Safety Data Sheet (SDS)

OSHA HazCom Standard 29 CFR 1910.1200(g) and GHS Rev 03.

Issue date 10/09/2018 Reviewed on 10/09/2018

1 Identification

· **Product Identifier**

· **Trade Name: ECC**

· **Relevant identified uses of the substance or mixture and uses advised against:**
Environmentally Preferred Contact Cleaner

· **Product Description:**
ECC is a unique contact cleaner that is virtually odorless and immediately evaporative. ECC delivers performance equivalent to chlorinated solvents without the environmental or regulatory hazards. Compared to HFE and HFC based contact cleaners, ECC is extremely economical.
ECC is not an ozone depleting compound. It contains no CFC, HCFC, PFC, or other EPA regulated materials.
ECC is EPA-SNAP approved as a replacement for CFC-113 and 1,1,1 trichloroethane.

Product Name	Part No.	Packaging
ECC	0318-55	55 Gal Drums
ECC	0318-5	5 Gal Pails
ECC	0318-1	4 x 1 Gallon Cans

· **Application of the substance / the mixture:** Environmentally Preferred Contact Cleaner

· **Details of the Supplier of the Safety Data Sheet:**

· **Manufacturer/Supplier:**
Ecolink
2177A Flintstone Drive
Tucker, GA 30084
www.ecolink.com email: info@ecolink.com
800-886-8240 or 770-621-8240 (8–5 EST)

· **Emergency telephone number:**
Inside the U.S.: 800-535-5053 (INFOTRAC, 24 HOURS)
Outside the U.S.: 352-323-3500 (INFOTRAC, 24 HOURS)

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2 Hazard(s) Identification

· **Classification of the substance or mixture:**

Flame

Flam. Liq. 2 H225 Highly flammable liquid and vapor.

Health hazard

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

Skin Irrit. 2 H315 Causes skin irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.

· **Label elements:**

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).

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Trade Name: ECC

· ***Hazard pictograms:***

GHS02 GHS07 GHS08

· ***Signal word:*** Danger

· ***Hazard-determining components of labeling:***
2,2,4-Trimethylpentane
Heptane
Isooctane

· ***Hazard statements:***
H225 Highly flammable liquid and vapor.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H304 May be fatal if swallowed and enters airways.

· ***Precautionary statements:***

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	If swallowed: Immediately call a poison center/doctor.
P321	Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
P331	Do NOT induce vomiting.
P302+P352	If on skin: Wash with plenty of water.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a poison center/doctor if you feel unwell.
P362+P364	Take off contaminated clothing and wash it before reuse.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P370+P378	In case of fire: Use for extinction: CO2, powder or water spray.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· ***Unknown acute toxicity:***
This value refers to knowledge of known, established toxicological or ecotoxicological values.
100 % of the mixture consists of component(s) of unknown toxicity.

· ***Classification system:*** NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

· ***NFPA ratings (scale 0 - 4)***

Health = 1
Fire = 3
Reactivity = 0

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· ***HMIS-ratings (scale 0 - 4)***

Health = *1
Fire = 3
Physical Hazard = 0

· ***Hazard(s) not otherwise classified (HNOC):*** None known

*
3 Composition/Information on Ingredients

· ***Chemical characterization: Mixtures***
· ***Description:*** Mixture of substances listed below with non-hazardous additions.

· ***Dangerous Components:***

CAS: 540-84-1 RTECS: SA 3320000	2,2,4-Trimethylpentane Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; STOT SE 3, H336	60-90%
CAS: 31394-54-4	Heptane Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; STOT SE 3, H336	25-50%
CAS: 26635-64-3	Isooctane Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; STOT SE 3, H336	2-12%

· ***Additional information:***
The exact percentages of the ingredients of this mixture are considered to be proprietary and are withheld in accordance with the provisions of paragraph (i) of §1910.1200 of 29 CFR 1910.1200 Trade Secrets.

*
4 First-Aid Measures

· ***Description of first aid measures***
· ***After inhalation:***
In case of symptoms arising from inhalation of fumes, mists or vapour: Remove casualty to a quiet and well ventilated place if safe to so so. If the casualty is unconscious and not breathing, ensure that there is no obstruction to air passage ways and give artificial respiration by trained personnel. If necessary, give external cardiac massage and obtain immediate medical assistance. If the casualty is breathing, place in a recovery position and administer oxygen by trained personnel if necessary. Seek medical attention if breathing remains difficult.
In case of unconsciousness place patient stably in side position for transportation.
· ***After skin contact:***
Immediately wash with water and soap and rinse thoroughly.
If skin irritation occurs, consult a doctor.
· ***After eye contact:***
If eye irritation occurs, consult a doctor.
Rinse opened eye for several minutes under running water.
· ***After swallowing:***
Rinse out mouth and then drink plenty of water.
Do not induce vomitting.
If vomiting does occur, repeat fluid administration
If vomiting ocurrs, the head should be kept low so that the vomit does not enter the lungs (aspiration). Once the vomiting ceases, place the person in the recovery position with the legs slightly raised.
If symptoms develop and/or persist, seek medical attention.
· ***Information for doctor***
· ***Most important symptoms and effects, both acute and delayed:*** No further relevant information available.

