TNEMEC

Safety Data Sheet

Issue Date 05-Jun-2017 Revision Date 05-Jun-2017 Revision Number 2

1. IDENTIFICATION

Product identifier

Product Code 1558

Product Name ENDURA-HEAT DTM

Color This safety data sheet covers all product color variations in accordance with 29 CFR

1910.1200(g)(4).

Other means of identification

Common Name SERIES 1558

UN/ID no. 1263 Synonyms None

Recommended use of the chemical and restrictions on use

Recommended Use industrial paint.

Uses advised againstConsumer use, For professional use only. Not for residential use.

Details of the supplier of the safety data sheet

Manufacturer Address Distributor

Tnemec Company, Inc. 6800 Corporate Drive, Kansas City, MO Tnemec Company, Inc. 86 Boul, des Entreprises, Ste. 203,

64120-1372 816-474-3400 Boisbriand, Quebec Canada J7G 2T3

Emergency telephone number

Company Phone Number Tnemec Regulatory Dept: 816-474-3400

24 Hour Emergency Phone Number 800-535-5053 (Infotrac)

2. HAZARDS IDENTIFICATION

Classification

OSHA Regulatory Status

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Carcinogenicity	Category 1B
Reproductive Toxicity	Category 2
Flammable Liquids	Category 2

Label elements

EMERGENCY OVERVIEW

Danger

Hazard statements

Causes skin irritation

Causes serious eye damage

May cause an allergic skin reaction

May cause cancer

Suspected of damaging fertility or the unborn child

Highly flammable liquid and vapor



Appearance white Physical state liquid Odor Solvent

Precautionary Statements

Prevention

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Use personal protective equipment as required

Wash face, hands and any exposed skin thoroughly after handling

Avoid breathing dust/fume/gas/mist/vapors/spray

Contaminated work clothing should not be allowed out of the workplace

Wear protective gloves

Keep away from heat/sparks/open flames/hot surfaces. — No smoking

Keep container tightly closed

Ground/bond container and receiving equipment

Use only non-sparking tools

Take precautionary measures against static discharge

Use explosion-proof electrical/ventilating/lighting/mixing/equipment

Response

IF exposed or concerned: Get medical advice/attention

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician

If skin irritation or rash occurs: Get medical advice/attention

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

In case of fire: Use CO2, dry chemical, or foam for extinction

Storage

Store locked up

Store in a well-ventilated place. Keep cool

Keep away from children

Dienosal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Other information

SEE SAFETY DATA SHEET

Cancer hazard. Contains crystalline silica which can cause cancer. (Risk of cancer depends on duration and level of exposure).

Respirable crystalline silica (quartz) can cause silicosis, a fibrosis (scarring) of the lungs

Acute Toxicity 71.2 % of the mixture consists of ingredient(s) of unknown toxicity.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
ISOPROPANOL	67-63-0	1 - <10%
TRIMETHYLBENZENES	25551-13-7	1 - <10%
PETROLEUM SOLVENT (NAPTHA)	64742-95-6	1 - <10%
N-BUTANOL (SKIN)	71-36-3	1 - <10%
XYLENE	1330-20-7	1 - <10%
1,2,4-TRIMETHYLBENZENE	95-63-6	1 - <10%

ORGANOSILANE ESTER	919-30-2	1 - <10%
ETHYL BENZENE	100-41-4	0.1 - <1%
CRYSTALLINE SILICA (QUARTZ)	14808-60-7	0.1 - <1%

^{*}The exact percentage (concentration) of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General advice If symptoms persist, call a physician.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Call

a physician immediately.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated

clothes and shoes. Consult a physician.

Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is

difficult, give oxygen. Get medical attention immediately.

Ingestion If swallowed, do not induce vomiting. Get medical attention immediately.

Self-protection of the first aiderUse personal protective equipment. Avoid contact with eyes, skin and clothing.

Most important symptoms and effects, both acute and delayed

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Carbon dioxide. Foam. Dry chemical.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating gases and vapours In the event of fire and/or explosion do not breathe fumes

Hazardous combustion products Hazardous combustion products may include: A complex mixture of airborne solid and

liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic

compounds. Carbon oxides.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Use personal protective equipment. Avoid contact with eyes, skin and clothing. Ensure

adequate ventilation. Remove all sources of ignition.

