ROTORK GEARS BV PAINT SPECIFICATION FOR STANDARD APPLICATIONS

1- SUBJECT

Painting of Steel and Cast Iron.

2- PREPARATION OF SURFACE

Chemical parts washers.

3- PAINT SPECIFICATION

3.a- PAINTING SPECIFICATION 1

FINAL COAT

Type	Direct to Metal Polyaspartic
Number of coats	1
Total Thickness	60 microns

3.b- PAINTING SPECIFICATION 2

PRIMER COAT

Type	Macolux shopprimer (Vinyl Resin)
Number of coats	1
Total Thickness	25 microns

FINAL COAT

Type	2 pack Acrylic Isocyanate
Number of coats	1
Total Thickness	35 microns

STANDARD COLOR BLUE RAL 5015 AND BLACK RAL 9005
OTHER COLORS AVAILABLE ON REQUEST.

4- CONTROL

Visual examination.
Control of thickness. Total thickness is 60 microns minimum.

5- SITE CONDITIONS

Max Temperature: 120 °C
For indoor and outdoor use.

REV	DATE	WRITTEN BY	CHECKED BY	REMARKS
00	**24-05-07**	**H.H.**	**N.M.**	
01	**15-12-09**	**H.H.**	**N.M.**	
02	**22-12-10**	**H.H.**	**N.M.**	

PAINTING SPECIFICATION 1 (PRIMARY METHOD)

International.

Intercure® 99

Direct to Metal Polyaspartic

PRODUCT DESCRIPTION

Intercure 99 polyaspartic technology is applied as a single coat at 6-10 mils (150-250 microns) direct-to-metal using standard application equipment, reducing application time and labor costs compared to two coat applications in moderately corrosive environments (up to C3, ISO 12944-2).

Intercure 99 is a low VOC, high solids, rapid cure primer/finish, offering excellent anticorrosive protection and long term color and gloss durability – a combination that cannot be achieved with alternative fast cure, single coat primer finishes.

Intercure 99 may also be specified as a high build, durable intermediate/finish over approved anti-corrosive primers for more aggressive environments, i.e. ISO 12944 C4 and C5M.

INTENDED USES

Intercure 99 is ideal for use where a single coat high performance coating is required. For structural steel applications, a reduced number of coats aids in yard throughput and productivity. Fast cure single coat properties also make it ideal for applications such as wind towers, transformers, mining equipment and pumps where productivity and drying space are of prime importance.

PRACTICAL INFORMATION FOR INTERCURE 99

Color	Wide range via the Chromascan® system
Gloss Level	Gloss
Volume Solids	80% ± 1%
Typical Thickness	6-10 mils (150-250 microns) dry equivalent to 7.5-12.5 mils (188-313 microns) wet
Theoretical Coverage	183 sq.ft/US gallon at 7 mils d.f.t and stated volume solids 4.60 m²/liter at 175 microns d.f.t and stated volume solids
Practical Coverage	Allow appropriate loss factors
Method of Application	Airless Spray, Air spray

Drying Time

			Overcoating interval with self	
Temperature	**Touch Dry**	**Hard Dry**	*Minimum*	*Maximum*
41°F (5°C)	1.5 hours	3 hours[1]	3 hours	Extended[2]
59°F (15°C)	45 minutes	2.5 hours[1]	2.5 hours	Extended[2]
77°F (25°C)	30 minutes	1.5 hours[1]	1.5 hours	Extended[2]
104°F (40°C)	30 minutes	1.5 hours[1]	1.5 hours	Extended[2]

[1] Drying times quoted relate to 50% R.H. increased humidity will result in faster dry times.
[2] See International Protective Coatings Definitions & Abbreviations

REGULATORY DATA

Flash Point	Part A 102°F (39°C); Part B 178°F (81°C); Mixed 102°F (39°C)	
Product Weight	10.7 lb/gal (1.28 kg/l)	
VOC	1.62 lb/gal (195 g/lt) 153 g/kg	EPA Method 24 EU Solvent Emissions Directive (Council Directive 1999/13/EC)

See Product Characteristics section.

SURFACE PREPARATION

All surfaces to be coated should be clean, dry and free from contamination. Prior to paint application, all surfaces should be assessed and treated in accordance with ISO 8504:2000.

Oil or grease should be removed in accordance with SSPC-SP1 solvent cleaning.

Abrasive Blast

Abrasive blast clean to SSPC-SP6 or Sa2½ (ISO 8501-1:2007). If oxidation has occurred between blasting and application of Intercure 99, the surface should be reblasted to the specified visual standard.

Surface defects revealed by the blast cleaning process, should be ground, filled, or treated in the appropriate manner.

A surface profile of 2-3 mils (50-75 microns) is recommended.

Primed Surfaces

Intercure 99 can be applied over approved anti-corrosive primers. The primer surface should be dry and free from all contamination and Intercure 99 must be applied within the overcoating intervals specified (consult the relevant product data sheet).

Areas of breakdown, damage etc., should be prepared to the specified standard (e.g. Sa2½ (ISO 8501-1:2007) or SSPC-SP6 Abrasive Blasting and patch primed prior to the application of Intercure 99.

APPLICATION

Mixing

Material is supplied in two containers as a unit. Always mix a complete unit in the proportions supplied. Once the unit has been mixed, it must be used within the working pot life specified.

(1) Agitate Base (Part A) with a power agitator.
(2) Combine entire contents of Curing Agent (Part B) with Base (Part A) and mix thoroughly with power agitator.

Mix Ratio

2 part(s) : 1 part(s) by volume

Working Pot Life

41°F (5°C)	59°F (15°C)	77°F (25°C)	104°F (40°C)
2.5 hours	2 hours	75 minutes	60 minutes

Airless Spray	Recommended	Tip Range 15-19 thou (0.38-0.48 mm) Total output fluid pressure at spray tip not less than 2503 psi (176 kg/cm²)	
Air Spray (Pressure Pot)	Recommended	Gun Air Cap Fluid Tip	DeVilbiss MBC or JGA 704 or 765 E
Air Spray (Conventional)	Recommended	Use suitable proprietary equipment.	
Brush	Suitable - Small areas only	Typically 4.0-6.0 mils (100-150 microns) can be achieved	
Roller	Suitable - Small areas only		
Thinner	International GTA713 (or International GTA056)	Do not thin more than allowed by local environmental legislation. **Do not use alternative thinners.**	
Cleaner	International GTA713 (or International GTA056)	**Do not use alternative cleaners.**	

Work Stoppages

Do not allow material to remain in hoses, gun or spray equipment. Thoroughly flush all equipment with International GTA056. Once units of paint have been mixed they should not be resealed and it is advised that after prolonged stoppages, work recommences with freshly mixed units.

Clean Up

Clean all equipment immediately after use with International GTA056. It is good working practice to periodically flush out spray equipment during the course of the working day. Frequency of cleaning will depend upon amount sprayed, temperature and elapsed time, including any delays.

All surplus materials and empty containers should be disposed of in accordance with appropriate regional regulations/legislation.

PRODUCT CHARACTERISTICS

The detailed Intercure 99 Application Guidelines should be consulted prior to use.

During the spray application of Intercure 99 at high relative humidity (>85%), a reduction in the quoted pot life time of the mixed material may occur. This can be resolved by placing sufficient solvent to cover the surface of the material during application. The addition of approx 3 ounces of GTA713 or GTA056 per 3 gallon mixed unit should suffice.

Level of sheen and surface finish is dependent on application method. Avoid using a mixture of application methods whenever possible.

For tinted colors, a 5 minute induction time is recommended to fully develop color. Failure to allow induction, particularly at low temperatures, may result in inconsistency of the finished shade.

Maximum film build in one coat is best attained by airless spray. When applying by methods other than airless spray, the required film build is unlikely to be achieved. Application by air spray may require a multiple cross spray pattern to attain maximum film build. Lower or high temperatures may require specific application techniques to achieve maximum film build.

When applying Intercure 99 by brush or roller, it may be necessary to apply multiple coats to achieve the total specified system dry film thickness.

Care should be exercised to avoid application in excess of 14 mils (350 microns) dry film thickness.

Application at excessively high relative humidity, or under conditions where condensation is likely to occur, may result in immediate or permature loss of gloss. It is recommended that relative humidity should not exceed 85 % during application and cure.

