LIVINGSTONE INTERNATIONAL PTY LTD
Branches in Sydney, Melbourne, Brisbane and Perth
HEAD OFFICE: Suite 1, Level 9, Building 3, 189 O'Riodan Street
Mascot NSW 2020 AUSTRALIA
EMAIL: sales@livingstone.com.au
WEBSITE: www.livingstone.com.au
PHONE: 1300 548 289
FAX: 1300 780 008
ABN 66 052 001 144

Issue Date: 06/03/2000
Last Revision Date: 11/04/2024
Superseded Date: 11/10/2018
Version Number: 06

SAFETY DATA SHEET

Product Code: JJ60243L

SECTION 1 PRODUCT IDENTIFICATION

Product Identifier

Product name Microshield Chlorhexidine Surgical Handwash
Synonyms Not Available
Other means of identification Not Available

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

Relevant identified uses SDS are intended for use in the workplace. For domestic-use products, refer to consumer labels. Antiseptic skin cleanser for external use, hand and body washing.

SECTION 2 HAZARD IDENTIFICATION

Classification of the substance or mixture

HAZARD RATINGS

		Min	Max
Flammability	0		
Toxicity	0		
Body Contact	1		
Reactivity	0		
Chronic	0		

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

GHS Classification Chronic Aquatic Hazard Category 3

Label elements

GHS label elements Not Applicable
SIGNAL WORD NOT APPLICABLE
Hazard statement(s) **H412:** Harmful to aquatic life with long lasting effects

Precautionary statement(s) Prevention: **P273:** Avoid release to the environment.
Precautionary statement(s) Response: Not Applicable
Precautionary statement(s) Storage: Not Applicable
Precautionary statement(s) Disposal: **P501:** Dispose of contents/container in accordance with local regulations.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

CAS No	Name	GHS Classification
18472-51-0	chlorhexidine gluconate	Acute Toxicity (Oral) Category 4, Skin Corrosion/Irritation Category 2, Serious Eye Damage Category 1, Skin Sensitizer Category 1, Acute Aquatic Hazard Category 1, Chronic Aquatic Hazard Category 1; H302, H315, H318, H317, H400, H410
67-63-0	isopropanol	Flammable Liquid Category 2, Eye Irritation Category 2A, STOT - SE (Narcosis) Category 3; H225, H319, H336
Not Available	Not Available	Not Applicable
Not Available	Not Available	Not Applicable
64-19-7	acetic acid glacial	Flammable Liquid Category 2, Metal Corrosion Category 1, Acute Toxicity (Dermal) Category 4, Skin Corrosion/Irritation Category 1A, Serious Eye Damage Category 1; H225, H290, H312, H314, H318
Not Available	Not Available	Not Applicable
Not Available	Not Available	Not Applicable
9004-34-6	cellulose	STOT - SE (Resp. Irr.) Category 3; H335
7732-18-5	water	Acute Toxicity (Oral) Category 4, Acute Toxicity (Dermal) Category 4, Acute Toxicity (Inhalation) Category 4, Skin Corrosion/Irritation Category 1B, STOT - SE (Resp. Irr.) Category 3; H302, H312, H332, H314, H335

SECTION 4 FIRST AID MEASURES

Description of first aid measures

Eye Contact

If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- Seek medical attention without delay; if pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact

No adverse effects anticipated from normal use.
- Concentrate and diluted solution is readily removed with water.
- Abraded or broken skin should be washed carefully and thoroughly.
- Seek medical attention in event of irritation.

Inhalation

- If fumes, aerosols or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

Ingestion

- For advice, contact a Poisons Information Centre or a doctor.
- If swallowed do NOT induce vomiting.
- If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.
- Observe the patient carefully.
- Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious.
- Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink.
- Seek medical advice.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 FIRE FIGHTING MEASURES

Extinguishing media

The product contains a substantial proportion of water, therefore there are no restrictions on the type of extinguishing media which may be used. Choice of extinguishing media should take into account surrounding areas. Though the material is non-combustible, evaporation of water from the mixture, caused by the heat of nearby fire, may produce floating layers of combustible substances.
In such an event consider:

- foam
- dry chemical powder.
- carbon dioxide.

Special hazards arising from the substrate or mixture

Fire Incompatibility None known.

Advice for firefighters

Fire Fighting

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves in the event of a fire.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.
- **DO NOT** approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

Fire/Explosion Hazard

- Non combustible.
- Not considered to be a significant fire risk.
- Expansion or decomposition on heating may lead to violent rupture of containers.
- Decomposes on heating and may produce toxic fumes of carbon monoxide (CO).
- May emit acrid smoke.