Environmental Precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Do not flush into surface water or

sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment

Remove all sources of ignition. Spills may be collected with inert, absorbent material for proper disposal. Use non-sparking tools, protective gloves, goggles and clothing, adequate ventilation, avoid the breathing of vapors and use respiratory protective devices. Transfer absorbent material to suitable containers for proper disposal.

Methods for cleaning up

If spilled, contain spilled material and remove with inert absorbent. Dispose of contaminated absorbent, container and unused contents in accordance with local, state and federal regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Handling

Wear personal protective equipment. Avoid contact with eyes, skin and clothing. Handle in accordance with good industrial hygiene and safety practice. Remove and wash contaminated clothing before re-use. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Do not breathe vapours or spray mist. Take necessary action to avoid static electricity discharge (which might cause ignition of organic vapours). Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Remove all sources of ignition. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

Conditions for safe storage, including any incompatibilities

Storage Keep containers tightly closed in a cool, well-ventilated place. Keep out of the reach of

children.

Incompatible products Strong acids. Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure guidelines

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
ISOPROPANOL 67-63-0	TWA: 200 ppm STEL: 400 ppm	TWA: 400 ppm TWA: 980 mg/m³ STEL: 500 ppm STEL: 1225 mg/m³	2000 ppm
TRIMETHYLBENZENES 25551-13-7	TWA: 25 ppm	TWA: 25 ppm TWA: 125 mg/m ³	
N-BUTANOL (SKIN) 71-36-3	TWA: 20 ppm	Skin Ceiling: 50 ppm Ceiling: 150 mg/m³ TWA: 100 ppm TWA: 300 mg/m³	1400 ppm
XYLENE 1330-20-7	TWA: 100 ppm STEL: 150 ppm	TWA: 100 ppm TWA: 435 mg/m³ STEL: 150 ppm STEL: 655 mg/m³	
ETHYL BENZENE 100-41-4	TWA: 20 ppm	TWA: 100 ppm TWA: 435 mg/m³ STEL: 125 ppm STEL: 545 mg/m³	800 ppm
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	TWA: 0.025 mg/m ³	TWA: 0.1 mg/m³ TWA: 50 µg/m³	50 mg/m³

Appropriate engineering controls

Engineering measuresSufficient ventilation, in volume and pattern, should be provided through both local and

general exhaust to keep the air contaminant concentration below current applicable OSHA

Permissible Exposure Limits (PEL) and ACGIH"s Threshold Limit Values (TLV).

Appropriate ventilation should be employed to remove hazardous decomposition products formed during welding or flame cutting operations of surfaces coated with this product.

Individual protection measures, such as personal protective equipment

Eye/face protection Chemical goggles or safety glasses with side-shields. If splashes are likely to occur, wear

face-shield.

Skin and body protectionWear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls,

as appropriate, to prevent skin contact.

Respiratory protectionUse only with adequate ventilation. Do not breathe vapors, spray mist, or dust. Ensure fresh

air entry during application and drying. If you experience eye watering, headache or dizziness or if air monitoring demonstrates vapor/mist or dust levels are above applicable limits, wear an appropriate, properly fitted respirator (NIOSH/MSHA approved) during and

after application. Follow respirator manufacturer's directions for respirator use.

General hygiene considerations Handle in accordance with good industrial hygiene and safety practice.

Avoid breathing dust created by cutting, sanding, or grinding.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state liquid

AppearancewhiteOdorSolvent

Color No information available Odor threshold No information available

PropertyValuesRemarkspHNo data available

pHMelting point / freezing pointNo data availableNo data availableNo data available

Boiling point / boiling range

No information available

Flash point 21 °C / 70 °F Pensky Martens - Closed Cup

Evaporation rate No data available

Flammability (solid, gas) No data available

Flammability Limit in Air No data available

Upper flammability limit NA
Lower flammability limit NA

Vapor pressure No data available

Vapor density 2.5

Specific gravity 1.346069778 g/cm3

Water solubility Insoluble in cold water

Solubility in other solvents No data available

Partition coefficient: n-octanol/water

Autoignition temperature

No data available

No data available

No data available

No data available

Decomposition temperatureNo data availableKinematic viscosityNo data availableDynamic viscosityNo data available

Other Information

Density 11.2299 lbs/gal Volatile organic compounds (VOC) 3.238 lbs/gal

content

Total volatiles weight percent 28.83 % Total volatiles volume percent 48.00 %

Bulk density No information available

10. STABILITY AND REACTIVITY

Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to avoid

Heat, flames and sparks.