Surface temperature must always be a minimum of 5°F (3°C) above dew point.

Application at humidities greater than 50% may result in faster drying times.

When applying Intercure 99 in confined spaces, ensure adequate ventilation.

Intercure 99 is not designed for continuous water immersion.

As with other fast dry coating systems care should be taken to prevent overspray contamination of previously coated work pieces.

Note: VOC values are typical and are provided for guidance purpose only. These may be subject to variation depending on factors such as differences in color and normal manufacturing tolerances.

SYSTEMS COMPATIBILITY

Intercure 99 may be applied direct to metal in atmospheric environments up to and including C3 (as defined in ISO12944 Part 2). When using Intercure 99 in atmospheric environments classed as C4 or C5, a recommended primer must be used.

Suitable primers for ISO 12944 C4 environment are:

Intercure 200HS

Suitable primers for ISO 12944 C5 environment are:

Interzinc 52

Intercure 99 must not be applied directly over Interzinc 52 low temperature grade cure.

Absolute maximum overcoating intervals with Intercure 99 are dependent upon primer. Intercure 99 Recommended Working Procedures must be consulted prior to use. Intercure 99 should only be overcoated with itself.

ADDITIONAL INFORMATION

Further information regarding industry standards, terms and abbreviations used in this data sheet can be found in the following documents available at www.international-pc.com:

- Definitions & Abbreviations
- Surface Preparation
- Paint Application
- Theoretical & Practical Coverage
- Intercure 99 Application Guidelines

Individual copies of these information sections are available upon request.

SAFETY PRECAUTIONS

This product is intended for use only by professional applicators in industrial situations in accordance with the advice given on this sheet, the Material Safety Data Sheet and the container(s), and should not be used without reference to the Material Safety Data Sheet (MSDS) which International Protective Coatings has provided to its customers.

All work involving the application and use of this product should be performed in compliance with all relevant national, Health, Safety & Environmental standards and regulations.

In the event welding or flame cutting is performed on metal coated with this product, dust and fumes will be emitted which will require the use of appropriate personal protective equipment and adequate local exhaust ventilation.

If in doubt regarding the suitability of use of this product, consult International Protective Coatings for further advice.

Warning: Contains isocyanate. Wear air-fed hood for spray application.

PACK SIZE

Unit Size	Part A		Part B	
	Vol	Pack	Vol	Pack
15 liter	10 liter	20 liter	5 liter	5 liter
3 US gal	2 US gal	3.5 US gal	1 US gal	1 US gal

For availability of other pack sizes contact International Protective Coatings

SHIPPING WEIGHT

Unit Size	Part A	Part B
15 liter	15.36 kg	6.13 kg
3 US gal	25 lb	10 lb

STORAGE

Shelf Life	12 months minimum at 77°F (25°C). Subject to re-inspection thereafter. Store in dry, shaded conditions away from sources of heat and ignition.

Disclaimer

Issue date: 4/9/2010

www.international-pc.com

Intercure 99
Application Guidance Notes

Rev. 00 – 3rd November 2008

Prepared by:
INTERNATIONAL PROTECTIVE COATINGS LTD.
www.international-pc.com

Intercure 99 Application Guidance Notes Revisions		
REV.	**DATE**	**Revision Notes**
00	23/07/2008	Original
01	03/11/2008	Extension of Scope to C4/C5 Applications

Table of Contents

1.0 INTRODUCTION

Intercure 99 is a novel, high performance coating that is primarily intended as a one coat primer/finish to provide both anticorrosion and barrier protection in direct-to-metal applications in moderate environments (ISO 12944 C3 or less). It is also suitable as an intermediate/finish when applied over suitable primers in environments which are more aggressive than C3 (as defined in ISO 12944-2). It is capable of providing corrosion protection to steel as soon as it is hard dry and may be stacked with care after the product is hard dry (please see the product data sheet).

This document gives detailed guidance on the use and application of Intercure 99 and should be read in conjunction with the Intercure 99 Technical Datasheet and Material Safety Datasheet (MSDS).

2.0 WHERE TO APPLY INTERCURE 99

Intercure 99 is suitable for application in the steel fabrication shop or at an applicators' works, provided sufficient time is given for through dry (hard dry) properties to be achieved. At this point the system can be readily handled but care should be taken during transportation and erection to minimise damage.

Typically applied direct to metal, as a one coat system, Intercure 99 is effective in moderately corrosive environments up to ISO12944 C3, offering early water resistance. It should not be used as a one coat system in the higher corrosivity environments of ISO12944 C4 and C5. In these environments, Intercure 99 should be used as part of a two coat system over a suitable primer (covered in section 6).

Intercure 99 offers hard dry times of 1½ hours at 25ºC/50%RH (77ºF/50%RH) and is therefore extremely valuable when rapid drying and handling is required. These dry times are further reduced as temperature and humidity levels increase.

Intercure 99 offers extended colour and gloss retention as well as corrosion protection. It rapidly hardens in the first 24 hours yet remains flexible, thus affording good damage and impact resistance.

3.0 STORAGE OF MATERIALS

Due to its moisture sensitive nature, Intercure 99 should always be stored in covered dry conditions. If the outside of the tin becomes wet it should be thoroughly dried before opening to ensure no moisture contamination occurs. Ideal storage temperature ranges from 5ºC- 40ºC (41ºF-104ºF).

At lower temperatures the base material will become more viscous and may require warming or thinning prior to application. At higher temperatures, materials will flow more easily and dry faster. It should be noted that there will be potlife variations depending on the temperature.

4.0 ENVIRONMENTAL CONDITIONS FOR APPLICATION

Intercure 99 is moisture sensitive and both the rate of drying and potlife can be affected therefore environmental monitoring is important. The following parameters apply and should be measured and recorded:-

Ideal application temperature is between 15ºC and 25ºC (59ºF and 77ºF), although it is feasible to apply at higher and lower ambient temperatures.

The surface onto which Intercure 99 is to be applied must be clean, dry and free from contaminants. Steel temperatures must always be 3ºC (5ºF) above the dew point.

Relative humidity (RH) during application and curing should ideally be between 40% and 80%. The higher the humidity, the faster the rate of cure. However, gloss reduction may accompany higher levels of humidity, especially where RH exceeds 85%.

Care should be taken where the relative humidity at the time of application is low (i.e. <25%). Where approved primers are used, they need to be allowed to achieve hard dry status (or a point at which they can resist the solvents used in Intercure 99) before application of the Intercure 99. Rate of cure (touch/hard dry times) will be affected at low relative humidity (<25%). See Section 6.0.

Moisture contamination in the mixed product may result in a significant reduction in potlife. Temperatures above 40ºC will also impact on potlife although 1 hour is typical under these conditions. Conversely, low temperatures (below 10ºC) may extend potlife and will also retard the drying process.

Ambient conditions should be measured at regular intervals, particularly if conditions are changeable.

Application should be conducted under cover from the elements and Intercure 99 should not be exposed to external weather conditions until through dry (hard dry) properties have been achieved.

5.0 SURFACE PREPARATION

In common with most protective coatings schemes, the performance level of Intercure 99 is ultimately determined by degree of surface preparation. The higher the degree of surface preparation achieved, the greater the long-term performance.

For optimum performance, all surfaces to be coated should be clean, dry and free from contamination including dirt, salts, oil and grease. Prior to paint application all surfaces should be assessed and treated in accordance with ISO 8504:1992. Where necessary, remove weld spatter and smooth weld seams and sharp edges.

Abrasive Blast Cleaning

All steel surfaces to be coated should be correctly prepared prior to application of the coating system. The preferred method of preparation is abrasive blast cleaning to Sa2½ (ISO 8501-1:1988) or SSPC-SP6.

A minimum surface profile of 50 microns (2 mils) is recommended.

Primed Surfaces

Primers should be clean and free of dirt, grease, oil, zinc salts or other deleterious matter. If the primer has exceeded its maximum overcoating interval, then abrasion may be necessary to provide a surface that will accept the Intercure 99.

Primers should be checked for compatibility prior to application of the Intercure 99.

