EC Safety Data Sheet

Delceram

valid for
Ceramic fabric tapes

Material Safety Datasheet according to 91/155/EWG or 93/112/EG

Product Nam: **DELCERAM**
Date of 1st issue: 9. February 2006 **Date of printing: 08. February 2006**

1. IDENTIFICATION OF THE PRODUCT AND OF THE COMPANY

Identification of the Product
Common Name: CERAMIC Fibre Textiles

Identification of the Company
Trade name : DELCERAM

Supplier: Risius GmbH
Marie-Curie-Str. 13
D-50259 Pulheim
Germany
Tel. : +49/2234/89017
Fax. : +49/2234/89010
E-mail : info@risiusgmbh.de

2. COMPOSITION / INFORMATION ON INGREDIENTS

Composition
Chemical composition of Ceramic Fibre:
SiO_2 45 – 60 %, Al_2O_3 40 – 55 %
CAS-Nr 142 844-00-6
T (Toxic)
R49
R38

Other Components: Maximum of 20 % viscose

3. HAZARDS IDENTIFICATION

RCF dust which has been classified under Directive 97/69/EC among category 2 carcinogens. (In October 2001 the International Agency for Research on Cancer /IARC) re-affirmed that category 2B (possibly carcinogenic to humans) remains the appropriate IARC classification for RCF.) Mild mechanical irritation to skin, eyes and upper respiratory system may result from exposure.

4. FIRST- AID MEASURES

In case of skin irritation, rinse affected areas with water and wash gently. In case of serious eye contact, flush abundantly with water; have an eye bath available

5. FIRE- FIGHTING MEASURES

These materials are not combustible. Use extinguishing agent suitable for type of surrounding combustible materials.

6. ACCIDENTAL RELEASE MEASURES

Personal protection in case of accidental release or spillage likely to result in an abnormally high dust concentration.
Provide the workers with appropriate personal protective equipment as detailed in section 8. Restrict access to the area to a minimum number of workers. Restore the situation to normal as quickly as possible, Prevent further dust dispersion for example by damping the materials.

Methods for cleaning up
Pick up large pieces first with a vacuum cleaner fitted with high efficiency filter (HEPA). If sweeping is used, ensure that the area is wetted down first. Do not use compressed air for clean up. For waste disposal refer to section 13.

Environmental protection
Do not allow to be wind blown. Do not flush spillage to drain and prevent from entering natural water courses. Check for local regulations which may apply.

7. HANDLING AND STORAGE

Handling/Techniques to reduce dust emissions during handling
Handling can be a source of dust exposure. The process should be designed to limit the amount of handling. Wherever possible, handling should be carried out under controlled conditions (i.e. use dust exhaust system).Using specially treated or packaged products will minimise dust release. Regular good housekeeping will minimise secondary dust dispersal. See next section 8 for personal protection.

Storage
Always use sealed and clearly labelled containers. Avoid damaging containers. Reduce dust emission during unpacking. Emptied containers, which may contain debris, should be cleaned before disposal or recycling. Recyclable cardboards and/or plastic films are recommended for packaging.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

How to reduce dust exposure to a minimum
Review your RCF application(s) and assess situations with the potential for dust release. Where practical enclose dust sources and provide dust extraction. Designate RCF work areas and restrict access to informed and trained workers, Use operating procedures, which will limit dust protection and exposure of workers. Keep the workplace clean. Use a vacuum cleaner fitted with an HEPA filter; avoid using brooms and compressed air. If necessary consult an industrial hygienist to design workplace controls properly. Using products specially tailored to your application(s) will help to control dust. Some products can be delivered ready for use to avoid further cutting or machining. Some could be treated or packaged to minimize or avoid dust release during handling. Consult your supplier for further details.

Hygiene Standards and exposure limits
Hygiene standards and exposure limits may differ from country to country, Check those currently applying in your country and comply with regulations. Examples of exposure limits (in January 2000) are given below:

COUNTRY	EXPOSURE LIMIT*	SOURCE
Germany	0,5 f/ml	TRGS 900
France	0,6 f/ml	Circulaire DRT No 95-4 du 12.01.95
U.K.	2,0 f/ml	HSE-EH40-Maximum Exposure Limit (proposal to reduce to 1,0 f/ml)

*Time weighted average concentrations of airborne respirable fibres measured over 8 hours by the conventional membrane filter method.

Skin Protection
Wear gloves and overalls, which are loose fitting at neck and wrists. After handling rinse exposed skin with water. Wash work clothing separately

Eye Protection
As necessary wear goggles or safety glasses with side shields in case of overhead working.

Respiratory Protection
Use appropriate respiratory protective equipment (RPE) against excessive concentrations of fibrous dust or possible contaminant which could have been introduced. For dust concentrations below the exposure limit value, RPE is not required but FFP2 respirators may be used on a voluntary basis. For short-term operations where excursions are less than ten times the limit value use FFP2 respirators. In case of higher concentrations, please contact your

supplier for advice.

