HARLEQUIN PAINTS PVT LTD
ISO Certified Company
Manufacturer and Applicator Of Speciality Coatings

20 & 21 Universal Industrial Estate, Sajgaon,
Khopoli, Tal: Khalapur Dist : Raigad, Maharashtra - 410203
Tel: 02192 - 265828 / 263244; Mob: +91 9867490914
Web:www.harlequinpaints.com
CIN NO. U24222MH2010PTC207099

GUIDE TO PRODUCT DATA SHEET S

Generic Description	This is the summary of the product - emphasis on binders, pigments and main properties.
Suggested Use	Suitability of product use, i.e. coating systems, kind of surfaces etc. Of course product may be used other than suggested use.
PRODUCT SPECIFICATION	
Colour	Refer IS shade card or any other shade cards such as RAL, Pentone etc.
Finish	The appearance of the dried / cured paint film and the gloss.
Mixing Ratio	This is particularly for two component system where base and hardener/curing agent/catalyst are in set mixing ratios. So precaution is to be taken while using these products. Generally catalyst added to base under stirring before 15 mins. of use (exceptions short pot life product). Care should be taken to strictly follow the given mixing ratios, as all the properties depend on set mixing ratios. Mix the quantity which can be used within the pot life period.
Pot life	This is the time interval for two component coatings after mixing during which coating can be used. Note: The pot life depends on the temperature at the time of mixing and thinning does not extended the pot life.
Flash point	It is the lowest temperature at which a liquid ignites in flash when a source of flame is introduced, but does not catch fire. Flash points for two component coatings are given for the mixed coating. Flash point is important for safety regulation to take precautionary measures of fire during utilization of coatings.
Solids by Volume	This is explains solid in volume present in 100 ltrs of paints and expressed as percentage. Theoretical volume solids % can be calculated of any coatings after considering the specific gravity of the coating and solvent used and solid % of the each coating.
Recommended Dry Film Thickness	Dry Film Thickness is very important in terms of cost and quality of coating finish. It is important to apply the coating at recommended dry film thickness [DFT min.] to achieve maximum benefit out of coating. Dry film thickness is generally measured with gauges.

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Theoretical Spreading Rate	This is measured based on Dry Film Thickness applied in microns. Theoretical Spreading Rate is calculated as follows $\frac{\text{Volume solids X 10}}{\text{Dry Film Thickness [Microns}\}}$ m2/ltr Theoretical spreading rate mentioned in product data sheet are calculated at indicated Dry Film thickness. If different dry film thickness applied then, accordingly theoretical spreading rate will change. The absorbing type of surface such as wood, concrete, particle boards etc. don't give theoretical spreading rate properly due to absorption of coatings by the surface. The Practical spreading rate depends on : 1) Surface conditions such as roughness, voids etc. 2) Application losses - such as wind velocity during application, left over paint in containers etc., painter's skill and shape of article or object to be painted and also on actual working conditions.
Drying Time	Surface Dry : A slight pressure with finger does not leave mark or feel sticky. Hard Dry : Coating surface sufficiently hardened to be handling with care without any damage. Drying Process: Dry to touch – for solvent or water containing paints mainly depends upon ventilation and also on temperature and film thickness of each coat. For physical drying paints, the drying time is influenced by the number of coats and the total film thickness of the system. Fully cured: This is applicable to two component products and data given in product data sheets are at 30ºC. The curing is retarded at low temperatures and accelerated at higher temperatures. Generally following rule of thumb can be followed. "Rise of temperature of 10ºC curing time is halved & decrease of 10ºC temperature doubles the curing time."
Method of Application	Specifies the possible method of application of coatings. Generally first coat of Anticorrosive primer is applied by brush or airless spray to get maximum possible wetting and penetration into the substrate. Application by brush/ roller usually requires application of more coats to achieve specified dry film thickness than application by airless spray.
Thinner Volume%	Harlequin High Performance Coatings are supplied in ready for application condition by brush or airless spray, after mixing of Base and Curing Agent and stirring. Under cold weather if coating found to be too thick or for any other special purpose, the thinner indicated may be added to give required consistency. Thinner amount mainly depends upon prevailing temperature, method of