6.0 PRIMERS & OVERCOAT INTERVALS

The following primers only are currently suitable for use in conjunction with Intercure 99 in C4 and C5 corrosive environments. Minimum overcoat intervals must be followed to achieve effective adhesion between the two coats and ultimately optimum performance.

Product	Environmental Conditions		
	C3	C4	C5 (M)
Interzinc 52 (EPA177 CA)	Not required – apply DTM	75	75
Intercure 200HS	Not required – apply DTM	100	n/a

Note: The low temperature curing agent EPA176 for Interzinc 52 is **not** recommended in this system due to poor adhesion exhibited between the primer and top-coat.

Interzinc 52 cure rate is affected by temperature and humidity and so should not be overcoated with Intercure 99 until hard dry time is achieved. The table below outlines minimum overcoat interval of approved primers at differing temperature/humidity.

Temperature	Humidity	Minimum Overcoating Interval
5ºC (41ºF)	50%	3 hours
15ºC (59ºF)	40%	4 hours
15ºC (59ºF)	50%	2½ hours
25ºC (77ºF)	50%	1½ hours
40ºC (104ºF)	50%	1½ hours

It should be noted that where prevailing conditions are high humidity combined with low temperature, for example, 10ºC and 80%RH, Interzinc 52 will cure more slowly and will therefore need an extended minimum overcoat interval to develop sufficient strength to support the Intercure 99; 24hrs is recommended under these circumstances. Maximum overcoat interval over Interzinc 52 is 2 months. The maximum overcoat interval can be extended via secondary surface preparation to ensure satisfactory adhesion of the Intercure 99. However, if the zinc primer has been exposed to atmospheric weathering, the zinc in the coating will react with atmospheric moisture to produce white zinc salts. These are detrimental to good adhesion if left on the surface and should be removed prior to overcoating. Thorough abrasion or scrubbing with fresh water will be necessary. Interzinc 52 can be assessed for sufficient film strength/hardness to support application of Intercure 99 by testing resistance to MEK solvent. A good indication that adequate film cure has been achieved is the point at which the film resists 4 double rubs using the method described in ASTM D4752.

7.0 MIXING

This product is supplied in two components; a pigmented base (Part A) and curing agent (Part B). Both tins should be kept dry until used. On opening the base it should be slowly mixed with a pallet knife (or similar implement) to reincorporate any liquid that may have separated out to the surface. The sides and bottom of the container should be scraped to ensure all settlement and residue is recombined. It should then be mixed with a mechanical agitator (air-powered equipment) for a few minutes to ensure full incorporation.

The curing agent should then be added to the base in its entirety and the combination power mixed with a mechanical agitator for several minutes until a uniform paint is obtained.

The quantities of base and curing agent supplied in the packs are such that the combination should not exceed the lip of the larger tin. There will also be room for partial thinning with International GTA713 (or GTA056) although this would not normally be required.

Note
Intercure 99 reacts with atmospheric moisture and will form a layer of skin on the surface if left exposed for a prolonged period. Once the containers have been opened, it is recommended that the material be mixed and used as soon as possible. No induction period is necessary. If a skin does form it should be scraped to one side and not re-incorporated into the paint. A thin layer of solvent added to the surface of the paint on commencing will prevent excessive skinning. International GTA713 or GTA056 should be used for this.

The importance of thorough and correct mixing cannot be over-emphasised and is essential in order to ensure the precise performance of the coating.

Do not mix more material than can be used within the potlife of the material.

For small packs, hand mixing is possible, but can be labour intensive. As a result, hand mixing is not recommended when large quantities of material are to be used.

Any surplus or unused base (Part A) and curing agent component (Part B) exposed to the atmosphere for more than 2 hours should be **discarded and not used.**

8.0 POT LIFE

With Intercure 99, no significant increase in viscosity is observed after mixing, even after long periods. However, if the stated potlife is exceeded then the final coating film may have inferior properties and will not give the specified level of performance.

Intercure 99 must not be applied after the stated potlife has been exceeded.

Potlife times outlined below refer to 50% relative humidity:

Temperature	Potlife
5ºC (41ºF)	2½ hours
15ºC (59ºF)	2 hours
25ºC (77ºF)	1¼ hours
40ºC (104ºF)	1 hour

Note

Relative humidity as well as temperature can affect the potlife. Generally the higher the humidity, the shorter the potlife; for example, at 10ºC (50ºF) and 80% humidity, the pot life will be 2 hours, compared with 2¼ hours at 50% humidity. Measurements should be made before and during application as to the exact environmental conditions.

9.0 AIRLESS SPRAY APPLICATION

Airless spray is one of the methods of application recommended to give the optimum cosmetic appearance of Intercure 99.

The airless spray equipment should be in good working order. Pump ratios of 32:1 up to 60:1 can be used or any pump capable of producing a minimum output pressure of 176kg/cm^2 (2,503 psi). A typical line length of 30m (100ft) should be used with a minimum internal diameter of 9.5mm (3/8").

Tip size can be from a minimum of 0.43mm (17 thou) up to 0.48mm (19 thou), depending on application requirements.

Tip angles will depend on the profile and area of the steelwork to be sprayed but are preferable to be low, i.e. less than 50º, to assist better wet film formation and reduced potential overspray.

Airless gun type used should be rated above the maximum working tip pressure anticipated.

It is recommended to flush out all application equipment with International GTA713 or GTA056 thinner prior to application to ensure that there is no contamination and/or moisture in the lines. All equipment should be cleaned immediately after use. It should be noted that Intercure 99 is moisture curing therefore it is good working practice to periodically flush out spray equipment during the course of the working day.

Note

Only use International GTA713 or GTA056; use of other thinners can severely reduce the workable potlife.

10.0 AIR SPRAY APPLICATION

Conventional air spray with attached pressure pot is best achieved when using a De Vilbiss MBC or JGA gun or an equivalent design with a 704 or 765 air cap and an E fluid tip with a minimum of 1.4mm (55 thou “) diameter and up to a 1.8mm (70 thou “) diameter. A moisture and oil trap in the main air supply line is essential.

A 12.5mm (½ inch) internal diameter paint line is recommended with all in-line filters removed. The pot pressure should be kept as low as is possible.

When starting to apply, keep the fluid tip fully open at the commencement and adjust until optimum settings are obtained.

Typical pressures:

- Atomising Pressure : 40-50 p.s.i. (2.8-3.5Kg/cm^2)
- Pot Pressure : 10-20 p.s.i. (0.7-1.4Kg/cm^2)

Note

Intercure 99 is designed to be applied between 150-250 microns dft (6-10 mils) in one spray coating without the need for thinning via air spray and airless spray techniques. This equates to approx. 188-313 microns (7.5-12.5 mils) wet film thickness.

11.0 BRUSH & ROLLER APPLICATION

Brush and roller are suitable methods of application for Intercure 99 although the standard of cosmetic appearance may be reduced. They are best used on small areas or stripe coating, where minimal overlap to other areas is required and where local site access prevents spray application. When using a brush/roller technique it may be necessary to apply multiple coats to achieve specified system dry film thickness. Typically, 100 – 150 microns (4.0 – 6.0 mils) dry film thickness can be achieved.

Wet film thickness readings should be taken periodically during application using a wet film comb or similar. Wet film thickness readings are a guide to the applicator to enable him to judge his application technique. They should be taken as frequently as necessary to enable a ‘feel’ for the material to be established.

Dry film thickness readings should be measured upon completion and any low areas should be brought up to specification.

12.0 STANDARD OF COSMETIC FINISH

Intercure 99 has been designed to provide long term colour and gloss retention, superior to that exhibited by commercial high build polyurethane finishes. A high cosmetic finish is dependant on the quality of application, applicator experience and the equipment employed.

The applicator is advised to use the maximum/minimum film thickness guidelines and avoid using a mixture of application techniques whenever possible.

Airless spray and conventional air-spray applications will generally give the best results in terms of glossy, uniform films. The level of gloss and surface finish may be affected when using other techniques such as brush application, which creates a more uneven appearance due to the presence of brush marks.

13.0 POSSIBLE FILM DEFECTS

The functions of Intercure 99 coating are;

- To provide corrosion protection direct-to-metal in moderate corrosion environments,
- To provide corrosion protection over an approved primer in high corrosion environments,
- Rapid drying to enable quick handling of steelwork and rapid throughput within the paintshop,
- Good gloss and uniform appearance,

A number of potential defects are detailed below together with recommended remedial treatment.

