Appendix B

MSDS:

Natural Gas

Spotleak

MATERIAL SAFETY DATA SHEET

SECTION I: PRODUCT IDENTIFICATION

NORTHWEST NATURAL GAS COMPANY
220 N.W. 2ND AVENUE
PORTLAND, OR 97209-3991

PRODUCT NAME: **NATURAL GAS**
MSDS DATE: 03/08/91

EMERGENCY (24-HOUR) PHONE: [503]-226-4211, Ext. 4513.
LABORATORY (GENERAL INFORMATION, 8-5, Mon-Fri): Same, Ext. 4729.

TRADE NAME: Natural gas.

SYNONYMS: Pipeline gas, natural gas - dry.

SHIPPING NAME:
[DOT] Flammable gas, UN1971 (if liquefied, UN1972).
[ICC] Flammable gas, RED LABEL, limit 300 lb.
[IATA] Flammable gas, RED LABEL.
CARGO: Limit 140 KG.
PASSENGER: NOT ACCEPTABLE.

NFPA RATING (Health-Flammability-Reactivity): 1 - 4 - 0 [GAS].

CHEMICAL FAMILY: Paraffin (saturated) hydrocarbons and inert gases.

CHEMICAL FORMULA: Not applicable. Product is a mixture.

CHEMICAL ABSTRACTS SERVICE (CAS)#: 68410-63-9

SECTION II: COMPONENTS AND HAZARDS

COMPONENT	FORMULA	CAS NO.	VOL% (TYP.)		TLV (PPM)	DOT#	
Methane	CH_4	74-82-8	93.5		N/A	UN1971	
Ethane	C_2H_6	74-84-0	3.8		N/A		UN1035
Propane	C_3H_8	74-98-6	1.0		1,000	UN1978	
i-Butane	C_4H_{10}	75-28-5	0.1		N/A	UN1969	
n-Butane	C_4H_{10}	106-97-8	0.1		800	UN1011	
i-Pentane	C_5H_{12}	78-78-4	< 0.1		350 mg/M3	UN1265	
n-Pentane	C_5H_{12}	109-66-0	< 0.1		600	UN1265	
n-Hexane	C_6H_{14}	110-54-3	< 0.1		50	UN1208	
Carbon Dioxide	CO_2	124-38-9	0.3	10,000	TWA OSHA	UN1013	
					5,000 TWA ACGIH	"	
					30,000 STEL ACGIH	"	
Nitrogen	N_2	7727-37-9		1.2	N/A		UN1066
t-Butyl Mercaptan	$C_4H_{10}S$	75-66-1	< 30 ppm	N/A	UN2347		
Methyl Ethyl Sulfide	C_2H_6S	624-89-5	< 3 ppm	40,250	UN1993		
Hydrogen Sulfide	H_2S	7783-06-4		< 5 ppm	10	UN1053	

AQUATIC TOXICITY: Not applicable. Natural gas and LNG have low water-solubility.

SECTION III: PHYSICAL DATA

FREEZING POINT (760 mm Hg):		-182.6°C (-296.7°F)
BOILING POINT (760 mm Hg):		-161.5°C (-258.7°F)
GAS SPECIFIC GRAVITY	(air = 1.000):	0.55 - 0.64
LIQUID SPECIFIC GRAVITY	(water = 1.000):	0.42 - 0.46
GAS DENSITY:	[varies slightly w. composition]	0.044 lb/cf
VAPOR PRESSURE:	Gaseous at 60°F, 1 atm. Completely volatile.	
SOLUBILITY IN WATER:	Less than 3.5 vol%. LIQUID pH: Not Applicable	
EVAPORATION RATE:	Normally a gas. Liquefied natural gas (LNG) evaporates much faster than diethyl ether.	

APPEARANCE AND ODOR:
GAS is extremely flammable, with no color, odor, or taste. If trace amounts of sulfur compounds are added as odorant, the gas has a characteristic garlic/rotten-egg/skunk odor.
LIQUID is clear, colorless, odorless, cryogenic (super-cold) and extremely flammable.

