

MARS II

by KARL VAN WELDEN

Technical Rider

Black-Box version

This rider is meant as a guideline and can be adapted according to the specific needs of the venue.

INTRODUCTION

MARS II is a poetic account of the impact of catastrophes on our thinking. In this musical performance Karl Van Welden works with the impact of volcanic ash on music and on the pianist (Frederik Croene) who produces the music. At the outset, grey particles fall gently and harmlessly enough. After a while, the particles down exponentially on the musician and his instrument, slowly but surely transforming the sound and image.

Trailer: <https://vimeo.com/unitedplanets/marsii/trailer>



1. GENERAL REQUIREMENTS

Running time: 1h20min, no break
Stage dimensions: Minimum 14m wide, 9m deep, 6m high
Floor: Black. If necessary black Marley already in place upon arrival.

2. THE SET

See drawing "stage plot" attached!

2.1 Ash-rain machinery

We bring an "ash-rain-machine" consisting of 6 aluminium grills of 3x3m (collapsable into 12x 3x1,5m or 24x 1,5x1,5m), which are rigged above the stage.

Each grill has a weight of about 50kg, so 150kg per rig and 300kg in total.

It is required that the grills can be lifted up and down, preferably in groups of 3, for filling and cleaning. This can be accomplished as follows:

- In a venue with a fly system:
by using 2 fly bars 1,5m apart from each other to suspend the grills and 1 extra flybar in the middle for the safety wires (3 fly bars per group of 3 grills, so we need 6 fly bars in total)
- in a venue with a fixed grid:
by using a 9m long square or triangular truss with 6 cross pipes of 1,5m and 2 electrical hoists (per group of 3 grills, so we need 2 trusses, 12 pipes and 4 hoists in total)

The grills are filled with artificial ash flakes called "Foss decor" and an insulation material called "Vermiculite". We bring a large vacuum cleaner to recycle the material.



2.2 Grid driver

The grids are fitted with “Buttkickers” (low frequency vibrators), which are manually controlled on stage by one of us.

We bring:

- 2x power amplifier
- 1x control box (6-channel frequency generator)
- 6x speaker cable
- 1 camera with hdmi output

The organiser will provide:

- a small table in one of the wings
- power: 230VAC/16A.
- 6x speakon cable (length depending on height of flybars)
- 6x speakon coupler female to female
- **hdmi connection to the technical booth!**
- hdmi input compatible monitor

2.3 Masking

We bring:

- a transparent gauze curtain (gobelin-tulle) of 12x6m2 which is hung and stretched in front of the stage.

The organiser will provide:

- a full black box (black backdrop **and sides!**)
- 4 legs of minimum 2m wide on each side and 2 borders of 12m wide.

3. SOUND

We bring:

- A baby grand piano (Kawai S-500, 1969), fitted with a QRS automation system (<http://www.qrsmusic.com>), **in a flight-case (400kg) with dimensions: 230cm long, 195cm high, 60cm wide.**
- A mini-Mac computer and sound card, positioned at the technical booth.
- An AKG contact microphone inside the piano.
- Two AKG C516 microphones to amplify the piano

The organiser will provide:

- Two full range speakers upstage, behind the backdrop, on the floor.
- Front-of-house system with sub-woofers. The FOH needs to be delayed against the stage speakers.
- A mixing console with 4 outputs (FOH and stage) and 3 microphone inputs.

We need the following connections at the centre stage:

- 1x power 230VAC/16A
- **1x Ethernet UTP/RJ45 connection to the technical booth!**
- 2x XLR connection (midi) to the technical booth
- 3x XLR connection (mikes) to the technical booth

4. LIGHT

See drawing “lighting plot” attached!

We bring:

- 10 ventilators
- LED-strip with DMX-controller (3-pin DMX)
- a light console (chamsys) with 5-pin DMX output

The organiser will provide:

Spotlights:

- 7x profile 1kW 15°-38° with shutters
- 2x Fresnel 1kW with barn-doors
- 18x PC 1kW with barn-doors

- 2x tower for 2 ventilators each (we bring the ventilators)
- 8x towers \ high stands in the wings for spotlights
- 13x floor stand for PC's

- All lights on separate identical dimmers. (about 36 channels of 1kW)
- An extra DMX-line at centre stage (we bring a LED-strip with DMX-controller).
- A 5-pin to 3-pin DMX convertor

Gels:

- 1x L117 for 1kW profile
- 2x L201 for 1kW profile
- 4x L241 for 1kW PC
- 14x L117 for 1kW PC
- 2x L201 for 1kW Fresnel

5. SET UP & BREAK DOWN SCHEDULE

Set up time: We need two set-up days before the day of the performance with a general rehearsal the night of the set-up day.

Schedule:

- Day 1:** 10:00 Arrival Crew and installation + unloading
 11:00 start setup
 13:00 lunch break
 14:00 continue setup
 18:00 end of day 1
- Day 2:** 10:00 start setup
 11:00 piano tuner arrives + continue setup
 13:00 lunch break
 14:00 continue setup
 18:00 dinner break
 19:00 continue setup
 20:00 dress rehearsal
 22:00 end of day 2
- Day 3:** 11:00 start reset
 13:00 piano tuner arrives for second tuning + lunch break
 14:00 sound check + lights check + piano rehearsal
 18:00 dinner break
 19:00 clearing stage of ash
 20:00 (or earlier) performance
- Day 4:** 10:00 strike-down + loading the truck
 14:00 the end

6. CREW/CAST + ASSISTANCE REQUIRED

Our crew/cast:

- 2x technicians (stage/light/sound)
- 1x artist
- 1x performer/pianist

The organiser will provide:

- 4x technicians during the set-up day
- 2x technicians during the first performance day
- 1x technician stand-by during the next performance day(s) if any

- 4x technicians for the strike-down
- A piano tuner on Day 1 (see schedule: 11:00) and Day 2 (see schedule: 13:00). If there's a Day 3 (13:00), etc.

Remark:

- If possible we would like to know the name/company of the piano tuner.
- Please inform us about house schedules and regulations. Whenever possible, we wish to work with the same crew for the duration of our stay.

