

This edition cancels the edition dated 24/01/2022

Edition: 19/06/2023

### REHAU – RAUFILAM-E Standard range

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#### 1. Scope

This technical specification forms part of the contractual content and applies for REHAU RAUFILAM-E hoses made of RAU-PVC 7869. It defines and limits the scope of REHAU's services.

#### 2. Designation

REHAU RAUFILAM-E made of RAU-PVC 7869

#### 3. Material, material properties and foodstuff regulations

The material RAU-PVC 7869 (polyvinyl chloride) contains plasticisers with calcium-zinc stabiliser. The resistance of RAU-PVC to various agents can be found in our material data sheet AV0010.

		Inner hose	Sheathing
		RAU-PVC 7869	RAU-PVC 7869
Shore hardness A	ISO 868, 3s	78 ±3	78 ±3
Bruchspannung	ISO 527	≥ 15 N/mm <sup>2</sup>	≥ 15 N/mm <sup>2</sup>
Bruchdehnung	ISO 527	≥ 250 %	≥ 250 %
Temperature resistance	---	-10°C bis +60°C	

RAU-PVC 7869 does not contain any SVHC >0.1% in accordance with the ECHA candidate list or attachment XIV. of the REACH Regulation (EC) no. 1907/2006.

RAU-PVC 7869 complies with the end of life vehicles Directive 2000/53/EC, including Directive 2002/525/EC, the RoHS electrical and electronic equipment Directive 2011/65/EU, including the addition Directive 2015/863/EU as well as the WEEE waste electrical and electronic equipment Directive 2012/19/EU.

RAU-PVC 7869 is phthalate-free according to entries 51 and 52 of Annex XVII. of REACH Regulation (EC) No. 1907/2006.

A declaration that it is safe to use to 21 CFR FDA party §170-199 exists for tube materials, that are intended to come into contact with watery, acidic or alcoholic foodstuffs according to the American categories (§ 175.300) for food types I, II, IV-B, VI (up to 10 % alcohol) at an application temperature of maximum 40 °C.

## REHAU RAUFILAM-E made of RAU-PVC 7869

### Conformity declaration in accordance with Regulation (EC) no. 1935/2004 and Regulation (EU) no. 10/2011

REHAU Industries SE & Co.KG, Rheniumhaus, 95111 Rehau, GERMANY

REHAU RAUFILAM-E and the polymer material RAU-PVC 7869 used for the production complies with Regulation (EC) no. 1935/2004 and with Regulation (EU) no. 10/2011 on materials and objects intended to come into contact with foodstuffs.

Ingredients with SML and/or QMA values are present, for which the compliance, with the limit values for the above application conditions based on appropriate laboratory tests, has been confirmed. Substances, which are also allowed as foodstuff additives (additives with dual application purpose), do not migrate and are included at such low quantities that they do not have any technological effect in the event of a migration.

The suitability of REHAU RAUFILAM-E for the following food categories was determined based on a surface/volume-ratio of 10 cm<sup>2</sup>/ml (corresponds to an inner diameter of 4mm). REHAU RAUFILAM-E is suitable for:

Fat-free, solid, aqueous, acidic and alcoholic foodstuffs with hydrophilic properties:

- Food category A, B and C
- Acidic foods with a pH below 4.5
- Alcoholic foods with an alcohol content up to 20 %
- Examples\*: Water, tea, coffee, lemonade, soft drinks, energy drinks, beer, wine and clear simple or concentrated fruit or vegetable juices

Based on the test conditions according to OM2 as well as the selected conditions for specific migration, the hose can be used e.g. as follows:

- Long term storage at 20°C (room temperature) and below
- Heating up 40 °C for a period of maximum 10 days
- Heating up 60 °C for a period of maximum 2 hours<sup>#</sup>

REHAU RAUFILAM-E is **not** suitable for contact with foods that are assigned to food category D1 and D2. REHAU RAUFILAM-E is also **not** suitable for contact with alcoholic foods that are assigned to have an alcohol content above 20% or are oil-in-water emulsions (e.g. milk) nor for fatty foods containing free fats on the surface.

REHAU RAUFILAM-E is intended for use as a universal industrial hose. Due to the wide range of possible applications not known to REHAU and the associated contact media, no sensory tests have been carried out. The respective user must ensure that the case-specific sensory tests are carried out.