SECTION IV: FIRE AND EXPLOSION DATA

FLASH POINT	-306°F (-188°C)
AUTOIGNITION TEMPERATURE:	1,004°F (540°C)
FLAMMABLE LIMITS IN AIR:	[LEL] 4.8 vol% [UEL] 15.0 vol%
EXTINGUISHING MEDIA:	Class B: [Dry chemical, "Halon", CO_2].

SPECIAL FIREFIGHTING PROCEDURES: Remove unnecessary personnel. Fire crews should have supplied-air respirators. Try to remove ignition sources. Use non-sparking tools to shut off the gas. Let the fire burn itself out to stop a flammable mix from forming when the flame is extinguished. Natural gas is lighter than air and will vent upward. If the gas cannot be shut off, let it burn and cool the surrounding area with water fog. If natural gas is compressed in cylinders, use water fog to cool them. If LNG has spilled, dike the liquid using non-sparking tools and disperse the vapors with water fog. Keep leaking natural gas, LNG or its vapors out of sewers or other enclosed spaces.

UNUSUAL FIRE/EXPLOSION HAZARD: Extremely flammable. NO SMOKING where natural gas is in use. Keep public away in case of leak/spill. Notify local gas utility (see Section I) immediately, plus local fire department as needed.

SECTION V: HEALTH HAZARD INFORMATION

MIXTURE TLV: Not established by OSHA or ACGIH.

EFFECTS OF ACUTE OVEREXPOSURE:

INHALATION: At high pressures and high concentrations, may cause cardiac sensitization. At high concentrations and in enclosed areas, may displace sufficient oxygen to cause dizziness, headache, lack of muscular coordination, diminished mental alertness, cyanosis, narcosis, dyspnea, or death by asphyxiation.

SKIN CONTACT: Not toxic, non-irritating. At high pressure, gas may be injected under skin, causing pain, possible tissue damage or embolism. Contact with LNG may cause immediate, severe frostbite.

SKIN ABSORPTION: Unlikely: natural gas is lighter than air.

EYE CONTACT: Not toxic, non-irritating. Pressurized gas or an LNG splash may cause physical damage to unprotected eyes.

SWALLOWING: Unlikely exposure route for gaseous or liquid products.

EFFECTS OF CHRONIC EXPOSURE: None.

NOTE TO PHYSICIAN: See "Natural Gas and Its Physiological Action", in California and Western Medicine, V. 47, #1. Light hydrocarbons (methane through butanes) are simple asphyxiants that displace O_2. CO_2 has health effects above 0.5% (vol). Nitrogen is inert.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Respiratory conditions such as emphysema may be aggravated by long exposure to high concentrations.

CARCINOGENS: None by NTP, IARC, or ACGIH.

SECTION VI: FIRST AID PROCEDURES

EYE: If physical damage occurs due to high-pressure gas release or an LNG splash, cover BOTH eyes with loose, bulky, sterile dressing and obtain immediate medical treatment.

SKIN: If gas is injected under skin, treat patient for shock and seek immediate medical treatment. If LNG has splashed skin, remove victim from contact, flush affected area with lukewarm water. Apply a loose, sterile, bulky dressing. Get immediate medical help.

INHALATION: Remove victim to fresh air quickly. Restore or support breathing as needed. Use mouth-to-mouth resuscitation or CPR as needed if asphyxiation has occurred. If available, have a trained person administer oxygen. Seek medical help immediately.

SECTION VII: REACTIVITY

STABILITY: Stable when contained and not exposed to oxidizers or heat.

CONDITIONS CAUSING INSTABILITY: Fire or other heat sources, frictional sparks, electrical arcing may cause ignition. Reacts explosively with Cl_2, BF_5, OF_2, NF_3, ClO_2. On contact with liquid oxygen (LOX) or liquid fluorine (LF_2), LNG will explode.

TENDENCY TO POLYMERIZE: None. CORROSIVENESS: None.

