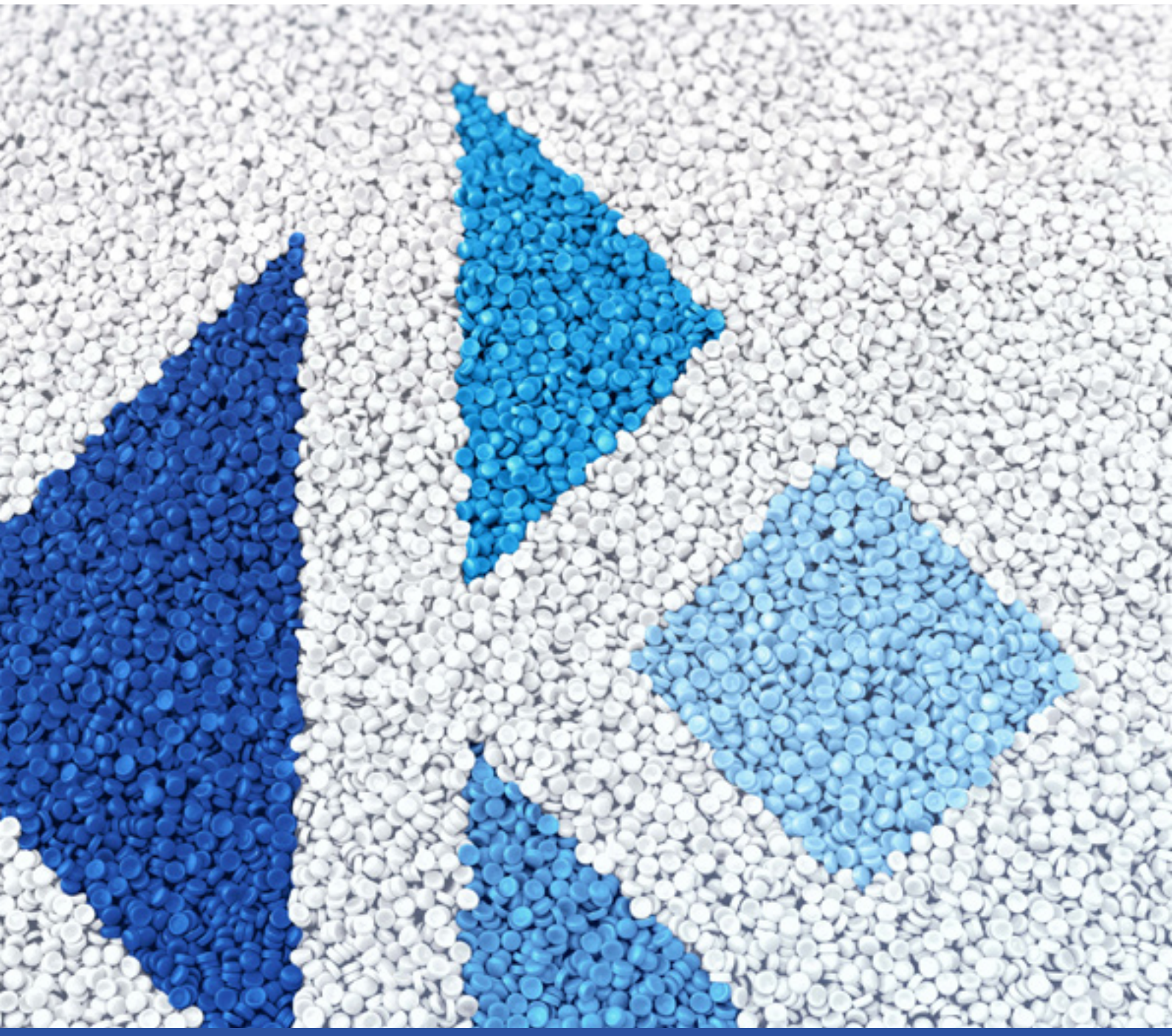
KERPEN
DATACOM



COMPETENCE IN COMPOUNDS

PVC and halogen-free flame-retardant materials for your individual needs

Arctic Energy Oil Industry Events

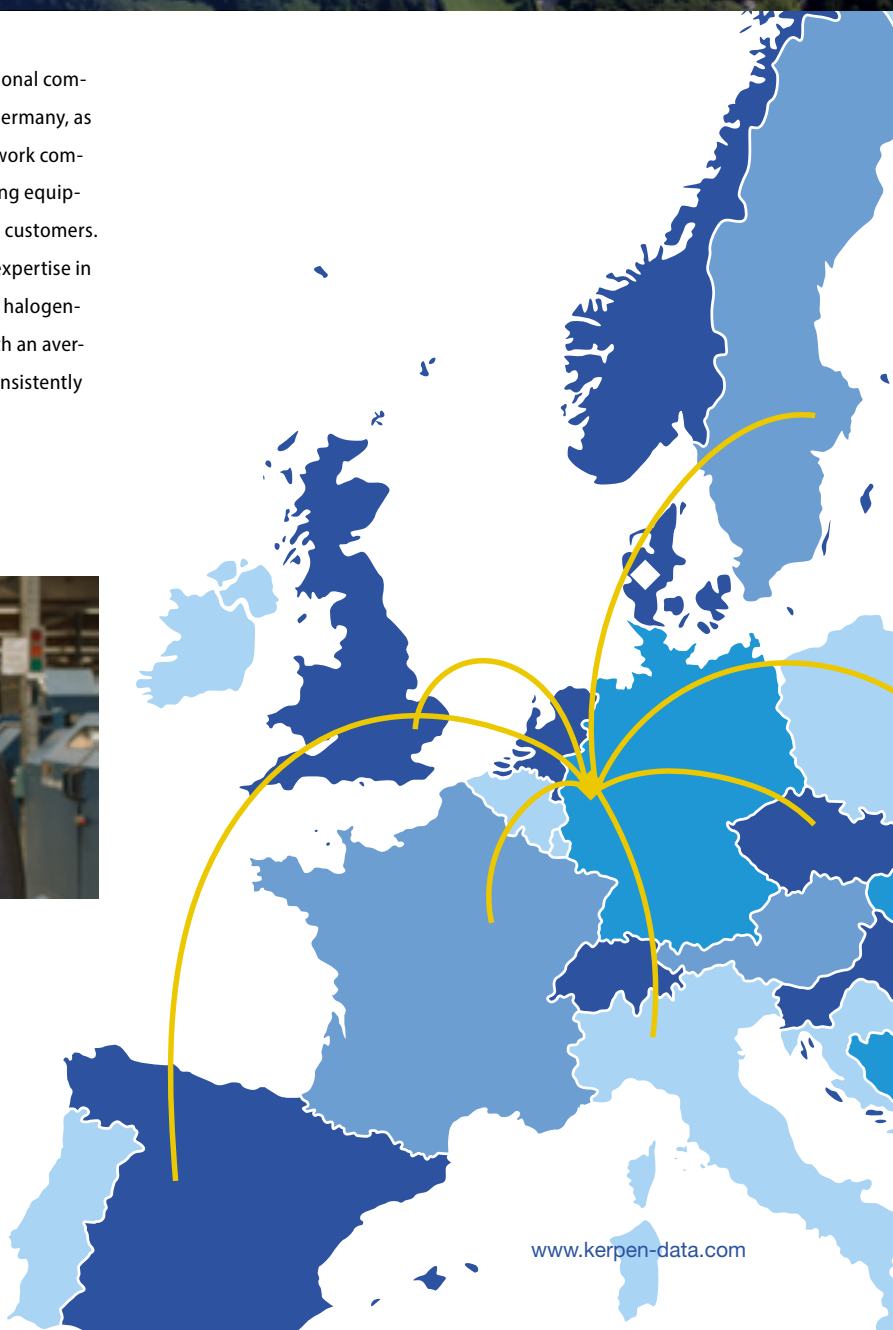
www.kerpen-data.com

WHO WE ARE

Factory area: 42.000 m²

KERPEN DATACOM has taken over the activities of the traditional company Kerpenwerk, founded in 1919 and based in Stolberg, Germany, as of 1 July 2021. The company produces and sells passive network components, such as data cables, RJ45 connectors and computing equipment, directly and via trading partners to installers and end customers. The company also has 60 years of industry experience and expertise in production and development as a compounder for PVC and halogen-free flame-retardant materials. 200 qualified employees with an average of 15 years of service and proven equipment provide consistently high quality and delivery reliability.

