

Technical Data Sheet

Resin Pro

25/10/2021

Use: Dooming

PRINTED :

05/11/2021

1 Composition

PART A	Resin	Hardener	PART B
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2 Description

General	100% reactive transparent two-component polyurethane system, suitable for outdoor applications
Use	Casting resin for the coating and decoration of emblems and / or labels
Application	Promotional, toy industry, appliance, motorcycle, automobile

3 Security information

Danger to transport	Not dangerous	Dangerous, UN 2290,6.1,III
Health hazard (See GHS encoding in paragraph 8 NOTES)	Dangerous GHS 07,08	Dangerous GHS 06,08,09

4 Properties of reagents

	PART A	PART B
Viscosity at 25°C , cPs , Brookfield (IM 1406)	270:370 24/03/2014	400:600 22/04/2015
Density , g/cm ³ , internal approach	1,03 21/10/2013	1,06 18/10/2013
Relative humidity , % ,	<0,04 27/05/2014	N/D
Mercury content , PPM , calculated	880	N/D

5 Mixing ratio of reagents

Volume ratio	100	100
%	50	50
Weight ratio	97,17	100
%	49,28	50,72

6 Storage

Resin	12 months in the original packaging stored at a temperature between 5 and 25°C
Hardener	12 months in the original packaging stored at a temperature between 5 and 25°C

7 Properties of the final polymer

Mercury content , PPM , calculated	434	
Gel time of mixture (100 gr.@25°C) ,mm, ss, internal approach	17/21	27/05/2014
Gel time of mixtuer (20 gr.@23°C) ,hh, mm	90/92	16/11/2015
Hardness @ 1 sec. , Shore D , internal approach	24,5/29,5	23/11/2015
Hardness @ 15 sec. , Shore D , internal approach	18,5/23,5	23/11/2015
Viscosity reaction after 150 seconds , cPs , internal approach	200/300	08/05/2017
Viscosity reaction after 300 seconds , cPs , internal approach	450/650	08/05/2017
Viscosity reacation after 600 seconds , cPs , internal approach	650/850	08/05/2017

8 NOTES

Any information or suggestions related to the product of this data sheet represent the best information available to us and we believe that it is reliable. Data shall not be considered as a check and shall be presented without any express or implied guarantee. This data sheet is valid only in combination with the latest edition of the safety data sheet

Encoding of the GHS symbols in the paragraph 3-SAFETY INFORMATION (Health hazard):

- GHS06 (skull) Chemicals which, in very small quantities, can cause serious damage to health
- GHS07 (exclamation mark) Harmful to health, irritant, skin sensitiser, respiratory irritant
- GHS08 (health hazard) specific toxicity to different organs or long-term hazardous properties
- GHS09 (environment) chemicals that may cause acute or chronic damage to aquatic organisms

9 Regulatori Compliance

1 REACH compliance policy

- a Registration of the substance: Resin Pro resins are not subject to registration on ECHA when they are mixed
- b Registration of ingredients: this material does not comply with European Regulation 2017/852 of 17/05/2017 (concerning restrictions on the content of mercury salts) as it contains a mercury-based catalys
- c List of SVHC substances: Resin Pro formulations do not include substances listed in the SVHC list updated to: 08/07/2021
- d Substances present in Annex XIV: Resin Pro resins do not contain substances subject to authorisation listed in Annex XIV of REACH published in Reg. EU 1907/2006 and updated with reg. EU 2020/171 of 06/02/2020
- e Substances listed in Annex XVII: Resin Pro resins do not contain substances listed in Annex XVII to REACH updated to 25/10/2021
- f PAH: in accordance with EU Regulation 1272/2013 amending Annex XVII of REACH in EU Regulation 1907/2006 concerning the restriction of polycyclic aromatic hydrocarbons (PAH), PAH are not intentionally added therefore, to the best of our knowledge, we consider them not present

2 Compliance with the RoHS legislation

- a RoHS compliance: it is stated that the mercury content in the polymer obtained is absent or below the limit imposed by directive 2011/65/UE of 1000 ppm. It is also stated that there are no substances subject to the constraints of this legislation and listed in Annex II updated by Directive 2015/863/UE (RoHS III) of 31/05/2015

3 Compliance with mercury-free legislation

- a Eu Regulation 2017/852: this material does not comply with European Regulation 2017/852 of 17/05/2017 (concerning restrictions on the content of mercury salts) as it contains a mercury-based catalyst

4 Compliance with local American regulations

- a EPA TSCA All ingredients listed in the formulation and production of this resin are listed on the EPA's Toxic Substances Control Act (8b)
- b Provisions of the Dodd-Frank Conflict Minerals I Conflict Minerals, which the U.S. Securities and Exchange Commission (SEC) has defined as Gold, Coltan (Columbite-Tantalite), Cassiterite, wolframite or their derivatives (tin, tantalum or tungsten) are not contained and are not necessary for the production of Resin Pro resins
- c California Proposition 65: The formulation of this products contains substances listed in California Proposition 65 because mercury and its compounds (used here as a catalyst) there was introduced on 01/06/1990. The list is updated to 19/03/2021

