

ALNOVOL® PN 430/GGMA

Technical Datasheet

TYPE

Non self-curing novolac

FORM OF DELIVERY (f.o.d.)

Coarsely ground

PRODUCT DATA

The data are determined by our quality control for each batch (lot) before release.

Determined per batch:

Dynamic Viscosity (Ubbelof dynamic viscosity 50 % propylene glycol mono (23 °C)	n de) DIN 53177 [mPa.s] methyl ether	2750 - 3750
Iodine Colour Number DIN iodine colour number	6162	<=120
HPLC PM 279 content (Phenol)	[%]	<= 1,0
Melting Interval DIN 53181 melting range (capillary method)	[°C]	108 - 124

SOLUBILITY AND COMPATIBILITY

ALNOVOL PN 430 is soluble in any ratio in ketones, alcohols, esters, glycol ethers. Insoluble in aliphatic and aromatic hydrocarbons. ALNOVOL PN 430 is compatible with alkyd resins in the mixing ratios normally encountered in commercial practice. Good compatibility exists also with urea resins, melamine resins, epoxy resins, unplasticized phenolic resins and with polyvinyl butyral.

The compounding into standard rubber grades shouldn't be a problem especially by using NBR.

We recommend in any case to check compatibility before using the resin.

PROCESSING PAINT

ALNOVOL PN 430 is dissolved at normal temperature in alcohols, ketones esters and glycol ethers and, if necessary, mixed with solutions of the modifying resins mentioned above.

PROPERTIES AND USES

Reinforcement of rubber.

mineral oils, electroinsulatiging varnishes.

Paint

USES

ALNOVOL PN 430 dry by solvent evaporation. It is commonly applied as a solution in ethanol. Solutions of ALNOVOL PN 430 dry fast to hard films with a good resistance to water, weak acids, petrol, mineral oils and tar. Coatings are weakly yellowish and posses moderate. The addition of small amounts of plasticizing components such as suitable alkyd resins or polyvinyl butyral has proved to be an effective way of modifying.

Fast drying spirit varnishes, coatings with resistance to petrol and

Spirit varnishes

ALNOVOL PN 430 serve as binder for fast-drying spirit varnishes. Such varnishes are used, for instance, in iron foundries for coating moulds and for coating toys and other consumer goods. Other fields of application are brewery enamels for vats and barrels and French polish.

Coatings with resistance to petrol and mineral oils

ALNOVOL PN 430 combined with PHENODUR® PR 373 or PR 263 and, if necessary, plasticizing alkyd resins and/or polyvinyl butyral for the manufacture of coatings which dry by solvent evaporation. Such coatings are resistant to petrol and mineral oils and are used for protecting the interior of tanks, storage containers, pipe systems and machine housings.

Rubber

ALNOVOL PN 430 is particularly suitable for reinforcing nitrile rubber. It can be used to produce very hard vulcanizates with both high resilience and very high resistance to tear propagation. For curing either hexamethylenetetramine or highly etherified melamine resins, e.g. CYREZ® 963 or CYREZ® 964 are added. The reinforcing effect can be regulated by the amount of hexamethylenetetramine added. ALNOVOL PN 430 can be homogeneously incorporated even in nitrile rubbers with low acrylonitrile content (27 %). Vulcanizates reinforced with ALNOVOL PN 430 and large amounts of hexymethylenetetramine are notable for their virtually constant hardness and resilience with increasing temperature. The required amount of crosslinker can be incorporated into the rubber in the second mixing stage.

For proper curing a resin to hardener ratio of 7:3 in the case of CYREZ 963 is recommended. ALNOVOL PN 430 is not so well suited for rubber compounds.

7.5 / 01.02.2021 (replaces all previous versions)

Worldwide Contact Info: www.allnex.com

Page 1/2

Disclaimer: allnex Group companies ('allnex') exclude all liability with respect to the use made by anyone of the information contained herein. The information contained herein represents allnex's best knowledge but does not constitute any express or implied guarantee or warranty as to the accuracy, the completeness or relevance of the data set out herein. Nothing contained herein shall be construed as conferring any license or right under any patent or other intellectual property rights of allnex or of any third party. The information relevance of the products is given for information is suitable for any specific use, performance or result. Any unauthorized use of the product or information may infringe the intellectual property rights of allnex, including its patent rights. The user should perform his/her own tests to determine the suitability for a particular purpose. The final choice of use of a product and/or information as well as the investigation of any possible violation of intellectual property rights or misappropriation of trade secrets of allnex and/or third parties remain the sole responsibility of the user. Notice: Trademarks indicated with *, TM or * as well as the allnex name and logo are registered, unregistered or pending trademarks of Allnex Netherlands B.V. or its directly or indirectly affiliated allnex Group companies. ©2020 allnex Group. All Rights Reserved.



Typical compounds

Mix		Pts by wt	Pts by wt
Nitril rubber*			
ML 1+4 (100 °C) 45 ±5		100,0	100,0
Hexamethethylenetetramine		3.0	4.0
Stearic acid		1.5	1.5
Zinc oxide		5.0	5.0
Sulfur		1.5	1.5
ALNOVOL PN 430		47.0	46.0
2- Mercaptobenzothiazole		1.5	1.5
* NBR with 28% acrylor	nitrile ML 1+4 45±5		
Test values after vulcanisation (30 min. at 155°C)	Unit	Value	e Value
Tensile strength	[MPa]	24.2	25.3

ienslie sciengui	[IVIPA]	24.2	25.5
Elongation at break	[%]	430	394
Modulus 100 % elongation	[MPa]	11.0	13.1
Modulus 300 % elongation	[MPa]	16.8	19.8
Notch impact strength	[N/mm]	55	47
Hardness (Shore A)	[°]	95	96
Resilience	[%]	34	39

STORAGE

At temperatures up to 25 $\,^{\rm o}{\rm C}$ storage stability packed in original containers amounts standard to 365 days.

The expiration date may be extended and COA updated after QC testing of retained samples, only for material in allnex possession.

7.5 / 01.02.2021 (replaces all previous versions)

Worldwide Contact Info: www.allnex.com

Page 2/2

Disclaimer: allnex Group companies ('allnex') exclude all liability with respect to the use made by anyone of the information contained herein. The information contained herein represents allnex's best knowledge but does not constitute any express or implied guarantee or warranty as to the accuracy, the completeness or relevance of the data set out herein. Nothing contained herein shall be construed as conferring any license or right under any patent or other intellectual property rights of allnex or of any third party. The information relating to the product is given for information may infringe the intellectual property rights of allnex, including its patent rights. The user should perform his/her own tests to determine the suitability for a particular purpose. The final choice of use of a product and/or information as well as the investigation of any possible violation of intellectual property rights or misappropriation of trade secrets of allnex and/or third parties remain the sole responsibility of the user. Notice: Trademarks indicated with *, TM or * as well as the allnex name and logo are registered, unregistered or pending trademarks of Allnex Netherlands B.V. or its directly affiliated allnex Group companies. ©2020 allnex Group. All Rights Reserved.