Managing Directors of KERPEN DATACOM:
David Schlenter and Frank Wettstein



KERPEN DATACOM

www.kerpen-data.com

In the 1950s, the Kerpen Kabel company manufactured cables with Heinz Kerpen Senior as managing director, mainly using elastomers, among other materials. The importance of the relatively new, thermoplastic material PVC for the insulation and sheathing of cables was quickly recognized. At the end of the 1950s, the first PVC compounds were produced manually on smaller mixers in the dough industry. Based on these successful trials, the pioneering and courageous decision was made to invest in the construction of a PVC processing plant that was highly modern at that time. Construction and completion of the multi-storey building took place in 1962. The plant was designed with a much higher capacity than originally required for the Kerpen Kabel company. This forward-looking planning proved to be the right decision for the following decades with huge increases in demand for PVC. Thanks to the consistently high quality of the PVC granulate, Kerpen Kabel was able to produce the corresponding compounds as a contract compounder for other cable factories. With a newly created organization in the company, an active start was made at the end of the 1970s to acquire cable manufacturers as potential Customers. At that time, the main focus was already on the sale of special compounds, whose formulations were created in-house at Kerpen. Particularly strong sales were the migration-resistant compounds that cable works needed for the sheathing of telephone connection lines. The demands on the properties and appearance of these special cables are high.

In the mid-1980s, Kerpen began to develop PVC compounds for the booming market of thin-walled automotive cables and became a valued partner of the automotive supply industry. The 1990s are characterized by one topic: conversion of the PVC compounds, which until then had been almost exclusively lead stabilized, to lead-free systems. Here, too, the special constellation at Kerpen proves to be extremely helpful: since the company's own cable plant is also supplied with PVC compounds, new compounds can be quickly tested with regard to processing and properties on the finished product. To this day, our chemists are represented in national and international standardization committees for materials and cables and can contribute their practical experience to specifications to be drawn up.

Dr Werner de Fries and Mr Siegfried Pohl have helped to build up and shape the compound sector over the past decades. Both look back on their professional careers with satisfaction and are grateful to have been part of it. Again and again, they emphasise that the competent and harmonious team around them was the greatest success factor. What was particularly impressive was the spirit of the people and the associated joy in their work.

Dr. Werner de Fries
Head of Compounding (1979-2017)

"The key to success has always been the cooperative relationship with our customers and suppliers, with whom we have always been able to communicate at eye level. Kerpen has always been a top address in the market and continues to be so."

Siegfried Pohl
Head of Laboratory (1981-2020)

"PVC and HFFR compounds have held their own for decades in the face of increasing environmental and technological demands and, in my opinion, will continue to maintain and expand these positions in the markets in the future."

HISTORY

Foundation of Kerpenwerk 1919 - Foundation of Compounding 1962

1919

1972

2000

2006

2021

WHAT SETS US APART

OUR STRENGTHS

INDUSTRY KNOW HOW

As a cable manufacturer, we know our customers' concerns. Our experts not only have extensive know-how about compounds, but also about their applicability to the application profile.

FLEXIBILITY

Our plant design makes it our particular strength to produce special compounds individually according to customer requirements in the shortest possible time.

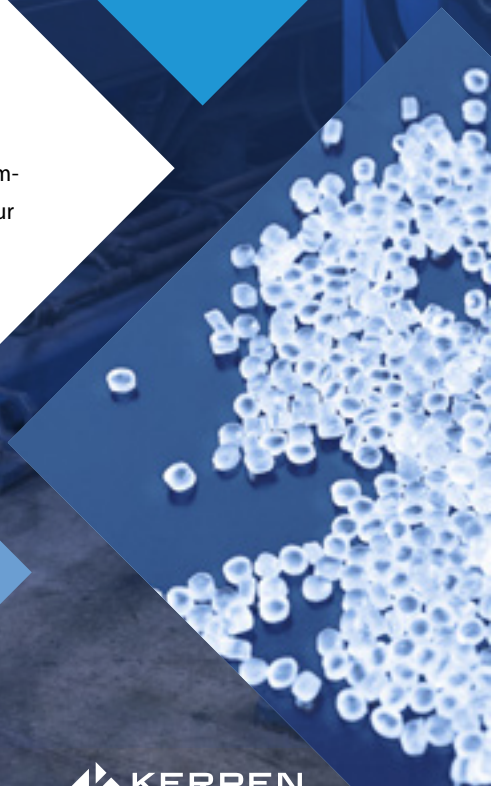
- Smallest quantities to silo deliveries

INDIVIDUALITY

Our extensive experience as a developer and manufacturer of special cables makes us to a competent partner in regards to your individual compound needs.

