

V- 10T/001

This edition cancels the edition dated 24/01/2022

Edition: 19/06/2023

REHAU - RAUCLAIR-E Standard range

1. Scope

This technical specification forms part of the contractual content and applies for REHAU RAUCLAIR-E hoses made of RAU-PVC 8069. It defines and limits the scope of REHAU's services.

2. Designation

REHAU RAUCLAIR-E made of RAU-PVC 8069

3. Material, material properties and foodstuff regulations

The material RAU-PVC 8069 (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.

		RAU-PVC 8069
Shore hardness A	ISO 868, 3s	80 ±3
Tensile stress at break	ISO 527	≥ 15 N/mm²
Tensile strain at break	ISO 527	≥ 250 %
Temperature resistance		-10°C to +60°C

RAU-PVC 8069 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 8069 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 8069 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.

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REHAU RAUCLAIR-E made of RAU-PVC 8069

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 RAUCLAIR-E and the polymer material RAU-PVC 8069 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 RAUCLAIR-E for the following food categories was determined based on a surface/volume-ratio of 20 cm²/ml (corresponds to an inner diameter of 2mm). REHAU RAUCLAIR-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#

REHAU RAUCLAIR-E is <u>not</u> suitable for contact with foods that are assigned to food category D1 and D2. REHAU RAUCLAIR-E is also <u>not</u> 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 RAUCLAIR-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 RAUCLAIR-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.

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^{*}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.