Gloss Reduction

Above a relative humidity of 80% it is possible that the coating will noticeably reduce in gloss so regular 'environmental' measurements should be conducted throughout application. Overspray may also lead to gloss reduction and this is referred to below. A thin coat, around 75-100µm dry film thickness may be applied over the initial coat once it has attained hard dry condition to alleviate this.
At temperatures exceeding 35ºC (95ºF) the rapid drying film properties may hinder good film flow which will result in perceived gloss reduction due to the subsequent uneven surface. The addition of 5% solvent in such instances may improve film flow where surface dry times are rapid. The thinning solvent should be either International GTA713 or GTA056.

"Orange Peel"

This is due to application technique and the effect can be minimised by thinning of the material and ensuring that the material is at a working temperature of 10ºC-25ºC (50ºF-77ºF). This effect normally occurs if the coating is applied with the gun held too close to the workpiece.

Over-Application

Intercure 99 is tolerant to some over-application. However, excessive film thickness may lead to extended cure times and potential blistering, especially when operating at elevated temperatures.
It is advised that Intercure 99 should not be specified at a nominal dry film thickness in excess of 250µm (10 mils) per coat.

Under-Application

If insufficient coating is applied then coalescence will be poor and the steel profile or primer will be clearly visible beneath the coating.
Stripe coats should be applied to bolts, welds, angles, corners and other difficult areas which are likely to receive less than the specified film thickness.
When the material is theoretically up to specified thickness, film thickness readings must be taken and any low areas brought up to specification.

Overspray / Dry Spray

Can be minimised by work planning (i.e. taking into account the rapid touch dry times), good spray technique, thinning, reduction of air pressure, sensible tip size, etc, depending on the structure to be sprayed (i.e. using a larger tip results in less “passes” to achieve a wet film although it will be more difficult to control the amount of paint being applied at any one time). If the effect is severe, leaving a rough, uneven surface, a further thin coat may have to be applied on top of it once it has dried sufficiently. Touch dry times can be attained in as little as 15-20 minutes given the right environmental conditions of high temperature and humidity. It is advisable not to apply a fresh coat which will overlap a drying coat if this time period has been passed.

For large areas or areas where overspray may be unavoidable, it is advised that the adjacent steelwork be covered or taped to prevent overspray damaging cosmetic appearance.

Overspray will have the appearance of poor coalescence and/or surface roughness.

Pinholes

May occur as a result of application over porous substrates, hand-prepared substrates, surfaces that are suffering from overspray/dry spray or poorly cleaned surfaces containing dust debris. Surfaces should be suitably prepared before application commences. Pressurised air may be used to blow down the surfaces but it should first be checked for cleanliness to avoid further contamination of the substrate, e.g. to ISO 8573 or ASTM D4266. If pinholing is observed, holiday testing can be used to confirm whether or not there is a conductive route through to the steel surface. Surface contaminants on zinc primers, i.e. white zinc salts, should be removed.

Sagging

The result of excessive film thickness and poor spray technique or over-thinning. If the areas are greater than 100mm equivalent diameter, the coating should be removed and re-applied. A maximum dry film thickness value is supplied in the data sheet and this should be adhered to as closely as possible.

Soft Films

Films which show signs of being mobile after the hard dry time indicate lack of curing. This may be as a result of poor mixing or even omission of the curing agent and affected areas will require removal and re-application of Intercure 99. Film hardness can be affected by temperature and humidity; at lower temperature and humidity the film will need further time to reach hard dry properties.

If the Intercure 99 is applied to a zinc primer too quickly (i.e. before hard dry time is achieved) this can lead to a softening effect due to solvent entrapment between the two coats. This can be detrimental to the adhesion between the two films. Overcoat intervals quoted in the data sheet should be adhered to for each temperature.

14.0 MEASUREMENT OF DRY FILM THICKNESS

An electronic dry film thickness gauge capable of storing statistical data is strongly recommended to enable a meaningful DFT survey to be conducted. Gauges should be calibrated on smooth plate.

- **Tolerances**

Specified thicknesses for Intercure 99 are nominal, rather than minimum, values. According to ISO19840: 2004 the following tolerances are recommended: -

- Individual dry film thicknesses of less than 80% of the nominal dry film thickness are not acceptable. Individual values between 80% and 100% of the nominal dry film thickness are acceptable provided that the overall average (mean) is equal to or greater than the nominal dry film thickness.
- Care shall be taken to achieve the nominal dry film thickness and to avoid areas of excessive thickness. It is recommended that the maximum dry film thickness is not greater than 2½ times the nominal film thickness.

15.0 INSPECTION AND REPAIR

Damage Down to Steel

For small areas of damage:

Clean down to remove all dirt, grease, oil or other deleterious matter. Remove any loose coating and/or corrrosion products by abrading the surface, feathering back the edges of sound coating and taking care not to polish the steel. Patch prime the bare areas using Intercure 99 thinned by 5% (with the appropriate International thinner) using brush application, ensuring that it is worked into the profile of the steel to allow good adhesion. The coating can then be reinstated with unthinned paint by roller application to the required dry film thickness; this may require multiple applications, taking care to observe the relevant overcoating interval.

For large areas of damage:

Surface preparation should be carried out as per the original standard, i.e. spot blast to IS 8501-1:2007 Sa2½ (SSPC SP6/NACE No. 3), followed by a full coat of Intercure 99. It is advised that adjacent areas to the repair site be 'masked' off with tape to help prevent fine pinholing at the edges of the repair site.

It is important to limit the amount of damage and subsequent repair work as much as possible so as not to detract from the overall appearance of the coating. By ensuring the correct film thickness is applied first time and that through dry (hard dry) properties are attained before handling, the amount of repair required can be minimised.

16.0 HEALTH & SAFETY

Intercure 99 is intended for use only by professional applicators in industrial situations in accordance with the advice given in this leaflet and on containers and should not be used without reference to the Material Health and Safety Data Sheets (MSDS) which International Protective Coatings has provided to its customers. If for any reason a copy of the relevant Material Health and Safety Data Sheets are not immediately available, the user should obtain a copy before using the product.

This product contains isocyanate and air-fed PPE should always be used during application, to prevent inhalation of the spray mist.

- Ensure that in addition to air-fed breathing apparatus, all typical personal protective equipment is used, e.g. overalls, gloves, goggles, face mask, barrier creams etc.
- Provide adequate ventilation.
- If product comes into contact with the skin wash thoroughly with luke warm water and soap or suitable industrial cleaner. Do not wash with solvents. If the eyes are contaminated flush with water (minimum 10 minutes) and obtain medical attention at once.
- These coatings contain flammable materials so keep away from sparks and open flames. Smoking should be prohibited in the area.
- Observe all precautionary notices on containers.

Safety Data Sheet

QNI605

Intercure 99 RAL 9005 Part A

Version No. 3 **Date Last Revised** 09/04/09

1. Identification of the preparation and company

Preparation/Product Name	Intercure 99 RAL 9005 Part A
Product Code	QNI605
Reg Number	
Intended use	See Technical Data Sheet. For professional use only.
Application Method	See Technical Data Sheet.
Company Name	International Paint Stoneygate Lane Felling Gateshead Tyne and Wear NE10 OJY UK
Telephone No.	+44 (0)191 469 6111
Fax No.	+44 (0)191 438 3711
24 hour Emergency Telephone No.	+44 (0)191 469 6111
Official Advisory Body Telephone No.	+44 (0)870 600 6266 For Advice to Doctors & Hospitals only
Email	sdsfellinguk@akzonobel.com

2. Hazard identification of the product

Flammable.
May cause sensitisation by skin contact.
Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Further information is given in section 11.

Safety Data Sheet

QNI605

Intercure 99 RAL 9005 Part A

Version No. 3 **Date Last Revised** 09/04/09

3. Composition/information on ingredients

If the product contains substances that present a health hazard within the meaning of the Dangerous Substances Directive 67/548/EC, or have occupational exposure limits detailed in EH40, these substances are listed below.