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· ***Indication of any immediate medical attention and special treatment needed:***
No further relevant information available.

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5 Fire-Fighting Measures

· ***Extinguishing media***
· ***Suitable extinguishing agents:*** Regular foam, carbon dioxide or dry chemical. Class B.
· ***For safety reasons unsuitable extinguishing agents:***
Water with full jet
No further relevant information.
· ***Special hazards arising from the substance or mixture:***
If incinerated product will release the following toxic fumes: Carbon Oxides and unburnt hydrocarbon particulate.
· ***Advice for firefighters*** Use water spray to cool unopened containers.
· ***Special protective equipment for firefighters:***
As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent) and full protective gear to prevent contact with skin and eyes.

*
6 Accidental Release Measures

· ***Personal precautions, protective equipment and emergency procedures:***
Ensure adequate ventilation.
Keep people at a distance and stay upwind.
Avoid contact with skin, eyes and clothing.
Keep away from ignition sources
Wear protective equipment. Keep unprotected persons away.
· ***Environmental precautions:*** Do not allow to enter sewers/surface or ground water.
· ***Methods and material for containment and cleaning up:***
Absorb with liquid-binding material (ie. sand, diatomite, universal binders), do NOT use sawdust.
Absorb with liquid-binding material (i.e. sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
Do not flush with water or aqueous cleansing agents
Dispose of the collected material according to regulations.
· ***Reference to other sections:***
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
· ***Protective Action Criteria for Chemicals***

· ***PAC-1:***		
540-84-1	2,2,4-Trimethylpentane	230 ppm

· ***PAC-2:***		
540-84-1	2,2,4-Trimethylpentane	830 ppm

· ***PAC-3:***		
540-84-1	2,2,4-Trimethylpentane	5000* ppm

*
7 Handling and Storage

· ***Handling***
· ***Precautions for safe handling:***
Avoid contact with skin, eyes and clothing
Keep away from sources of ignition.

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Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
Keep receptacles tightly sealed.

· ***Information about protection against explosions and fires:***
Do not spray on a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

· ***Conditions for safe storage, including any incompatibilities***
Store away from strong acids, strong bases, strong oxidizing agents and strong reducing agents.

· ***Storage***

· ***Requirements to be met by storerooms and receptacles:***
Store in a well ventilated place.
Store in a cool, dry place away from sparks and flame.
Do not store in direct sunlight.
Store in a cool location.

· ***Information about storage in one common storage facility:*** Not required.

· ***Further information about storage conditions:***
Keep receptacle tightly sealed.
Store in cool, dry conditions in well sealed receptacles.

· ***Specific end use(s):*** No further relevant information available.

* 8 Exposure Controls/Personal Protection

· ***Additional information about design of technical systems:*** No further data; see section 7.

· ***Control parameters:***
All ventilation should be designed in accordance with OSHA standard (29 CFR 1910.94). Use mechanical (general) ventilation for storage areas. Use appropriate ventilation as required to keep Exposure Limits in Air below TLV & PEL limits.

· ***Components with occupational exposure limits:***
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.
At this time, the other constituents have no known exposure limits.

540-84-1 2,2,4-Trimethylpentane	
PEL	Long-term value: 2350 mg/m³, 500 ppm n-Octane only
TLV	Long-term value: 1401 mg/m³, 300 ppm

· ***Additional information:*** The lists that were valid during the creation of this SDS were used as basis.

· ***Exposure controls:***

· ***Personal protective equipment***

· ***General protective and hygienic measures:***
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing and wash before reuse.
Wash hands before breaks and at the end of work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.

(Contd. on page 6)

· **Breathing equipment:**

Suitable respiratory protective device recommended.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure, use respiratory protective device that is independent of circulating air.

· **Protection of hands:**

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
Select glove material based on penetration times, rates of diffusion and degradation.

· **Material of gloves:**
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material cannot be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material:**
The exact break-through time has to be determined and observed by the manufacturer of the protective gloves.