7. STORAGE

- We need safe storage for flight cases and construction equipment.

8. TRANSPORT INSTALLATION

- We come with a 7m long, 2,5m wide and 3,10m high truck with a loading lift.
- We need a safe parking space for the truck for the total time of our stay.

9. SAFETY

- Independently of their attachment points, the grills are fitted with steel safety cables in case one of the attachment points should fail.
- Foss decor is made by Snow Business International. It is certified for fire behavior according to DIN4102 - see "Prüfzeugnis" attached. Vermiculite is made by Nestaan. It is an inherently fireproof mica material (used in fireproof doors) attached you can also find the Material Safety Data Sheet for both substances.
- We also bring a transparent gauze curtain (gobelin-tulle) of 12x6m (flame resistance class M1 - certificate in attachment).

IMPORTANT

- Requested information: Name and telephone of the technical director; Name of the production manager; Tel n° of backstage and box office.
- French or English speaking stage manager (or translator).
- The requested material must be at our disposal upon arrival.
- It is the organiser's responsibility to ensure that the organiser is secured and that the company's set and equipment as well as their personal belongings are safe and secure. The organiser is responsible for any loss, damage or theft.
- **Filming, photographing or any other registration or recording formats are strictly subject to preliminary consultation between the organiser and Karl Van Welden!**
- All photo and text material used for promotion and press should be made in consultation with Karl Van Welden.
- A list of the following phone numbers should be available to the company upon arrival: emergency ambulance, dentist, chiropractor, physiotherapist, and massages.
- Any modifications to the above technical requirements have to be negotiated.
- These technical requirements constitute a part of the contractual agreement between the organiser and wpZimmer vzw and have to be respected as such.

CREDITS

Concept | Direction | Sound | Composition: Karl Van Welden – *Dramaturgy:* Bart Capelle – *Sound | Composition | Pianist:* Frederik Croene – *Sound | Composition | Sound engineer:* Vincent Malstaf – *Machinery | Realisation:* Maarten De Vrieze – *Lighting design:* Jelle Moerman | Reynaldo Rampersad – *Production:* wpZimmer (BE) – *Co-production:* Vooruit (BE) | Gessnerallee (CH) | Uzès Danse (FR) | Le Vivat (FR) | IN SITU: TAKT Dommelhof (BE) | La Strada (AT) | METROPOLIS (DK) – *With the support of:* Flemish Government | muziek LOD (BE) – *Thanks to:* Piano's Maene