Ingredient	EINECS	Concentration	Symbol(s)	Risk phrases (*)
Aspartic Ester	-	25 - < 50	Xi	R43, R52-53
Bis(pentamethyl-4-piperidyl)sebacate	255-437-1	0 - < 1	Xi,N	R43, R50-53
Ethyl 3-ethoxypropionate	212-112-9	2.5 - < 10		
Heptan-2-one	203-767-1	2.5 - < 10	Xn	R10, R20/22
Methyl pentamethyl-4-piperidyl sebacate	280-060-4	0 - < 1	Xi,N	R43, R50-53
Solvent naphtha (petroleum), light aromatic	265-199-0	0 - < 1	Xn,N	R51-53, R65

* The full texts of the phrases are shown in section 16.

4. First aid measures

General

In all cases of doubt, or when symptoms persist, seek medical attention.

Never give anything by mouth to an unconscious person.

Inhalation

Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, give artificial respiration. If unconscious place in the recovery position and obtain immediate medical attention. Give nothing by mouth.

Eye Contact

Irrigate copiously with clean fresh water for at least 10 minutes, holding the eyelids apart and seek medical attention.

Skin Contact

Remove contaminated clothing. Wash skin thoroughly with soap and water or use a recognised skin cleanser. Do NOT use solvents or thinners.

Ingestion

If accidentally swallowed obtain immediate medical attention. Keep at rest. Do NOT induce vomiting.

5. Fire-fighting measures

Recommended extinguishing media; alcohol resistant foam, CO^2. powder, water spray.

Do not use; water jet.

Note; Fire will produce dense black smoke. Decomposition products may be hazardous to health. Avoid exposure and use breathing apparatus as appropriate.

Cool closed containers exposed to fire by spraying them with water. Do not allow run off water and contaminants from fire fighting to enter drains or water courses.

6. Accidental release measures

Remove sources of ignition, do not turn lights or unprotected electrical equipment on or off. In case of a major spill or spillage in a confined space evacuate the area and check that solvent vapour levels are below the Lower Explosive Limit before re-entering.

Ventilate the area and avoid breathing vapours. Take the personal protective measures listed in section 8.

Contain and absorb spillage with non-combustible materials e.g. sand, earth, vermiculite. Place in closed containers outside buildings and dispose of according to the Waste Regulations. (See section 13).

Clean, preferably with a detergent. Do not use solvents.

Do not allow spills to enter drains or watercourses.

If drains, sewers, streams or lakes are contaminated, inform the local water company immediately. In the case of contamination of rivers, streams or lakes the Environmental Protection Agency should also be informed.

Safety Data Sheet

QNI605

Intercure 99 RAL 9005 Part A

Version No. 3 **Date Last Revised** 09/04/09

7. Handling and storage

Handling

This coating contains solvents. Solvent vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Areas of storage, preparation and application should be ventilated to prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentrations higher than the occupational exposure limits.

In Storage

Handle containers carefully to prevent damage and spillage.

Naked flames and smoking should not be permitted in storage areas. It is recommended that fork lift trucks and electrical equipment are protected to the appropriate standard.

In Use

Avoid skin and eye contact. Avoid inhalation of vapours and spray mists. Observe label precautions. Use personal protection as shown in section 8.

Smoking, eating and drinking should be prohibited in all preparation and application areas.

Never use pressure to empty a container; containers are not pressure vessels.

All sources of ignition (hot surfaces, sparks, open flames etc) should be excluded from areas of preparation and application. All electrical equipment (including torches) should be protected (Ex) to the appropriate standard.

The product may charge electrostatically. Always use earthing leads when pouring solvents and transferring product. Operators should wear clothing which does not generate static (at least 60% natural fibre) and antistatic footwear; floors should be of conducting type.

Activities such as sanding, burning off etc. of paint films may generate dust and/or fumes hazardous to the skin and lungs. Work in well ventilated areas. Use local exhaust ventilation and personal skin and respiratory protective equipment as appropriate.

Storage

Store in a well ventilated, dry place away from sources of heat and direct sunlight.

Store on concrete or other impervious floor, preferably with bunding to contain any spillage. Do not stack more than 3 pallets high.

Keep container tightly closed. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in the original container or one of the same material.

Prevent unauthorised access.

8. Exposure controls and personal protection

Engineering Measures

Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapour below occupational exposure limits suitable respiratory protection must be worn.

Exposure Limits

The following workplace exposure limits have been established by the Health and Safety Executive as published in EH40.

Material	Short term (15 min. ave)		Long term (8hr TWA)		Comments
	ppm	mg/m³	ppm	mg/m³	
Ethyl 3-ethoxypropionate	100	-	50	-	R
Heptan-2-one	100	475	50	237	+

For Key to entries in 'Comments' column see Section 16

Personal Protection

A work place assessment should be carried out to ensure that the PPE mentioned below provides the level of protection required.

Respiratory Protection

If workers are exposed to concentrations above the exposure limit they must use the appropriate, certified respirators. When spraying this product use a respiratory mask with charcoal and dust filters (as filter combination A2-P2). In confined spaces use compressed air or fresh air respiratory equipment.

Eye Protection

Wear safety eyewear, e.g. safety spectacles, goggles or visors to protect against the splash of liquids. Eyewear should comply with British Standard 2092.

Hand Protection

For maximum protection a multi layer laminate glove, such as 4H, should be worn. The penetration time for these gloves will vary according to the raw materials present in this product.

Skin Protection

Overalls which cover the body, arms and legs should be worn. Skin should not be exposed. Barrier creams may help to protect areas which are difficult to cover such as the face and neck. They should however not be applied once exposure has occurred. Petroleum jelly based types such as Vaseline should not be used. All parts of the body should be washed after contact.

Safety Data Sheet

QNI605

Intercure 99 RAL 9005 Part A

Version No. 3 **Date Last Revised** 09/04/09

9. Physical and chemical properties

Physical State	Liquid
Flash Point (deg C)	55
Viscosity (cSt)	81
Specific Gravity	1.252
Vapour Density	Heavier than air.
Lower Explosive Limit	0.8
Solubility in Water	Immiscible
R.A.Q. to ventilate to 10% of the LEL (m ³/l)	42

10. Stability and reactivity

Stable under recommended storage and handling conditions (see section 7). When exposed to high temperatures may produce hazardous decomposition products such as carbon monoxide, carbon dioxide, oxides of nitrogen and smoke.

Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid possible exothermic reactions.

11. Toxicological information

There are no data available on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and classified for toxicological hazards accordingly. See Sections 2 and 15 for details.

Safety Data Sheet

QNI605

Intercure 99 RAL 9005 Part A

Version No. 3 **Date Last Revised** 09/04/09

12. Ecological information

There are no data available on the product itself.

The product should not be allowed to enter drains or water courses.

The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 1999/45/EC and is classified for eco-toxicological properties accordingly. See Sections 2 and 15 for details

13. Disposal considerations

Do not allow into drains or water courses. Wastes and emptied containers should be disposed of in accordance with regulations made under the Control of Pollution Act and the Environmental Protection Act.

Using information provided in this data sheet advice should be obtained from the Waste Regulation Authority, whether the special waste regulations apply.

The European Waste Catalogue Classification of this product, when disposed of as waste is 08 01 11 Waste paint and varnish containing organic solvents or other dangerous substances. If mixed with other wastes this code may no longer apply and the appropriate code should be assigned. For further information contact your local waste authority.

14. Transport information

Transport only in accordance with the following regulations:

ADR/RID UN1263 Paint, 3, III

IMDG	Class	3	Subsidiary Class
	Proper Shipping Name	PAINT	
	UN No	1263	
	Ems	F-E,S-E	
	Packaging Group	III	
	Marine Pollutant	No	

ICAO/IATA	Shipping Name	PAINT	
	Class	3	Subsidiary Class
	UN No	1263	
	Packaging Group	III	

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15. Regulatory information

In accordance with EC Directive 88/379/EEC and the Chemicals (Hazard Information and Packaging for Supply) Regulations SI /3247/1994 this product is labelled as follows:

Symbol(s)

Irritant

Contains;

Aspartic Ester

R. Phrases;

Flammable.

May cause sensitisation by skin contact.

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S. Phrases;

Do not breathe vapour/spray.

Avoid contact with skin.

Wear suitable gloves.

Use only in well-ventilated areas.