Decomposition may produce toxic fumes of:, carbon dioxide (CO_2), nitrogen oxides (NOx), other pyrolysis products typical of burning organic material

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Minor Spills Slippery when spilt.

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact with the substance, by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Wipe up.
- Place in a suitable, labelled container for waste disposal.

Major Spills Slippery when spilt.
Minor hazard.

- Clear area of personnel.
- Alert Fire Brigade and tell them location and nature of hazard.
- Control personal contact with the substance, by using protective equipment as required.
- Prevent spillage from entering drains or water ways.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.
- Wash area and prevent runoff into drains or waterways.
- If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

Safe handling

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- When handling, **DO NOT** eat, drink or smoke.
- Always wash hands with soap and water after handling.
- Avoid physical damage to containers.
- Use good occupational work practice.
- Observe manufacturer's storage and handling recommendations contained within this SDS.

Other information

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well ventilated area.
- Store away from incompatible materials and foodstuff containers.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storage and handling recommendations contained within this SDS.

Conditions for safe storage, including any incompatibilities

Suitable container

- Lined metal can, lined metal pail/ can.
- Plastic pail.
- Polyliner drum.
- Packaging as recommended by manufacturer.
- Check all containers are clearly labelled and free from leaks.

Storage incompatibility: None known

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
India Permissible Levels of Certain Chemical Substances in Work Environment	acetic acid glacial	Acetic acid	25 mg/m³ /10 ppm	37 mg/m³ / 15 ppm	Not Available	Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
isopropanol	Isopropyl alcohol	400 ppm	400 ppm	12000 ppm
acetic acid glacial	Acetic acid	Not Available	Not Available	Not Available
cellulose	Cellulose	30 mg/m³	260 mg/m³	260 mg/m³

Ingredient	Original IDLH	Revised IDLH
chlorhexidine gluconate	Not Available	Not Available
isopropanol	12,000 ppm	2,000 [LEL] ppm
acetic acid glacial	1,000 ppm	50 ppm
cellulose	Not Available	Not Available
water	Not Available	Not Available

MATERIAL DATA

Exposure controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are:

General exhaust is adequate under normal operating conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection. Provide adequate ventilation in warehouse or closed storage areas. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.

Type of Contaminant:	Air Speed
solvent, vapours, degreasing etc., evaporating from tank (in still air)	0.25-0.5 m/s (50-100 f/min)
aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)
direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min)
grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).	2.5-10 m/s (500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood - local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Personal protection


PPE GLOVES


PPE GOGGLES


PPE MASK


PPE SUIT

Eye and face protection:

No special equipment for minor exposure i.e. when handling small quantities.
OTHERWISE:

- Safety glasses with side shields.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59], [AS/NZS 1336 or national equivalent]

Skin protection	See Hand protection below
Hands/feet protection	No special equipment needed when handling small quantities. **OTHERWISE**: Wear general protective gloves, e.g. light weight rubber gloves.
Body protection	See Other protection below
Other protection	No special equipment needed when handling small quantities. **OTHERWISE:** ▸ Overalls. ▸ Eyewash unit.
Thermal hazards	Not Available

Recommended material(s)

GLOVE SELECTION INDEX

Glove selection is based on a modified presentation of the:
"Forsberg Clothing Performance Index".
The effect(s) of the following substance(s) are taken into account in the ***computer-generated*** selection:

MICROSHIELD 4 SURGICAL HANDWASH

Material	CPI
BUTYL	C
BUTYL/NEOPRENE	C
NAT+NEOPR+NITRILE	C
NATURAL RUBBER	C
NATURAL+NEOPRENE	C
NEOPRENE	C
NITRILE	C
NITRILE+PVC	C
PE	C
PE/EVAL/PE	C
PVA	C
PVC	C
SARANEX-23	C
TEFLON	C
VITON	C
##acetic acid	glacial

Respiratory protection

Not Available

Not Available

A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion
NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -
* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

SECTION 9 PHYSICAL/CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Pale pink viscous liquid with a cologne fragrance; partly mixes with water.		
Physical state:	#00Liquid	**Relative density (Water = 1):**	1.02
Odour:	Not Available	**Partition coefficient n-octanol / water:**	Not Available
Odour threshold:	Not Available	**Auto-ignition temperature (°C)**	Not Available

pH (as supplied)	5.3	**Decomposition temperature**	Not Available
Melting point / freezing point (°C)	Not Available	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	Not Available	**Molecular weight (g/mol)**	Not Applicable
Flash point (°C)	Not Applicable	**Taste**	Not Available
Evaporation rate	Not Available	**Explosive properties**	Not Available
Flammability	Not Applicable	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Applicable	**Surface Tension (dyn/cm or mN/m)**	Not Available
Lower Explosive Limit (%)	Not Applicable	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water (g/L)	#01partimmiscible	**pH as a solution(1%)**	Not Available
Vapour density (Air = 1)	Not Available	**VOC g/L**	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical Stability	Product is considered stable and hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

