No

15.8. SOURCES

OSHA Hazard Communication Standard (29 CFR 1910.1200)

SECTION 16: OTHER INFORMATION**FULL TEXT OF H-PHRASES AS MENTIONED IN SECTION 3**

H302, Harmful if swallowed.

H304, May be fatal if swallowed and enters airways.

H315, Causes skin irritation.

H318, Causes serious eye damage.

H319, Causes serious eye irritation.

THE FULL TEXT OF IDENTIFIED USES AS MENTIONED IN SECTION 1

None known.

ABBREVIATIONS AND ACRONYMS

ACGIH = American Conference of Governmental Industrial Hygienists

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CERCLA = Comprehensive Environmental Response Compensation and Liability Act

DOT = Department of Transportation

EINECS = European Inventory of Existing Commercial chemical Substances

EPCRA = Emergency Planning and Community Right-To-Know Act

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

HCIS = Hazardous Chemical Information System

HNOC = Hazards Not Otherwise Classified

IARC = International Agency for Research on Cancer

IATA = International Air Transport Association

IMDG = International Maritime Dangerous Goods

LogPow = logarithm of the octanol/water partition coefficient

MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)

NFPA = National Fire Protection Association

NIOSH = National Institute for Occupational Safety and Health

OECD = Organisation for Economic Co-operation and Development

OSHA = Occupational Safety and Health Administration

PBT = Persistent, Bioaccumulative and Toxic

RCRA = Resource Conservation and Recovery Act

RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail

RRN = REACH Registration Number

SARA = Superfund Amendments and Reauthorization Act
SCL = A specific concentration limit.
STEL = Short-term exposure limits
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TSCA = The Toxic Substances Control Act
TWA = Time weighted average
UN = United Nations
UVBC = Unknown or variable composition, complex reaction products or of biological materials
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

ADDITIONAL INFORMATION

The classification of the mixture in regard of health hazards is in accordance with the calculation methods given by HCS (29 CFR 1910.1200).

THE SAFETY DATA SHEET IS VALIDATED BY

Magnaflux

OTHER

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product.

Information in this safety data sheet cannot be used as a product specification.

Country-language: US-en