· **Eye protection:**

Tightly sealed goggles

· **Body protection:**

Protective work clothing

*
9 Physical and Chemical Properties

· **Information on basic physical and chemical properties**
· **General Information**
· **Appearance:**

Form:	Liquid
Color:	Clear, colorless
· **Odour:**	Mild, petroleum-like
· **Odor threshold:**	Not determined.
· **pH-value:**	Not determined.
· **Change in condition**	
Melting point/Melting range:	Not determined.
Boiling point/Boiling range:	≥99 °C (≥210.2 °F)

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· **Flash point:**	-11 °C (12.2 °F)
· **Flammability (solid, gaseous):**	Not applicable.
· **Ignition temperature:**	≥410 °C (≥770 °F)
· **Decomposition temperature:**	Not determined.
· **Auto igniting:**	Product is not self-igniting.
· **Danger of explosion:**	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· **Explosion limits:**	
Lower:	1 Vol %
Upper:	6.6 Vol %
· **Vapor pressure @ 20 °C (68 °F):**	≤15 hPa (≤11.3 mm Hg)
· **Density @ 20 °C (68 °F):**	0.698 g/cm³ (5.8248 lbs/gal)
· **Relative density:**	Not determined.
· **Vapor density @ 20 °C (68 °F):**	>2 g/cm³ (>16.69 lbs/gal) (air=1)
· **Evaporation rate @ 20 °C (68 °F):**	>1 (nBuAc=1)
· **Solubility in / Miscibility with:**	
Water:	Negligible
· **Partition coefficient (n-octanol/water):**	Not determined.
· **Viscosity:**	
Dynamic:	Not determined.
Kinematic:	Not determined.
· **Solvent content:**	
Organic solvents:	67.5 %
VOC content:	67.50 %
Solids content:	0.0 %
· **Other information:**	No further relevant information available.

* 10 Stability and Reactivity

· **Reactivity:** No further relevant information available.
· **Chemical stability:** Stable under normal conditions.
· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
· **Possibility of hazardous reactions:** No dangerous reactions known.
· **Conditions to avoid:**
Elevated temperatures; decomposes with heat. Sources of ignition such as sparks, hot spots, welding, flames.
· **Incompatible materials:** Strong acids, strong bases, strong oxidizing agents and strong reducing agents.
· **Hazardous decomposition products:** Carbon Oxides.

* 11 Toxicological Information

· **Information on toxicological effects:** The toxicity of this product is unknown.
· **Acute toxicity:**
· **LD/LC50 values that are relevant for classification:** No data available.
· **Primary irritant effect:**
· **On the skin:** Irritant to skin and mucous membranes.
· **On the eye:** No irritating effect.

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· **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Irritant

· **Carcinogenic categories:**

· **IARC (International Agency for Research on Cancer):**
None of the ingredients are listed.

· **NTP (National Toxicology Program):**
None of the ingredients are listed.

· **OSHA-Ca (Occupational Safety & Health Administration):**
None of the ingredients are listed.

12 Ecological Information

· **Toxicity:** The hazards for the aquatic environment are unknown.
· **Aquatic toxicity:** No further relevant information available.
· **Persistence and degradability:** No further relevant information available.
· **Behavior in environmental systems:**
· **Bioaccumulative potential:** No further relevant information available.
· **Mobility in soil:** No further relevant information available.
· **Additional ecological information:**
· **General notes:**
Do not allow product to reach ground water, water course or sewage system.
Danger to drinking water if even small quantities leak into the ground.
· **Results of PBT and vPvB assessment:**
· **PBT:** Not applicable.
· **vPvB:** Not applicable.
· **Other adverse effects:** No further relevant information available.

* 13 Disposal Considerations

· **Waste treatment methods**
· **Recommendation:**
Observe all federal, state and local environmental regulations when disposing of this material.
ECC liquid is to be disposed of according to local, state, and federal regulations. The manufacture recommends incineration when disposing of waste material. Please call us if you need additional disposal information.

· **Uncleaned packaging**
· **Recommendation:** Dispose of as unused product.

* 14 Transport Information

· **UN-Number:**
· **DOT, ADR/ADN, IMDG, IATA** UN3295
· **UN proper shipping name:**
· **DOT** Hydrocarbons, liquid, n.o.s.
· **ADR/ADN** UN3295 Hydrocarbons, liquid, n.o.s.
· **IMDG** HYDROCARBONS, LIQUID, N.O.S. (OCTANES, Heptane), MARINE POLLUTANT
· **IATA** HYDROCARBONS, LIQUID, N.O.S.