HAZARDOUS DECOMPOSITION PRODUCTS: CO, CO_2, partially-oxidized combustion products of hydrocarbons (aldehydes, acids, "soot").

SECTION VIII: DISPOSAL/LEAK PROCEDURE

If leak is from a gas line, notify appropriate safety personnel. Evacuate the area. Provide explosion-proof ventilation. Use non-sparking tools to shut off the gas flow ahead of the leak. If the leak is on the Gas Company side of the gas meter, call Northwest Natural Gas immediately at 503-226-4211, Ext.4513.

If leak is on a compressed-natural-gas cylinder, cautiously remove the cylinder to an isolated outside area or to an explosion-proof hood. Vent the gas at a slow, controlled rate. When empty, tag the defective cylinder and return it to the supplier.

If leak is from an LNG container, put on proper protective clothing and dike the liquid with dirt or other nonflammable absorbent. Use water fog to disperse the vapor cloud. Keep LNG or its vapors out of sewers or other enclosed spaces.

SECTION IX: SPECIAL PRECAUTIONS

The use of flame-retardant clothing, including leather or cotton gauntlet gloves, is mandatory in any situation where pressurized natural gas or LNG vapors may ignite accidentally.

Wear goggles or a faceshield when working with any pressurized gases or LNG.

Use an explosion-proof oxygen [O_2] tester, NOT a combustible-gas detector, to check the atmosphere of any area that may be deficient in oxygen. If the oxygen reading is below 19%, use a SUPPLIED-AIR RESPIRATOR with a properly fitting face mask. Use the same type of respirator in trenches over four feet deep when a gas-air mix exists below the gas line. Using only a cartridge respirator in low-oxygen conditions may lead to asphyxiation.

Ground all equipment and houselines used in natural gas service to prevent the buildup of static and possible sparks. Where feasible, use non-sparking tools to work on and around natural gas lines and equipment.

Natural gas may be present in mains, services, houselines, or customers' equipment at pressures ranging from less than 1 psi to over 720 psi. Open and close gas valves slowly to avoid pressure surges that might cause personal injury or damage equipment.

Provide sufficient local exhaust to prevent gas buildup to 20% of LEL. Pressure-test natural gas houselines with inert gas before putting them into service for the first time, and again when taking them permanently out of service.

At least 48 hours prior to excavating in an area where gas lines are known or suspected to be, call Northwest Natural Gas [503-226-4211, Ext. 4513] for location and marking at the site. NOTE: Many communities have a one-call service that alerts all underground utilities (gas, power, telephone, TV cable, water, or sewer) to mark their lines. Check your telephone book for the local number.

If a gas line is damaged, IMMEDIATELY report the incident to Northwest Natural Gas [503-226-4211, Ext. 4513]. If the gas line is broken, evacuate the area and also call the local fire department. If a gas line has been bent or pulled out of alignment, other gas lines in the vicinity may have been damaged even if the pulled line looks intact.

If only the gas line's coating is damaged, it must still be inspected and properly repaired by the gas company before reburial, to prevent corrosion and possible leakage.

SECTION X: OTHER

ADDITIONAL REGULATORY CONCERNS:

CPSC: None
FDA: None
SARA: Title III, Sections 302, 304, 311, 312, and 313.
TSCA: None
USDA: None
OTHER FEDERAL: Department of Transportation, Office of Pipeline Safety, CFR Title 49, Parts191-192, with all revisions.
OTHER STATE: None in either Oregon or Washington.

DISCLAIMER: The data contained in this MSDS are believed to be accurate, but are not so warranted whether or not they originated at Northwest Natural Gas Company. Recipients of this MSDS are advised to confirm ahead of time that the data are current and suitable to their needs.