MANY YEARS OF EXPERIENCE

In our factory, compounding was put into operation in 1962 and has been steadily developed over the past decades



OUR COMPOUNDS ARE AT HOME IN MANY AREAS

Power supply
Application area Flat ribbon Cables for Switch gears

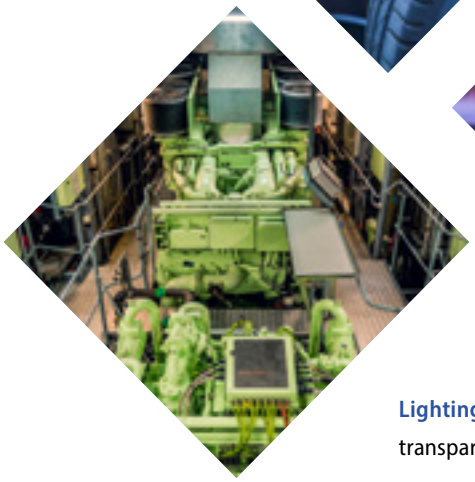
Petrochemical oil
petrol and chemical resistant cables

Extreme temperature applications
Plant engineering in extreme environments

- cold
- heat
- mechanical stress

E-mobility, mobility
Automotive, high temperature resistant compounds, oil resistant petrol station lines

Plant engineering
Flexible measuring and control cables



Lighting and event technology
transparent, weather-resistant audio cables

OUR SERVICE FOR YOU

Individual
CONSULTATION

Application-oriented
DEVELOPMENT

FABRICATION
according to customer recipe

QUALITY
CONTROL
according to the highest standards in our own laboratory

On-time
DELIVERY

After-Sales
SERVICE

We will be happy to support you!

PERFECT – ONLY WITH THE RIGHT COMPOUND

Compounds are the icing on the cake and make cables perfect. Our technical know-how in cable production combined with our expertise as a compounder creates synergies from which our customers benefit directly.

We not only develop and produce customised insulation and sheathing materials, we are also experts in their processing. Take advantage of our extensive wealth of experience to optimise your production performance.

Our compounds are developed and tested in our chemistry and physics laboratories according to the latest standards. We currently produce around 150 different compounds. State-of-the-art production facilities allow us to react flexibly to our customers' wishes within a very short time.

From smallest quantities to silo deliveries - we make it possible

Comprehensive quality management ensures a consistently high level of quality. Of course our company is DIN EN ISO 9001, DIN EN ISO 14001 and OHSAS 18001 certified.

PVC-COMPOUNDS

SOFT-PVC WITH HIGHEST QUALITY STANDARDS FOR YOUR INDIVIDUAL REQUIREMENTS

With more than 6 decades of experience, KERPEN DATACOM develops and produces soft-PVC compounds for a wide range of applications. With the know-how of our employees, we have focused on the special requirements of our customers since the beginning of our production. Our developers work out an appropriate formulation for your requirements in our modern, in-house laboratory. Our aim is to find tailor-made solutions for our customers.

This goes through numerous analysis and testing procedures in coordination with our customers in order to be able to offer quality at the highest level. Our comprehensive product portfolio is particularly suitable for extrusion and injection moulding technology. During processing, we pay special attention to our suppliers and the quality of our raw materials. The satisfaction of our customers is always our top priority.

PVC COMPOUNDS

Product portfolio

Example selection PVC product range

Product type	Density (g/cm^3)	Tensile strength (Mpa)	Elongation at break (%)	Shore hardness	Oxygen index LOI (%)	Isolation	Coat	Flame retardancy	Special features
Standard Compounds									
Y0200 BF	1,46	17	250	44 D	–	•	•	*	Standard, YI7, YM5, TI52, TM52
Y0500 BF	1,51	14	270	89 A	–	•	•	*	Standard, YI2, YM3
Y0700 BF	1,39	12	320	77 A	–	–	•	*	Flexible applications, YM2, TM2
Y1500 BF	1,50	17	250	40 D	31	–	•	**	Standard, flame-retardant, YM3, TM52
Y2100 BF	1,31	25	280	54 D	–	•	–	*	Standard, YI7, TI54
Y6100 BF	1,36	24	270	49 D	–	•		*	Standard, YI7
KU 9 BF	1,28	14	350	64 A	–		•	*	PVC-NBR compound, flexible, matt surface
Heat resistant Compounds									
Y0400 BF	1,31	30	320	55 D	–	•	–	*	UL 105°C, Fire class UL94 94V-0
Y1100 BF	1,36	21	270	52 D	–	•	–	*	High temperature stress, automotive
Y1400 BF	1,31	22	300	48 D	–	•	–	*	UL 105°C, UL-registered,application smallest wall thicknesses
Y2400 BF	1,46	18	250	42 D	30	–	•	**	TM53, UL 105°C, UL-registered, Flame retardant
Y4200 BF	1,45	18	300	48 D	30	–	•	**	TM54, Flame retardant
Y5200 BF	1,58	14	250	48 D	32	–	•	***	Low smoke, UL94 94V-0, termite protection
KU 125-96	1,32	18	250	54 D	–	•	–	*	Automotive application 125°C
KU 125-88	1,27	23	270	45 D	–	•	–	*	Automotive application 125°C
Cold flexible Compounds									
Y0900 BF	1,42	14	300	80 A	33	–	•	***	High cold flexibility and flame resistance
Oil resistant Compounds									
Y2700 BF	1,39	17	330	73 A	29	–	•	**	YM5, TM54, TM55, flame retardant
Y8100 BF	1,39	24	300	46 D	–	•	–	*	UL 105°C, application smallest wall thicknesses
KU 92 BF	1,41	16	350	75 A	25	–	•	*	YM3, very good oil resistance
Transparent Compounds									
Y0318 BF	1,19	16	320	74 A	–	–	•	*	Flexible sheath mix, YM2, TM52
KU 41 BF	1,23	18	300	90 A	–	•	•	*	YI2, YM2, TI52, TM52
Cable Filler Compounds									
Y1800 BF	1,78	8	220	42 D	–	–	–	**	UL 105°C, UL94 94V-0, standing filling mixture

