



Crystalite Thermoplastic Roadmarking Compound

Crystalite Design

Chemwatch: 4966-87

Version No: 5.1.1.1

Safety Data Sheet according to WHS and ADG requirements

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S.GHS.AUS.EN

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

Product Identifier

Product name:	Crystalite Thermoplastic Roadmarking Compound
Chemical Name:	Not Applicable
Synonyms:	Not Available
Proper shipping name:	Not Applicable
Chemical formula:	Not Applicable
Other means of identification:	Not Available
CAS number:	Not Applicable

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

Relevant identified uses:	Used to make preformed thermplastic roadmarking compound.
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Details of the supplier of the safety data sheet

Registered company name:	Crystalite Design
Address:	26-28 Frederick Kelly Street South West Rocks 2431 NSW Australia
Telephone:	+61 2 6566 7766
Fax:	Not Available
Website:	www.crystalite.com.au
Email:	ryan@crystalite.com.au

Emergency telephone number

Association / Organisation:	Not Available
Emergency telephone numbers:	+61 407 766 796 (Mon-Fri; 8am-6pm)
Other emergency telephone numbers:	+61 407 766 796 (Mon-Fri; 8am-6pm)

SECTION 2 Hazards identification

Classification of the substance or mixture

HAZARDOUS CHEMICAL. NON-DANGEROUS GOODS. According to the Model WHS Regulations and the ADG Code.

Poisons Schedule:

GHS Classification^[1]:

Serious Eye Damage Category 1

Legend: 1. Classified by Chemwatch; 2. Classification drawn from HSIS; 3. Classification drawn from EC Directive 1272/2008 - Annex VI

Label elements

GHS label elements



Signal word: DANGER

Hazard statement(s):

H318 Causes serious eye damage

Precautionary statement(s): Prevention

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Precautionary statement(s): Response

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor/physician/first aider

Precautionary statement(s): Storage

Not Applicable

Precautionary statement(s): Disposal

(null) (null)

SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
65997-17-3.	30-60	glass beads
Not Available	5-30	quartz chips
Not Available	10-30	hydrocarbon resin
1317-65-3	5-19	limestone
13463-67-7	1-9	titanium dioxide
Not Available	1-9	plasticiser
14808-60-7	<0.1	silica crystalline - quartz

SECTION 4 First aid measures

Description of first aid measures

Eye Contact:

If this product comes in contact with eyes:

- Wash out immediately with water.
- If irritation continues, seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

Skin Contact:

If skin or hair contact occurs:

- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

Inhalation:

- If dust is inhaled, remove from contaminated area.
- Encourage patient to blow nose to ensure clear passage of breathing.
- If irritation or discomfort persists seek medical attention.

Ingestion:

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5 Firefighting measures

Extinguishing media

- Foam.
- Dry chemical powder.
- BCF (where regulations permit).
- Carbon dioxide.

Special hazards arising from the substrate or mixture

Fire Incompatibility:

Avoid contamination with strong oxidising agents as ignition may result

Advice for firefighters

Fire Fighting:

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use water delivered as a fine spray to control fire and cool adjacent area.

Fire/Explosion Hazard:

- Solid which exhibits difficult combustion or is difficult to ignite.
- Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion.
- Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust (420 micron or less) may burn rapidly and fiercely if ignited; once initiated larger particles up to 1400 microns diameter will contribute to the propagation of an explosion.
- A dust explosion may release large quantities of gaseous products; this in turn creates a subsequent pressure rise of explosive force capable of damaging plant and buildings and injuring people.

SECTION 6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Minor Spills:

Sweep up.

Major Spills:

- Clear area of personnel and move upwind.
- Alert Fire Brigade and tell them location and nature of hazard.
- Control personal contact with the substance, by using protective equipment and dust respirator.
- Prevent spillage from entering drains, sewers or water courses.

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

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling

Remove all ignition sources.

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.

Other information

- Keep dry.
- Store under cover.
- Protect containers against physical damage.
- Observe manufacturer's storage and handling recommendations contained within this MSDS.

Conditions for safe storage, including any incompatibilities

Suitable container:

Multi-ply paper bag with sealed plastic liner or heavy gauge plastic bag.

NOTE: Bags should be stacked, blocked, interlocked, and limited in height so that they are stable and secure against sliding or collapse. Check that all containers are clearly labelled and free from leaks.