SIGNED: *W. T. Amies* TITLE: CHIEF CHEMIST
(W. T. Amies)

DATE: 03/08/91

1 PRODUCT AND COMPANY IDENTIFICATION

Thio and Fine Chemicals
Arkema Inc.
2000 Market Street
Philadelphia, PA 19103

EMERGENCY PHONE NUMBERS:
Chemtrec: (800) 424-9300 (24hrs) or (703) 527-3887
Medical: Rocky Mountain Poison Control Center
(866) 767-5089 (24Hrs)

Information Telephone Numbers	Phone Number	Available Hrs
Customer Service	1-800-628-4453	8:30 to 5:30 EST

Product Name	SPOTLEAK 1009
Product Synonym(s)	
Chemical Family	Mixture
Chemical Formula	Mixture
Chemical Name	Blend: Butyl and Propyl Mercaptans
EPA Reg Num	
Product Use	Odorant for Natural Gas

2 COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient Name	CAS RegistryNumber	Typical Wt. %	OSHA
tert-Butylmercaptan	75-66-1	77-80%	Y
Isopropylmercaptan	75-33-2	>16%	Y
n-Propylmercaptan	107-03-9	>2%	Y

The substance(s) marked with a "Y" in the OSHA column, are identified as hazardous chemicals according to the criteria of the OSHA Hazard Communication Standard (29 CFR 1910.1200)

This material is classified as hazardous under Federal OSHA regulation.

The components of this product are all on the TSCA Inventory list.

3 HAZARDS IDENTIFICATION

Emergency Overview
Clear, colorless liquid, gas-like odor

DANGER!
EXTREMELY FLAMMABLE LIQUID AND VAPOR. VAPOR MAY CAUSE FLASH FIRE.
MAY CAUSE EYE IRRITATION.
MAY CAUSE RESPIRATORY TRACT IRRITATION.
MAY CAUSE ALLERGIC SKIN REACTION.
MAY CAUSE NAUSEA, HEADACHE OR DIZZINESS.

Potential Health Effects

Inhalation and skin contact are expected to be the primary routes of occupational exposure to this material. Based on single exposure animal tests, it is considered to be no more than slightly toxic if absorbed through skin, practically non-toxic if inhaled, practically non-irritating to eyes and non-irritating to skin. Vapor may be irritating to the eyes and respiratory tract. Repeated or prolonged contact may cause an allergic skin reaction. This material has a strong objectionable odor that may cause nausea, headache, or dizziness.

4 FIRST AID MEASURES

IF IN EYES, immediately flush with plenty of water. Get medical attention if irritation persists.

IF ON SKIN, immediately wash with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Thoroughly clean shoes before reuse.

IF SWALLOWED, do NOT induce vomiting. Give water to drink. Get medical attention immediately. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON.

IF INHALED, remove to fresh air. If breathing is difficult, get medical attention.

5 FIRE FIGHTING MEASURES

Fire and Explosive Properties

Auto-Ignition Temperature	245 C		
Flash Point	<0 F	Flash Point Method	TCC
Flammable Limits- Upper	NE		
Lower	NE		

Extinguishing Media

Use water spray, carbon dioxide, foam or dry chemical.

Fire Fighting Instructions

Water may be ineffective. Use water spray or water fog to cool surrounding surfaces and prevent fire damage or rupture of containers. Fire fighters and others who may be exposed to products of combustion should wear full fire fighting gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand NIOSH approved or equivalent). Fire fighting equipment should be thoroughly decontaminated after use.

Fire and Explosion Hazards

When burned, the following hazardous products of combustion can occur:
Oxides of carbon
Sulfur oxides
Thermally insulated
Vapors can travel to a source of ignition and flash back.