Incompatible materials

Strong acids, Strong oxidizing agents

Hazardous decomposition products

Hazardous combustion products may include: A complex mixture of airborne solid and liquid particulates and gases (smoke). Carbon monoxide. Unidentified organic and inorganic compounds. Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on Likely Routes of Exposure

Inhalation HARMFUL BY INHALATION. May cause central nervous system depression with nausea,

headache, dizziness, vomiting, and incoordination.

Eye contact Causes serious eye irritation. Causes serious eye damage.

Skin contact Irritating to skin. May cause sensitization by skin contact.

Ingestion May be harmful if swallowed.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
ISOPROPANOL 67-63-0	= 1870 mg/kg (Rat)	= 4059 mg/kg (Rabbit)	= 72600 mg/m³ (Rat) 4 h
TRIMETHYLBENZENES 25551-13-7	= 8970 mg/kg (Rat)	-	-
PETROLEUM SOLVENT (NAPTHA) 64742-95-6	= 8400 mg/kg (Rat)	> 2000 mg/kg(Rabbit)	= 3400 ppm(Rat) 4 h
N-BUTANOL (SKIN) 71-36-3	= 700 mg/kg (Rat) = 790 mg/kg (Rat)	= 3402 mg/kg (Rabbit) = 3400 mg/kg (Rabbit)	> 8000 ppm (Rat) 4 h
XYLENE 1330-20-7	= 3500 mg/kg (Rat)	> 4350 mg/kg (Rabbit) > 1700 mg/kg (Rabbit)	= 29.08 mg/L (Rat) 4 h = 5000 ppm (Rat) 4 h
1,2,4-TRIMETHYLBENZENE 95-63-6	= 3280 mg/kg (Rat)	> 3160 mg/kg (Rabbit)	= 18 g/m³(Rat)4 h
ORGANOSILANE ESTER 919-30-2	= 1780 mg/kg (Rat)	= 4 mL/kg(Rabbit)	-
ETHYL BENZENE 100-41-4	= 3500 mg/kg (Rat)	= 15400 mg/kg (Rabbit)	= 17.4 mg/L (Rat)4 h
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	= 500 mg/kg (Rat)	-	-

Information on toxicological effects

Symptoms Symptoms of overexposure are dizziness, headache, tiredness, nausea, unconsciousness,

cessation of breathing. Irritating to eyes and skin. Skin disorders.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity NOTICE: Reports have associated repeated and prolonged occupational overexposure to

solvents with permanent brain and nervous system damage. Intentional misuse by

deliberately concentrating and inhaling the contents may be harmful or fatal. Skin sensitizer.

May cause cancer. Substances known to impair fertility.

Sensitization May cause sensitization of susceptible persons.

Mutagenicity No information available.

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	ACGIH	IARC	NTP	OSHA
ISOPROPANOL		Group 3	-	
67-63-0		•		
XYLENE		Group 3	-	
1330-20-7		•		
ETHYL BENZENE	A3	Group 2B	-	X
100-41-4		•		
CRYSTALLINE SILICA	A2	Group 1	Known	X
(QUARTZ)		•		
14808-60-7				

Reproductive effects Suspected of damaging fertility or the unborn child.

STOT - single exposure
STOT - repeated exposure
No information available
No information available

Target organ effects blood, Central nervous system, Gastrointestinal tract, Eyes, kidney, liver, respiratory

system, Skin.

Aspiration hazard No information available.

Acute Toxicity 71.2 % of the mixture consists of ingredient(s) of unknown toxicity.