Contact



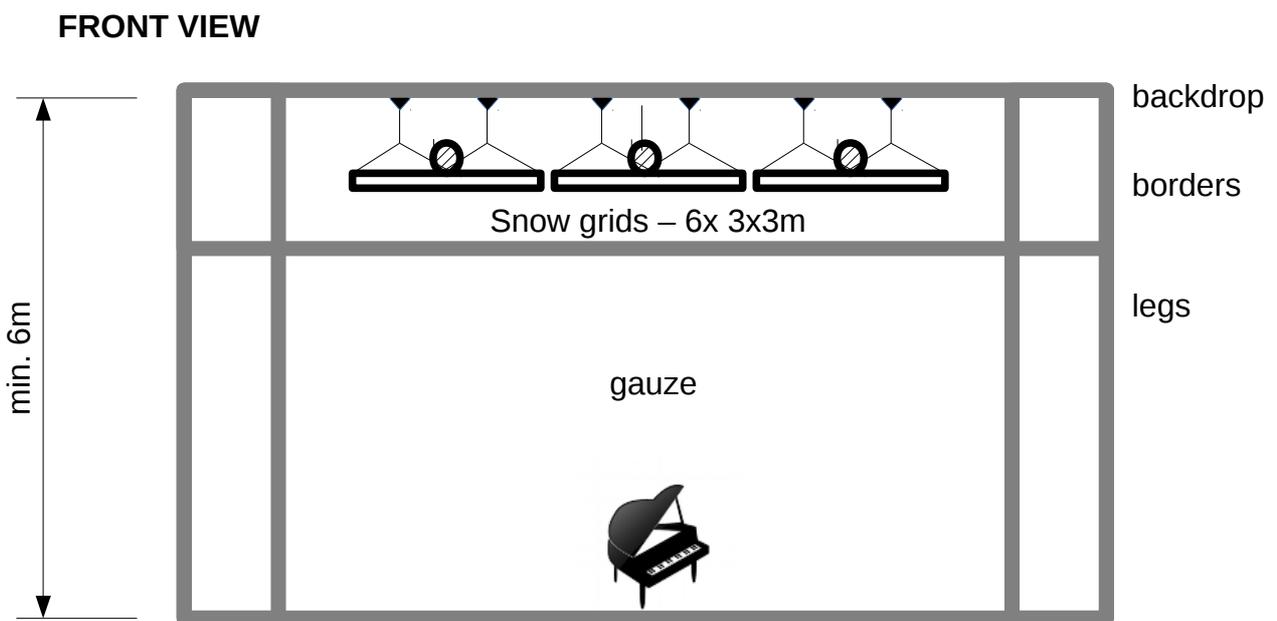
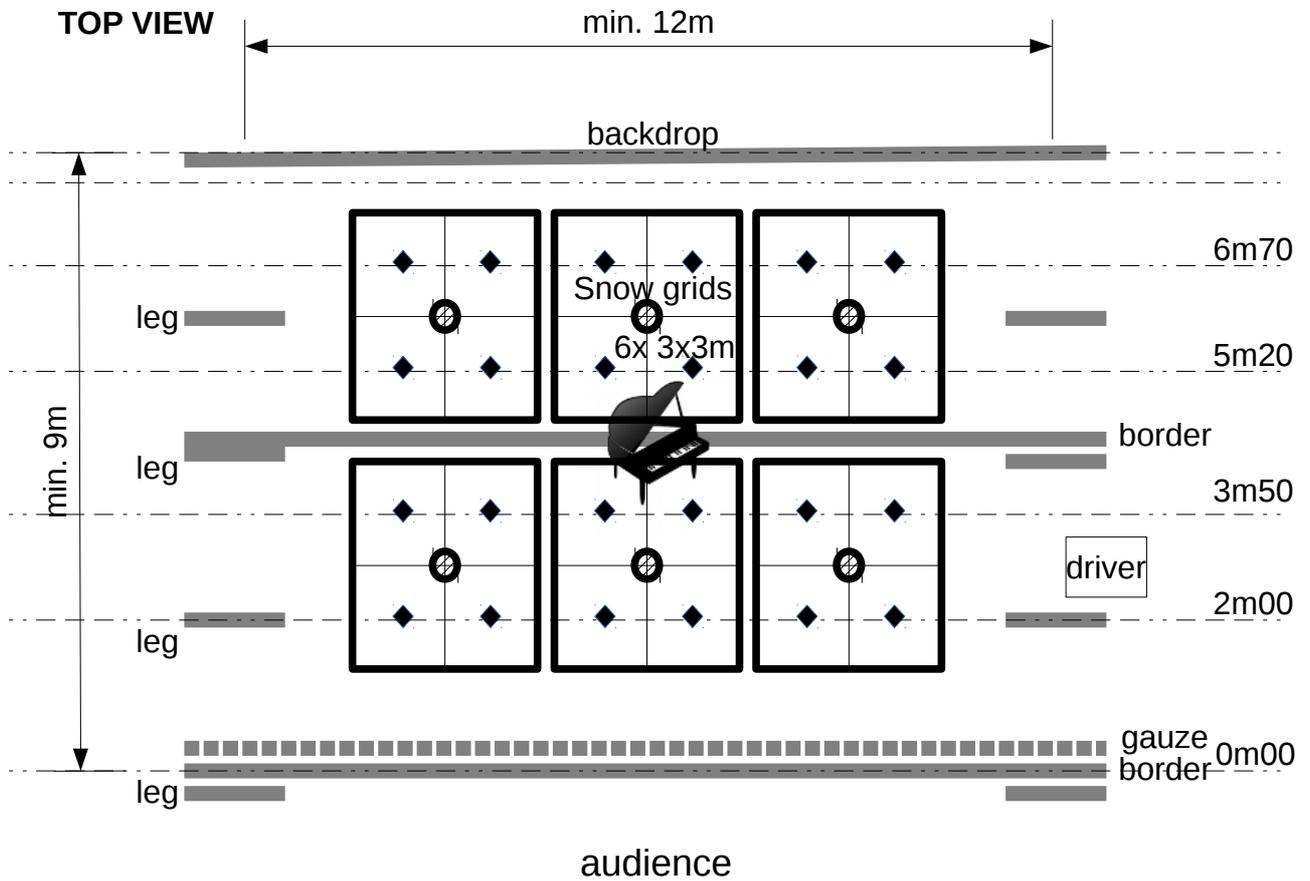
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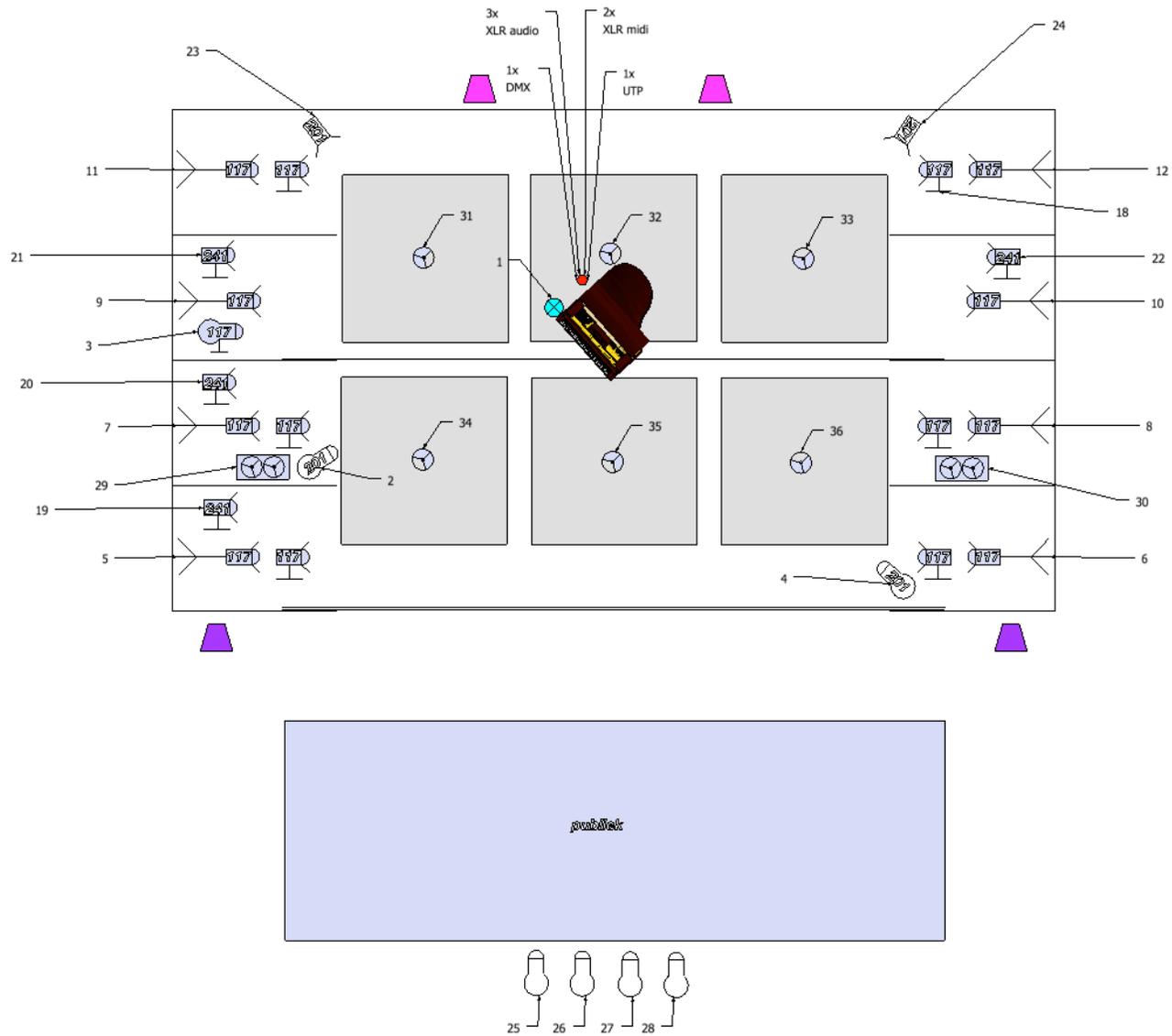
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Stage plot

