

Mat Clear LV

Technical Data Sheet

09.12.2012

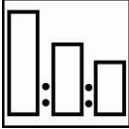


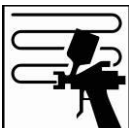
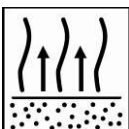


L1.05.13

LESONAL

North America

Description Lesonal Mat Clear LV is a VOC compliant clearcoat which can be used as is, full strength, or can be added to other Lesonal clearcoats which provides various gloss levels.

Gloss level; Matte (20 to 30 gloss units)

Mixing ratio		100 50 30	Lesonal Mat Clear LV Lesonal LV Clear Hardener/LV Clear Hardener Fast Lesonal LV Clear Reducer or LV Clear Reducer Fast
Measuring stick		4	
Equipment		Spray gun set-up: 1.3-1.5 mm	Application pressure: HVLP; max. 10 psi at air cap
Application		2-3 coats	
Flash-off		Between coats 5 - 10 minutes at 70°F (20°C)	Before curing 5 - 10 minutes at 70°F (20°C)
Drying		70°F (20°C) 5-10 hours	140°F (60°C) 25-60 minutes
Protection		Safety Considerations Use suitable personal protection. AkzoNobel Car Refinishes recommends the use of a fresh air supply respirator. Refer to the product Material Safety Data Sheet (MSDS) for more complete safety information.	

Read complete technical data sheet for detailed product information

Mat Clear LV

Technical Data Sheet

09.12.2012

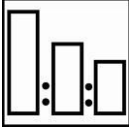



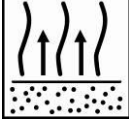
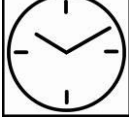

L1.05.13

LESONAL

North America

Description Lesonal Mat Clear LV is a VOC compliant clearcoat which can be used as is, full strength, or can be added to other Lesonal clearcoats which provides various gloss levels.

Gloss level; Matte (20 to 30 gloss units) – Alternate Mixing ratio

Mixing ratio		5 1 1	Lesonal Mat Clear LV Lesonal ProAir Clear LV Hardener Lesonal ProAir Clear LV Slow/Medium/Spot & Panel Activator
Measuring stick		23	
Equipment		Spray gun set-up: 1.3-1.5 mm	Application pressure: HVLP; max. 10 psi at air cap
Application		2-3 coats	
Flash-off		Between coats 5 - 10 minutes at 70°F (20°C)	Before curing 5 - 10 minutes at 70°F (20°C)
Drying		70°F (20°C) 1.5 – 3 hours	140°F (60°C) 10-15 minutes
Protection		Safety Considerations Use suitable personal protection. AkzoNobel Car Refinishes recommends the use of a fresh air supply respirator. Refer to the product Material Safety Data Sheet (MSDS) for more complete safety information.	

Read complete technical data sheet for detailed product information

Mat Clear LV

Technical Data Sheet

09.12.2012

L1.05.13

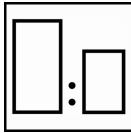
LESONAL

North America

Description Lesonal Mat Clear LV is a VOC compliant clearcoat which can be used as is, full strength, or can be added to other Lesonal clearcoats which provides various gloss levels.

Variable gloss (Lesonal LV Clear)

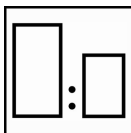
Mixing ratio



Eggshell (40 to 60 gloss units)

40 Lesonal LV Clear
60 Lesonal Mat Clear LV

Mixing ratio



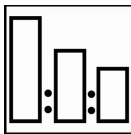
Semi gloss (70 to 85 gloss units)

70 Lesonal LV Clear
30 Lesonal Mat Clear LV



Stir the mixture

Mixing ratio



100 one of the above mixtures
50 Lesonal LV Clear Hardener
30 Lesonal LV Clear Reducer or LV Clear Reducer Fast

Measuring stick



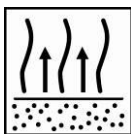
4

Application



2 x 1 coat

Flash-off



Between coats

Before curing

5 - 10 minutes at 70°F (20°C)

5 - 10 minutes at 70°F (20°C)

Drying



70°F (20°C)

140°F (60°C)

5-10 hours

25-60 minutes

Protection



Safety Considerations

Use suitable personal protection. AkzoNobel Car Refinishes recommends the use of a fresh air supply respirator. Refer to the product Material Safety Data Sheet (MSDS) for more complete safety information.