Storage incompatibility:

Avoid storage with oxidisers

Package Material Incompatibilities:

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	limestone	Calcium carbonate	10 (mgm3)	Not Available	Not Available	This value is for inhalable dust containing no asbestos and < 1% crystalline silica
Australia Exposure Standards	titanium dioxide	Titanium dioxide	10 (mgm3)	Not Available	Not Available	This value is for inhalable dust containing no asbestos and < 1% crystalline silica
Australia Exposure Standards	silica crystalline - quartz	Silica – Crystalline Quartz (respirable dust) / Quartz (respirable dust)	0.1 (mgm3)	Not Available	Not Available	See Silica - Crystalline

Emergency Limits

Ingredient	TEEL-0	TEEL-1	TEEL-2	TEEL-3
glass beads	5(ppm)	15(ppm)	60(ppm)	500(ppm)
limestone	15(ppm)	45 / 30(ppm)	75 / 500(ppm)	350 / 500(ppm)
titanium dioxide	15(ppm)	15(ppm)	15(ppm)	500(ppm)
silica crystalline - quartz	0.3(ppm)	0.3(ppm)	0.3(ppm)	50(ppm)
Ingredient	Original IDLH		Revised IDLH	
titanium dioxide	N.E.(mgm3)N.E.(ppm)		5,000(mgm3)	
silica crystalline - quartz	N.E.(mgm3)N.E.(ppm)		50(mgm3)	

Exposure controls

Appropriate engineering 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:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Personal protection



Eye and face protection:

- Safety glasses with side shields; or as required,
- Chemical goggles.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task.

Skin protection:

See Hand protection below

Hand protection:

Wear general protective gloves: i.e. Disposable polythene gloves or Cotton gloves or Light weight rubber gloves, with Barrier cream preferably Safety footwear.

Body protection:

See Other protection below

Other protection:

No special equipment needed when handling small quantities.**OTHERWISE:**

- Overalls.
- Barrier cream.

Thermal hazards:

Recommended material(s):

When handling larger quantities:General purpose rubber glove.

Respiratory protection:

Type AX-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent)

SECTION 9 Physical and chemical properties

Information on basic physical and chemical properties

Appearance

White powder with no odour; insoluble in water.

Physical state	Divided Solid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Available	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 Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m)	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Applicable	Gas group	Not Available
Solubility in water (g/L)	Immiscible	pH as a solution(1%)	Not Available
Vapour density (Air = 1)	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:

Generated dust may be discomforting

Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.

If prior damage to the circulatory or nervous systems has occurred or if kidney damage has been sustained, proper screenings should be conducted on individuals who may be exposed to further risk if handling and use of the material result in excessive exposures. The very low content of respirable quartz dust does not present an inhalation hazard during handling/use.

Ingestion:

Considered to be non toxic

Skin Contact:

The material may be mildly discomforting

The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis. Histologically there may be intercellular oedema of the spongy layer (spongiosis) and intracellular oedema of the epidermis.

Eye:

The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Chronic:

Principal routes of exposure are by accidental skin and eye contact and inhalation of generated dusts.

Long term exposure to high dust concentrations may cause changes in lung function (i.e. pneumoconiosis) caused by particles less than 0.5 micron penetrating and remaining in the lung. A prime symptom is breathlessness. Lung shadows show on X-ray.

TOXICITY	IRRITATION
Crystalite Thermoplastic Roadmarking Compound	
Not Available	Not Available
glass beads	
Not Available	Not Available
limestone	
Oral (rat) LD50: 6450 mg/kg	Skin (rabbit): 500 mg/24h-moderate
Not Available	Not Available
titanium dioxide	
Oral (Mouse) LD50: >10000 mg/kg *	Skin (human): 0.3 mg /3D (int)-mild *
Oral (Rat) LD50: >20000 mg/kg *	
Not Available	Not Available
silica crystalline - quartz	
	Y
Not Available	Not Available

Not available. Refer to individual constituents.

GLASS BEADS

No data of toxicological significance identified in literature search.

LIMESTONE

The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling the epidermis.

TITANIUM DIOXIDE

The material may produce moderate eye irritation leading to inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. The material may cause skin irritation after prolonged or repeated exposure and may produce a contact dermatitis (nonallergic). This form of dermatitis is often characterised by skin redness (erythema) and swelling epidermis.