- Black curtain
- Hanging point 24x
- Butt kicker 6x





LEGEND:

- profile on floor stand
- profile suspended
- profile suspended
- profile suspended
- PC on floor stand
- PC on high stand
- FRESNEL suspended
- 2 ventilators on tower (or high stand)
- ventilator above grid
- PA speakers
- full range speaker on floor (behind backdrop)



Material Safety Data Sheet –

In accordance with 91/155/EEC

1. Identification of substances

- 1.1 Trade Name: Foss decor
 - 1.2 Supplier: Snow Business International Ltd, The Snow Mill, Ebley, Stroud, Glos GL5 4TR, United Kingdom.
 - 1.3 Contact: Symon Doliczny
 - 1.4 Telephone: +44 (0) 1453 840088
 - 1.5 Applications Artificial dressed and falling snow effects
-

2 Hazards Identification

- 2.1 Classification of the substance or mixture
- 2.2 Classification according to Directive 671548/EEC or Directive 1999145/EC
- 2.3 Information concerning particular hazards for human and environment: The molten product adheres to the skin and causes burns. Spilled material may present a slipping hazard
- 2.4 Classification system: This product is, according to EEC directives 1999145, 671548, Regulation 190712006/EC, and following amendments, not classified as hazardous.
- 2.5 Label elements
Labelling according to EU guidelines: Not classified
- 2.6 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable

Snow Business

The Snow Mill, Bridge Road, Ebley, Stroud,
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www.snowbusiness.com

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3 Composition / information on ingredients

- 3.1** Chemical characterization: Substances
- 3.2** CAS No. Designation
9002-88-4 1-ethene homopolymer
- 3.3** Chemical characterization: Mixtures
- 3.4** Description: low density polyethylene
- 3.5** Dangerous components: Void
- 3.6** Additional information Can contain additives

4 First Aid Measures

- 4.1** Description of first aid measures
- 4.2** General information
At room temperature the product is neither an irritant nor gives off hazardous vapours. The measures listed below apply to critical situations (Fire, incorrect process conditions).
- 4.3** After inhalation In case of excessive inhalation offi1mes move the person to fresh air. Call for medical help.
- 4.4** After skin contact
After contact with the molten product, cool rapidly with cold water. Do not pull solidified product away from the skin Seek immediate medical advice.
- 4.5** After eye contact Rinse opened eye for several minutes under running water.
- 4.6** After swallowing No specific measures have to be taken if the product is swallowed.
- 4.7** Information for doctor
Most important symptoms and effects, both acute and delayed No further relevant information available.
Indication of any immediate medical attention and treatment needed No further relevant information available.

5 Firefighting Measures

- 5.1** Extinguishing media
- 5.2** Suitable extinguishing agents
Water haze
Foam
Chemical powder
- 5.3** For safety reasons unsuitable extinguishing agents- water jet

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- 5.4** Special hazards arising from the substance or mixture
In case of fire it can release water (H₂O), carbon dioxide (CO₂), and when lacking oxygen (O₂), carbon monoxide (CO)
The products of the burning are dangerous
- 5.5** Advice for the firefighters
Protective equipment
Use a mask with universal filter
Use self contained breathing apparatus within confined rooms
- 5.6** Additional Information
Heat Value:12.2kWh/kg

6 Accidental Release Measures

- 6.1** Personal precautions, protective equipment and emergency procedures Particular danger of slipping on leaked/spilled product.
See point 8
- 6.2** Environmental precautions: No special measures required. See points 12 and 13.
- 6.3** Methods and material for containment and cleaning up: Recycle product or dispose properly.
See point 13
- 6.4** Reference to other sections Collect spilled polymer: It could cause falls (Danger of slipping).

7 Handling and Storage

- 7.1** Handling
Precautions for safe handling
No special requirements necessary, if handled at room temperature.
When bringing the material to processing temperatures gases might develop, forming: ethylene and alkenes of higher molecular weight. Traces of formaldehyde and acrylaldehyde traces of acids (Formic acid, acetic acid)
Provide appropriate ventilation for such processing conditions.
Take precautionary measures against explosion risks, as all types of polymer may develop dust during transporting or grinding of granules.
Prevent formation of dust.
Avoid spilling the product, as this might cause falls.
Conditions for safe storage, any incompatibilities

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7.2 Storage

Requirements to be met by store rooms and containers

Take precautionary measures to prevent the information of static electricity

Do Not Smoke

Ground equipment electrically

Open flames prohibited

Information about in one common storage facility: Not required

Further information about storage conditions

Protect from heat and direct sunlight

Store container in a well ventilated position

Store under dry conditions

Do not stack up the octabins

Specific end use(s). For safe stacking follow the storage recommendations specific to this product.

8 Exposure Controls / personal protection

Additional information about design of technical systems: No further data; see item 7

8.1 Control parameter

Components with limit values that require monitoring at the workplace: Not required

Additional exposure limit values for possible processing dangers:107-02-8 acrylaldehyde

WEL I Short-term value: 0.7 mg/m³ 0.3 ppm

Long-term value: 0.23 mg/m³ 0.1 ppm

50-00-0 formaldehyde

WEL I Short-term value: 2.5 mg/m³ 2 ppm

Long-term value: 2.5 mg/m³ 2 ppm

64-18-6 formic acid

WEL I Long-term value: 9.6 mg/m³ 5 ppm

8.2 Additional information Void

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8.3 Exposure controls

Personal protective equipment

General protective and hygienic measures Do not eat, drink or smoke while working.

Breathing equipment: Use breathing protection in case of insufficient ventilation.