Found nothing suitable? We will be happy to work out an individual solution for your requirement profile

HFFR-COMPOUNDS

MAXIMUM SECURITY

with $B2_{ca}$ cables and compounds from KERPEN DATACOM

Fire provides warmth, light and cosiness. But fire can also be life-threatening and lead to terrible devastation in the event of fire.

One third of all fires occur in buildings. These result in numerous deaths due to gas and smoke poisoning.
The average length of time from the development of a fire until the rollover (pyrolysis gases) has decreased drastically in recent years.

- **1950: 15 minutes**
- **1985: 5 minutes**
- **2010: 3 minutes**

As a result, the available time for a possible escape from the building has also been drastically reduced.

This situation has prompted construction material manufacturers to produce increasingly better and more flame-retardant products.

Saving lives, impeding fires and minimising consequential damages are the priorities when fires break out. Electrical and optical cables must also play their part here, especially given the fact that cable density in modern buildings is constantly increasing. How can cables contribute to a positive behaviour in the event of a fire and/or what dangers are posed by obsolete, insufficiently fire-resistant cables? These questions can be assigned to three categories:

1. The cable must not significantly contribute to fire propagation. In particular, it must not propagate the fire from one storey to the next. It must also be ensured that there are no droplets and particles that contribute to fire propagation.

2. Smoke and toxic gases must be avoided as they hamper the safe evacuation of buildings and make it difficult or impossible for emergency services to intervene. Most cases of death in the event of a fire can be traced to smoke and toxic gases, not to the fire itself. Therefore, this aspect should actually be given top priority.

3. The rebuilding phase comes after the fire. This is complicated when large quantities of corrosive combustion gases have developed from the fire, because these gases build corrosive acids (e.g. hydrochloric acid) when combined with extinguishing water. Such acids are finely dispersed well beyond the location of the fire throughout the entire building, causing damage to all metallic objects.
Possible examples include: structural steel, metal constructions, electrical installations, electronics and IT systems.

SAVE LIVES

IMPEDE FIRES

MINIMISE CONSEQUENTIAL DAMAGE

These three requirements have been incorporated into the fire classification of the new EU Construction Products Regulation.

CE MARKING AND DECLARATION OF PERFORMANCE

EU Construction Products Regulation

The declaration of performance certifies compliance with the fire classes defined below and is thus a requirement for use of the cable for the applications defined by the EU member states.

Note: Cables with insulation and total system integrity (resistance to fire) are handled separately in a different standard to be harmonised in the future. They are therefore not subject to current implementation of the Construction Products Regulation.

The classes of fire behaviour are summarised in the following table that classifies the requirements from A_{ca} (non-flammable) to $B1_{ca}$ or $B2_{ca}$ (very high) to C_{ca} (high), D_{ca} (moderate), E_{ca} (low) and F_{ca} (no requirement).

This classification from A to F applies in general to all construction products. The index 'ca' stands for cable.