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Trade Name: ECC

· **Transport hazard class(es):**

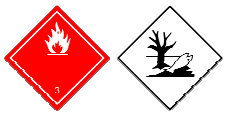
· **DOT**

· **Class:**	3 Flammable liquids
· **Label:**	3

· **ADR/ADN**

· **Class:**	3 (F1) Flammable liquids
· **Label:**	3

· **IMDG**



· **Class:**	3 Flammable liquids
· **Label:**	3

· **IATA**

· **Class:**	3 Flammable liquids
· **Label:**	3
· **Packing group:**	
· **DOT, ADR/ADN, IMDG, IATA**	II
· **Environmental hazards:**	Product contains environmentally hazardous substances: 2,2,4-Trimethylpentane, Heptane
· **Special precautions for user:**	Warning: Flammable liquids
· **Danger code (Kemler):**	33
· **EMS Number:**	F-E,S-D
· **Stowage Category**	B
· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:**	Not applicable.

· **Transport/Additional information:**

· **DOT**

· **Quantity limitations:**	On passenger aircraft/rail: 5 L On cargo aircraft only: 60 L

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· **ADR/ADN**
· **Excepted quantities (EQ):** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml

· **IMDG**
· **Limited quantities (LQ):** 1L
· **Excepted quantities (EQ):** Code: E2
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 500 ml
· **UN "Model Regulation":** UN 3295 HYDROCARBONS, LIQUID, N.O.S., 3, II

* 15 Regulatory Information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture:**
· **SARA (Superfund Amendments and Reauthorization):**

· **Section 355 (extremely hazardous substances):**
None of the ingredients are listed.

· **Section 313 (Specific toxic chemical listings):**
None of the ingredients are listed.

· **TSCA (Toxic Substances Control Act):**
All ingredients are listed or exempt from listing.

· **TSCA new (21st Century Act) (Substances not listed)**

31394-54-4	Heptane
26635-64-3	Isooctane

· **California Proposition 65:**

· **Chemicals known to cause cancer:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for females:**
None of the ingredients are listed.

· **Chemicals known to cause reproductive toxicity for males:**
None of the ingredients are listed.

· **Chemicals known to cause developmental toxicity:**
None of the ingredients are listed.

· **New Jersey Right-to-Know List:**

540-84-1	2,2,4-Trimethylpentane

· **New Jersey Special Hazardous Substance List:**

540-84-1	2,2,4-Trimethylpentane	F3

· **Pennsylvania Right-to-Know List:**
All ingredients are listed.

· **Pennsylvania Special Hazardous Substance List:**
None of the ingredients are listed.

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· **Carcinogenic categories:**

· **EPA (Environmental Protection Agency):**		
540-84-1	2,2,4-Trimethylpentane	II

· **TLV (Threshold Limit Value established by ACGIH):**
None of the ingredients are listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health):**
None of the ingredients are listed.

· **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).
· **Hazard pictograms:**

GHS02 GHS07 GHS08

· **Signal word:** Danger

· **Hazard-determining components of labeling:**
2,2,4-Trimethylpentane
Heptane
Isooctane
· **Hazard statements:**
H225 Highly flammable liquid and vapor.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H304 May be fatal if swallowed and enters airways.
· **Precautionary statements:**

P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	If swallowed: Immediately call a poison center/doctor.
P321	Specific treatment (see supplementary first aid instructions on this Safety Data Sheet).
P331	Do NOT induce vomiting.
P302+P352	If on skin: Wash with plenty of water.
P303+P361+P353	If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a poison center/doctor if you feel unwell.
P362+P364	Take off contaminated clothing and wash it before reuse.
P332+P313	If skin irritation occurs: Get medical advice/attention.
P370+P378	In case of fire: Use for extinction: CO2, powder or water spray.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P403+P235	Store in a well-ventilated place. Keep cool.

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P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.

· ***National regulations:***

None of the ingredients are listed.

· ***Chemical safety assessment:*** A Chemical Safety Assessment has not been carried out.

16 Other Information

Ecolink, Inc. believes the information contained herein is accurate. However, Ecolink makes no warranty, expressed or implied, regarding the accuracy of this data or the results to be obtained by the use thereof. Ecolink, Inc. assumes no responsibility for injury from the use of the product described herein.

· ***Date of preparation / last revision:*** 10/09/2018 / 1

· ***Abbreviations and acronyms:***

ADR: The European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN: The European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
ACGIH: American Conference of Governmental Industrial Hygienists
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
VOC: Volatile Organic Compounds (USA, EU)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety and Health
OSHA: Occupational Safety & Health Administration
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
REL: Recommended Exposure Limit
Flam. Liq. 2: Flammable liquids – Category 2
Skin Irrit. 2: Skin corrosion/irritation – Category 2
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

· **** Data compared to the previous version altered.***

SDS created by MSDS Authoring Services www.msdsauthoring.com +1-877-204-9106