Protection of hands: Heat resistant gloves

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Eye protection: Not required

9 Physical and Chemical Properties

9.1 Information on basic physical and Chemical

General Information

Appearance:

Form: Pellets

Colour: Neutral
various colours

Odour: Nearly odourless

9.2 Change in condition

Melting point/Melting range: 50-140 °C

Boiling point/Boiling range: Not applicable

9.3 Flash point: Not applicable (see attachment to guideline 92169/EEC, A.9)

9.4 Ignition temperature 360°C

9.5 Danger of Explosion Product is not explosive see point(s)7

9.6 Density at 20°C 0.9-0.97g/cm³

9.7 Solubility in I Miscibility with

Water: Insoluble

Other information Soluble in boiling, aromatic chlorinated solvents

10 Stability and Reactivity

10.1 Reactivity

10.2 Chemical stability

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- 10.3** Thermal decomposition I conditions to be avoided:
The product is stable when handled and stored under normal conditions. Decomposes over 360 °C.
- 10.4** Possibility of hazardous reactions No dangerous reactions known
- 10.5** Conditions to avoid No special precautions necessary if used correctly.
- 10.6** Incompatible materials: No special requirements.
- 10.7** Hazardous decomposition products: No hazardous decomposition products known at room temperature

11 Toxicological Information

- 11.1** Information on toxicological effects
Acute toxicity:
- 11.2** Primary irritant effect:
On the skin: No irritant effect.
On the eye: No irritant effect.
Sensitization: No sensitizing effect known.
- 11.3** Additional toxicological information:
When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

12 Ecological Information

- 12.1** Toxicity
Aquatic toxicity: No further relevant information available.
- 12.2** Persistence and degradability No further relevant information available.
- 12.3** Other information: The product is not biodegradable.
- 12.4** Behaviour in environmental systems:
Bio accumulative potential Floats on water.
There is no bioaccumulation.
In soil No further relevant information available.
Additional ecological information

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12.5 General notes:

The product is not toxic, small particles can have physical effects on water and soil organisms.

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Other adverse effects No further relevant information available.

13 Disposal Considerations

13.1 Waste treatment methods

Recommendations

Reuse or recycle if possible

Disposal through controlled incineration or authorised waste dump

European waste catalogue 070213

Uncleaned packagings

Recommendation: Disposal must be done according to official regulations

14 Transport Information

UN-Number

ADR, ADN, IMDG, IATA Void

UN proper shipping name

ADR, ADN, IMDG, IATA Void

Transport hazard class(es)

ADR, ADN, IMDG, IATA

Class Void

Packing group

ADR, IMDG, IATA Void

Environmental hazards: Not applicable.

Transport in bulk according to Annex II of

MARPOL 73178 and the /BC Code Not applicable.

Transport/Additional information: According to national and international guidelines, which regulate the road-, rail-, air- and sea transport, this product is classified as not dangerous.

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15 Regulatory Information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
Chemical Substance Control Law
Existing Chemical Substances 9002-88-4 1-ethene homopolymer
- 15.2 Specified Chemical Substances
None of the ingredients is listed
- 15.3 Monitoring / Type 11 Monitoring (before amendment) Chemical Substances
None of the Ingredients is listed
- 15.4 Priority Assessment Chemical Substances
None of the ingredients below
- 15.5 Chemical Substances Relating to a Public notice pursuant to the Provisions of a Paragraph 4 or Article 4 of the Former Act
None of the ingredients listed
- 15.6 Toxicity test results
None of the ingredients listed
Designation according to EC guidelines: Not classified
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.
-

Compilation date **04/06/2015**

Approved **Symon Doliczny**

Reviewed by

The statements in this bulletin were made to the best of our knowledge and are as accurate as possible. They are given for information only. They do not constitute a contractual guarantee of a product's properties. They must neither be altered nor transferred to other products.

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PRÜFZEUGNIS

PZ-Hoch-130777-2

for the proof of Fire behavior according to DIN 4102, part 1 and part 14

Translation of the German test report – no guarantee for translation of technical terms

company	Snow Business International Limited The Snow Mill Bridge Road Ebley Gloucestershire, GL5 4TR United Kingdom
description of samples	decor snow made of pe-film
name of the material	„Foss Decor“
sampling	by the company "Snow Business GmbH", Ladbergen
content of request	Proof of flammability to classify building materials to class B1 "schwerentflammbar" according to DIN 4102, part 1 and part 14
validity of test report	30.06.2018
result	The decor snow (with a thickness about 20 mm) meets applied on massive mineral material with a density $\geq 1800 \text{ kg/m}^3$ the requirements of class B1 for „schwerentflammbare“ (hardly flammable) floorings according to DIN 4102, part 1 (Mai 1998) and part 14 (May 1990).

This test report includes 3 pages and 2 enclosures.

Remark: If the above mentioned building material is not used as product according to MBO § 2, Abs. 9, Ziffer 1, there is no need for a general building supervisory test report.

This test report is not valid if the examined building material is used as product in the meaning of state building prescriptions (MBO § 17, Abs. 3).

This test report does not replace an eventually necessary proof of applicability concerning building supervisory or building laws in the meaning of state building prescriptions. This has to be verified by:

- "allgemeine bauaufsichtliche Zulassung" (general building inspectorate approval) or by
- „allgemeines bauaufsichtliches Prüfzeugnis“ (general building inspectorate certificate) or by
- "Zustimmung im Einzelfall" (exceptional approval)

This test report can underlie building supervisory procedures

- for regular building products for the prescribed proofs of conformity
- for non regular building products for the needed proofs of applicability.

This test report must not be published and copied without preceding agreement of the test laboratory and if agreed, only during validity and unchanged concerning appearance and contents.

1. Description of test material in condition as delivered

PN 17520 „Snow Fall“ decor snow made of pe-film
characteristic values determined by the test laboratory.
granulation ca. 5 mm bis 40 mm

The testing laboratory is not provided with further details concerning composition of the tested building materials. Samples are deposited.