Recommendation of the ZVEI for the fire classes to be applied for cable under the Construction Products Regulation

Fire classes				Safety requirement in the building
Flame propagation Heat development	Smoke production/ density	Flaming droplets	Acid production/ corrosivity	
A_{ca}	–	–	–	Very high
$B1_{ca}$	–	–	–	Very high
$B2_{ca}$	s1	d1	a1	Very high
C_{ca}	s1	d1	a1	High
D_{ca}	s2	d2	a1	Moderate
E_{ca}	–	–	–	Low
F_{ca}	–	–	–	None

Classes of fire behaviour of electrical cabins according to DIN EN 13501-6

		Classification						
Test procedure	**Parameter**	**A_{ca}**	**$B1_{ca}$**	**$B2_{ca}$**	**C_{ca}**	**D_{ca}**	**E_{ca}**	**F_{ca}**
EN ISO 1716	PCS (MJ/kg)	≤ 2.0	–	–	–	–	–	–
EN 60332-1	H (mm)	–	≤ 425	≤ 425	≤ 425	≤ 425	≤ 425	–
EN 50399	Flame source (kW)	–	30	20.5	20.5	20.5	–	–
EN 50399	FS (m)	–	≤ 1.75	≤ 1.5	≤ 2.0	–	–	–
EN 50399	THR (MJ)	–	≤ 10	≤ 15	≤ 30	≤ 70	–	–
EN 50399	Max. HRR (kW)	–	≤ 20	≤ 30	≤ 60	≤ 400	–	–
EN 50399	FIGRA (W/s)	–	≤ 120	≤ 150	≤ 300	≤ 1300	–	–
		Additional classification						
EN 50399/EN 61034	Smoke development	–	s1, s1a, s1b, s2, s3	s1, s1a, s1b, s2, s3	s1, s1a, s1b, s2, s3	s1, s1a, s1b, s2, s3	No	No
EN 60754-2	corrosiveness	–	a1, a2, a3	a1, a2, a3	a1, a2, a3	a1, a2, a3	No	No
EN 50399	Flaming droplets	–	d0, d1, d2	d0, d1, d2	d0, d1, d2	d0, d1, d2	No	No

H: Flame spread, vertical flame propagation (mm)
FS: Flame spread, vertical flame propagation (m)
PCS: Pouvoir Calorifique Supérieur, gross calorific value

THR: Total heat release (MJ)
HRR: Heat release rate, maximum heat release rate (kW)
FIGRA: Fire growth rate, index of heat release rate (W/s)

TSP: Total smoke production, Total smoke generation (m^2)
SPR: Smoke production rate, max. smoke production rate, maximum value of smoke production (m^2/s)

Explanation

s1 = TSP ≤ 50 m^2 and max. SPR ≤ 0.25 m^2/s
s1a = **s1** and transmission value according to EN 61034-2 ≥ 80%
s1b = **s1** and transmission value according to EN 61034-2 ≥ 60% < 80%
s2 = TSP ≤ 400 m^2 and max. SPR ≤ 1.5 m^2/s
s3 = neither s1 nor s2

d0 = no flaming droplets/particles
d1 = no flaming droplets/particles for longer than 10 s
d2 = neither d0 nor d1

EN 60754-2:
a1 = electrical conductivity < 2.5 µS/mm and pH value > 4.3
a2 = electrical conductivity < 10 µS/mm and pH value > 4.3
a3 = neither a1 nor a2. No data = no performance determined.

TOP PERFORMANCE IN FIRE PROTECTION

HFFR compounds for the highest standards

Since the early 1990s, our cable plant has been at the forefront of innovation and quality in compounding halogen-free, flame-retardant compounds (HFFR). With decades of experience and continuous sustainability as well as environmental protection we offer our customers high-quality compounds that not only fulfil the strict requirements of the Construction Products Regulation (CPR) for data and instrumentation cables, but also significantly improve the safety and efficiency of their projects.

The importance of HFFR compounds on the market cannot be overestimated. In a world where safety and environmental compatibility are paramount, halogen-free, flame-retardant solutions offer an essential alternative to traditional halogen-containing materials. HFFR compounds make a decisive contribution to the reduction of smoke development and toxicity in the event of fire, which not only protects human life, but also the preservation of material assets property. Our products are the result of many years of research and development, with the aim of not only to fulfil your expectations, but to exceed them. In doing so, we close cooperation with our customers in order to offer customized solutions that are precisely tailored to their specific requirements.

Our commitment to quality, innovation and customer satisfaction has made us a trusted partner worldwide. With our range of HFFR compounds, which are specifically tailored to the needs of the modern cable industry, we are proud to offer solutions that are not only technically advanced but also environmentally friendly. We invite you to join us on the journey towards a safer and greener future.

