SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier

Product Name: Superior® - #1A, #2B, #3C, #W3C

Synonyms: Seal Pac® Leak Test - #1AT, #2BT, #3CF, #W3CF

Relevant uses and uses advised against

Uses: Professional pipe, sewer, HVAC leak testing, fire training.

Advised against: Non-professional use

Details of the supplier of the product

Supplier name Leak Test Australia Pty Ltd
Postal Address PO Box 201, North Fremantle, WA, 6159
Telephone 1800 LEAK TEST
Email sales@leaktest.com.au
Web Address www.leaktest.com.au

Emergency telephone numbers

Emergency: (+61) 428 223 603

2. HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Hazardous chemical according to the GHS Criteria of Safe Work Australia

Carcinogen – Category 2

Eye irritation – Category 2A

Specific target organ toxicity (repeated exposure) – category 2

Specific target organ toxicity (single exposure) – category 3

2.2 GHS label elements

Signal word: **WARNING**

Pictograms:

2.3 Hazard statements

H319 – Causes serious eye irritation

H335 – May cause respiratory irritation

2.4 Precautionary Statements

Prevention

P201 - Obtain special instructions before use

P202 - Do not handle until all safety precautions have been read and understood

P261 – Avoid breathing vapours and fume

Response

P337 + P313 If eye irritation persists: Get medical attention.

P308 + P313 - If exposed or concerned, Get medical advice

Storage

P402: Store in a dry place.

Disposal

P501 - Dispose of contents/container to in accordance with local regulations

2.5 Other hazards

Other Hazards;

NOTE: Cannot self-activate. Product is sealed in heavy cardboard airtight tube or metal canister and requires the product to be removed and an external sustained ignition source applied to initiate.

Exempt from Dangerous Goods classification

After activation, the product emits a haze (Zinc Chloride mist) that can be irritating to the eyes, respiratory tract, and mucous membranes.

When used as directed exposure should be limited, and normally poses no hazard. Persons with known respiratory sensitivity should not be exposed to haze.

Moderate exposure may temporarily result in irritation, inflammation, and difficulty breathing – moving to fresh air will reverse these effects. Heavy exposure may result in coughs, chills, fever, and pulmonary edema, requiring medical treatment.

Note: It does not leave a residue on surface or in absorbent materials Overwhelming exposure can be dangerous and is to be avoided. Persons who will be exposed to sustained heavy haze should wear Self Contained Breathing Apparatus (SCBA).

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substance / Mixture

Ingredient	CAS Number	EC Number	Content
Hexachloroethane	67-72-1	200-666-4	<55%

Remaining product components are not considered hazardous chemicals or are below levels requiring classification.

4. FIRST AID MEASURES

4.1 Description of first aid measures;

Eye: Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist

Inhalation: Allow victim to breathe fresh air. Allow the victim to rest

Skin: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

First aid facilities: Medical Centre or practitioner

4.2 Most important symptoms and effects, both acute and delayed

Acute irritation of the nasal pharynx and eyes from extreme concentration. Symptoms will stop on removal to fresh air. Chronic cell differentiation is improbable due to the small amount of carcinogen which is consumed during haze generation.

Hexachloroethane, used in the generation the haze acts primarily as a central nervous system depressant (possibly resulting in mild paralysis) in humans acutely exposed to it and in high concentrations it causes narcosis.

Hexachloroethane is moderately irritating to the skin, mucous membranes, and liver in humans. Liver and kidney effects have been observed in animals acutely exposed to hexachloroethane by ingestion.

Tests involving acute exposure of rats, mice, guinea pigs, and rabbits have demonstrated hexachloroethane to have moderate acute toxicity from ingestion and low acute toxicity from dermal exposure.

The levels of Hexachloroethane released post ignition is immeasurable, testing indicates it is consumed in the haze generation phase rendering it inert.

4.3 Immediate medical attention and special treatment needed

Remove casualty to fresh air, wash face and rinse mouth. Seek medical advice if irritation persists.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Water – FINE SPRAY .

5.2 Special hazards arising from the substance or mixture

May produce of haze / packaging smoke in a large volume and in a free burning state. Apply water.

5.3 Advice for firefighters

Fight fire with normal precautions from a reasonable distance. Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent firefighting water from entering environment.

5.4 Hazchem code

2Z

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Remove non-essential personnel from immediate area and maintain a safe distance.

6.2 Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters

6.3 Methods of cleaning up

On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other material.

6.4 References to other sections

See Heading 8. Exposure controls and personal protection

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

The individual units are stored in airtight containers called Sealpaks ®. On opening the container there is no safe handling requirements unless the generator is initiated through the application of a sustained, high temperature external ignition source.

Prior to initiation the user shall read the safety instructions and don protective glasses and safety gloves. The Haze Generator shall only be used in open air unless the application requires a heavy concentration of haze.

Persons who will be exposed to sustained heavy concentration of haze should wear a half face respirator with ABK filtering or a Self-Contained Breathing Apparatus (SCBA). Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

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

7.2 Conditions for safe storage, including any incompatibilities

Store only in original packaging and conform with the directions for storage with non-dangerous goods or goods with the same dangerous goods classification.

Store in original container. Prevent moisture contact, store in a dry, well ventilated place away from ignition sources.

Keep container closed when not in use, exposure to moisture renders the product inert.

7.3 Specific end uses

The candles generate a positive pressure haze that does not leave residue on surfaces and easily diffuses in an open environment. The haze, when applied to a sewer, pipe or ventilation system will accurately track airflow and indicate leaks as the haze moves through a circuit.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Ingredient	Reference	TWA		STEL	
		ppm	mg/m³	ppm	mg/m³
Hexachloroethane (67-72-1)	SWA ES	1	9.7		
Zinc chloride fume (in use)	SWA ES	-	1		

Biological limits;

Not applicable in this product form.

