



IMPRANIL[®] HS 62

Characterization

Impranil HS-62 is an aromatic polyurethane prepolymer with butanone oxime-blocked NCO groups.

Impranil HS-62 is suitable for application by the transfer coating process as top coats, intermediate coats (compact or foamed), adhesion coats and by the direct coating process as single- or double-sided coatings applied in one or more coats.

Form supplied

Form supplied is a colorless to yellowish solution in methoxypropylacetate with a solids content of approximately 98%.

Characteristic data

Property	Value	Unit of measurement	Method
Viscosity* at 23°C	50,000 - 90,000	mPa•s	

**The viscosity can be measured using e.g. a Haake Viscotester VT 23 rotational viscometer (E 100 test body).*

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Typical film properties*

The data given below are average values measured in approx. 0.1 mm transparent films of Impranil HS-62, crosslinked with 6.2% Imprafix[®] HS-C.

Property	Value
100% Modulus, MPa	2
Tensile Strength, MPa	8
- After 14 days hydrolysis	8
- After 42 days hydrolysis	8
Elongation at Break, %	660
- After 14 days hydrolysis	660
- After 42 days hydrolysis	660
Lightfastness	2
Softening Range, °C	200 - 210
Volume Swelling**, % (2 hours at room temperature)	
- Ethyl acetate	200
- Butanone	180

*These values provide general information and are not part of the product specifications.

**The volume swelling decreases again as the solvent evaporates.

Properties / Applications

Impranil HS-62 exhibits outstanding resistance to hydrolysis, long pot life if crosslinked with Imprafix HS-C or Imprafix VP LS 2330, and low solvent. A high film thickness in one coat is also possible.

As with any product, use of Impranil HS-62 in a given application must be tested (including but not limited to field testing) in advance by the user to determine suitability.



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Crosslinker

Imprafix HS-C or Imprafix VP LS 2330

Crosslinking conditions

Temperature: 150 - 160°C

Dwell time: 1.5 - 2 minutes

Note: When thinning the aliphatic prepolymer Impranil HS-85 LN with aromatic high-solids products, the crosslinking conditions for the aliphatic product should be observed.

Crosslinking ratio

Impranil HS-62 / Imprafix HS-C 1,000 g / 62 g

Impranil HS-62 / Imprafix VP LS 2330 1,000 g / 55 g

The use of Imprafix VP LS 2330 yields softer films than those obtained with Imprafix HS-C, with correspondingly lower film values.

Pot life

Once the crosslinker has been added, the coating has a maximum pot life of 3 days, provided a temperature of 35°C is not exceeded when mixing the formulation.

Deaeration

It is recommended that the coatings be deaerated prior to application.

Thinning

Solvents such as:

- ethyl acetate
- 1-methoxypropylacetate-2
- dimethyl formamide

can be added to lower the viscosity of Impranil HS-62. The addition of 5 –10% of one of the solvents listed above can lower the viscosity by 20,000 to 25,000 mPa.s.

Ketone-based solvents may not be used as thinning agents as these solvents interfere with crosslinking.



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Storage

Impranil HS-62 should be stored in tightly sealed original containers and protected from moisture, heat, and foreign materials. The product may become turbid if the storage temperature is too low. This can be reversed by briefly heating to 35°C. Briefly stirring the product does not completely reverse turbidity, leading to leveling problems. Recommended storage temperature is at room temperature (20°C).

Storage time

Impranil HS-62 has a shelf life of twelve months from date of receipt at customer, provided the material is stored in sealed original containers at the recommended storage temperature.

Health and Safety Information

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling this product. Before working with this product, you must read and become familiar with the available information on its risks, proper use, and handling. This cannot be overemphasized. Information is available in several forms, e.g., safety data sheets and product labels. For further information contact your Covestro LLC representative or the Product Safety and Regulatory Affairs Department in Pittsburgh, PA.

The manner in which you use and the purpose to which you put and utilize our products, technical assistance and information (whether verbal, written or by way of production evaluations), including any suggested formulations and recommendations, are beyond our control. Therefore, it is imperative that you test our products, technical assistance and information to determine to your own satisfaction whether our products, technical assistance and information are suitable for your intended uses and applications. This application-specific analysis must at least include testing to determine suitability from a technical as well as health, safety, and environmental standpoint. Such testing has not necessarily been done by us. Unless we otherwise agree in writing, all products are sold strictly pursuant to the terms of our standard conditions of sale which are available upon request. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. It is expressly understood and agreed that you assume and hereby expressly release us from all liability, in tort, contract or otherwise, incurred in connection with the use of our products, technical assistance, and information. Any statement or recommendation not contained herein is unauthorized and shall not bind us. Nothing herein shall be construed as a recommendation to use any product in conflict with any claim of any patent relative to any material or its use. No license is implied or in fact granted under the claims of any patent.

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Product Datasheet