An overview of our compounds:

Name	Compound-Type	Description	Process Conditions	Application
H 4200	HFFR (FRNC), thermoplastic insulation compound appication area -20°C to +70°C	Shore D 52 LOI 36	max. processing temperature 185°C	HM2 acc. to VDE 0276-24, 70°C acc. to EN 50290-2-26 Depending on cable construction, fulfils D_{ca} to C_{ca}
H 6400	HFFR (FRNC), thermoplastic application area -20°C to +70°C	Shore D 52 LOI 37	max. processing temperature 185°C	HM2 acc.to VDE 0276-24, Type 1 acc. to EN 50290-2-27 Depending on cable construction, fulfils D_{ca} to C_{ca}
H 6800	HFFR (FRNC), thermoplastic application area -20°C to +70°C	Shore D 53 LOI 44	max. processing temperature 185°C	HM2 acc. to VDE 0276-24 Type 1 acc. to EN 50290-2-27 Depending on cable construction, fulfils D_{ca} to C_{ca} UL 444 listet
H 7400	HFFR (FRNC), thermoplastic application area -25 to +90°C	Shore D 56 LOI 36 good oil resistance good resistance to stress cracking UV-resistant Suitable for underground installation UL1581 sunlight resistance test 720h	max. processing temperature 185°C	HM4 acc. to VDE 0276-604 90°C acc.to EN 50290-2-27 SHF1 acc. to IEC 60092-360 ST8 acc. to 60502-1 FRPE acc. to (UL) 1581 TI7 acc. to DIN EN 50363-1 LTS1 acc. to BS 7566-6.1

WE OFFER YOU CUSTOMISED COMPOUNDS FOR YOUR SPECIAL REQUIREMENTS.

Please contact us.

A COMPANY WITH EXPERIENCE AND PASSION

QUALITY AND CERTIFICATES

STANDARD DOCUMENTATION

- TECHNICAL DATA SHEET
- SAFETY DATA SHEET
- INDIVIDUALLY AGREED TEST CERTIFICATE
- CERTIFICATION
  ACCORDING TO DIN EN ISO 9001:2015,
  DIN EN ISO 14001:2015, DIN ISO 45001:2018

We are represented in the following committees in order to constantly develop ourselves further

zvei electrifying ideas

CENELEC

UL Solutions

europacable Try life without us

FOR THE LOVE OF OUR ENVIRONMENT

For the love of our environment

COMBINING INNOVATION WITH SUSTAINABILITY.

THIS IS ONE OF OUR COMPANY'S MOST IMPORTANT GOALS.

Our vision is to create sustainable connections in technological harmony with the natural resources. The natural cycle offers us the perfect model to emulate here. It is our duty to learn from nature – to use its resources even as we conserve them for future generations. As natural resources grow scarcer and the burden on the environment increases, a rethink is required at all levels of our society. For

KERPEN DATACOM, sustainability is therefore an integral part of our corporate policy.

While trends such as globalisation, mobility and urbanisation are crucial for market movements, our core principles are sustainability and global responsibility. This is why we have set ourselves the goal of becoming an innovative producer of cables for ecotechnology. Another point of vital interest for us is to identify the needs and requirements of tomorrow today, and to supply the markets of the future with future-proof and sustainable solutions. We also view it as our responsibility to take on an active role in shaping the markets for environmentally-friendly energy production – such as solar thermal technology.

KERPEN DATACOM stands for the resource-conserving and low-emission production of sustainable quality cables made with low-pollution elements. We constantly work at optimising the efficiency with which resources are used in the manufacturing process by deploying energy-efficient machines or taking heat recovery measures. That's why we are environmentally certified according to the ISO 14001 standard, among others.

As a leading European supplier of wires, optical fibre, cables and cable systems for communication and infrastructure projects, it is our responsibility to continuously optimise the sustainability and durability of our products, system solutions and services so as to reduce their impact on the environment. We have to increase the amount of environmentally compatible raw materials in our cable products as well as the recyclability of processed materials or components, thereby creating end products that have been developed today for the environmental standards of tomorrow.

Together with ecological compatibility, future technologies are measured in terms of efficiency, service life, emission reduction and the conservation of natural resources. Innovative cable products and systems, integrated solutions and maximum performance in project management make up the added value that we offer to our customers and business partners. These are also our cornerstones for strong connections into the future.