2. Preparation of samples

For building up the samples boxes of fiber-cement boards (with thickness 6 mm, density 1900 kg/m³) were build, with a height of 20 mm. Into this boxes we put the snow (thickness about 20 mm and area weight about 0.3 kg/m²).

The samples were kept in climate chamber 23/50 until they reached constant weight.

3. Arrangement of samples #1328: decor snow

4. Date of test 04.07.2013

5. Results The test has been examined according to DIN 4102-14 (May 1990)

#1328	specimen 1	specimen 2	specimen 3	specimen 4	average value
max. burning distance [cm]	5	0	—	-	2,5 cm
self-extinguishing of the flames [min:sek]	2:45	— (no ignition)	—	-	---
end of test [min:sek]	30:00	30:00	—	-	---
critical radiation intensity I [W/cm ²]	≥ 1,1	≥ 1,1	—	-	≥ 1,1 W/cm ²
max. density of smoke [%]	0,8	0,9	—	-	0,85 %
smoke production [%/min]	12,4	11,1	—	-	11,8 %/min

According to DIN 4102, part 1, "schwerentflammbare" (hardly flammable) building materials must meet the requirements of class B2.

Pursuant to additional tests in the ignitability apparatus this can be determined (appendix 2).

6. Explanations concerning the testing procedure

The decor snow melted after about 20 seconds. Only in sample 1 for a short time became the melting catch fire after touching with the pilot burner and then go out again after about 2:45 minutes. Since the critical light intensity > 1.0 W / cm², and the smoke development to be < 300% min in the first two experiments, we reduced the number of attempts.

7. Special remarks

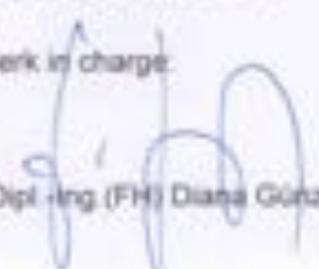
- This report is only valid for the material as described under paragraph 1. In combination with other materials or with additional coatings or grounds etc. the burning behaviour may differ.
- This test report is not valid for the exposure to outdoor climate conditions.
- This test report is not valid, as soon as the fabric is used as a building product in the sense of the "Landesbauordnungen" (state building requirements, MBO § 17, par. 3).
- This test report is no substitute for a General Building Inspectorate Certificate.
- In General Building Inspectorates procedures this test report can be based for
 - regular building materials for the required proof of accordance
 - for not regular building materials for the required proof of applicability
- For legal interests only the German original version is relevant.

8. Validity

This test report is valid until the mentioned date on page 1. The test report becomes invalid in case the standards on which the tests are based are changed.

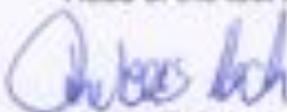
Fladungen, 18.02.2014

clerk in charge:


(Dipl.-Ing. (FH) Diana Gützel)



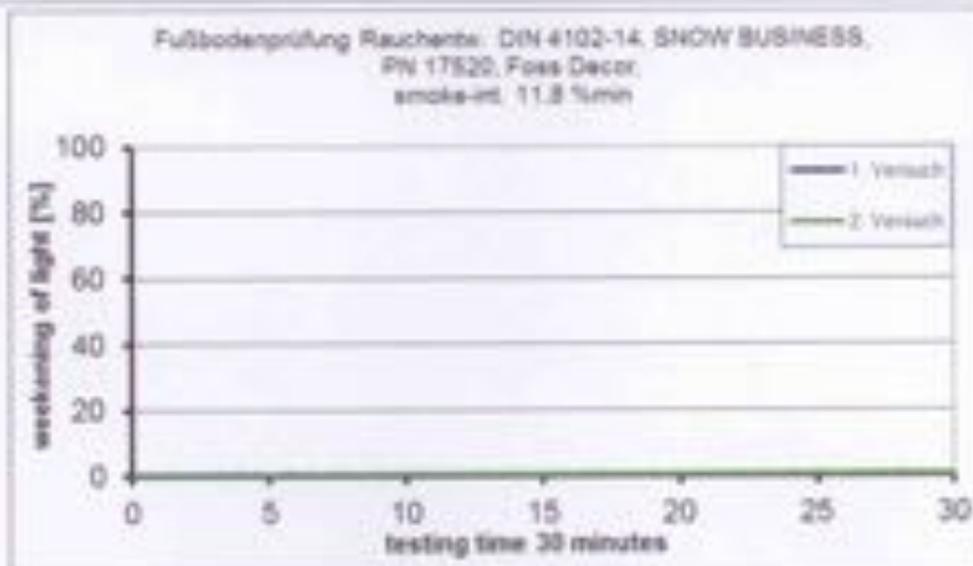
Head of the test laboratory:


(Dipl.-Ing. (FH) Andreas Hoch)

test #1328



measurement



Test for normal flammability

classifying B2 according to DIN 4102

1. Description of test material in condition as delivered look at page 2

2. Preparation of samples

The decor snow were pour in the sample holder for loose fillers (according to DIN EN ISO 11925-2 clause 4.5 c.)

The samples were kept in a climate 23/50 until they reached constant weight.

3. Arrangement of samples -freely suspended

4. Date of test 03.07.2013

5. Versuchsergebnisse:

„Snow Fall“ PN17520	edge-test					surface-test					
	1	2	3	4	5	1	2	3	4	5	
samples no.											
ignition ¹⁾	--	--	--	--	--	5	8	6	5	4	s
reaching the mark of measurement ²⁾	--	--	--	--	--	/	/	/	/	/	s
max. flame height	--	--	--	--	--	5	5	4	9	6	cm
time	--	--	--	--	--	15	15	15	15	15	s
self-extinguishing of the flames ¹⁾	--	--	--	--	--	19	/	/	/	/	s
end of glowing ¹⁾	--	--	--	--	--	/	20	20	20	20	s
flames were extinguished after ¹⁾	--					little					
smoke development (visual)	--	--	--	--	--	/	/	/	/	/	s
Appearance after test: melted max. height 6 cm											

¹⁾ time mentioned from the beginning of the test ²⁾ during 20 Sec: / - no appearance -- no information

6. Remarks and explanations to the testing procedure - none -

7. Opinion concerning the dropping of burning material

The test for normal flammability shows no burning dripping material.