Inhaled	Not normally a hazard due to non-volatile nature of product. The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.
Ingestion	The liquid is mildly discomforting. Ingestion may result in nausea, abdominal irritation, pain and vomiting
Skin Contact	Not considered to cause discomfort through normal use. Discontinue use if irritation occurs.
Eye	The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.
Chronic	There exists limited evidence that shows that skin contact with the material is capable either of inducing a sensitisation reaction in a significant number of individuals, and/or of producing positive response in experimental animals. Chronic ingestion of chlorhexidine can result in liver and kidney damage.

MICROSHIELD 4 SURGICAL HANDWASH

TOXICITY	IRRITATION
Not Available	Not Available

chlorhexidine gluconate

TOXICITY	IRRITATION
Oral (rat) LD50: 2000 mg/kgd[2]	Nil reported

isopropanol

TOXICITY	IRRITATION
Dermal (rabbit) LD50: 12792 mg/kg[1]	Eye (rabbit): 10 mg - moderate
Inhalation (rat) LC50: 72.6 mg/L/4h[2]	Eye (rabbit): 100 mg - SEVERE
Oral (rat) LD50: 5000 mg/kg[2]	Eye (rabbit): 100mg/24hr-moderate
	Skin (rabbit): 500 mg - mild

MICROSHIELD 4 SURGICAL HANDWASH

TOXICITY	IRRITATION
Not Available	Not Available

MICROSHIELD 4 SURGICAL HANDWASH

TOXICITY	IRRITATION
Not Available	Not Available

acetic acid glacial

TOXICITY	IRRITATION
Dermal (rabbit) LD50: 1060 mg/kg[2]	Eye (rabbit): 0.05mg (open)-SEVERE
Inhalation (mammal) LC50: 11.4 mg/L/4H[2]	Skin (human):50mg/24hr - mild
Inhalation (mouse) LC50: 5620 ppm/1H[2]	Skin (rabbit):525mg (open)-SEVERE
Oral (rat) LD50: 3310 mg/kgE[2]	

MICROSHIELD 4 SURGICAL HANDWASH

TOXICITY	IRRITATION
Not Available	Not Available

Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

Acute Toxicity	⦸	**Carcinogenicity**	⦸
Skin Irritation/Corrosion	⦸	**Reproductivity**	⦸
Serious Eye Damage/Irritation	⦸	**STOT - Single Exposure**	⦸
Respiratory or Skin sensitisation	⦸	**STOT - Repeated Exposure**	⦸
Mutagenicity	⦸	**Aspiration Hazard**	⦸

Legend: ✓ — *Data required to make classification available*
× — Data available but does not fill the criteria for classification
⦸ — Data Not Available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Ingredient	Endpoint	Test Duration	Species	Value	Source
chlorhexidine gluconate	LC50	96	Fish	2.08mg/L	2
chlorhexidine gluconate	EC50	48	Crustacea	0.050.1mg/L	2
chlorhexidine gluconate	EC50	72	Algae or other aquatic plants	0.011mg/L	2
chlorhexidine gluconate	BCF	24	Algae or other aquatic plants	0.05mg/L	4
isopropanol	LC50	96	Fish	183.8440mg/L	3
isopropanol	EC50	48	Crustacea	125000mg/L	5
isopropanol	EC50	96	Algae or other aquatic plants	993.2320mg/L	3
isopropanol	EC0	24	Crustacea	>=10000mg/L	1
isopropanol	EC10	24	Algae or other aquatic plants	680mg/L	4
isopropanol	EC100	24	Crustacea	>100000mg/L	1

Ingredient	Endpoint	Test Duration	Species	Value	Source
isopropanol	EC29	504	Crustacea	100mg/L	1
isopropanol	EC90	96	Algae or other aquatic plants	>10000mg/L	1
acetic acid glacial	LC50	96	Fish	31.367.6mg/L	2
acetic acid glacial	EC50	48	Crustacea	18.90mg/L	2
acetic acid glacial	EC50	72	Algae or other aquatic plants	29.230mg/L	2
acetic acid glacial	EC100	0.25	Algae or other aquatic plants	720mg/L	1
acetic acid glacial	EC100	24	Crustacea	114mg/L	1
acetic acid glacial	EC0	24	Crustacea	78mg/L	1
acetic acid glacial	EC10	24	Algae or other aquatic plants	105mg/L	4
cellulose	LC50	96	Fish	7.450580mg/L	3
cellulose	EC50	96	Algae or other aquatic plants	17857.939050mg/L	3
water	LC50	96	Fish	897.5200mg/L	3
water	EC50	96	Algae or other aquatic plants	8768.8740mg/L	3