A TEAM WITH EXPERIENCE AND PASSION

KONTAKTIEREN SIE UNS

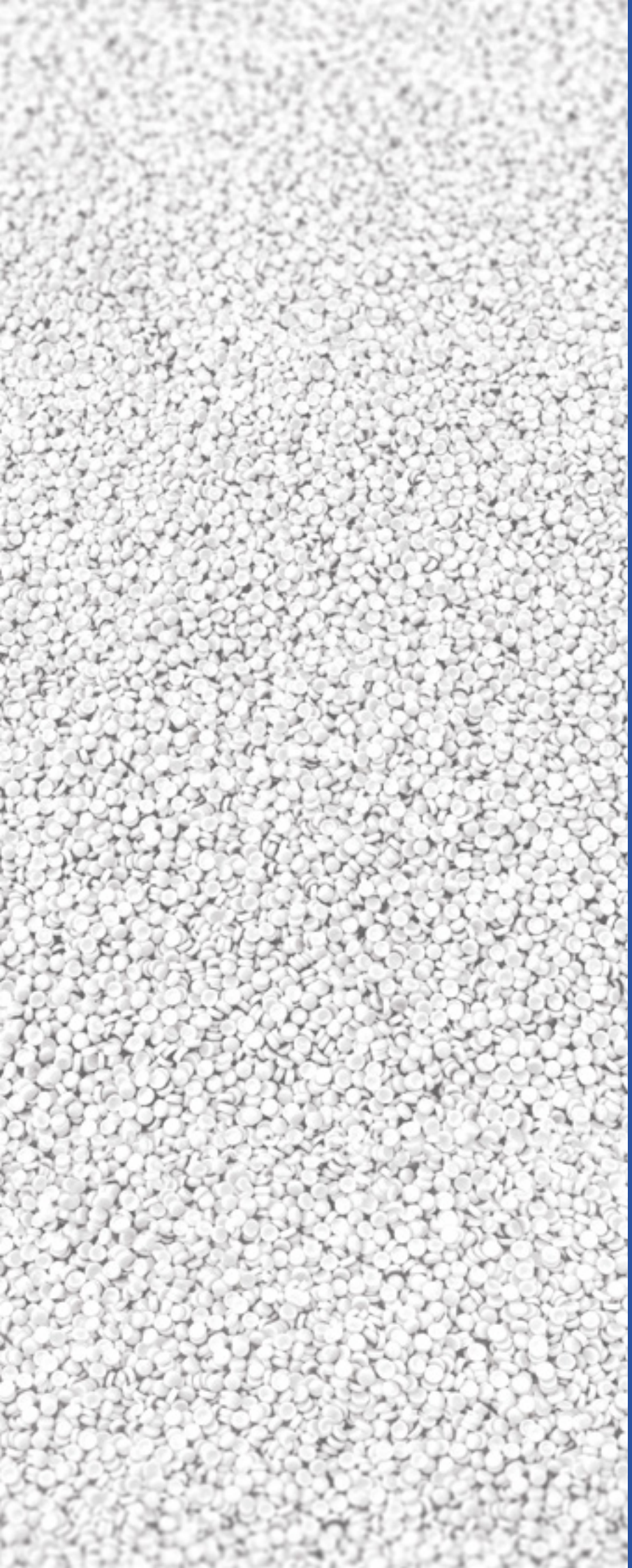
Martina Schüller
Application Engineer
Tel: +49 2402 17237
martina.schueller@kerpen-data.com

David Schlenter
Head of Compounds
Tel: +49 2402 17388
david.schlenter@kerpen-data.com

Dominik Schlarb
Head of Sales
Tel: +49 2402 17345
Mobile: +49 172 5733492
dominik.schlarb@kerpen-data.com

Clarissa Klama
Inside Sales
Tel: +49 2402 17380
Mobile: +49 172 2408183
clarissa.klama@kerpen-data.com

Dirk Maffei
Research & Development
Tel: +49 2402 17238
Mobile: +49 152 04539761
dirk.maffei@kerpen-data.com



KERPEN DATACOM LATEST NEWS

Further catalogues on the topics of **Mega**Line®, **Giga**Line® and **Vario**Line® connection systems can be found online.

With current information services like the KERPEN DATACOM newsletter, we keep you updated on the latest developments at KERPEN DATACOM and in the market.

kerpen_datacom
Kerpen Datacom

KERPEN DATACOM GmbH
Zweifaller Straße 275–287
52224 Stolberg
Deutschland
+49 24 02 17 1
compounds.sales@kerpen-data.com

CLOTH.BE