12. ECOLOGICAL INFORMATION

Ecotoxicity

71.2 % of the mixture consists of components(s) of unknown hazards to the aquatic environment

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia
ISOPROPANOL	1000: 72 h Desmodesmus	11130: 96 h Pimephales promelas	13299: 48 h Daphnia magna mg/L
67-63-0	subspicatus mg/L EC50 1000: 96 h	mg/L LC50 static 9640: 96 h	EC50
	Desmodesmus subspicatus mg/L	Pimephales promelas mg/L LC50	
	EC50	flow-through 1400000: 96 h	
		Lepomis macrochirus µg/L LC50	
TRIMETHYLBENZENES		7.72: 96 h Pimephales promelas	
25551-13-7		mg/L LC50 flow-through	
PETROLEUM SOLVENT		9.22: 96 h Oncorhynchus mykiss	6.14: 48 h Daphnia magna mg/L
(NAPTHA)		mg/L LC50	EC50
64742-95-6			
N-BUTANOL (SKIN)	500: 72 h Desmodesmus	100000 - 500000: 96 h Lepomis	1897 - 2072: 48 h Daphnia magna
71-36-3		macrochirus µg/L LC50 static 1730 -	
	Desmodesmus subspicatus mg/L	1910: 96 h Pimephales promelas	Daphnia magna mg/L EC50
	EC50	mg/L LC50 static 1740: 96 h Pimephales promelas mg/L LC50	
		flow-through 1910000: 96 h	
		Pimephales promelas µg/L LC50	
		static	
XYLENE		LC50= 13.4 mg/L Pimephales	EC50 = 3.82 mg/L 48 h LC50 = 0.6
1330-20-7		promelas 96 h LC50 2.661 - 4.093	mg/L 48 h
1000 20 7		mg/L Oncorhynchus mykiss 96 h	g, 2 18 11
		LC50 13.5 - 17.3 mg/L	
		Oncorhynchus mykiss 96 h LC50	
		13.1 - 16.5 mg/L Lepomis	
		macrochirus 96 h LC50= 19 mg/L	
		Lepomis macrochirus 96 h LC50	
		7.711 - 9.591 mg/L Lepomis	
		macrochirus 96 h LC50 23.53 -	
		29.97 mg/L Pimephales promelas	
		96 h LC50= 780 mg/L Cyprinus	
		carpio 96 h LC50> 780 mg/L	
		Cyprinus carpio 96 h LC50 30.26 -	
		40.75 mg/L Poecilia reticulata 96 h	
1,2,4-TRIMETHYLBENZENE		7.19 - 8.28: 96 h Pimephales	6.14: 48 h Daphnia magna mg/L
95-63-6		promelas mg/L LC50 flow-through	EC50
ETHYL BENZENE	1.7 - 7.6: 96 h Pseudokirchneriella	11.0 - 18.0: 96 h Oncorhynchus	1.8 - 2.4: 48 h Daphnia magna mg/L
100-41-4	subcapitata mg/L EC50 static 2.6 -	mykiss mg/L LC50 static 7.55 - 11:	EC50

11.3: 72 h Pseudokirchneriella	96 h Pimephales promelas mg/L	
subcapitata mg/L EC50 static 4.6:	LC50 flow-through 9.1 - 15.6: 96 h	
72 h Pseudokirchneriella	Pimephales promelas mg/L LC50	
subcapitata mg/L EC50 438: 96 h	static 32: 96 h Lepomis macrochirus	
Pseudokirchneriella subcapitata	mg/L LC50 static 4.2: 96 h	
mg/L EC50	Oncorhynchus mykiss mg/L LC50	
_	semi-static 9.6: 96 h Poecilia	
	reticulata mg/L LC50 static	

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Mobility in Environmental Media

Chemical name	log Pow
ISOPROPANOL	0.05
67-63-0	
N-BUTANOL (SKIN)	0.785
71-36-3	
XYLENE	2.77
1330-20-7	
1,2,4-TRIMETHYLBENZENE	3.63
95-63-6	
ETHYL BENZENE	3.118
100-41-4	

Other Adverse Effects

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal Methods It must undergo special treatment, e.g. at suitable disposal site, to comply with local

regulations.

Contaminated packaging Empty containers should be taken to an approved waste handling site for recycling or

disposal.