DO NOT discharge into sewer or waterways
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
isopropanol	LOW (Half-life = 14 days)	LOW (Half-life = 3 days)
acetic acid glacial	LOW	LOW
cellulose	LOW	LOW
water	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
isopropanol	LOW (LogKOW = 0.05)
acetic acid glacial	LOW (LogKOW = -0.17)
cellulose	LOW (LogKOW = -5.1249)
water	LOW (LogKOW = -1.38)

Mobility in soil

Ingredient	Mobility
isopropanol	HIGH (KOC = 1.06)
acetic acid glacial	HIGH (KOC = 1)
cellulose	LOW (KOC = 10)
water	LOW (KOC = 14.3)

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods
Product / Packaging disposal

- Recycle wherever possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.
- Dispose of by: burial in a land-fill specifically licenced to accept chemical and / or pharmaceutical wastes or incineration in a licenced apparatus (after admixture with suitable combustible material).
- Decontaminate empty containers. Observe all label safeguards until containers are cleaned and destroyed.

- Containers may still present a chemical hazard/ danger when empty.
- Return to supplier for reuse/ recycling if possible.

Otherwise:

- If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.
- Where possible retain label warnings and SDS and observe all notices pertaining to the product.

SECTION 14 TRANSPORT INFORMATION

Labels Required
Marine Pollutant NO

Land transport (ADG): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
Air transport (ICAO-IATA / DGR): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
Sea transport (IMDG-Code / GGVSee): NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS
Transport in bulk according to Annex II of MARPOL 73 / 78 and the IBC code

Source	Ingredient	Pollution Category
IMO MARPOL 73/78 (Annex II) - List of Noxious Liquid Substances Carried in Bulk	acetic acid glacial	Z

SECTION 15 REGULATORY INFORMATION

Safety, health and environmental regulations / legislation specific for the substance or mixture
CHLORHEXIDINE GLUCONATE(18472-51-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS
Not Applicable
ISOPROPANOL(67-63-0) IS FOUND ON THE FOLLOWING REGULATORY LISTS
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs
• Not Applicable
• Not Applicable
ACETIC ACID GLACIAL(64-19-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS
India Permissible Levels of Certain Chemical Substances in Work Environment
• Not Applicable
• Not Applicable
CELLULOSE(9004-34-6) IS FOUND ON THE FOLLOWING REGULATORY LISTS
Not Applicable
WATER(7732-18-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS
Not Applicable

National Inventory	Status
Australia - AICS	Y
Canada - DSL	Y
Canada - NDSL	N (chlorhexidine gluconate; water; acetic acid glacial; isopropanol)
China - IECSC	Y
Europe - EINEC / ELINCS / NLP	Y
Japan - ENCS	N (chlorhexidine gluconate; water)
Korea - KECI	Y
New Zealand - NZIoC	Y

Philippines - PICCS	N (chlorhexidine gluconate)
USA - TSCA	Y
Legend:	Y = All ingredients are on the inventory N = Not determined or one or more ingredients are not on the inventory and are not exempt from listing(see specific ingredients in brackets)

SECTION 16 OTHER INFORMATION

Other information

Ingredients with multiple cas numbers

Name	CAS No.
cellulose	68442-85-3, 9004-34-6

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and currentor available engineering controls must be considered.

Definitions and abbreviations

PC-TWA: Permissible Concentration-Time Weighted Average
PC-STEL: Permissible Concentration-Short Term Exposure Limit
ARC: International Agency for Research on Cancer
ACGIH: American Conference of Governmental Industrial Hygienists
STEL: Short Term Exposure Limit
TEL: Temporary Emergency Exposure Limit.
IDLH: Immediately Dangerous to Life or Health Concentrations
OF: Odour Safetv Factor
NOAEL :No Observed Adverse Effect Level
LOAEL: Lowest Observed Adverse Effect Level
TLV: Threshold Limit Value
LOD: Limit Of Detection
OTV: Odour Threshold Value
BCF: BioConcentration Factors
BEI: Biological Exposure Index

Reason for Revision: To bring to date

END OF SDS