



MATERIAL SAFETY DATA SHEET

EC7M Bioact EC7M, Non Aerosol

1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME EC7M Bioact EC7M, Non Aerosol
PRODUCT NO. MCC-EC7ML, MCC-EC7MG, MCC-EC7MP, MCC-EC7MD
PRODUCT USE Cleaning agent.
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IDENTIFICATION No. UN2319

2 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Combustible Liquid. This product has low toxicity. Only large volumes may have adverse impact on human health. Liquid irritates mucous membranes and may cause abdominal pain if swallowed. Liquid may irritate the skin. May irritate eyes. Keep out of the reach of children.

PHYSICAL AND CHEMICAL HAZARDS

The product is highly flammable, and explosive vapors/air mixtures may be formed even at normal room temperatures. Vapors are heavier than air and may travel along the floor and in the bottom of containers.

HUMAN HEALTH

See section 11 for additional information on health hazards.

POTENTIAL HEALTH EFFECTS

INHALATION

May cause irritation to the respiratory system. Vapors may cause headache, fatigue, dizziness and nausea. Prolonged inhalation of high concentrations may damage respiratory system.

INGESTION

May cause discomfort if swallowed. This product has low toxicity. Only large volumes may have adverse impact on human health.

SKIN CONTACT

Product has a defatting effect on skin. May cause skin irritation/eczema.

EYE CONTACT

Irritating to eyes. Liquid, aerosols and vapors of this product are irritating and can cause pain, tearing, reddening and swelling accompanied by a stinging sensation and/or a feeling like that of fine dust in the eyes.

ROUTE OF ENTRY

Skin and/or eye contact. Ingestion. Inhalation:

TARGET ORGANS

Skin Eyes Respiratory system, lungs

MEDICAL SYMPTOMS

Skin irritation. High concentrations of vapors may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.

CARCINOGENICITY

This substance has no evidence of carcinogenic properties.

3 COMPOSITION/INFORMATION ON INGREDIENTS

Name	EC No.	CAS-No.	Content %
d-LIMONENE	227-813-5	5989-27-5	90-100%

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COMPOSITION COMMENTS

The Data Shown is in accordance with the latest EC Directives.

4 FIRST-AID MEASURES

GENERAL INFORMATION

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

INHALATION

Move the exposed person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Keep the affected person warm and at rest. Get prompt medical attention.

INGESTION

DO NOT INDUCE VOMITING! Immediately rinse mouth and drink plenty of water (200-300 ml). Do not give victim anything to drink if he is unconscious. Consult a physician for specific advice.

SKIN CONTACT

Wash the skin immediately with soap and water. Get medical attention if any discomfort continues.

EYE CONTACT

Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

5 FIRE-FIGHTING MEASURES

EXTINGUISHING MEDIA

Use: Powder. Dry chemicals, sand, dolomite etc. Water spray, fog or mist.

SPECIAL FIRE FIGHTING PROCEDURES

Containers close to fire should be removed or cooled with water. Use water to keep fire exposed containers cool and disperse vapors.

UNUSUAL FIRE & EXPLOSION HAZARDS

Combustible Liquid.

SPECIFIC HAZARDS

Vapors are heavier than air and may travel along the floor and in the bottom of containers. Vapors may be ignited by a spark, a hot surface or an ember. Containers can burst violently when heated, due to excess pressure build-up.

PROTECTIVE MEASURES IN FIRE

Self contained breathing apparatus and full protective clothing must be worn in case of fire.

AUTO IGNITION TEMPERATURE 235 C / 458 F

(°C)

FLAMMABILITY LIMIT - 0.7

LOWER(%)

FLAMMABILITY LIMIT - UPPER(%) 6.0

FLASH POINT (°C) TCC (Tag closed cup). 47 C / 117 F

6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Use protective gloves, goggles and suitable protective clothing. Do not smoke, use open fire or other sources of ignition. Provide adequate ventilation.

ENVIRONMENTAL PRECAUTIONS

Avoid release to the environment. Do not discharge into drains, water courses or onto the ground. Contain spillages with sand, earth or any suitable adsorbent material.

SPILL CLEAN UP METHODS

Wear necessary protective equipment. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Dam and absorb spillages with sand, earth or other non-combustible material. Collect in containers and seal securely.

7 HANDLING AND STORAGE

HANDLING

Keep away from heat, sparks and open flame. Avoid spilling, skin and eye contact. Ventilate well, avoid breathing vapors. Use approved respirator if air contamination is above accepted level. Storage tanks and other containers must be grounded. Ground and bond containers when transferring material. Static electricity and formation of sparks must be prevented.

STORAGE

Store in tightly closed original container in a dry, cool and well-ventilated place. Keep containers tightly closed. Keep away from heat, sparks and open flame. Keep out of the reach of children.

