

Safety Data Sheet

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH)
Classification according to Regulation (EC) No. 1272/2008 [CLP]

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifier

Product code	M6494
Product name	MTT (3-(4,5-dimethylthiazol- 2-yl)-2,5-diphenyltetrazolium bromide)
Unique Formula Identifier (UFI)	Not Applicable
Chemical Name	Not Applicable
REACH registration number	No registration number is given yet for this substance / substances in this mixture since the annual import quantity is less than one tonnage per annum or the transition period for its registration according to Article 23 of REACH has not yet expired.

Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Laboratory chemicals
Use Description Code	SU22 - Professional uses: Public domain (administration, education, entertainment, services, craftsmen), PROC15 - Use as laboratory reagent, PC21 - Laboratory chemicals, SU24 - Scientific research and development
Uses advised against	Not for consumer use.

Details of the supplier of the safety data sheet

Manufacturer / Supplier

LIFE TECHNOLOGIES EUROPE BV
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2665 NN BLEISWIJK
NETHERLANDS
31-(0)180 392 400
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Emergency telephone number

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24 hour Emergency Response for Hazardous Materials Within the USA + Canada: 1-800-424-9300 and
[or Dangerous Goods] Incident. Spill, Leak, Fire, 1-703-527-3887
Exposure, or Accident. Call CHEMTREC Outside the USA + Canada: 1-703-741-5970

Country Specific Emergency Number (if available):

CHEMTREC Ireland (Dublin) +(353)-19014670 (Greeting Language: English and Irish)
CHEMTREC UK (London) +(44)-870-8200418 (Greeting Language: English)

SECTION 2: Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Physical hazards

Not Hazardous

Health hazards

Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Germ cell mutagenicity	Category 2
Specific target organ toxicity - Single exposure	Category 3

Environmental hazards

Not Hazardous

Additional information

Not Applicable

Label elements

Labelling according to Regulation (EC) No 1272/2008 [CLP]

Hazard pictograms



Signal Word

Warning

Hazard Statements

H315 - Causes skin irritation
H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
H341 - Suspected of causing genetic defects

EU Specific Hazard Statements

Not Applicable

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Precautionary Statements

Prevention

- P201 - Obtain special instructions before use
- P261 - Avoid breathing dust/fume/gas/mist/vapours/spray
- P264 - Wash hands thoroughly after handling
- P271 - Use only outdoors or in a well-ventilated area
- P280 - Wear protective gloves/protective clothing/eye protection/face protection

Response

- P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
- P308 + P313 - IF exposed or concerned: Get medical advice/attention
- P332 + P313 - If skin irritation occurs: Get medical advice/attention
- P362 + P364 - Take off contaminated clothing and wash it before reuse
- P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Storage

- P403 + P233 - Store in a well-ventilated place. Keep container tightly closed
- P405 - Store locked up

Disposal

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

Other hazards

This mixture does not contain any substances that are assessed to be a PBT or a vPvB

SECTION 3: Composition/information on ingredients

Mixtures

We recommend handling all chemicals with caution.

Chemical Name	CAS No	EINECS-No.	Weight-%	REACH registration number	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2H-Tetrazolium, 2-(4,5-dimethyl-2-thiazolyl)-3,5-diphenyl-, bromide	298-93-1	-	95-100	-	-

Chemical Name	Specific concentration limit (SCL)	M-Factor	Acute Toxicity Estimate
2H-Tetrazolium, 2-(4,5-dimethyl-2-thiazolyl)-3,5-diphenyl-, bromide	-	-	-

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SECTION 4: First aid measures

Description of first aid measures

Skin contact	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.
Ingestion	Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.
Inhalation	Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a doctor.
Notes to Physician	Treat symptomatically.

Most important symptoms and effects, both acute and delayed

H315 - Causes skin irritation H319 - Causes serious eye irritation H335 - May cause respiratory irritation H341 - Suspected of causing genetic defects

Indication of any immediate medical attention and special treatment needed

IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF exposed or concerned: Get medical advice/attention. Get medical advice/attention if you feel unwell.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media
Unsuitable extinguishing media

Water spray. Carbon dioxide (CO₂). Foam. Dry chemical.
No information available.

Special hazards arising from the substance or mixture

Not known

Advice for firefighters

Standard procedure for chemical fires.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation
Always wear recommended Personal Protective Equipment
Use personal protection equipment
Avoid contact with skin, eyes or clothing
See section 8 for more information

Environmental precautions

Prevent product from entering drains.

