SECTION 1 IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

Product Identifier

Product name	Jeffries Raw Mulches
Synonyms	Jeffries Forever Black, Jeffries Forever Brown, Jeffries Forever Red, other raw mulch products
Other means of identification	Not Available

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

Relevant identified uses	Mulching for decorative, soil health and related benefits

Details of the supplier of the safety data sheet

Registered company name	Jeffries Group
Address	412 Hanson Road North Wingfield South Australia 5013 Australia
Telephone	+61 8 8368 3588
Fax	+61 8 8368 3588
Website	www.jeffries.com.au
Email	info@jeffries.com.au

Emergency telephone number

Association / Organisation Not Available	Chemwatch
Emergency telephone numbers	Australia: +61 1800 951 288 (Toll Free – 24x7) New Zealand: +64 800 700 112 (Toll Free – 24x7)
Other emergency telephone numbers	+61 8 8368 3555 (Business Hours)

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

This product is *not classified as hazardous* according to the Globally Harmonised System (GHS) Revision 7 and the WHS Regulations.

Poisons Schedule	Not Applicable
Classification [1]	Not Applicable

Label elements

Hazard pictogram(s)	None required
SIGNAL WORD	**NONE**

Hazard statement(s)	None – Product is not classified as hazardous
Precautionary statement(s) Prevention	Not required
Precautionary statement(s) Response	Not required
Precautionary statement(s) Storage	Not required
Precautionary statement(s) Disposal	Not required

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances
See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
Not Available	100	This product consists of organic raw mulch materials, including shredded timber, bark, and coloured mulch containing iron oxide pigments. No hazardous ingredients above GHS cut-off values.

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, move to fresh air. Monitor for respiratory irritation. - Product may contain naturally occurring microorganisms which may cause irritation or infection in susceptible individuals.
Ingestion	- Give water to drink. - If symptoms persist, seek medical advice.

Indication of any immediate medical attention and special treatment needed

- Likely symptoms include eye irritation, coughing or throat irritation from dust, and minor skin abrasion.

SECTION 5 FIREFIGHTING MEASURES

Extinguishing media

- Use water spray, foam, or dry chemical.
- Use extinguishing media suitable for surrounding area.

Special hazards arising from the substrate or mixture

- Product is a *combustible solid*. May burn or smoulder when exposed to heat or stored in large, compacted piles.
- Bulk mulch may self-heat and ignite under certain conditions. Smouldering may continue beneath surface layers.

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 firefighting 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 a significant fire risk, however containers may burn.
HAZCHEM	Not Applicable

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
See section 8

Environmental precautions
See section 12

Methods and material for containment and cleaning up

Minor Spills	- Clean up all spills immediately. - Avoid contact with skin and eyes. - Wear impervious gloves and safety glasses. - Use dry clean up procedures and avoid generating dust. - Collect using shovel or mechanical means. Avoid generating dust when handling dry mulch. - Do **NOT** use air hoses for cleaning. - Place spilled material in clean, dry, sealable, labelled container.
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. - Avoid generating dust. - Sweep, shovel up. Recover product wherever possible. - Put residues in labelled plastic bags or other containers for disposal. - 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. - Avoid contact with incompatible materials. - When handling, **DO NOT** eat, drink or smoke. - Keep containers securely sealed when not in use. - Avoid physical damage to containers. - Always wash hands with soap and water after handling. - Work clothes should be laundered separately. - Use good occupational work practice. - Observe manufacturer's storage and handling recommendations contained within this SDS. - Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.
Other information	- Store in original containers. - Keep containers securely sealed. - Store in a cool, dry area protected from environmental extremes. - 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. For major quantities: - Consider storage in bunded areas - ensure storage areas are isolated from sources of community water (including stormwater, ground water, lakes and streams). - Ensure that accidental discharge to air or water is the subject of a contingency disaster management plan; this may require consultation with local authorities.

Conditions for safe storage, including any incompatibilities

Suitable container	- Store bulk mulch in well-ventilated areas. Avoid deep compacted piles that may encourage self-heating. - Monitor for hotspots in large stockpiles. Keep away from ignition sources. - Plastic pail, Poly-lined drum. - Packing as recommended by manufacturer. - Check all containers are clearly labelled and free from leaks.
Storage incompatibility	Avoid contamination of water, foodstuffs, feed or seed. None known

SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA
Not Available

EMERGENCY LIMITS

Ingredient	Material name	TEEL-1	TEEL-2	TEEL-3
Jeffries Raw Mulches	Not Available	Not Available	Not Available	Not Available

Ingredient	Original IDLH	Revised IDLH
Jeffries Raw Mulches	Not Available	Not Available

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. - Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. - Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. - Employers may need to use multiple types of controls to prevent employee overexposure.

Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.

If in spite of local exhaust an adverse concentration of the substance in air could occur, respiratory protection should be considered.

Such protection might consist of:

- (a): particle dust respirators, if necessary, combined with an absorption cartridge;
- (b): filter respirators with absorption cartridge or canister of the right type;
- (c): fresh-air hoods or masks.

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:
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 4-10

	m/s (800-2000 f/min) for extraction of crusher dusts generated 2 metres 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	
Eye and face protection	- Safety glasses with side shields - 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 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	Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended. For general applications, gloves with a thickness typically greater than 0.35 mm, are recommended. Gloves should be examined for wear and/ or degradation constantly.
Body protection	See Other protection below
Other protection	No special equipment needed when handling small quantities. **OTHERWISE:** - Overalls. - Barrier cream. - Eyewash unit.