6 ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Extinguish or turn off ignition or combustion sources. Contain spill. Stop leak at source if this can be done safely. Ventilate area only if odor control is not an issue. Nonessential personnel should leave the area until cleanup is completed. Cover spill area with closed-cell foam to reduce odors (use of Aqueous Film Forming Foam (AFFF) with polymeric layer is acceptable). If foam is unavailable, absorb spill with liquid-binding material (e.g. diatomaceous earth, saw dust universal binder) and deodorize residue on ground with 3-10% hydrogen peroxide. If spill is contained within a large containment area, add 5% bleach solution (sodium hypochlorite) in a 50 parts bleach solution to one part product dilution ratio. Swimming pool chemicals (hypochlorite compounds) work effectively in deodorizing product. If these are applied to product, the crystals must be accompanied by sufficient water of dilution so that the considerable heat of reaction will be absorbed. Enzyme or bacteria based deodorizers are also acceptable for use. Place waste materials into Department of Transportation (DOT)-approved drums for disposal. Where practicable wash area down with water. Keep concentrate and wash water from entering sewers or waterways. Consult a regulatory specialist

6 ACCIDENTAL RELEASE MEASURES

to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits.

7 HANDLING AND STORAGE

Handling

Keep away from heat, sparks and flame.
Keep container closed.
Use only with adequate ventilation.
Avoid prolonged or repeated contact with skin.
Avoid contact with eyes, skin and clothing.
Wash thoroughly after handling.

CONTAINER HAZARDOUS WHEN EMPTY. Emptied container retains vapor and product residue. Follow labeled warnings even after container is emptied. RESIDUAL VAPORS MAY EXPLODE ON IGNITION. DO NOT CUT, DRILL GRIND OR WELD ON OR NEAR THIS CONTAINER. Improper disposal or reuse of this container may be dangerous and/or illegal.

Storage

Store in well ventilated area away from heat and sources of ignition such as flame, sparks and static electricity. Ensure that all storage and handling equipment is properly rated, grounded and installed to satisfy electrical classification requirements. Static electricity may accumulate and create a fire hazard. All storage containers, including containers such as drums, cylinders and IBC's, must be bonded and grounded during filling and emptying operations. Store away from oxidizers and reactive materials. Keep container tightly closed. Observe all federal, state and local regulations and National Fire Protection Association (NFPA) Codes which pertain to the specific local conditions of storage and use, including OSHA 29 CFR 1910.106 and NFPA 30, 70, 77, and 497.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls

Investigate engineering techniques to reduce exposures. Provide ventilation if necessary to minimize exposure. Dilution ventilation is acceptable, but local mechanical exhaust ventilation preferred, if practical, at sources of air contamination such as open process equipment. Consult ACGIH ventilation manual or NFPA Standard 91 for design of exhaust systems.

Eye / Face Protection

Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment available.

Skin Protection

Wear appropriate chemical resistant protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type glove material for given application. Wear chemical goggles, a face shield, and chemical resistant clothing such as a rubber apron when splashing may occur. Rinse immediately if skin is contaminated. Remove contaminated clothing promptly and wash before reuse. Clean protective equipment before reuse. Provide a safety shower at any location where skin contact can occur. Wash skin thoroughly after handling.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Respiratory Protection

Avoid breathing vapor or mist. Where airborne exposure is likely, use NIOSH approved respiratory protection equipment appropriate to the material and/or its components. Full facepiece equipment is recommended and, if used, replaces need for face shield and/or chemical goggles. If exposures cannot be kept at a minimum with engineering controls, consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Airborne Exposure Guidelines for Ingredients

The components of this product have no established Airborne Exposure Guidelines

-Only those components with exposure limits are printed in this section.
-Skin contact limits designated with a "Y" above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required.
-ACGIH Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic reactions.
-WEEL-AIHA Sensitizer designator with a value of "Y" above means that exposure to this material may cause allergic skin reactions.

9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor	Clear, colorless liquid, gas-like odor
pH	NE
Specific Gravity	0.812 @ 15.5 C
Vapor Pressure	6.6 psia @ 100
Vapor Density	3
Melting Point	NA
Freezing Point	<-50 F
Boiling Point	62 C
Solubility In Water	Insoluble @ 20 C
Solubility in Other Materials	Alcohols, ethyl ether
Evaporation Rate	NE
Percent Volatile	100
Viscosity	0.570 cP @ 20 C
Other Physical Data	Olfactory threshold: 0.1 ppb Refractive index: 1.425

10 STABILITY AND REACTIVITY

Stability

This material is chemically stable under normal and anticipated storage and handling conditions.