P. Phrases;

Safety Data Sheet

QNI605

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16. Other information

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 Safety 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 advice 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.

The information in this Health & Safety Data Sheet is required pursuant to Directive 91/155/EEC and the Chemicals (Hazard Information & Packaging for Supply) Regulations 1994.

Key to 'Comments' column in Section 8.
(+) There is a risk of absorption through unbroken skin.
(C) Capable of causing cancer and/or heritable genetic damage
(R) Suppliers recommended limit
(S) Capable of causing occupational asthma

The full text of the R phrases appearing in section 3 is:

R10 Flammable.

R20/22 Harmful by inhalation and if swallowed.

R22 Harmful if swallowed.

R43 May cause sensitisation by skin contact.

R50-53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R51-53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R52-53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R65 Harmful: May cause lung damage if swallowed.

PAINTING SPECIFICATION 2 (SECONDARY METHOD)

090Y

Macolux Shopprimer

Description : Primer based on vinyl resins.

Application : As a primer in the professional paintersbranch.

Specific Properties : Very quick drying protective coating for already coated doors, windows and frames. Improves the durability of the total paintsystem. Apply (in several coats) with a non-pilling fabric. For interior and exterior use.

Technical Specifications

Productcode number	:	090Y		
Degree of gloss	:	mat		
Colour Assortment	:	various opaque colours		
Solid Content	:	approx. 40 gew.% = approx. 23 vol.%		
Density	:	approx. 1,07 kg/dm3 at 20°C		
Drying times (20°C/65% RH)	:	dust dry	:	after approx. 10 minutes
at a wet filmthickness of 100 µm	:	touch dry	:	after approx. 30 minutes
		through dry	:	after approx. 1 hour(s)
Suitable for recoating	:	after min.	:	1 hour(s)
		after max.	:	not limited
Flashpoint (DIN 53213)	:	approx.14 °C		

Processing Specification

Ambient conditions	:	Temperature between 15 und 25°C RH between 40 und 70%		
Thinner	:	to change viscosity	:	Thinner 2000
		for cleaning the equipment	:	Thinner 2000
Forced drying	:	not relevant		
Advised filmthickness per coat	:	dry filmthickness: 23 µm = wet filmthickness: 100 µm		
Theoretical yield	:	approx. 10 m2/lt at 23 µm dry filmthickness		
Practical yield	:	The practical yield depends on the way of applicationm the quality of the substrate and the shape of the object.		
Special details	:	Stirr well before use.		

Application Information

APPLICATION METHODS	Pressure	Nozzle-size	guide-air	Max.Temp. Coating	Hinweise
Pneumatic spaying	3-5 bar	1,5-1,8 mm			add max. 50% thinner
Airless/Airmix spraying	not relevant	not relevant	not relevant	not relevant	none
Elektrostatic spraying	not relevant				
Rollercoater	not relevant				
Curtaincoater	not relevant				
Vacuumcoater	not relevant				
Dipping	not relevant				
Flowcoater	not relevant				
Brush-Roller	The product is ready-to-use.				

Substrate Information

Suitable Subtrates	Pine Spruce	Meranti	Merbau	Iroko	Multiply	MDF	Board	Various Metals
	☐	☐	☐	☐	☐	☐	☐	☑
Note								
Demands	The substrate to be treated should be free of (sanding)dust, grease or other contaminations.							

Further Information

Shelf life: If stored in original packaging in cool and frost-free areas, approx. 24 months.

Safety Information For exact information see the safety data sheet.

Environment: Storage, use and waste disposal in accordance with local legislation. May not be disposed into sewerage.

Systems For possible systems with this product see the concerned system sheet.

SCHAEPMAN

BELTICRYL TWO-PACK FINISH **C4P000185**

Two-pack paint of which the hardening takes place at room temperature. Because of the fast drying and the excellent chemical resistance this finish is applied especially in many industrial sectors. For application when yellowing resistance is required, the hardener H4P000004 is recommended.

1. general properties

1.01	Main component	: acrylic isocyanate combination
1.02	Purpose of use	: articles on which a good filling and hardness is required
1.03	Applicable to	: a. board and chipboard b. steel and other metals c. plastics - e.g. polyurethane and PVC
1.04	Pre-treatment of the substrate	: a. depending on the more or less absorbing action of the substrate, pre-spraying with a spraying filler will be desirable b. degrease, phosphatize or chromate with Nibralux washprimer or an epoxy primer c. degrease; the surface has to be free of grease and mould release agents
1.05	Colours available	: most current colours
1.06	Gloss	: from matt to glossy
1.07	Viscosity at delivery 20°C	: 70-80 sec. DIN cup 4 mm.
1.08	Specific gravity 20°C	: ± 1.230 gr/cm^3
1.11	Drying times at 20°C	: dustfree after ± 20 min. tack-free after ± 1 hour packable after 24 hours
1.13	Potlife	: 1 working day
1.15	Stability	: in well-closed packing at least ½ year keepable
1.16	Theoretical yield	: 10 m²/kg paint ready for use at a film thickness of 30 microns dry

2. film- and resistance properties

2.01	Film thickness at which the xperiments have been made	: 30 microns
2.02	Adhesion (Gitterschnitt DIN 53151)	: GT-0
2.03	Hardness (pendulum hardness Persoz)	: 160 sec.
2.04	Impact resistance	: moderate
2.05	Flexibility (Erichsen DIN 53156)	: 7 mm.
2.10	Recoatability	: good
2.14	Water resistance (humidity test DIN 50017)	: 8 x 24 hours on phosphatized steel, good
2.15	Corrosion resistance (salt spray test ASTM B-117)	: 8 x 24 hours on phosphatized steel, good
2.16	Weather resistance	: good

Zwolle, April 2000

3. application properties and -techniques

3.01	Hardener	: H4P000004
3.02	Addition percentage hardener	: 16 W%
3.03	Thinner	: V0A000084 or V0A000135 (at application with spray gun with a cup or pressure feed container) At application with airless or airless electrostatic, our Techn. Inf. Departm. will be pleased to advise you.
3.04	Addition percentage thinner	: ca. 20 weight%
3.05	Application viscosity	: 18-27 sec. DIN cup 4 mm. for air electrostatic, spray gun with a cup or pressure feed container 30-35 sec. DIN cup 4 mm. for airless or airless electrostatic N.B. It's only possible to process these paints electrostatically with apparatus that works with electrostatic resistances < 700 kilo ohm.

3.06 Nozzle apertures and spraying pressure :

	aperture	atomization pressure	material pressure
spray gun with a cup	1.3-1.8 mm.	3-4 bar	
pressure feed container	1.3-1.8 mm.	3-4 bar	± ½ bar
airless	0.009-0.011 inch	120-150 bar	

3.07	Baking cycle/forced drying	: till max. 20 min. 120°C
3.08	Cleaning of the equipment	: with cleaning thinner V0A000593 or Cellulose thinner
3.09	Film thickness	: in general a film thickness of 35-40 microns (2 cross coats) is sufficient

Zwolle, April 2000

Bezoekadres: Thorbeckegracht 90 - 8011 VR Zwolle

Category: 1 - Basic solvent borne preparation Revision date: 05-03-07

CEPE GROUP SAFETY DATA SHEET

1. Identification of the substance / preparation and of the company / undertaking

Product name and code: Belticryl 2-pack paint black C4P000185

Use of the substance/preparation: paint / paint related product for industrial / professional use (see technical information)

Name, full address and tel. of company:

Schaepman's Lakfabrieken b.v.
Thorbeckegracht 90
8011 VR ZWOLLE / HOLLAND
tel. +31 (0)38-4211345

Emergency phone nr. of the National Poisonings Information Centre, tel. +31 (0)30-2748888. (Only to be reached by a doctor in case of an accidental poisoning.)

2. Composition / information on ingredients

Substances presenting a health or environmental hazard within the meaning of the Dangerous Substances Directive 67/548/EEC or assigned an occupational exposure limit.

Name	Conc. range	Symbol	R-phrases 1)
Xylene	>25-≤50	Xn	10-20/21-38
Ethylbenzene	>2.5-≤10	Xn	20

1) See full text of phrases under section 16.

3. Hazards identification

Flammable.
Harmful by inhalation and in contact with skin.
Irritating to skin.