SILICA CRYSTALLINE - QUARTZ

WARNING: For inhalation exposure **ONLY:** This substance has been classified by the IARC as Group 1:

Acute Toxicity:	Not Applicable	Carcinogenicity:	Not Applicable
Skin Irritation/Corrosion:	Not Applicable	Reproductivity:	Not Applicable
Serious Eye Damage/Irritation:	Serious Eye Damage Category 1	STOT - Single Exposure:	Not Applicable
Respiratory or Skin sensitisation:	Not Applicable	STOT - Repeated Exposure:	Not Applicable
Mutagenicity:	Not Applicable	Aspiration Hazard:	Not Applicable

CMR STATUS

SECTION 12 Ecological information

Toxicity

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
Not Available	Not Available	Not Available

Bioaccumulative potential

Ingredient	Bioaccumulation
Not Available	Not Available

Mobility in soil

Ingredient	Mobility
Not Available	Not Available

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal:

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Bury residue in an authorised landfill.
- Recycle containers if possible, or dispose of in an authorised landfill.

SECTION 14 Transport information

Labels Required:

Marine Pollutant: NO

HAZCHEM: None

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

SECTION 15 Regulatory information

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

glass beads(65997-17-3) is found on the following regulatory lists

"Australia Inventory of Chemical Substances (AICS)", "OECD List of High Production Volume (HPV) Chemicals", "FisherTransport Information", "Sigma-AldrichTransport Information", "Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Appendix A"

limestone(1317-65-3) is found on the following regulatory lists

"Australia Inventory of Chemical Substances (AICS)", "OECD List of High Production Volume (HPV) Chemicals", "International Council of Chemical Associations (ICCA) - High Production Volume List", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Exposure Standards", "IMO IBC Code Chapter 17: Summary of minimum requirements", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "FisherTransport Information", "Sigma-AldrichTransport Information", "Acros Transport Information", "Australia Therapeutic Goods Administration (TGA) Substances that may be used as active ingredients in Listed medicines", "CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP", "International Numbering System for Food Additives", "Australia Drinking Water Guideline Values For Physical and Chemical Characteristics"

titanium dioxide(13463-67-7) is found on the following regulatory lists

"International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "Australia Inventory of Chemical Substances (AICS)", "OECD List of High Production Volume (HPV) Chemicals", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Exposure Standards", "Australia Therapeutic Goods Administration (TGA) Sunscreening agents permitted as active ingredients in listed products", "IMO IBC Code Chapter 17: Summary of minimum requirements", "GESAMP/EHS Composite List - GESAMP Hazard Profiles", "FisherTransport Information", "Sigma-AldrichTransport Information", "Australia Therapeutic Goods Administration (TGA) Substances that may be used as active ingredients in Listed medicines", "CODEX General Standard for Food Additives (GSFA) - Additives Permitted for Use in Food in General, Unless Otherwise Specified, in Accordance with GMP", "Australia Australian Pesticides and Veterinary Medicines Authority (APVM) Record of approved active constituents", "International Numbering System for Food Additives", "International Fragrance Association (IFRA) Survey: Transparency List"

silica crystalline - quartz(14808-60-7) is found on the following regulatory lists

"International Agency for Research on Cancer (IARC) - Agents Reviewed by the IARC Monographs", "Australia Inventory of Chemical Substances (AICS)", "OECD List of High Production Volume (HPV) Chemicals", "Australia High Volume Industrial Chemical List (HVICL)", "Australia Exposure Standards", "Australia Hazardous Substances Requiring Health Surveillance", "United Nations Consolidated List of Products Whose Consumption and/or Sale Have Been Banned, Withdrawn, Severely Restricted or Not Approved by Governments", "Australia - Northern Territories Work Health and Safety National Uniform Legislation Regulations- Restricted hazardous chemicals", "Australia Work Health and Safety Regulations 2011 - Restricted hazardous chemicals", "Australia Hazardous Substances Information System - Consolidated Lists", "Australia - Queensland Work Health and Safety Regulation - Restricted hazardous chemicals", "Australia - New South Wales Hazardous Substances Prohibited for Specific Uses", "Australia - Tasmania Hazardous Substances Prohibited for Specified Uses", "FisherTransport Information", "Sigma-AldrichTransport Information"

SECTION 16 Other information

Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:

www.chemwatch.net/references

The (M)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 current or available engineering controls must be considered.

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