Read complete technical data sheet for detailed product information

Mat Clear LV

Technical Data Sheet

09.12.2012

L1.05.13

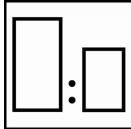
LESONAL

North America

Description Lesonal Mat Clear LV is a VOC compliant clearcoat which can be used as is, full strength, or can be added to other Lesonal clearcoats which provides various gloss levels.

Variable gloss (Lesonal ProAir Clear LV)

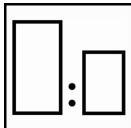
Mixing ratio



Eggshell (40 to 60 gloss units)

40 Lesonal ProAir Clear LV
60 Lesonal Mat Clear LV

Mixing ratio



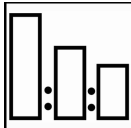
Semi gloss (70 to 85 gloss units)

70 Lesonal ProAir Clear LV
30 Lesonal Mat Clear LV



Stir the mixture

Mixing ratio



5 one of the above mixtures
1 Lesonal ProAir Clear LV Hardener
1 Lesonal ProAir Clear LV Slow/Medium/S&P Activator

Measuring stick



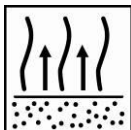
23

Application



2 x 1 coat

Flash-off



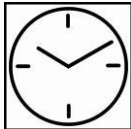
Between coats

5 - 10 minutes at 70°F (20°C)

Before curing

5 - 10 minutes at 70°F (20°C)

Drying



70°F (20°C)

10 hours

140°F (60°C)

30 minutes

Protection



Safety Considerations

Use suitable personal protection. AkzoNobel Car Refinishes recommends the use of a fresh air supply respirator. Refer to the product Material Safety Data Sheet (MSDS) for more complete safety information.

Mat Clear LV

LESONAL

Technical Data Sheet

09.12.2012

L1.05.13

North America

Description

Lesonal Mat Clear LV is a VOC compliant clearcoat which can be used as is, full strength, or can be added to other Lesonal clearcoats which provides various gloss levels.

Product and additives

Product Lesonal Mat Clear LV

Hardener

- Lesonal LV Clear Hardener; a special hardener made for LV Clear.
- Lesonal LV Clear Hardener Fast; a fast cure hardener to speed the curing, for small to medium size jobs.
- Lesonal ProAir LV Clear Hardener

Reducers / activators

- Lesonal LV Clear Reducer; a special reducer made for LV Clear.
- Lesonal LV Clear Reducer Fast; a fast dry reducer used to speed up the dry times, for spot repair.
- Lesonal ProAir Clear LV Slow Activator.
- Lesonal ProAir Clear LV Medium Activator
- Lesonal ProAir Clear LV Spot & Panel Activator

Additives –Lesonal Flex Additive: additive to increase flexibility of Lesonal Mat Clear LV, for use on flexible parts.

Basic raw materials

Lesonal Mat Clear LV: Hydroxyl acrylic resins
Lesonal LV Hardeners and Lesonal ProAir Clear LV Hardeners: Polyisocyanate resins
Lesonal LV Reducers and Lesonal ProAir Clear LV Activators: Special blended chloronated solvents

Suitable surfaces

- Lesonal WB (waterborne basecoat) solid, metallic or pearl colors: After a flash off time of 20 minutes at 70°F (20°C)
- Existing clear coat that is thoroughly prepared, in the case of spot repairing. Please see tech data sheet; Basecoat WB Spot Repair for detailed information.

Adjustment of gloss level

The following gloss levels can be achieved by mixing Lesonal Mat Clear LV with Lesonal LV Clear or ProAir Clear LV.