4. First aid measures

General
In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious place in recovery position and seek medical advice.

Inhalation
Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

Eye contact
Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart and seek medical advice.

Skin contact
Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.

Ingestion
If accidentally swallowed obtain immediate medical attention. Keep at rest. DO NOT induce vomiting.

5. Fire-fighting measures

Suitable extinguishing media
Recommended: alcohol resistent foam, CO_2, powders, water spray

Extinguishing media which must not be used for safety reasons
Waterjet

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:
Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not allow run-off from fire-fighting to enter drains or water courses.

6. Accidental release measures

Personal precautions
Exclude sources of ignition and ventilate the area. Avoid breathing vapours. Refer to protective measures listed in sections 7 and 8. Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13).

Environmental precautions
Do not allow to enter drains or water courses. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations.

Methods for cleaning up
Clean preferably with a detergent; avoid the use of solvents.

7. Handling and storage

Handling
Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits.
In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.
Preparation may charge electrostatically: always use earthing leads when transferring from one container to another.
Operators should wear anti-static footwear and clothing and floors should be of the conducting type.
Keep container tightly closed. Isolate from sources of heat, sparks and open flame. No sparking tools should be used.
Avoid skin and eye contact. Avoid the inhalation of dust, particulates and spray mist arising from the application of this preparation. Avoid inhalation of dust from sanding.
Smoking, eating and drinking should be prohibited in application area.
For personal protection see section 8.
Never use pressure to empty: container is not a pressure vessel.
Always keep in containers of same material as the original one.
Comply with the health and safety at work laws.

Storage
Observe the label precautions. Store between 10° and 30°C in a dry, well ventilated place away from sources of heat and direct sunlight.
Keep away from sources of ignition. Keep away from oxidising agents, from strongly alkaline and strongly acid materials.
No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Do not empty into drains.

8. Exposure controls / personal protection

Exposure controls
Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and solvent vapour below the occupational exposure limits (OEL), suitable respiratory protection must be worn.

Exposure limits
Occupational exposure limit for (ref Dutch MAC-list):

Name	**STEL(1) mg/m^3**	**TWA(2) mg/m^3**
Xylene		210 (H)
Ethylbenzene	430	215 (H)

(1) Short Term Exposure Limits - 15 min.
(2) Time Weighted Average - 8 hrs.

Occupational exposure controls

Respiratory protection:
If workers are exposed to concentrations above the exposure limit they must use appropriate, certified respirators.

Hand protection:
For prolonged or repeated contact: use hand gloves (solvent resistant).
The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

Eye protection:
Use safety eyewear designed to protect against splash of liquids.

Skin protection:
Personnel should wear anti-static clothing made of natural fibre or of high temperature resistant synthetic fibre.

9. Physical and chemical properties

Physical state	:	liquid	
Flash point	:	25°C	Method : DIN 53213
Viscosity	:	60-70 sec. DIN cup 4/20	Method : DIN 53211
Specific gravity	:	1188 kg/m³	Method : DIN 53214
Vapour density	:	> than air	
Lower explosion limit	:	1.0 vol.%	
Solubility in water	:	not miscible	

10. Stability and reactivity

Conditions to avoid
Stable under recommended storage and handling conditions (see section 7). When exposed to high temperatures may produce hazardous decomposition products

Materials to avoid
Keep away from oxidising agents, strongly alkaline and strongly acid materials in order to avoid exothermic reactions.

Hazardous decomposition products
Such as carbon monoxide and dioxide, smoke, oxides of nitrogen, etc.

11. Toxicological information

There are no data available on the preparation itself. The preparation has been assessed following the conventional method of the Dangerous Preparations Directive 99/45/EC and classified for toxicological hazards accordingly. See sections 2 and 15 for details.

Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.
Solvents may cause some of the above effects by absorption through the skin. Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin.
The liquid splashed in the eyes may cause irritation and reversible damage.

12. Ecological information

There are no data available on the preparation itself.

13. Disposal considerations

Do not allow into drains or water sources.
Wastes and emptied containers should be treated like chemical waste.

14. Transport information

Transport within the user's premises
Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in accordance with ADR/RID, IMDG and ICAO/IATA.

Packing group	:	III				
ADR/RID	:	class	:	-	UN-nr.	: -
		transport document name	:	-		
IMDG	:	class	:	3	UN-nr.	: 1263
		proper shipping name	:	paint		
		marine pollutant	:	no		
		EmS	:		MFAG	:
ICAO/IATA	:	class	:		UN-nr.	:
		proper shipping name	:			

15. Regulatory information

The product is classified and labelled for supply in accordance with the Dangerous Preparation Directive (DPD) as follows:

Symbols	:	Xn		
Contains	:	Xylene		
R-phrases	:	10	:	flammable
		20/21	:	harmful by inhalation and in contact with skin
		38	:	irritating to skin
S-phrases	:	16	:	keep away from sources of ignition - no smoking
		23	:	do not breathe spray
		26	:	in case of contact with eyes, rinse immediately with plenty of water and seek medical advice
		36/37	:	wear suitable protection clothing and suitable gloves
		51	:	use only in well-ventilated areas

This safety data sheet is prepared in accordance with EU Directive 91/155/EEC amended by Directive 2001/58/EC.

16. Other information

Full text of R-phrases appearing in section 2:

10	:	flammable
20/21	:	harmful by inhalation and in contact with skin
38	:	irritating to skin

The information of this SDS is based on the present state of our knowledge and on current EU and national laws. The product is not to be used for other purposes than those specified under section 1 without first obtaining written handling instruction. It is always the responsibility of the user to take all necessary steps in order to fulfil the demand laid down in the local rules and legislation. The information in this SDS is meant as a description of the safety requirements of our products: it is not to be considered as a guarantee of the products' properties.

Department : K.A.M. (Quality, Work, Environment)

CEPE GROUP SAFETY DATA SHEET

1. Identification of the substance / preparation and of the company / undertaking

Product name and code: Belticryl hardener / 1810 PU H4P000004

Use of the substance/preparation: paint / paint related product for industrial / professional use (see technical information)

Name, full address and tel. of company:

Schaepman's Lakfabrieken b.v.
Thorbeckegracht 90
8011 VR ZWOLLE / HOLLAND
tel. +31 (0)38-4211345

Emergency phone nr. of the National Poisonings Information Centre, tel. +31 (0)30-2748888. (Only to be reached by a doctor in case of an accidental poisoning.)

2. Composition / information on ingredients

Substances presenting a health or environmental hazard within the meaning of the Dangerous Substances Directive 67/548/EEC or assigned an occupational exposure limit.

Name	Conc. range	Symbol	R-phrases 1)
Aliphatic polyisocyanate	>50-≤75	Xn	42/43
2-Methoxy-1-methyl ethyl acetate	>10-≤25	Xi	10-36
Xylene	>2.5-≤10	Xn	10-20/21-38
Ethylbenzene	>1-≤2.5	Xn	20
Hexamethylene-1,6-diisocyanate	≤1	T	23-36/37/38-42/43

1) See full text of phrases under section 16.

3. Hazards identification

Flammable.
Harmful by inhalation.
May cause sensitization by inhalation and by skin contact.
Contains isocyanates (see point 11 and 15).
Contains sensitizing material; may cause an allergic reaction.

4. First aid measures

General
In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person. If unconscious place in recovery position and seek medical advice.

Inhalation
Remove to fresh air, keep patient warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

Eye contact
Remove contact lenses, irrigate copiously with clean, fresh water, holding the eyelids apart and seek medical advice.

Skin contact
Remove contaminated clothing. Wash skin thoroughly with soap and water or use recognised skin cleanser. Do NOT use solvents or thinners.

Ingestion
If accidentally swallowed obtain immediate medical attention. Keep at rest. DO NOT induce vomiting.

5. Fire-fighting measures

Suitable extinguishing media
Recommended: alcohol resistent foam, CO_2, powders, water spray/mist

Extinguishing media which must not be used for safety reasons

Waterjet

Special exposure hazards arising from the substance or preparation itself, combustion products, resulting gases:
Fire will produce dense black smoke. Exposure to decomposition products may cause a health hazard. Appropriate breathing apparatus may be required. Cool closed containers exposed to fire with water. Do not allow run-off from fire-fighting to enter drains or water courses.