Respiratory protection

- Use P2 dust mask if dust is generated
- Persons with asthma or other respiratory conditions should avoid exposure to mulch dust.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Red, Brown, black solids

Physical state	Divided Solid	**Relative density (Water =1)**	Not Available
Odour	Mild earthy to no odour	**n-octanol / water**	Not Available
Typical bulk density	150-300 kg/m^3	**pH**	Typically 6-8
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 Applicable	**Viscosity (cSt)**	Not Available
Initial boiling point and boiling range (°C)	Not Applicable	**Molecular weight (g/mol)**	Not Applicable
Flash point (°C)	Not Available	**Taste**	Not Available
Evaporation rate	Not Applicable	**Explosive properties**	Not Available
Flammability	Combustible solid	**Oxidising properties**	Not Available
Upper Explosive Limit (%)	Not Available	**Surface Tension (dyn/cm or mN/m)**	Not Applicable
Lower Explosive Limit (%)	Not Available	**Volatile Component (%vol)**	Not Available
Vapour pressure (kPa)	Not Available	**Gas group**	Not Available
Solubility in water	Partly miscible	**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	- Stable under normal conditions.
Possibility of hazardous reactions	- Avoid ignition sources. - See section 7 for more details
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	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. 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.
Ingestion	The material has **NOT** been classified by EC Directives or other classification systems as "harmful by ingestion". This is because of the lack of corroborating animal or human evidence.
Skin Contact	The material is not thought to produce adverse health effects or skin irritation following contact (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable gloves be used in an occupational setting.
Eye	Although the material is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may cause transient discomfort characterised by tearing or conjunctival redness (as with windburn). Slight abrasive damage may also result.
Chronic	Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless, exposure by all routes should be minimised as a matter of course. 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.

Jeffries Raw Mulches	**TOXICITY**	**IRRITATION**
	Not Available	Not Available
Legend:	*1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*	

Acute Toxicity	*Data either not available or does not*	**Carcinogenicity**	*Data either not available or does not*

	fill the criteria for classification		*fill the criteria for classification*
Skin Irritation/Corrosion	*Data either not available or does not fill the criteria for classification*	**Reproductivity**	*Data either not available or does not fill the criteria for classification*
Serious Eye Damage/Irritation	*Data either not available or does not fill the criteria for classification*	**STOT - Single Exposure**	*Data either not available or does not fill the criteria for classification*
Respiratory or Skin sensitisation	*Data either not available or does not fill the criteria for classification*	**STOT - Repeated Exposure**	*Data either not available or does not fill the criteria for classification*
Mutagenicity	*Data either not available or does not fill the criteria for classification*	**Aspiration Hazard**	*Data either not available or does not fill the criteria for classification*

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

Jeffries Raw Mulches	**ENDPOINT**	**TEST DURATION (HR)**	**SPECIES**	**VALUE**	**SOURCE**
	Not Available	Not Available	Not Available	Not Available	Not Available
Legend:	*Extracted from* - *1. IUCLID Toxicity Data* - *2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity* - *3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated)* - *4. US EPA, Ecotox database - Aquatic Toxicity Data* - *5. ECETOC Aquatic Hazard Assessment Data* - *6. NITE (Japan) - Bioconcentration Data* - *7. METI (Japan) - Bioconcentration Data* - *8. Vendor Data*				

Product consists of biodegradable organic matter. Not expected to be harmful to aquatic organisms. Large quantities may cause oxygen depletion during decomposition. **DO NOT** discharge into sewer or waterways.

Persistence and degradability

Ingredient	**Persistence: Water/Soil**	**Persistence: Air**
	No Data available for all ingredients	No Data available for all ingredients

Bio-accumulative potential

Ingredient	**Bioaccumulation**
	No Data available for all ingredients

Mobility in soil

Ingredient	Mobility
	No Data available for all ingredients

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

Product / Packaging disposal	- **DO NOT** allow wash water from cleaning or process equipment to enter drains. - It may be necessary to collect all wash water for treatment before disposal. - Dispose of mulch via green waste recycling where possible. - Do not allow large volumes to enter stormwater drains. - Contaminated mulch should be disposed of in accordance with local council guidelines.

SECTION 14 TRANSPORT INFORMATION

Labels Required

Marine Pollutant	NO
HAZCHEM	Not Applicable

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 and the IBC code: NOT APPLICABLE

SECTION 15 REGULATORY INFORMATION

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

Not Applicable

SECTION 16 OTHER INFORMATION

SDS Version Summary

Issue #	Issue Date	Sections Updated
1	01/08/2011	First version
2	01/08/2016	Second version
3	04/12/2020	GHS compliant version
4	08/12/2025	GHS-7 format and complies with Australian WHS Code of Practice 2020

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 current or available engineering controls must be considered.

Definitions and abbreviations

PC－TWA:	Permissible Concentration-Time Weighted Average
PC－STEL:	Permissible Concentration-Short Term Exposure Limit
IARC:	International Agency for Research on Cancer
ACGIH:	American Conference of Governmental Industrial Hygienists
STEL:	Short Term Exposure Limit
TEEL:	Temporary Emergency Exposure Limit。
IDLH:	Immediately Dangerous to Life or Health Concentrations
OSF:	Odour Safety 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:	Bio Concentration Factors
BEI:	Biological Exposure Index