5 Compliance with automotive regulations

- a GADSL We hereby declare that the components of this polymer are not included in the GADSL list updated to: 01/02/2021
- b ELV: It is stated that the components of this polymer are not subject to the constraints of the Directive 2000/53/CE
- c IMDS: The resins listed here have been registered or can be registered on the IMDS database and do not contain elements belonging to their reference list

6 Compliance with legislation on toys

- a EN71: It is stated that the final polymer itself meets the requirements of the standard EN 71-3:2019
- b Phthalates: it is stated the the final polymer fulfils the requirements of European Directive 2005/84/UE concerning restrictions on the market and use of certain dangerous substances and preparations (phthalates in toys and childcare articles)

7 Regulations on Biocides and Pollutants

- a It is hereby stated that the formulation of this product does not include substances listed in European Regulation 528/2012 concerning the availability on the market and the use of biocidal products
- b DMF (Dimethyl fumarate): It is stated that the formulation of this product does not include dimethyl fumarate as specified in European Directive 2009/251/UE
- c PFOS: it is hereby declared that the formulation of this product does not include perfluorinated octane sulfonates as specified in european Directive 2006/122/ECOF
- d Persistent organic pollutants: it is hereby declared that the formulation of these products does not include substances listed in European Directive 2012/519/UE amending Regulation 850/2004/UE of the European Parliament and of the Council on persistent organic pollutants
- e Benzotriazoles and Bisphenol-A: it is hereby stated that Benzotriazoles and Bisphenol-A are not present in this formulation

8 European local legislation

- a Swedish Act 2016:1067: it is stated that the formulation of this product does not include substances listed in Swedish Act 2016:1067

10 Technical specifications

It is necessary to verify that our products and related information meet and are suitable for the intended uses and applications of the user. The specific analysis for the application shall include at least tests to determine technical, environmental, health and safety suitability. These tests do not need to be performed by us

1 Artificial ageing

- a QUV: Still in good condition after 1500 hours of exposure to the QUV following the settings of the SAE J2020: 8 hours of exposure to UVB lamps (usually at 0.48 W/m² radiant power) at 70°C + 4 hours of condensation at 50°C
- b WOM: The test, carried out in accordance with the method RENAULT D27 1911 (02/95), has produced positive results with delta E values lower than 2. The instrument used is a Weather O Meter ATLAS (Black Panel @80°C; humidity 50%; int. and ext. Borosilicate filters S; Insolation continuously; Irrigation with 18 min. spray and 102 min. dry water ; Radiant power 0,55 W/m² @ 340 nm
- c Climate ageing: the test out in accordance with the RENAULT 1309 method (09/81) produced positive results with no mechanical, physical or visible degradation. For this test a regulated climate area and a gray scale were used for measurements. The samples were exposed to 10 cycles each of which consisted of 16±1h@ 40°C with 95% humidity, 3±1h@-20°C and 6±1h@85°C

2 Chemical Resistance

- a Resistance to chemical agents: after 120 hours of immersion, the material is still in very good condition with Water, Sea Water, Sulphuric Acid, Sodium Hydroxide, Ethylene Glycol and Elf Oil 15W40. Good resistance to hydrochloric acid and ammonium hydroxide.

3 Mechanical resistance

- a Scratch-proof: The scratch-proof test carried out in accordance with PSA method D15 1211 (03/81) produced results between 5 and 20 grams (using an instrument type ERICHSEN 239 MI with angle 90°, conical carbon steel tip, radius or curvature of the conical tip 0.08 mm and magnifying glass 3)
- b Grit test: the test, carried out in accordance with the method RENAULT 1428 (10/83), gave results included between 24 and 34 minutes, using a Grit Machine with nozzle (Nozzle diameter 10 0,1 mm; air injector diameter 4 mm; workpiece-nozzle distance 100 1 mm; nozzle/piece angle 30 transpires), 5 kg of grit type GP14 (Wheelabrator Allevard) and stopwatch ±1 second

4 Resistance to temperature:

- a Shrinkage: no shrinkage after 17 days at 80°C. The test was applied to 2 mm thick samples conditioned for the 15 days at room temperature

- b Resistance to heat: there are no changes due exposure to temperatures between -30°C and +60°C. One of our admission tests was passed after exposure to 140°C for 2h 30' without any changes (the sample was placed on the front panel of a gas cooker)

5 Flame resistance

- a FMVSS 302: this test was carried out in accordance with FMVSS 302 (Federal Motor Vehicle Safety Standard). The test was conducted inside a chamber in which the sample was mounted horizontally. The exposed side of the sample is subject from the bottom to the gas flame. During the test, the distance from the flame and the time required to burn shall be measured.