NESTAAN NV
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7522 Blandain—Belgium

Tel. +32/69.77.83.20
Fax. +32/69.22.95.27
nestaan@nhb.be
www.nestaan.be

MATERIAL SAFETY DATA SHEET	Review : 1
	Date : 21.03.2012
	Replaces : 30.04.2008

Exfoliated Vermiculite



Producer:
Nestaan NV
Zone Industrielle Tournai Ouest 2
B-7522 Blandain
Tel : +32 (0)69.77.83.20 Fax : +32 (0)69.22.95.27

1. IDENTIFICATION OF THE MATERIAL

Vermiculite is a natural mineral consisting of aluminum silicate. The exfoliation process is realized at a high temperature. The exfoliated product is totally sterile.
Chemical identification : CAS NO. 1318-00-9

2. INFORMATION ON THE COMPOSITION

Vermiculite is composed of a laminary complex of aluminum, magnesium, calcium, iron and silicate.

3. DANGERS

The only possible dangers issuing from vermiculite, are possible irritations by its dust or possibly, in case the material is wet, the risk of slipping.

Vermiculite is not classified dangerous according to the regulations of the E.U.

DOC71-3 MSDS



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4. EMERGENCY MEASURES

General :	In case of any doubt or when the symptoms persist, a medical doctor should be consulted.
Measures in case of :	
-Inhalation :	Can cause minor irritations of the bronchial tubes in case of very heavy exposure to dust. Bring the person outside in fresh air.
-Contact with the skin :	Can cause minor dehydration in case of very long exposure. Rinse with abundant water and mild soap.
-Contact with the eyes :	The dust can cause a minor irritation. Rinse immediately with abundant clean water during about 15 minutes. When needed consult an oculist..
-Swallowing:	No known effect on health situation. Drink sufficiently. When needed, consult a medical doctor.

5. MEASURES IN CASE OF FIRE

Vermiculite is incombustible. Fire class A1.

6. MEASURES TO BE TAKEN IN CASE OF AN ACCIDENT.

Minimize the dust by wetting the product.
Beware: when vermiculite is wet, there is a risk of slipping !

7. HANDLING AND STORAGE

Store INSIDE: Protect against Ultra Violet light that can harm the packaging and against rain. Vermiculite can absorb a very large quantity of liquid..

Don't put the pallets on each other to storage.
Vermiculite is incombustible and not explosive, you don't need to take measurements on this.

DOC71-3 MSDS



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8. MATERIAL FOR PERSONAL PROTECTION

General :	The usual safety precautions should be respected and taken into account.
-Protection against inhalation:	In case of a dusty environment, a protective mask with an air filter should be worn.
-Protection of the hands :	When needed wear protecting gloves .
-Protection of the eyes :	When needed wear protecting glasses.
-Protection of the body:	When needed, wear protective clothing, which is adapted to the presence of dust.

9. PHYSICAL AND CHEMICAL PROPERTIES

Colour/aspect :	Harmonica shaped particles in brown or golden colour
Density (g/cm ³) :	ca. 65-160 kg/m ³
pH in aqueous solution:	between +/- 6 en 7
Fusionpoint (°C) :	1330 °C
Odour :	None, odour less.

10. STABILITY AND REACTIVITY

Stability :	inert
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11. TOXICOLOGICAL INFORMATION

No single known toxicological effect.

12. ECOLOGICAL INFORMATION

No single known ecological implication.

13. CONSIDERATIONS REGARDING DESTRUCTION AND REMOVAL

Destruction and removal of the product should be assured in accordance with the local laws and regulations.

DOC71-3 MSDS



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14. INFORMATION ON TRANSPORT

No specifically required precautions to be taken.

15. REGULATORY INFORMATION

Vermiculite is non toxic.
The dust is classified as irritating.

16. OTHER INFORMATION

This Material Safety Data Sheet is realized in accordance with CE-regulations and guidelines. The information is provided in good faith but it may well be possible that it does not cover all items and subjects. It is the obligation of the user to evaluate and judge if it is safe to use or apply the product in a specific way, in a specific application or in a particular way and to comply with the appropriate local laws, rules and regulations to do so.

No liability whatsoever can either be accepted, derived or has been expressed by this document.

End of the document.

DOC71-3 MSDS



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TECHNICAL DATASHEET

Exfoliated Vermiculite Medium

Productdescription

Vermiculite is a mineral, which exfoliates like a harmonica, when rapidly heated at temperatures above 800°C and in this way becomes several times bigger than the original crude.

Product Physical Properties

Identification number : CAS N° 1318-00-9
Chemical formula : $(\text{Mg,Ca})_{0,7}(\text{Mg,Fe,Al})_6(\text{Al,Si})_8\text{O}_{22}(\text{OH})_{24}\cdot 8\text{H}_2\text{O}$
Density : 65-145 kg/m³ depending on the granulometrics and origine
Grade : 0,5 à 4 mm
Lambda : 0,05 à 0,08 W/m.K
PH : 5.5-10
Solubility : insoluble in water and organic solvents
Fire behaviour : incombustible – A1
Meltingpoint: $\pm 1350^\circ \text{C}$
Stability : insensible to atmosferic influences
Appearance: worm-like, brune or yellow
VOC-level : -

Asbestos free

Typical chemical composition

Silicon	SiO ₂	38-46 %
Aluminum	Al ₂ O ₃	10-16 %
Magnesium oxyde	MgO	16-35 %
Iron oxyde	Fe ₂ O ₃	5-13 %
Titanium oxyde	TiO ₂	1-3 %
Calcium oxyde	CaO	1-5 %
Kalium oxyde	K ₂ O	1-6 %
Moisture	H ₂ O	3-16 %
Others	/	1-2 %



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Application

- Building and construction (renovations & new)
- Agriculture and horticulture
- Packaging & Absorption
- Fireprotection
- Others like: animalfeed, substates, additives for paints, glue, plastering and odourbags

Packaging

- Bags of 100 liter by filling
- Big bags of 1200 liters by filling
- Bulk
- Others upon request

Transport

Classified as undangerous. Vermiculite is not polluting and is chemical inert.