8.2 Exposure controls

Engineering controls;

Do not eat or drink during use and initiate from a well-ventilated position. Consider using a mechanical blower to direct haze into the test area.

NOTE: Exposure is highly unlikely when product is used as directed. After initiation, product produces haze and hexachloroethane is consumed. Direct contact with the Hexachloroethane (67-72-1) product does not occur.

PPE:	Ensure PPE is suitable for the task at hand.
Eye:	Where protective glasses.
Hands:	Wear protective gloves.
Body:	Full length protective workwear is advised
Respiratory:	Minimum – consider a respirator with a carbon filter.
	Maximum – Consider SCBA

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	GREY SOLID CONTAINED IN A TUBE
Odour	CAMPHOR
Flammability	NON FLAMEABLE
Flash point	> 250°C
Boiling point	NOT RELEVANT
Melting point	NOT RELEVANT
Evaporation rate	NOT RELEVANT
pH	NOT RELEVANT
Vapour density	NOT RELEVANT
Specific gravity	NOT RELEVANT
Solubility (water)	SOLUBLE WILL BREAK DOWN IN WATER
Vapour pressure	NOT AVAILABLE
Upper explosion limit	NOT RELEVANT
Lower explosion limit	NOT RELEVANT
Partition coefficient	NOT RELEVANT
Autoignition temperature	> 250°C
Decomposition temperature	> 250°C
Viscosity	NOT RELEVANT
Explosive properties	NOT RELEVANT
Oxidising properties	NOT RELEVANT
Odour threshold	NOT RELEVANT

Other Information: NOT AVAILABALE

10. STABILITY & REACTIVITY

10.1 Reactivity

Zinc chloride may react with water, producing haze. The quantities in the haze generator are not concentrated for this to occur. Testing indicates that exposure to humidity and water renders the generator inert.

10.2 Chemical stability n

Product is stable.

10.3 Possibility of hazardous reaction

Not established

10.4 Conditions to avoid

Moisture, high humidity, extreme radiant heat or direct sustained flame contact.

10.5 Incompatible materials

Strong acids. Strong bases.

10.6 Hazardous decomposition products

Zinc chloride. Haze. Carbon monoxide. Carbon dioxide.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity Based on available data the classification criteria are not met.

Ingredient	Oral LD50	Dermal LD50	Inhalation LD50
Hexachloroethane (67-72-1)	4460 mg/kg	32000 mg/kg	

Skin: Extreme exposure
Eye: Extreme exposure
Sensitisation Not classified
Mutagenicity Not classified
Carcinogenicity May cause cancer (Dermal, oral).
Reproductive No information is available on the reproductive or developmental effects of hexachloroethane in humans.
STOT - single exposure Not classified
STOT - repeated exposure Not classified
Aspiration Not classified

12. ECOLOGICAL INFORMATION

12.1 Toxicity;

Hexachloroethane (67-72-1)

LC50 fish 1	967 - 1250 µg/l (Exposure time: 96 h - Species: Pimephales promelas)
LC50 fish 2	712 - 1030 µg/l (Exposure time: 96 h - Species: Lepomis macrochirus)

12.2 Persistence;

Seal Pac® Leak Test (NA)

NOT ESTABLISHED

12.3 Bio accumulative potential;

Hexachloroethane (67-72-1)

Log Pow	4.14

12.4 Mobility in soil;

Seal Pac® Leak Test (NA)

Ecology - soil	Not Established

12.5 Other adverse effects;

Effect on the global warming	No known ecological damage caused by this product
Other information	Avoid release to the environment

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste Disposal	Collect and place in sealable containers and dispose of to an approved landfill site. Contact the manufacturer/supplier for additional information (if required).
Legislation	Dispose of in accordance with relevant local legislation.

14. TRANSPORT INFORMATION

Exempt from classification as Dangerous Goods:

Special Provision 335
(Australian Dangerous Goods Code for Road and Rail, IMDG Code for Sea Transport)

Special Provision A158
(International Air Transport Association Dangerous Goods Regulations)

Marking and Labelling Requirements:
Not applicable

14.5 Environmental Hazards

NO INFORMATION PROVIDED

14.6 Special precautions for use

15. REGULATORY INFORMATION

15.1 Safety, health and environment regulations / legislation for the substance or mixture

Poison schedule	A poison schedule number has not been allocated to this product using the criteria in the Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP).
Classifications	The assessment is based on the Globally Harmonised System (GHS) of Classification and Labelling of Chemicals
Inventory listings	All components listed on the AIIC (Australian Inventory of Industrial Chemicals)

16. OTHER INFORMATION

Additional information

RESPIRATORS:
In general the use of respirators should be limited and engineering controls employed to avoid exposure. If respiratory equipment must be worn ensure correct respirator selection and training is undertaken. Remember that some respirators may be extremely uncomfortable when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary. Before wearing a respirator ensure a correct face fit test has been completed.

HEALTH EFFECTS FROM EXPOSURE:
It should be noted that the effects from exposure to this product will depend on several factors including: form of product; frequency and duration of use; quantity used; effectiveness of control measures; protective equipment used and method of

application. Given that it is impractical to prepare a report which would encompass all possible scenarios, it is anticipated that users will assess the risks and apply control methods where appropriate.

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CNS	Central Nervous System
EC No.	EC No - European Community Number
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
GHS	Globally Harmonized System
GTEPG	Group Text Emergency Procedure Guide
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m³	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
SWA ES	Short-Term Exposure Limit
STEL	Safe Work Australia Exposure Standard
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
SWA	Safe Work Australia
TLV	Threshold Limit Value
TWA	Time Weighted Average

Report status Prepared by

This document has been compiled by LTA on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to LTA by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

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