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8 EXPOSURE CONTROLS/PERSONAL PROTECTION

INGREDIENT COMMENTS

WEL = Workplace Exposure Limits

PROTECTIVE EQUIPMENT



ENGINEERING MEASURES

Provide adequate general and local exhaust ventilation.

RESPIRATORY EQUIPMENT

No specific recommendation made, but respiratory protection must be used if the general level exceeds the Recommended Occupational Exposure Limit

HAND PROTECTION

Chemical resistant gloves required for prolonged or repeated contact. Gloves of nitrile rubber, PVA or Viton are recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.

EYE PROTECTION

Use eye protection. Wear approved, tight fitting safety glasses where splashing is probable.

OTHER PROTECTION

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapor contact.

HYGIENE MEASURES

DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. When using do not eat, drink or smoke.

9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE	Clear liquid.
COLOR	Colourless to pale yellow.
ODOR	Characteristic. Orange.
VOLATILITY DESCRIPTION	Volatile
SOLUBILITY	Not soluble in water.
BOILING POINT (°C)	169-187 C / 340 - 372 F
VAPOR DENSITY (air=1)	4.6
VAPOR PRESSURE	1.6 mm Hg 20 C / 70 F
VOLATILE BY VOL. (%)	100
FLASH POINT (°C)	47 C / 117 F TCC (Tag closed cup).

10 STABILITY AND REACTIVITY

STABILITY

Stable under normal temperature conditions.

CONDITIONS TO AVOID

Avoid heat, flames and other sources of ignition. Avoid contact with: Strong oxidizing agents. Strong alkalis. Strong mineral acids.

HAZARDOUS POLYMERISATION

Will not polymerise.

MATERIALS TO AVOID

Strong oxidizing substances.

HAZARDOUS DECOMPOSITION PRODUCTS

Fire creates: Vapors/gases/fumes of: Carbon monoxide (CO). Carbon dioxide (CO₂).

11 TOXICOLOGICAL INFORMATION

TOXIC CONC. - LC 50 4400 mg/l (rat)

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This product has low toxicity. Only large volumes may have adverse impact on human health.

12 ECOLOGICAL INFORMATION

MOBILITY

The product is soluble in water.

13 DISPOSAL CONSIDERATIONS

WASTE MANAGEMENT

Rags and the like, moistened with flammable liquids, must be discarded into designated fireproof bucket.

DISPOSAL METHODS

Dispose of waste and residues in accordance with local authority requirements.

14 TRANSPORT INFORMATION



DOT PROPER SHIPPING NAME	Terpine Hydrocarbons N.O.S. (d-Limonene)
ROAD TRANSPORT NOTES	Exception Applies: LIQUID CLEANING COMPOUND N.O.S. NOT D.O.T REGULATED PER 49 CFR 173.150 (f)
TDG SHIPPING NAME	Terpine Hydrocarbons N.O.S. (d-Limonene)
ENVIRONMENTALLY HAZARDOUS SUBSTANCE/MARINE POLLUTANT	No.
IDENTIFICATION No.	UN2319
DOT PACKING GROUP	III
PACKAGING INSTRUCTIONS	309 (air transport)
UN NO. SEA	UN2319
IMDG CLASS	3
IMDG PACK GR.	III
EMS	F-E, S-E
UN NO. AIR	UN2319
AIR CLASS	3
AIR PACK GR.	III
TDG PACKING GROUP	III

15 REGULATORY INFORMATION

INVENTORIES

COMPONENT	CAN	US	EU	AUS	JAP	KOR	CHN	PHLP
d-LIMONENE	DSL	Yes.						

SARA (311/312) HAZARD CATEGORIES

None.

REGULATORY STATUS (US)

TSCA: The ingredients of this product are on the TSCA Inventory.

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REGULATORY REFERENCES

29 CFR 1910.1010 Federal Regulations (OSHA Standard).

WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM -WHMIS

LABEL(S) FOR SUPPLY



Combustible Liquid.



Materials Causing Other Toxic Effects.

CONTROLLED PRODUCT CLASSIFICATION

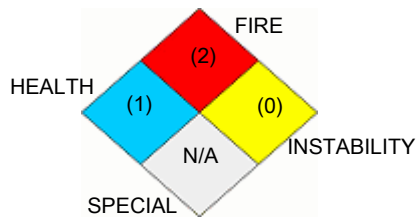
Canadian WHMIS Classification D2B WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM (CPR SECTION (33)) This product has been classified according to the hazard criteria of the Controlled Product Regulations, and the MSDS contains all required information.

16 OTHER INFORMATION

HAZARDOUS MATERIAL INFORMATION SYSTEM (HMIS)

HEALTH	1
FLAMMABILITY	2
PHYSICAL	0
PERSONAL PROTECTION	upervisor

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)



REVISION COMMENTS

NOTE: Lines within the margin indicate significant changes from the previous revision.

REVISION DATE 08/29/2011

VERSION No. 6

SAFETY DATA SHEET STATUS

Approved.

DATE May 20, 2009

DISCLAIMER

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his o