Gloss Level	Parts by weight or volume Lesonal Mat Clear LV	Parts by weight or volume Lesonal LV Clear or ProAir Clear LV
Matte (20 to 30 GU)	100	0
Eggshell (40 to 60 GU)	60	40
Semi-Gloss (70 to 85 GU)	30	70

(GU = Gloss Units)

Stir the mixture thoroughly; add hardener and reducer as shown below under sub heading Mixing Ratio.

Mat Clear LV

LESONAL

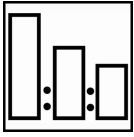
Technical Data Sheet

09.12.2012

L1.05.13

North America

Mixing ratio



100 parts by volume Lesonal Mat Clear LV (or mixture from above)
50 parts by volume Lesonal LV Clear Hardener
30 parts by volume Lesonal LV Clear Reducer

OR

5 parts by volume Lesonal Mat Clear LV (or mixture from above)
1 part by volume Lesonal ProAir Clear LV Hardener
1 part by volume Lesonal ProAir Clear LV Activator

For easy and accurate mixing, use the Lesonal measuring stick #4 or #23

Flexible plastic parts

100 parts by volume Lesonal Mat Clear LV (or mixture from above)
10-33 parts by volume Lesonal Flex (depending upon gloss level desired)

Stir this mixture and then proceed as follows:

100 parts by volume Lesonal Mat Clear LV (or mixture from above)
50 parts by volume Lesonal LV Clear Hardener
30 parts by volume Lesonal LV Clear Reducer

OR

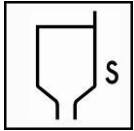
5 parts by volume Lesonal Mat Clear LV (or mixture from above)
1 part by volume Lesonal ProAir Clear LV Hardener
1 part by volume Lesonal ProAir Clear LV Activator

For easy and accurate mixing, use the Lesonal measuring stick #4 or #23

Soft Plastics

As the amount of Lesonal Flex necessary to maintain flexibility of the topcoat over soft polyurethane foam parts is high, it is impossible for Lesonal LV Clear to retain its matte appearance.
For more information on spraying plastic car parts, see "Test Methods for Plastics Identification" TDS.

Spraying Viscosity



16 - 18 sec. DIN Cup 4 at 70°F (20°C) (Lesonal LV Clear)

20 - 23 sec. DIN Cup 4 at 70°F (20°C) (Lesonal ProAir Clear LV)

Spray gun and pressure



Spraygun

HVLP gravity
HVLP siphon
TE gravity

Fluid opening

1.3 – 1.5 mm
1.8 – 2.2 mm
1.3 – 1.5 mm

Spraying pressure

Max. 10 psi at air cap
Max. 10 psi at air cap
Check gun manufacturer specification

Application



Apply two to a maximum of three single coats. Allowing for a flash time of 5 to 10 minutes between coats.

- Heavy wet coats will increase the gloss effect.

Mat Clear LV

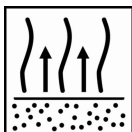
Technical Data Sheet

09.12.2012

L1.05.13

LESONAL

North America



The flash times are dependent on air velocity and temperature. The correct choice of reducer should be made by determining the size of job and the spraying temperature. Please refer to subheading "Reducers or Activators" earlier in this technical data sheet.

Drying Times

Mat Clear LV may be air dried or force dried in a baking booth. The chart below shows the variations of dry times.



Temperature	Drying	Lesonal LV Clear Hardener		ProAir Clear LV Hardener
		LV Clear Reducer	LV Clear Reducer Fast	ProAir Clear LV Activator Slow or Medium
70°F (20°C)	Dust free	40 minutes	40 minutes	25-40 minutes
	Dry	10 hours	7 hours	2-3 hours
140°F (60°C)	Dust free	10 minutes	10 minutes	9-15 minutes
	Dry	60 minutes	30 minutes	11-15 minutes

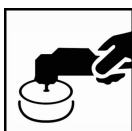
Temperature	Drying	Lesonal LV Clear Hardener Fast		ProAir Clear LV Hardener
		LV Clear Reducer	LV Clear Reducer Fast	ProAir Clear LV Activator Spot&Panel
70°F (20°C)	Dust free	30 minutes	25 minutes	20 minutes
	Dry	6 hours	5 hours	1.5 hours
140°F (60°C)	Dust free	10 minutes	10 minutes	7 minutes
	Dry	30 minutes	25 minutes	10 minutes

(Drying times will be very much influenced by factors such as temperature and air movement at the time of application and drying).