6. Accidental release measures

Personal precautions
Exclude sources of ignition and ventilate the area. Avoid breathing vapours. Refer to protective measures listed in sections 7 and 8. Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth. Place in a suitable container.

Environmental precautions
Do not allow to enter drains or water courses. If the product contaminates lakes, rivers or sewage, inform appropriate authorities in accordance with local regulations.

Methods for cleaning up
The contaminated area should be cleaned up immediately with a suitable decontaminant.One possible (flammable) decontaminant compires (by colume): water (45 parts), ethanol or isopropyl alcohol (50 parts), concentrated (d: 0,880) ammonia solution (5 parts). A non-flammable alternative is sodium carbonate (5 parts), water (95 parts). Add the same decontaminant to the remnants and let stand for several days until no further reaction in non-sealed container. Once this stage is reached, close container and dispose according to local reguations (see section 13).

7. Handling and storage

Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be exposed to any process in which this preparation is used.
Examination of lung function should be carried out on a regular basis on persons spraying this preparation.

Handling
Vapours are heavier than air and may spread along floors. Vapours may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentration higher than the occupational exposure limits.
In addition, the product should only be used in areas from which all naked lights and other sources of ignition have been excluded. Electrical equipment should be protected to the appropriate standard.
Preparation may charge electrostatically: always use earthing leads when transferring from one container to another.
Operators should wear anti-static footwear and clothing and floors should be of the conducting type.
Keep container tightly closed. Precautions should be taken to minimise exposure to atmospheric humidity or water: CO_2 will be formed which in closed containers can result in pressurisation. Care should be taken when re-opening partly used containers. Isolate from sources of heat, sparks and open flame. No sparking tools should be used.
Avoid skin and eye contact. Avoid the inhalation of dust, particulates and spray mist arising from the application of this preparation. Avoid inhalation of dust from sanding.
Smoking, eating and drinking should be prohibited in application area.
For personal protection see section 8.
Never use pressure to empty: container is not a pressure vessel.
Always keep in containers of same material as the original one.
Comply with the health and safety at work laws.

Storage
Observe the label precautions. Store between 10° and 30°C in a dry, well ventilated place away from sources of heat and direct sunlight.
Keep away from sources of ignition. Keep away from oxidising agents, from strongly alkaline and strongly acid materials as well of amines, alcohols and water.
No smoking. Prevent unauthorized access. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. Exposure controls / personal protection

Persons with a history of asthma, allergies, chronic or recurrent respiratory disease should not be exposed to any process in which this preparation is used.
Examination of lung function should be carried out on a regular basis on persons spraying this preparation.

Exposure controls
Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust

ventilation and good general extraction. Air-fed protective respiratory equipment must be worn by spray operator even when good ventilation is provided. In other operations, if local exhaust ventilation and good general extraction are not sufficient to maintain concentrations of particulates and solvent vapour below the OEL, suitable respiratory protection must be worn (see personal protection).

Exposure limits
Occupational exposure limit for (ref Dutch MAC-list):

Name	STEL(1) mg/m^3	TWA(2) mg/m^3
2-Methoxy-1-methyl ethyl acetate		550
Xylene		210 (H)
Ethylbenzene	430	215 (H)
Hexamethylene-1,6-diisocyanate	0.14	0.04

(1) Short Term Exposure Limits - 15 min.
(2) Time Weighted Average - 8 hrs.

Occupational exposure controls

Respiratory protection:
By spraying: air-fed respirator.
By other operations than spraying: in well ventilated ares, air-fed respirators could be replaced by a combination of charcoal filter and particulate filter mask.

Hand protection:
For prolonged or repeated contact: use hand gloves (solvent resistant).
The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed. Barrier creams may help to protect the exposed areas of the skin, they should however not be applied once exposure has occurred.

Eye protection:
Use safety eyewear designed to protect against splash of liquids.

Skin protection:
Personnel should wear anti-static clothing made of natural fibre or of high temperature resistant synthetic fibre.

9. Physical and chemical properties

Physical state	:	liquid	
Flash point	:	38°C	Method : DIN 53213
Viscosity	:	ca. 60 sec. DIN cup 4/20	Method : DIN 53211
Specific gravity	:	1070 kg/m³	Method : DIN 53214
Vapour density	:	> than air	
Lower explosion limit	:	1.0	
Solubility in water	:	not miscible	

10. Stability and reactivity

Conditions to avoid
Stable under recommended storage and handling conditions (see section 7). In a fire, hazardous decomposition products may be produced.

Materials to avoid
Keep away from oxidising agents, strongly alkaline and strongly acidic materials, amines, alcohols and water. Uncontrolled exothermic reactions occur with amines and alcohols. The product reacts slowly with water resulting in evolution of carbon oxide. In closed containers, pressure build up could result in distortion, blowing and in extreme cases bursting of the container.

Hazardous decomposition products
Such as carbon monoxide and dioxide, smoke, oxides of nitrogen, hydrogen cyanide, monomeric isocyanates.

11. Toxicological information

Based on the properties of the isocyanate components and considering toxicological data on similar preparations, this preparation may cause acute irritation and/or sensitisation of the respiratory system leading to an asthmatic condition,

wheeziness and a tightness of the chest. Sensitised persons may subsequently show asthmatic symptoms when epoxed to atmospheric concentrations well below the OEL. Repeated exposure may lead to permanent respiratory disability. Exposure to component solvents vapours concentration in excess of the stated occupational exposure limit may result in adverse health effects such as mucous membrane and respiratory system irritation and adverse effects on kidney, liver and central nervous system. Symptoms and signs include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness.
Repeated or prolonged contact with the preparation may cause removal of natural fat from the skin resulting in non-allergic contact dermatitis and absorption through the skin. Repeated or prolonged skin contact may lead to allergic contact dermatitis.
The liquid splashed in the eyes may cause irritation and reversible damage.

12. Ecological information

There are no data available on the preparation itself.

13. Disposal considerations

Do not allow into drains or water sources. Residues in empty containers should be neutralised with decontaminant (see section 6).
Wastes and emptied containers should be treated like chemical waste.

14. Transport information

Transport within the user's premises
Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Transport in accordance with ADR/RID, IMDG and ICAO/IATA.

Packing group	:	III				
ADR/RID	:	class	:	3	UN-nr. :	1263
		transport document name	:	paint related products		
		if IBC < 450 ltr., ADR	:	-		
IMDG	:	class	:	3	UN-nr. :	1263
		proper shipping name	:	paint related products		
		marine pollutant	:	no		
		EmS	:		MFAG :	
ICAO/IATA	:	class	:		UN-nr. :	
		proper shipping name	:			

15. Regulatory information

The product is classified and labelled for supply in accordance with the Dangerous Preparation Directive (DPD) as follows:

Symbols	:	Xn		
Contains	:	Aliphatic polyisocyanates. See information supplied by the manufacturer. This information is supplied in the present safety data sheet.		
R-phrases	:	10	:	flammable
		20	:	harmful by inhalation
		42/43	:	may cause sensitization by inhalation and skin contact
S-phrases	:	16	:	keep away from sources of ignition - no smoking
		23	:	do not breathe spray
		26	:	in case of contact with eyes, rinse immediately with plenty of water and seek medical advice
		36/37	:	wear suitable protection clothing and suitable gloves
		51	:	use only in well-ventilated areas
P-phrases	:	contains isocyanates; see information supplied by the manufacturer contains sensitizing material; may cause an allergic reaction		

This safety data sheet is prepared in accordance with EU Directive 91/155/EEC amended by Directive 2001/58/EC.

16. Other information

Full text of R-phrases appearing in section 2:

10	:	flammable
20/21	:	harmful by inhalation and in contact with skin
23	:	toxic by inhalation
36/37/38	:	irritating to eyes, respiratory system and skin
42/43	:	may cause sensitization by inhalation and skin contact

The information of this SDS is based on the present state of our knowledge and on current EU and national laws. The product is not to be used for other purposes than those specified under section 1 without first obtaining written handling instruction. It is always the responsibility of the user to take all necessary steps in order to fulfil the demand laid down in the local rules and legislation. The information in this SDS is meant as a description of the safety requirements of our products: it is not to be considered as a guarantee of the products' properties.

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