Stability en reactivity

Inert

Stockage

Store inside in a dry place. It is recommended to wear a protective mask for people with breathing difficulties.

Pallets are not stackable (compression of the material)

Toxicologie

On short term: occasionally a small irritation off the eyes

On long term: nothing attended



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Emergency measure

Contact with the eyes:	rinse with abundant water
Contact with the skin:	no risk
Inhalation :	breath fresh air
Swallowing:	drink a lot of water

Remarks

Our advices or indications regarding technical applications, either in word, in written or by means of trials are provided in good faith, but do entirely remain without commitment, equally regarding possible protecting rights from third parties. It is the obligation of the user to evaluate and judge if it is safe to use or apply the product in a specific way, in a specific application or in a particular process and to comply with the appropriate local laws, rules and regulations to do so. Application, use and processing of the products takes place beyond our possibilities of control and therefore fall within the liabilities of the user. In case of any liability, for any or all damages this remains limited to the value of the delivered or processed goods. Vermiculite should be stored inside. Obviously we do guarantee the good quality of our products, such as specified according to the general conditions of sale and delivery.

GOBELINTULLE

TECHNICAL DATA SHEET

November 2015

Classic theatre sharktooth scrim for disappearing & appearing acts. Can also be used as large speaker gauze (because of excellent sound transparency) or for exhibition stands. Mesh size: H 1.25 mm x W 2.5 mm.

» ARTICLE CODE	» WIDTH	» LENGTH	» WEIGHT
3420 0450 #	450 cm	± 70 m	85 g/m ²
3420 0640 #	640 cm	± 70 m	85 g/m ²
3420 0810 #	810 cm	± 70 m	85 g/m ²
3420 0950 #	950 cm	± 70 m	85 g/m ²
3420 1100 #	1100 cm	± 70 m	85 g/m ²
3420 1200 #	1200 cm	± 70 m	85 g/m ²

» COMPOSITION

95% CO + 5% PES

» CARE INSTRUCTIONS



» FLAME RESISTANCE

NF P 92-503 (1995)

NEN EN ISO 6941/6065/6066

BS 5867 PART 2 TYPE B (1980)

CLASS M1

PASS

PASS

» AVAILABLE COLOURS



0001



0003



0005



0007



0030

ATTEST VLAMWERENDHEID

voor **VOR15163167**

WP Zimmer VZW

Karl Van Welden
Gasstraat 90
2060 Antwerpen
België

Showtex Contact: Bart Delporte

Uw referentie Project Mars II

Contact: Karl Van Welden

Datum :19/11/15

OND nr.:BE 0428.652.502

Klant nr.: 26244

1 X Stof	<i>GobelinTulle - 95% CO/5% PES</i>
Type	<i>Gaashorizondoek</i>
Kleur	<i>Zwart (Artnr: 3420 0640 0007)</i>
Spec	<i>Stofbreedte: 640 cm - Spec. Gew.:85 g/m²</i>
Norm	<i>Vlamwerend: BS 5867 part 2B - NF P 92-503 / M1</i>
Afmeting	<i>600 cm H x 1.200 cm B.</i>
Afwerking	<i>Bovenaan: singelband met zeilringen en knooplint om de 25 cm Linkerkant en Rechterkant: boordelastiek met zeilringen om de 100 cm Onderaan: open zoom 10 cm</i>

Hierbij bevestigt ShowTex NV dat bovengenoemd artikel GobelinTulle vlamwerend werd uitgerust volgens NF P 92-503 / M1,BS 5867 PART 2 B,NF P 92-503 / M1,NEN EN ISO 6941,NF P 92-503 / M1.

Opgelet: blootstelling aan vocht en reinigingsmiddelen kunnen de brandwerendheid van de stof verminderen.

ShowTex NV confirme que le tissu mentionné ci-dessus GobelinTulle est ignifugé selon NF P 92-503 / M1,BS 5867 PART 2 B,NF P 92-503 / M1,NEN EN ISO 6941,NF P 92-503 / M1.Attention : l'exposition à l'humidité et aux détergents peut réduire la résistance au feu du tissu.

ShowTex NV confirms that the above mentioned fabric GobelinTulle meets the flame retardant requirements according to NF P 92-503 / M1,BS 5867 PART 2 B,NF P 92-503 / M1,NEN EN ISO 6941,NF P 92-503 / M1.Attention: please mind that exposure to moisture and detergents can reduce the fire resistance of the fabric.

Hiermit bestätigt die Fa. ShowTex NV, dass oben ausgeführte Ware GobelinTulle schwerentflammbar nach NF P 92-503 / M1,BS 5867 PART 2 B,NF P 92-503 / M1,NEN EN ISO 6941,NF P 92-503 / M1 ausgerüstet ist.Achtung: bitte achten Sie darauf dass Einwirkung von Reinigungsmitteln und Feuchtigkeit die Feuerfestigkeit de

ShowTex NV certifica que el tejido GobelinTulle citado arriba cumple los requisitos ignifugos de acuerdo con NF P 92-503 / M1,BS 5867 PART 2 B,NF P 92-503 / M1,NEN EN ISO 6941,NF P 92-503 / M1.

Atención: Tenga en cuenta que la exposición al la humedad y detergentes pueden reducir la resistencia al fuego de la tela.

Norm: NF P 92-503 / M1

Analyserapport: 8393

Testlabo: Universiteit Gent

Norm: BS 5867 PART 2 B

Analyserapport: 56903/F

Testlabo: Centexbel

Norm: NF P 92-503 / M1

Analyserapport: 46497/P

Testlabo: Centexbel

Norm: NEN EN ISO 6941

Analyserapport:

Testlabo: Bolderdijk Brand Preventie

Norm: NF P 92-503 / M1

Analyserapport: CM-15-P-017

Testlabo: FCBA

ATTEST VLAMWERENDHEID

Pagina 2

voor **VOR15163167**

Uw referentie **Project Mars II**

Contact: **Karl Van Welden**

Datum :19/11/15

OND nr.:BE 0428.652.502

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