Information and training of workers
Workers shall be informed on:

- The applications involving RCF-containing product
- The potential risks to health resulting from the exposure to fibrous dust
- The requirements regarding smoking, eating and drinking at the workplace
- The requirements for protective equipment and clothing

Workers shall be trained on:

- The good working practices to limit dust release
- The proper use of protective equipment

Further recommendation
Please refer to the code of practice and industrial hygiene guide issued by the European Ceramic Fibres Industry Association (ECFIA)

9. PHYSICAL AND CHEMICAL PROPERTIES

Oxidising Properties	None
Odour	None
Melting Point	> 1650°C
Flammability	None
Explosives Properties	None
Length Weighted Geometric Mean Diameter	**2,5 - 3 µm**

10. STABILITY AND REACTIVITY

Conditions or materials to avoid None

11. TOXICOLOGICAL INFORMATION

Irritant Properties
When tested using approved methods (Directive 67/548/EEC, Annex 5, Method B4), fibres contained in this material give negative results. All man-made mineral fibres, like some natural fibres, can produce a mild irritation

resulting in itching or rarely, in some sensitive individuals, in a slight reddening. Unlike other irritant reactions this is not the result of allergy or chemical skin damage but is caused by mechanical effects.

Human Data on pulmonary effects
Pulmonary morbidity studies were carried out among production workers in Europe and the USA. The only noticeable finding was an incidence of 2,9 % pleural plaques among the American workers examined. The relationship between RCF exposure and pleural plaques was not found in the two European studies.
A mortality study had not been conducted among RCF workers. No case report of disease attributed to RCF was ever published in the medical literature.

Inhalation toxicology data in animals
In earlier studies, RCF together with other man-made fibres were regarded as inert. In the 70's and 80's tumours were produced in animals after intrapleural or intraperitoneal injections, but the several inhalation experiments conducted were inconclusive.
In 1990. chronic inhalation studies known as the *RCC Studies* were conducted with size-selected fibres. Fibrosis, lung tumours and mesotheliomas were produced in animals exposed to very high concentration for 24 months. It was then discovered that the size selection process led to a serious contamination of the test samples by non-fibrous particles. These particles may have modified the behaviour of fibres leading to a condition sometimes referred as pulmonary overload. Experts are still analysing the significance of the RCC results. In further tests, uncontaminated RCF samples have proved to be largely less biologically active.

IARC Review
In October 2001, a scientific working group of 19 experts from 11 countries convened by the International Agency for Research on Cancer (IARC) concluded on re-evaluation of the carcinogenic risk of airborne Man Made Vitreous Fibres. After detailed examination of all available data of the IARC working party confirmed that category 2b (possibly carcinogen to humans) remains the appropriate classification for RCF.

12. ECOLOGICAL INFORMATION

These products are inert materials which remain stable over a considerable time.

13. DISPOSAL CONSIDERATIONS

In the UK, Some types RFC Waste are considered as "special". Check with local authorities if the "special" waste classification applies to you and follow "special" rules for disposal. Unless wetted, such a waste is normally dusty and so should be properly sealed in clearly and visibly labelled containers for disposal. Special precautions should be taken to avoid damaging the containers during transportation, storage and field disposal. In case of contamination by products classified as hazardous waste, expert guidance should be sought. Always check for local regulations which may apply.

14. TRANSPORT INFORMATION

Not classified as dangerous goods under relevant international transport regulations. Ensure that dust is not wind blown during the transportation.

15. REGULATORY INFORMATION

Regulatory Status comes from European Directive 97/69/CE and its implementation by the Member States.

Hazard classification
According to Directive, these fibres belong to the group of "man-made vitreous (silicate) fibres with random orientation with alkaline oxide and alkali earth oxide (Na_2O + K_2O + Ca= + MgO + BaO) content less or equal to 18 % by weigh5t"
Fibres in this group are classified as:

- Carc. Cat. 2
- T
- R49
- Xi
- R38

16. OTHER INFORMATION

The European Ceramic Fibres Industry Association (ECFIA):
3, Rue du Colonel Moll, 75017 Paris; Tel. +33 (0) 1 44 05 54 84 – Fax: +33 (0) 44 05 54 94 –
Web site: www.efcia.org

Useful references

- Working with Refractory Ceramic Fibres; ECFIA Code of Practice (February 1998)
- Recognition and control of exposure to Refractory Ceramic Fibres (RCF): ECFIA Industrial hygiene guide (November 1999)
- Hazard form the use of Refractory Ceramic Fibres
- Health and Safety Executive; information document HSE 267/(1998)
- Requirements of COSHH, control of substances hazardous to health
- COSSH essentials; easy steps to control chemicals, HSE books, HSG 193

- Requirements of CHIP; Chemical hazard information and packaging of substances and preparations dangerous for supply
- Council Directive 90/394/EC <<on the protection of workers from risks related to exposure to carcinogens at work>> Official Journal of the European Communities, 216/07/90
- Commission Directive 97/69/EC of 5th December 1997 <<adapting the technical process for the 23rd time Council Directive 67/548/EEC on approximation of the laws, regulations and administrative provisions relating to the classification, packaging and labelling of dangerous substances>> Official Journal of the European Communities, 13/12/97.
- Refractory ceramic fibres: a substitute study, RCF Document March 1996

The European Ceramic Fibres Industry Association (ECFIA) has undertaken an extensive industrial hygiene programme to provide assistance to the users of RCF products.
The objectives are twofold:

1. To monitor workplace dust concentrations at both manufacturers' and customers' premises
2. To document manufacturing and use of RCF products form an international hygiene perspective in order to establish appropriate recommendations to reduce exposures.

If you wish to participate in the CARE programme, contact ECFIA.

Spraying

ECFIA recommends that this fibre is not used for spraying.

Notice

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