*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

Material no. In mm	echnical data					
10303901003	Material no	ID	Wall Coil length		Coils	
10301801003 3.0 +0.101-0.20 1.0 ±0.15 100 ±2.0 9 108 10302301003 3.0 +0.101-0.20 1.5 ±0.15 100 ±2.0 9 108 10300301004 4.0 +0.101-0.20 1.5 ±0.15 100 ±2.0 4 72 10303301003 4.0 +0.101-0.20 1.5 ±0.15 100 ±2.0 4 72 10303801003 4.0 +0.101-0.20 1.5 ±0.15 100 ±2.0 6 72 10304601002 5.0 +0.101-0.20 1.5 ±0.15 100 ±2.0 6 72 10304601002 5.0 +0.101-0.20 1.5 ±0.15 100 ±2.0 6 72 10304601002 5.0 +0.101-0.20 1.5 ±0.15 100 ±2.0 6 72 10303991002 5.0 +0.101-0.20 1.5 ±0.15 100 ±2.0 6 72 10303991003 5.0 +0.101-0.20 1.5 ±0.15 100 ±2.0 5 60 10304901003 6.0 +0.201-0.30 1.0 ±0.15 100 ±2.0 7 84 1030501006 6.0 +0.201-0.30 1.5 ±0.15 100 ±2.0 5 60 1030501006 6.0 +0.201-0.30 1.5 ±0.15 100 ±2.0 5 60 1030501005 7.0 +0.201-0.30 2.0 ±0.02 100 ±2.0 4 48 1030501005 7.0 +0.201-0.30 2.0 ±0.20 100 ±2.0 4 48 1030501005 7.0 +0.201-0.30 2.0 ±0.20 100 ±2.0 4 48 1030501005 7.0 +0.201-0.30 2.0 ±0.20 100 ±2.0 4 48 1030601003 8.0 +0.201-0.30 2.0 ±0.20 50 ±1.0 6 72 10306601002 9.0 +0.251-0.25 1.5 ±0.15 50 ±1.0 6 72 10306601002 9.0 +0.251-0.25 1.5 ±0.15 50 ±1.0 6 72 10306601003 9.0 +0.251-0.25 2.0 ±0.20 50 ±1.0 5 60 10305401003 10.0 +0.251-0.30 1.5 ±0.15 50 ±1.0 5 60 10305401003 10.0 +0.251-0.30 2.0 ±0.20 50 ±1.0 5 60 10305401003 10.0 +0.251-0.30 3.0 ±0.30 50 ±1.0 5 60 10307601003 10.0 +0.251-0.30 3.0 ±0.30 50 ±1.0 5 60 10307601003 10.0 +0.251-0.30 3.0 ±0.30 50 ±1.0 5 60 10307601003 10.0 +0.251-0.30 3.0 ±0.30 50 ±1.0 5 60 10307601003 10.0 +0.251-0.30 3.0 ±0.30 50 ±1.0 5 60 10307601003 10.0 +0.251-0.30 3.0 ±0.30 50 ±1.0 5 60 10307601003 10.0 +0.251-0.30 3.0 ±0.30 50 ±1.0 5 60 10307601003 10.0 +0.251-0.30 3.0 ±0.30 50 ±1.0 5 60 60 60 60 60 60 60		in mm	in mm	in m	per carton	per pallet
10302301003	10303901003	2,0 +0,10/-0,20	1,0 ±0,15	100 ±2,0	14	168
10300301004	10301801003	3,0 +0,10/-0,20	1,0 ±0,15	100 ±2,0	9	108
10303701003	10302301003	3,0 +0,10/-0,20	1,5 ±0,15	100 ±2,0	9	108
10303801003	10300301004	4,0 +0,10/-0,20	1,0 ±0,15	100 +4/-0	6	108
10304601002	10303701003	4,0 +0,10/-0,20	1,5 ±0,15	100 ±2,0		
10304401006	10303801003	4,0 +0,10/-0,20	2,0 ±0,20	100 ±2,0	6	72
10303991002	10304601002	5,0 +0,10/-0,20	1,0 ±0,15	100 ±2,0	7	84
10304901003	10304401006	5,0 +0,10/-0,20	1,5 ±0,15	100 ±2,0	6	72
10305001006	10303991002	5,0 +0,10/-0,20	2,0 ±0,20	100 ±2,0	5	60
10305101003	10304901003	6,0 +0,20/-0,30	1,0 ±0,15	100 ±2,0	7	84
10305701005	10305001006	6,0 +0,20/-0,30	1,5 ±0,15	100 ±2,0	5	60
10305801005	10305101003	6,0 +0,20/-0,30	2,0 ±0,20	100 ±2,0	4	48
10306101003	10305701005	7,0 +0,20/-0,30	1,5 ±0,15	100 ±2,0	4	48
10306201005	10305801005	7,0 +0,20/-0,30	2,0 ±0,20	100 ±2,0	4	48
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10306101003	8,0 +0,20/-0,30	1,5 ±0,15	50 ±1,0		72
10306601002	10306201005	8,0 +0,20/-0,30	2,0 ±0,20	50 ±1,0	5	60
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10306501004	9,0 +0,25/-0,25	1,5 ±0,15	50 ±1,0		72
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10306601002	9,0 +0,25/-0,25	2,0 ±0,20	50 ±1,0	5	60
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10305401003	10,0 +0,25/-0,30	1,5 ±0,15	50 ±1,0	5	60
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10307001008	10,0 +0,25/-0,30	2,0 ±0,20	50 ±1,0	4	48
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10307201007	10,0 +0,25/-0,30	$3,0\pm0,30$	50 ±1,0		36
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10304091002	12,0 +0,30/-0,35	1,5 ±0,15	50 ±1,0	3	36
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10307801007	12,0 +0,30/-0,35	2,0 ±0,20	50 ±1,0		36
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10301901003	12,0 +0,30/-0,35	3,0 ±0,30	50 ±1,0	2	24
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10308501003	13,0 +0,30/-0,40	3,0 ±0,30	50 ±1,0		24
$\begin{array}{c} 10302201003 & 16,0 + 0,40/-0,50 & 2,0 \pm 0,20 & 50 \pm 1,0 & Einzelrolle & 24 \\ 10301791006 & 16,0 + 0,40/-0,50 & 2,5 \pm 0,25 & 50 \pm 1,0 & Einzelrolle & 24 \\ 10312101003 & 18,0 + 0,45/-0,55 & 3,0 \pm 0,30 & 50 \pm 1,0 & Einzelrolle & 20 \\ 10336001002 & 19,0 + 0,50/-0,55 & 2,0 \pm 0,20 & 50 \pm 1,0 & Einzelrolle & 8 \\ 10319901005 & 19,0 + 0,50/-0,55 & 3,0 \pm 0,30 & 50 \pm 1,0 & Einzelrolle & 10 \\ 10302401006 & 19,0 + 0,50/-0,55 & 3,5 \pm 0,35 & 50 \pm 1,0 & Einzelrolle & 8 \\ 10310201002 & 19,0 + 0,50/-0,55 & 4,0 \pm 0,40 & 50 \pm 1,0 & Einzelrolle & 8 \\ 10309191002 & 20,0 + 0,50/-0,60 & 2,0 \pm 0,20 & 50 \pm 1,0 & Einzelrolle & 8 \\ 10302601003 & 20,0 + 0,50/-0,60 & 2,0 \pm 0,20 & 50 \pm 1,0 & Einzelrolle & 8 \\ 10302491002 & 22,0 + 0,55/-0,65 & 3,0 \pm 0,30 & 50 \pm 1,0 & Einzelrolle & 8 \\ 10302491002 & 22,0 + 0,55/-0,65 & 3,0 \pm 0,30 & 50 \pm 1,0 & Einzelrolle & 8 \\ 10302491002 & 22,0 + 0,55/-0,65 & 3,0 \pm 0,30 & 50 \pm 1,0 & Einzelrolle & 8 \\ 10302901003 & 25,0 + 0,65/-0,75 & 3,0 \pm 0,30 & 50 \pm 1,0 & Einzelrolle & 7 \\ 10302801007 & 25,0 + 0,65/-0,75 & 4,0 \pm 0,40 & 50 \pm 1,0 & Einzelrolle & 7 \\ 10302901002 & 27,0 + 0,70/-0,81 & 3,0 \pm 0,30 & 25 \pm 0,5 & Einzelrolle & 7 \\ 10302391004 & 32,0 + 0,80/-0,95 & 4,0 \pm 0,40 & 25 \pm 0,5 & Einzelrolle & 7 \\ 103027101003 & 38,0 + 0,95/-1,15 & 5,0 \pm 0,50 & 25 \pm 0,5 & Einzelrolle & 7 \\ 10315001002 & 40,0 + 1,00/-1,20 & 5,0 \pm 0,50 & 25 \pm 0,5 & Einzelrolle & 7 \\ 10315001002 & 40,0 + 1,00/-1,20 & 5,0 \pm 0,50 & 25 \pm 0,5 & Einzelrolle & 7 \\ 10326801003 & 50,0 + 1,25/-1,50 & 5,0 \pm 0,50 & 25 \pm 0,5 & Einzelrolle & 6 \\ 10326801003 & 50,0 + 1,25/-1,50 & 5,0 \pm 0,50 & 25 \pm 0,5 & Einzelrolle & 5 \\ \end{array}$	10300201002	14,0 +0,35/-0,40	2,0 ±0,20	50 ±1,0		24
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10301201003	15,0 +0,40/-0,45	2,0 ±0,20	50 ±1,0	2	24
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10302201003	16,0 +0,40/-0,50	2,0 ±0,20	50 ±1,0	Einzelrolle	24
$\begin{array}{cccccccccccccccccccccccccccccccccccc$	10301791006	16,0 +0,40/-0,50	2,5 ±0,25	50 ±1,0	Einzelrolle	24
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10312101003	18,0 +0,45/-0,55	3,0 ±0,30	50 ±1,0	Einzelrolle	20
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10336001002	19,0 +0,50/-0,55	2,0 ±0,20	50 ±1,0	Einzelrolle	8
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10319901005	19,0 +0,50/-0,55	3,0 ±0,30	50 ±1,0	Einzelrolle	10
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10302401006	19,0 +0,50/-0,55	3,5 ±0,35	50 ±1,0	Einzelrolle	8
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10310201002	19,0 +0,50/-0,55	4,0 ±0,40	50 ±1,0	Einzelrolle	8
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10309191002	20,0 +0,50/-0,60	2,0 ±0,20	50 ±1,0	Einzelrolle	8
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10302601003	20,0 +0,50/-0,60	3,0 ±0,30	50 ±1,0	Einzelrolle	8
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10304491002	22,0 +0,55/-0,65	3,0 ±0,30	50 ±1,0	Einzelrolle	8
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10332901003	25,0 +0,65/-0,75	3,0 ±0,30	50 ±1,0	Einzelrolle	7
$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	10302801007	25,0 +0,65/-0,75	4,0 ±0,40	50 ±1,0	Einzelrolle	7
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	10302901002	27,0 +0,70/-0,81	3,0 ±0,30	25 ±0,5	Einzelrolle	10
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	10304591002	30,0 +0,75/-0,90	4,0 ±0,40	25 ±0,5	Einzelrolle	7
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	10302391004	32,0 +0,80/-0,95	4,0 ±0,40		Einzelrolle	8
$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$	10310091001	35,0 +0,90/-1,05	3,5 ±0,35	25 ±0,5	Einzelrolle	7
10326801003 50,0 +1,25/-1,50 5,0 ±0,50 25 ±0,5 Einzelrolle 5	10327101003	38,0 +0,95/-1,15	5,0 ±0,50	25 ±0,5	Einzelrolle	7
	10315001002		5,0 ±0,50	25 ±0,5	Einzelrolle	6
10326001002 60.0 ±1.50/±1.80 5.0 ±0.50 25.±0.5 Einzelrolle 9	10326801003	50,0 +1,25/-1,50	5,0 ±0,50	25 ±0,5	Einzelrolle	5
10020001002 00,0 ±1,00/-1,00 0,0 ±0,00 20 ±0,0 ElliZellOlle 0	10326901002	60,0 +1,50/-1,80	5,0 ±0,50	25 ±0,5	Einzelrolle	8

^{*}All coils possess EAN coding

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5. Colour

Transparent, REHAU-Colour no. 70002

6. Printing

The hoses are recurringly printed in black as follows (example mat.no. 10303901003):

REHAU RAUCLAIR®-E PHTHALATE-FREE 2/1 2x4 📈 (EU) 10/2011 A-B-C 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

Pressure

Due to the typical PVC flow behavior, RAUCLAIR-E hoses are not to be used as pressure hoses. For these pressure applications, e.g. the REHAU RAUFILAM-E program is recommended.

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 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 has 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.

Absence of silicone

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

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.

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Quality inspection

In order to meet quality requirements, production of REHAU RAUCLAIR-E hoses are subject to permanent checks which relate to visual, dimensional and functional test criteria.

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		
	Place, date	Customer signature/Company stamp

19/06/2023 / Mrs. Gareis 7794 / IS-PFS-TRADE

Date / Tel.-Nr. / Dept.

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