Methods and material for containment and cleaning up

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

Reference to other sections

See section 8 for more information.

SECTION 7: Handling and storage

Precautions for safe handling

Use personal protective equipment as required. Ensure adequate ventilation. Ensure that eyewash stations and safety showers are close to the workstation location. Do not ingest. Avoid dust formation.

Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep in properly labelled containers.

Specific end use(s)

Laboratory chemicals.

SECTION 8: Exposure controls/personal protection

Control parameters

Chemical Name	EU OEL (TWA)	EU OEL (STEL)	EU Skin Notation
2H-Tetrazolium, 2-(4,5-dimethyl-2-thiazolyl)-3,5-diphenyl-, bromide 298-93-1	None	None	None

Chemical Name	Austria	Belgium (TWA)	Czech Republic
2H-Tetrazolium, 2-(4,5-dimethyl-2-thiazolyl)-3,5-diphenyl-, bromide 298-93-1	None	None	None

Chemical Name	Denmark (TWA)	Finland OEL (TWA)	France OEL (VME)
2H-Tetrazolium, 2-(4,5-dimethyl-2-thiazolyl)-3,5-diphenyl-, bromide 298-93-1	None	None	None

Chemical Name	Germany OEL (TWA)	Ireland (TWA)	Italy OEL (TWA)
2H-Tetrazolium, 2-(4,5-dimethyl-2-thiazolyl)-3,5-diphenyl-, bromide 298-93-1	None	None	None

Chemical Name	Lithuania OEL (TWA)	Netherlands OEL (MAC)	Norway
2H-Tetrazolium, 2-(4,5-dimethyl-2-thiazolyl)-3,5-diphenyl-, bromide 298-93-1	None	None	None

Chemical Name	Poland	Portugal	Spain OEL (TWA)
2H-Tetrazolium, 2-(4,5-dimethyl-2-thiazolyl)-3,5-diphenyl-, bromide 298-93-1	None	None	None

Chemical Name	Sweden - Occupational Exposure Limits - TLVs (LLVs)	Switzerland	United Kingdom
2H-Tetrazolium, 2-(4,5-dimethyl-2-thiazolyl)-3,5-diphenyl-, bromide 298-93-1	None	None	None

Engineering Measures

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

Exposure controls

Personal protection equipment

Respiratory protection

In case of insufficient ventilation wear respirators and components tested and approved under appropriate government standards.

Hand protection

Wear suitable gloves Glove material: Compatible chemical-resistant gloves.

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Eye protection Tight sealing safety goggles.

Skin and Body Protection Wear suitable protective clothing.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls
Prevent product from entering drains.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	Solid	
Colour	yellow	
Odour	Odourless	
Molecular Weight	414.32	
Melting point / melting range	°C 195 °C / 383 °F	°F No data
Boiling point / boiling range	°C No data	°F No data
Flammability (solid, gas)	No data	
Lower explosion limit	No data	
Upper explosion limit	No data	
Flash point	°C No data	°F No data
Autoignition Temperature	°C No data	°F No data
Decomposition temperature	°C No data	°F No data
Evaporation rate	No data	
Viscosity	No data	
Solubility	No data	
Partition coefficient: n-octanol/water	No data	
Vapour Pressure	No data	
Specific gravity	No data	
Relative density	No data	
Vapour density	No data	
Explosive properties	No data	
Oxidising properties	No data	
Particle characteristics	No data	

Other information

Information with regards to physical hazard classes

No information available

Other safety characteristics

No information available

SECTION 10: Stability and reactivity

Reactivity	None known.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	Hazardous reaction has not been reported.
Conditions to avoid	Keep away from Incompatible materials. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Moisture.
Incompatible materials	Strong oxidising agents.
Hazardous decomposition products	Carbon monoxide. Nitrogen oxides (NOx). Carbon dioxide (CO ₂). Sulphur oxides.

SECTION 11: Toxicological information

Information on hazard classes as defined in Regulation (EC) No 1272/2008

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
2H-Tetrazolium, 2-(4,5-dimethyl-2-thiazolyl)-3,5-diphenyl-, bromide	No data available	No data available	No data available

Principal Routes of Exposure

Skin corrosion/irritation	Skin irritation
Serious eye damage/irritation	Irritating to eyes
Respiratory or skin sensitisation	Data are conclusive but insufficient for classification
Specific target organ toxicity (STOT) – single exposure	Respiratory system May cause respiratory irritation
Specific target organ toxicity (STOT) – repeated exposure	Data are conclusive but insufficient for classification
Carcinogenicity	Data are conclusive but insufficient for classification
Germ cell mutagenicity	Germ cell mutagenicity category 2
Reproductive Toxicity	Data are conclusive but insufficient for classification
Aspiration Hazard	Data are conclusive but insufficient for classification

Information on other hazards

Endocrine disrupting properties

No information available

Other information

No information available

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SECTION 12: Ecological information

Toxicity

The environmental impact of this product has not been fully investigated.