REHAU RAUFILAM-E complies with the regulation (EC) no. 2023/2006 on good manufacturing processes for materials and objects that are intended to come into contact with foodstuffs; the production and administration locations have the appropriate ISO-9001 certifications and QS systems.

\*A complete classification of foods to the required food categories can be found in Table 2 in Annex III of Regulation (EU) No. 10/2011.

<sup>#</sup>Deviating from the food contact conditions according to OM2, the maximum permissible temperature for the material RAU-PVC is 60°C.

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## 4. Technical data

The maximum operating pressure values were determined with a safety factor 3 from the static bursting pressure values. The bursting pressure test was carried out based on DIN EN ISO 1402.

Material no.	Bez.	ID	Wall	Burst pressure	Operating pressure			Bending radius	Coil length*
				in bar bei				in mm bei	
				20°C	20°C	40°C	60°C	20°C	
		in mm	in mm					in m	
10285111001	DN 4	4,0 +0,10/-0,20	3,0 ±0,30	93	31	25	18	≥ 15	25 ±0,5
10285111002	DN 4	4,0 +0,10/-0,20	3,0 ±0,30	93	31	25	18	≥ 15	50 ±1,0
10285311001	DN 6	6,0 +0,10/-0,20	3,0 ±0,30	81	27	21	16	≥ 25	25 ±0,5
10285311002	DN 6	6,0 +0,10/-0,20	3,0 ±0,30	81	27	21	16	≥ 25	50 ±1,0
10285511001	DN 8	8,0 +0,20/-0,20	3,0 ±0,30	72	24	20	14	≥ 30	25 ±0,5
10285511002	DN 8	8,0 +0,20/-0,20	3,0 ±0,30	72	24	20	14	≥ 30	50 ±1,0
10285611001	DN 9	9,0 +0,25/-0,25	3,0 ±0,30	63	21	17	13	≥ 35	25 ±0,5
10285611002	DN 9	9,0 +0,25/-0,25	3,0 ±0,30	63	21	17	13	≥ 35	50 ±1,0
10285711001	DN 10	10,0 +0,25/-0,30	3,0 ±0,30	57	19	16	12	≥ 40	25 ±0,5
10285711002	DN 10	10,0 +0,25/-0,30	3,0 ±0,30	57	19	16	12	≥ 40	50 ±1,0
10285811002	DN 12	12,0 +0,30/-0,35	3,0 ±0,30	57	19	16	12	≥ 55	50 ±1,0
10285911002	DN 12	12,2 +0,30/-0,35	4,2 ±0,40	57	19	16	12	≥ 50	50 ±1,0
10286011001	DN 13	13,2 +0,35/-0,40	3,3 ±0,35	48	16	12	10	≥ 70	25 ±0,5
10286011002	DN 13	13,2 +0,35/-0,40	3,3 ±0,35	48	16	12	10	≥ 70	50 ±1,0
10286211001	DN 16	16,2 +0,40/-0,50	3,7 ±0,35	48	16	12	10	≥ 90	25 ±0,5
10286211002	DN 16	16,2 +0,40/-0,50	3,7 ±0,35	48	16	12	10	≥ 90	50 ±1,0
10286321001	DN 19	19,0 +0,50/-0,60	3,5 ±0,35	39	13	11	8	≥ 130	25 ±0,5
10286321002	DN 19	19,0 +0,50/-0,60	3,5 ±0,35	39	13	11	8	≥ 130	50 ±1,0
10286311001	DN 19	19,4 +0,50/-0,60	3,7 ±0,35	39	13	11	8	≥ 130	25 ±0,5
10286311002	DN 19	19,4 +0,50/-0,60	3,7 ±0,35	39	13	11	8	≥ 130	50 ±1,0
10286511001	DN 25	25,4 +0,65/-0,75	4,3 ±0,45	33	11	9	8	≥ 200	25 ±0,5
10286511002	DN 25	25,4 +0,65/-0,75	4,3 ±0,45	33	11	9	8	≥ 200	50 ±1,0
12169321001	DN 28	28,0 +0,70/-0,70	5,0 ±0,50	27	9	7	6	≥ 250	25 ±0,5
10286711001	DN 32	32,4 +0,80/-1,00	4,8 ±0,50	27	9	7	6	≥ 310	25 ±0,5
10286811001	DN 38	38,0 +0,95/-1,15	4,8 ±0,50	24	8	6	5	≥ 420	25 ±0,5
10286911001	DN 40	39,5 +1,00/-1,20	4,5 ±0,45	24	8	6	5	≥ 450	25 ±0,5
10287011001	DN 50	50,0 +1,25/-1,50	5,0 ±0,50	15	5	4	3	≥ 650	25 ±0,5
10287111001	DN 50	50,0 +1,25/-1,50	6,0 ±0,60	15	5	4	3	≥ 620	25 ±0,5