Pot life

When mixed with LV Clear Hardener and LV Clear Reducer Fast: 2 hours at 70°F (20°C).
When mixed with ProAir Clear LV Hardener and ProAir Clear LV Spot&Panel Activator: 1.5 hours at 70°F (20°C).

Polishing



As Lesonal Mat Clear LV is designed to produce a low gloss (matte) appearance, polishing is never recommended.

Layer Thickness

Approximately 1.0 – 1.2 mils (25 – 28 µm) per single coat

Theoretical coverage

Approximately 70 sq.ft/liter (6.5 sq./liter) of unmixed paint at a film thickness of 2.4 mils. It is a requirement that Lesonal Mat Clear LV be applied at a film thickness of approximately 2.4 mils.

Note: The practical coverage depends on many factors i.e. shape of the object, roughness of the surface, application method and application circumstances.

Mat Clear LV

LESONAL

Technical Data Sheet

09.12.2012

L1.05.13

North America

Cleaning Equipment

Clean equipment with solvent borne gun cleaners

Shelf life

Store products unopened, and used products with closed lids preferably between 50°F-95°F (10°C-35°C)
Avoid too much temperature fluctuation, optimal storage temperature approximately 70°F (20°C)

Mat Clear LV 2 years at 70°F (20°C) If stored unopened

VOC

100:50:30	Mat Clear LV: LV Clear Hard. LV Clear Reducer:	1.14 lb/gal. (137 g/liter)
(40:60) 100:50:30	LV Clear: Mat Clear LV: LV Clear Hard. LV Clear Red.	1.49 lb/gal. (179 g/liter)
(70:30) 100:50:30	LV Clear: Mat Clear LV: LV Clear Hard. LV Clear Red.	1.73 lb/gal. (208 g/liter)
5:1:1	Mat Clear LV: ProAir Clear LV Hard. ProAir Clear LV Activator:	1.61 lb/gal. (193 g/liter)
(1.5:3.5)1:1	ProAir Clear LV: Mat Clear LV: ProAir Clear LV Hard. ProAir Clear LV Activator.	1.74 lb/gal. (209 g/liter)

AkzoNobel Coatings Inc. North America

Address: 3587 Parkway Lane, Norcross. GA 30092 USA

Tel: (+1) 770-662-8464

FOR PROFESSIONAL USE ONLY

IMPORTANT NOTE The information in this data sheet is not intended to be exhaustive and is based on the present state of our knowledge and on current laws: any person using the product for any purpose other than that specifically recommended in the technical data sheet without first obtaining written confirmation from us as to the suitability of the product for the intended purpose does so at his own risk. It is always the responsibility of the user to take all necessary steps to fulfill the demands set out in the local rules and legislation. Always read the Material Data Sheet and the Technical Data Sheet for this product if available. All advice we give or any statement made about the product by us (whether in this data sheet or otherwise) is correct to the best of our knowledge but we have no control over the quality or the condition of the substrate or the many factors affecting the use and application of the product. Therefore, unless we specifically agree in writing otherwise, we do not accept any liability whatsoever for the performance of the product or for any loss or damage arising out of the use of the product. All products supplied and technical advices given are subject to our standard terms and conditions of sale. You should request a copy of this document and review it carefully. The information contained in this data sheet is subject to modification from time to time in the light of experience and our policy of continuous development. It is the user's responsibility to verify that this data sheet is current prior to using the product.

Brand names mentioned in this data sheet are trademarks of or are licensed to AkzoNobel.

Head Office

Akzo Nobel Car Refinishes B.V., PO Box 3 2170 BA Sassenheim, The Netherlands. www.Lesonal.com

