

MATERIAL (HEALTH) SAFETY DATA SHEET

Reviewed November 2002

1. IDENTIFICATION

1.1 Commercial Name(s): Dicacel 1, 2, 4, 10 & 20 (Powdered Cellulose)

1.2 Producer and Supplier: **Dicalite Trading n.v.**
Scheepzatestraat 100
9000 Gent
BELGIUM

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2. CHEMICAL COMPOSITION

Cellulose is the most frequently occurring organic substance on earth. In nature Cellulose does not occur in pure form, but only accompanied by hemicellulose and lignin.

As raw material for the manufacture of Cellulose, annual plants, as well as perennials can be used.

The economically most interesting raw material are broadleaved, as well as coniferous trees, who consist of about 55% of Cellulose in dry condition. After separating the secondary ingredients by means of the usual processing of wood and consecutive bleaching, the pure Cellulose remains. (Cellulose fibres of 1 to 6 mm in length)

The Cellulose materials selected according to their applicability in certain areas (purity, fibre length, fibre thickness, pH - ASH values, whiteness, etc.) are now cut into the desired fibre lengths. To this end the very elastic Cellulose fibres are carefully ground when dry and separated into various fibre lengths by a series of sieves.

ECOIN-EINECS-CAS-EG Nr.: Cellulose has been registered as pure cellulose, under the CAS Nr. 65996-61-4 and listed in the ECOIN Volume I, unit 71, column 1, page 361. This ensures that there will be an obligatory entry into EINECS.

3. HAZARD INFORMATION

Purified Powdered Cellulose, can cause an annoying, but reversible effect on the lungs by inhalation.

This annoying dust causes no organic disease, no toxic influence on the organism, as long as the concentration is not higher as 10 mg/m³ air.

It is recommended to wear a dust or respiration mask against dust particles that may fly around during handling.

4. FIRST AID PROCEDURE

4.1 Inhalation: Remove person from dusty area, drink water to clear throat, blow nose to evacuate dust. Consult physician if necessary.

4.2 Eye irritation: Do not rub! Flush eyes immediately with copious amounts of water. Consult a physician if irritation persists.

4.3 Skin irritation: None

5. FIRE- AND EXPLOSION HAZARDS

When using or handling, take precautions against dust-explosion and electrostatic load. Do NOT store together with inflammable or explosive materials. (Also see Nr. 7)

6. PROVIDE AGAINST ESCAPE OF DUST

6.1 Personal prevention: It is recommended to wear an approved dust or respiration mask and safety eyewear.

6.2 Ecology prevention: None. Cellulose is an organic product which can be used as soil-conditioner.

6.3 Spill and leak procedure: Vacuum clean or wet sweep.

7. HANDLING AND STORAGE-PRECAUTIONS

7.1 **Handling:** Avoid creating dust. Repair all broken bags immediately.

7.2 **Storage:** Keep dry and far from odoriferous chemicals. Ventilated storage and production areas are recommended.

8. EXPOSURE AND PERSONAL PRECAUTION

8.1 **Respiratory organs protection:** It is recommended to wear an approved dust or respiratory mask. (Also see Nr. 6)

8.2 **Eye protection:** It is recommended to wear approved safety glasses.
(Also see Nr. 6)

8.3 **Hand & skin protection:** None.

9. PHYSICAL-CHEMICAL PROPERTIES

Appearance: Fibrous bleached Cellulose flocks or powders, with different average bulk densities and fibre lengths, depending on the particular grade, typically between 20 to 1000 microns.

Colour & Odour: White & practically odourless.

pH: Usual values between 5 - 7 (in 100 g/l H₂O slurry)

Flash point: Reference values for temperature loads →
160 °C during several days
180 °C approximate one (1) day
200 °C should be regarded as temperature load boundary

Solubility: Insoluble in water and organic solvents.

Not to be confused with, water soluble Cellulose derivatives such as MC, CMC & HEC, which are also utilised in several similar application fields as our products, but result in totally different functions, such as for example explicit water retention.

10. STABILITY AND REACTIVITY

Hazardous Reaction: None

However, the usual precautionary rules should be followed as in paragraphs Nrs. 3, 5 & 7 when handling or using product.

11. TOXICOLOGY

Toxicological completely inoffensive.

See paragraph Nrs. 2, 4 & 5.

12. ECOLOGICAL DATA

Bio degradability and aquatic toxicity: No data

See paragraph Nrs. 2 & 11.

13. WASTE MANAGEMENT

Waste disposal method:

Lift product mechanically and collect it in appropriate container or dumpster. May be incinerated or recycled.

When used as landfill at National or Regional approved waste site, preferably keep product moist when dumping.

Cover dumped product with earth afterwards.

See paragraph Nrs. 5, 7, 8, 11 & 12.

14. TRANSPORT INFORMATION

According to the given data, the above mentioned product is NOT DANGEROUS along the corresponding EC-directives and the decree on dangerous materials version of 26/08/1986.

However, the usual precautionary rules when handling goods should be followed. See paragraph Nrs. 3, 7 & 8.

15. LEGAL INFORMATION

Hazard symbol	: none
Risk sentences R	: none
Risk sentences S	: none
Recommended: S22	: do not inhale dust
S26	: by eye contact, flush with water
	See paragraph Nr. 4

16. FURTHER INFORMATION

These Cellulose products, are primarily used as functional fillers in more than 40 different application fields and industries, world-wide.

Additional information, concerning individual grades and properties, is available upon request.

NOTE: THIS M.S.D. SHEET IS BASED UPON TODAY'S BEST AVAILABLE INFORMATION, ON PRESENT EXPERIENCES AND ACCORDING TO DIRECTIVE 2001/58/EC OF THE COMMISSION OF 27/07/2001.