\* All coils possess EAN coding

## 5. Colour

Inner hose transparent, REHAU- colour no. 70002  
 Sheating transparent iceblue, REHAU- colour no. 27267

## 6. Printing

The hoses are recurringly printed in black as follows (example mat.no. 10285111002):

REHAU RAUFILAM® -E PHTHALATE-FREE DN 4 (EU) Nr.10/2011 A-B-C BD 31bar 20°C  
 TÜV-Nord Bauart geprüft DIN EN ISO 1402 Made in Germany TTTJ / A, B oder C REHAU  
 Industries SE & Co.KG, 95111 Rehau/Germany

Key: TTTJ / A, B or C = Julian date/ year and shift code

## 7. Notes

### **Combustible gaseous media**

If combustible or gaseous media is supposed to be conducted through the hose, we would like to ask you to contact our sales department in order to clarify the relevant safety requirements. For such applications, special instructions may have to be observed in individual cases.

### **Colour intensive foodstuffs and cleaning recommendation**

When being in contact with very colour intensive solid or liquid foodstuffs such as fruit juice, syrup, coffee or red wine, the hose material may change its colour after quite some time due to dyes from foodstuffs penetrating the hose wall; however, this does not restrict the basic foodstuff conformity of the hose.

We recommend strictly meeting the cleaning requirements, which are common before and after using hoses for foodstuff applications; in order to thoroughly remove deposits of foodstuff residues in particular and to considerably reduce the probability of occurrence or the intensity of the potential change in colour of the hose material.

### **Storage recommendation**

A dry and dark room with a maximum temperature of 30°C is advisable for storing REHAU industrial hoses. The hoses have to be protected from direct sunlight and should be stored away from substances with a strong odour. Please see standard DIN 20066:2012-01 item 14.1.2.2 and ISO 8331:2011-08 item 3.2 for a more in-depth description about the storage of hoses.

### **TÜV test**

REHAU RAUFILAM-E colour hoses are tested and certified by TÜV North Cert GmbH according to an extensive series of tests. TÜV North Cert GmbH confirms the compliance with quality stipulations according to DIN EN ISO 1402:2009 with the certificate dated 28/01/2014.

### **Absence of silicone**

REHAU RAUFILAM-E colour formulations are silicone-free. In order to ensure the absence of silicone, the hoses are to be stored away from materials containing silicone.

### **Reinforcement**

The reinforcement (pressure carrier) made of rot-proof synthetic fibres is wound around the hose at a specific angle and guarantees maximum dimensional stability under pressure load.

### **Surface finish**

The surface designed in machine gloss is free from foreign matter inclusions and bubbles. Sporadic, material-related fish eyes having no effect on general utilisation characteristics are admissible.

### **Quality inspection**

In order to meet quality requirements, production of REHAU RAUFILAM-E colour hoses are subject to permanent checks which relate to visual, dimensional and functional test criteria. In addition to this, TÜV North Cert GmbH will also perform checks unannounced within a specific period of time.

# Technical delivery specification

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## 8. Function

Our warranty is limited to series supplies in accordance with specification. The customer has determined suitability for the specific application by way of appropriate functional tests. Acceptance by the customer in writing is proof for us of the proper function of our product. Approval becomes also valid upon return of legally binding signature of TDS/drawing or upon placing a production order.

## 9. Modifications

As the responsible supplier, REHAU reserves the right to carry out modifications or deviations of the products under contract, for purposes of improvement and further development; whereas there will be no modifications of the specifications agreed herein.

## 10. Conformity with standards

Changes of requirements due to modifications of the standards indicated in this Technical Delivery Specification have to be advised and ordered by the customer. Unless a different agreement exists, the standard editions valid at the time of issue of the TDS shall apply.

**Checked**

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Place, date

Customer signature/Company stamp

24/01/2022 / Mrs. Gareis 7794 / IS-PFS-TRADE

Date / Tel.-Nr. / Dept.