US EPA Waste Number

Chemical name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
N-BUTANOL (SKIN)		Included in waste stream:		U031
71-36-3		F039		
XYLENE		Included in waste stream:		U239
1330-20-7		F039		
ETHYL BENZENE		Included in waste stream:		
100-41-4		F039		

California Hazardous Waste Status

Chemical name	CAWAST
ISOPROPANOL	Toxic
67-63-0	Ignitable
N-BUTANOL (SKIN)	Toxic
71-36-3	
XYLENE	Toxic
1330-20-7	Ignitable
ETHYL BENZENE	Toxic
100-41-4	Ignitable

14. TRANSPORT INFORMATION

DOT

UN/ID no. 1263
Proper Shipping Name paint
Hazard Class 3
Packing Group || |
Emergency Response Guide 128

Number

<u>Additional information</u> Call TNEMEC Traffic Department - 816-474-3400 for additional information or other modes

of Transportation.

15. REGULATORY INFORMATION

International Inventories

TSCA Complies **DSL/NDSL** Does not comply Does not comply **EINECS/ELINCS** Does not comply **ENCS** Does not comply **IECSC** Does not comply **KECL PICCS** Does not comply **AICS** Does not comply

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

Chemical name HAPS Data

XYLENE

ETHYL BENZENE

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and and Title 40n of the Code of Federal Regulations, Part 372:

Chemical name	SARA 313 - Threshold Values
ISOPROPANOL - 67-63-0	1.0
N-BUTANOL (SKIN) - 71-36-3	1.0
XYLENE - 1330-20-7	1.0
1,2,4-TRIMETHYLBENZENE - 95-63-6	1.0
ETHYL BENZENE - 100-41-4	0.1

SARA 311/312 Hazardous

Categorization

Acute Health Hazard Yes
Chronic Health Hazard Yes
Fire Hazard Yes
Sudden Release of Pressure Hazard No
Reactive Hazard No

Clean Water Act

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
XYLENE 1330-20-7	100 lb			Х
ETHYL BENZENE 100-41-4	1000 lb	X	Х	Х

CERCLA

Chemical name	Hazardous Substances RQs	CERCLA EHS RQs	RQ
N-BUTANOL (SKIN)	5000 lb		RQ 5000 lb final RQ
71-36-3			RQ 2270 kg final RQ
XYLENE	100 lb		RQ 100 lb final RQ
1330-20-7			RQ 45.4 kg final RQ
ETHYL BENZENE	1000 lb		RQ 1000 lb final RQ
100-41-4			RQ 454 kg final RQ

California Prop. 65

:This product can expose you to the following chemicals which are known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Chemical name		California Prop. 65	
ISOPROPANOL - 67-63-0		*	
ETHYL BENZENE - 100-41-4		Carcinogen	
ſ	CRYSTALLINE SILICA (QUARTZ) - 14808-60-7	Carcinogen	

California SCAQMD Rule 443

Contains Photochemically Reactive Solvent

State Right-to-Know

Chemical name	New Jersey	Massachusetts	Pennsylvania
ISOPROPANOL 67-63-0	X	X	Х
TRIMETHYLBENZENES 25551-13-7	Х	X	Х
N-BUTANOL (SKIN) 71-36-3	X	X	X
XYLENE 1330-20-7	X	X	X
1,2,4-TRIMETHYLBENZENE 95-63-6	Х	X	Х
ETHYL BENZENE 100-41-4	Х	X	Х
CRYSTALLINE SILICA (QUARTZ) 14808-60-7	Х	X	Х

16. OTHER INFORMATION

NFPA Health 2 Flammability 3 Instability 0 Physical hazard *
HMIS (Hazardous Health 2* Flammability 3 Reactivity 0

HMIS (Hazardous Material Information

System)

Prepared By Tnemec Regulatory Dept: 816-474-3400

Revision Date 05-Jun-2017 Revision Summary

1 9 4 5 6 7 10 8 11 14 15 13

Disclaimer

For specific information regarding occupational safety and health standards, please refer to the Code of Federal Regulations, Title 29, Part 1910.

To the best of our knowledge, the information contained herein is accurate. However, neither the Tnemec Company or any of its subsidiaries assume any liability whatsoever for the accuracy of completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown health hazards and should be used with caution. Although certain hazards are described herein, we cannot

guarantee that these are the only hazards which exist.

End of SDS