Incompatibility

Avoid contact with strong oxidizers, acids, bases, reducing agents.

Hazardous Decomposition Products

None known.

11 TOXICOLOGICAL INFORMATION

Toxicological Information

Data on this material and/or its components are summarized below.

Single exposure (acute) studies indicate:
Dermal - No More than Slightly Toxic to Rats (LD50 >2,000 mg/kg)
Inhalation - Practically Non-toxic to Rats (4-hr LC50 >5.3 mg/l; vapor)
Eye Irritation - Practically Non-irritating to Rabbits
Skin Irritation - Non-irritating to Rabbits

tert-Butylmercaptan
In rodents, acute poisoning by this material produced a pattern of central nervous system depression, muscular paralysis, and tremors. Skin allergy was observed in guinea pigs following repeated exposure. Following repeated inhalation exposures, mild to moderate liver effect (hypertrophy) and mild kidney effects (proximal tubular nephrosis in males only) were observed in rats. No birth defects were noted in the offspring of rats and mice exposed by inhalation during pregnancy. No genetic changes were observed in tests using bacteria or animals. Both positive and negative responses have been reported in tests using animal cells.

Isopropyl Mercaptan
Acute effects in rats during exposure to sublethal vapor concentrations of 18.44 mg/l or less for 4-hours were attributed to the irritant nature of the vapors.

n-Propyl Mercaptan
Acute poisoning produced a pattern of central nervous system depression and respiratory paralysis in rodents with death resulting from respiratory failure.

12 ECOLOGICAL INFORMATION

Ecotoxicological Information

Data on this material and/or its components are summarized below.
tert-Butylmercaptan
This material is moderately toxic to Daphnia magna (48-hr EC50 6.7 mg/l), and is slightly toxic to rainbow trout (96-hr LC50 34 mg/l) and alga (72-hr EC50 13 mg/l).

Chemical Fate Information

Data on this material and/or its components are summarized below.
tert-Butylmercaptan
The solubility of this material is 1,470 mg/l after 24-hrs. and the stability is 10 mg/l and 81.8% after 96-hrs.

13 DISPOSAL CONSIDERATIONS

Waste Disposal

Incineration is the recommended method for disposal observing all local, state and federal regulations. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14 TRANSPORT INFORMATION

DOT Name	Mercaptans, mixture, liquid, flammable, n.o.s.
DOT Technical Name	(Butyl mercaptan, Isopropyl mercaptan)
DOT Hazard Class	3
UN Number	3336
DOT Packing Group	PG II
RQ	No

15 REGULATORY INFORMATION

Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370)

Immediate (Acute) Health	Y	Fire	Y
Delayed (Chronic) Health	N	Reactive	N
		Sudden Release of Pressure	N

The components of this product are all on the TSCA Inventory list.

Ingredient Related Regulatory Information:

SARA Reportable Quantities	CERCLA RQ	SARA TPQ
n-Propylmercaptan	NE	
Isopropylmercaptan	NE	
tert-Butylmercaptan	NE	

Massachusetts Right to Know
This product does contain the following chemicals(s), as indicated below, currently on the Massachusetts Right to Know Substance List.

Isopropylmercaptan
n-Propylmercaptan
tert-Butylmercaptan

New Jersey Right to Know
This product does contain the following chemical(s), as indicated below, currently on the New Jersey Right-to-Know Substances List.

Isopropylmercaptan
n-Propylmercaptan
tert-Butylmercaptan

Pennsylvania Right to Know
This product does contain the following chemical(s), as indicated below, currently on the Pennsylvania Hazardous Substance List.

tert-Butylmercaptan

16 OTHER INFORMATION

Revision Information

Revision Date	11 OCT 2004	Revision Number 10
Supercedes Revision Dated	19-AUG-2004	

Revision Summary
ATOFINA Chemicals, Inc. has changed its name to Arkema Inc.

Key
NE= Not Established NA= Not Applicable (R) = Registered Trademark

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