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Microtox Data	log Pow
2H-Tetrazolium, 2-(4,5-dimethyl-2-thiazolyl)-3, 5-diphenyl-, bromide	No data available	No data available	No data available	No data available	No data available

Persistence and degradability No information available.

Bioaccumulative potential No information available.

Mobility in soil No information available.

Results of PBT and vPvB assessment

This mixture does not contain any substances that are assessed to be a PBT or a vPvB.

Endocrine disrupting properties

This product does not contain any known or suspected endocrine disruptors

Other adverse effects

No information available.

SECTION 13: Disposal considerations

Waste treatment methods

The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in according to approved disposal technique. Disposal of this product, its solutions or of any by-products, shall comply with the requirements of all applicable local, regional or national/federal regulations. Do not empty into drains.

SECTION 14: Transport information

IATA / ADR / DOT-US / IMDG

Not regulated in the meaning of transport regulations

UN number or ID number	Not Applicable
UN proper shipping name	Not Applicable
Transport hazard class(es)	Not Applicable
Packing group	Not Applicable

Marine pollutant

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No

Special precautions for user

Not Applicable

Maritime transport in bulk according to IMO instruments

Not Applicable.

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Substances of Very High Concern

None

Substance subject to authorisation per REACH Annex XIV

None

Restricted substances under EC 1907/2006, Annex XVII

None

Regulation (EC) No 649/2012 (Rotterdam Convention - export/import of dangerous chemicals)

None

Regulation (EU) No 2019/1021 (Stockholm Convention – persistent organic pollutants)

None

EU - Substances Depleting the Ozone layer (1005/2009)

None

German Water hazard classes (Wassergefährdungsklassen)

Not classified.

Other International Inventories

Chemical Name	EINECS (European Union)	ELINCS (European List of Notified Chemical Substances)	ENCS (Japan)	PICCS (Philippines)
2H-Tetrazolium, 2-(4,5-dimethyl-2-thiazolyl)-3,5-diphenyl-, bromide	Listed	-	-	-

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Chemical Name	AICS (Australia)	South Korea (KECL)	Canada (DSL)	NDSL
2H-Tetrazolium, 2-(4,5-dimethyl-2-thiazolyl)-3,5-diphenyl-, bromide	Listed	-	-	Listed

Chemical safety assessment

No Chemical safety assessment has been carried out.

SECTION 16: Other information

Reason for revision Update according to Commission Regulation EU No. 2020/878
Revision number 3
Revision date 20-May-2021

References

- ECHA: <http://echa.europa.eu/>
- TOXNET: <http://toxnet.nlm.nih.gov/>
- eChemPortal: <http://www.echemportal.org/>
- LOLI database: <https://www.chemadvisor.com/loli-database>

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Skin corrosion/irritation	Category 2	Calculation method
Serious eye damage/eye irritation	Category 2	Calculation method
Germ cell mutagenicity	Category 2	Calculation method
Specific target organ toxicity - Single exposure	Category 3	Calculation method

Abbreviations and acronyms

TWA - Time-Weighted Average
OELs - Occupational Exposure Limits
STEL - Short Term Exposure Limit
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
KECL - Korean Existing and Evaluated Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances
NZIoC - New Zealand Inventory of Chemicals
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
CEPA - Canadian Environmental Protection Act
EPA - Environmental Protection Agency
OSHA - Occupational Safety and Health Administration of the US Department of Labour
IATA - International Air Transport Association
DOT - Department of Transportation
IMDG - International Maritime Dangerous Goods
ACGIH - American Conference of Governmental Industrial Hygienists
NIOSH - National Institute for Occupational Safety and Health
AIHA - American Industrial Hygiene Association
HMIS - Department of Defense Hazardous Materials Information System
NTP - National Toxicology Program
IARC - International Agency for Research on Cancer

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006 COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006

"The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held

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liable for any damages or losses resulting from the handling or from contact with the product as described herein.
THE INFORMATION IN THIS SDS DOES NOT CONSTITUTE A WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE"

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