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	application etc. If more thinner is required please consult, HARLEQUIN PAINTS PVT LTD. Addition of thinner increases the quantity of paint but at the cost of reduced volume solids. So proportionally higher wet film thickness of paint is to be applied to get recommended dry film thickness. Revised solids volume after thinning can be calculated by $\text{Solids by Volume\% [after thinning]} = \frac{\text{Solids By Volume\% X 100}}{\text{\% thinner added} + 100}$ Habitual thinning should be avoided
Nozzle Orifice	Suitable Nozzle orifice range is indicated
Pressure [Atm]	Generally suitable pressure is indicated for the application of paint. All these data are indicated as a guideline and subject to adjustment to suit work and environment.
Cleaning of Tools	High Performance thinners are to be used preferably [as mentioned in Product data Sheet] for cleaning of the tools.
Surface Preparation	The recommended degree of cleaning of the substrate before painting. The degree of cleaning refer to ISO- 8501-1/1988. For some products a minimum surface profile is mandatory. For previously painted surface method and degree of cleaning is indicated.
Application conditions	Generally paint should not be applied under adverse weather conditions. Though weather seems to be good for painting there may be condensation if the temperature of substrate is at or below the dew point (e.g. dew formation early morning). So ideally substrate should be at least few degrees above the dew point during painting and drying . It may be necessary for confined spaces to remove solvent vapors or water vapors by supplying adequate amount of fresh air constantly during application and drying to assist evaporation of solvents. Reason for this is Safety and Health.
Preceding Coats	Some preceding coats are recommended considering ideal coating system and compatibly of product. There are no limitation and so other compatible products may be specified. Shop primers are regarded as integral part of surface preparation.
Subsequent Coat	Compatible coating are recommended as subsequent coats. But there is no limitation and so other products can be specified depending on the end use.
Remark	Relevant data or information is given under this leading e.g. Limitation if coating application notes etc. Also application data is provided.
Safety Precautions	General Safety precautions are given for handling and using the product. In addition natural & local Safety regulations should always to be followed.
Note	Under this heading some precautionary measures are included handling

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	or working with the products
Issued On	Month and Year of issue of Technical data sheet.

ADDITIONAL INFORMATION ON EXPRESSIONS USED IN THE PRODUCT DATA SHEETS

Blast Primer	This paint used for short term protection of blast cleaned steel surface to ease the working procedure So these are often regarded as integral part of surface preparation.
Holding primer	It is used to extend the protective time of shop primer till proper paint system is applied.
Mist coat	Also known as flash coat- one or two spray passes are applied very thin to expel the air from the pores from a porous substrate. As soon as this thin coat has flashed off usual coat should be applied as specified.
Tie coat	It bridges between conventional and High Performance Coating or between Epoxy and Physically drying paint. i.e. improves the adhesion between coatings of different generic types.
Sealer Coat	This is used to seal porous surfaces such as Zinc Silicate and others. i.e. balance between binder & active pigments maintained in subsequent coats.

Surface cleaning	Fresh water hosing/cleaning { FWH/FWC}	Up to 60 bar/860 psi
	High Pressure fresh water hosing {HPFWH}	60-200 bar/860-2900 psi
	High pressure water cleaning {HPFWC}	200-350 bar/2900-5000 psi
	High pressure fresh water blasting[HPFWB}	350-1000bar/'5000-14500 psi
	Hydro Blast {HB}/Fresh water jetting {FWJ}	Above 100 bar/14500 psi

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SURFACE PREPARATION STANDARDS	Swedish standards now superseded by ISQ:8501188
DESIGNATION	DESCRIPTION
Sa3	Blast-cleaning to visually clean steel.. The surface shall be free from visible oil, grease and dirt and shall be free from mill scale, rust, paint coatings and foreign matter. It shall have a uniform metallic colour. [viewed without magnification.]
Sa21/2	Very thorough blast cleaning. When viewed without magnification, the surface shall be free from visible oil, grease and dirt and from scale, rust, paint coating and foreign matter. Any remaining traces o f contamination shall show only as slight stains in the form of spots or strips.
Sa2	Thorough blast-cleaning: When viewed without magnification, the surface shall be free from visible oil, grease and dirt and from most of the mill scale, rust, paint coating and foreign matter, Any residual contamination shall be firmly adhering. When viewed without magnification, the surface shall be free from visible oil, grease and dirt, and from poorly adhering mill scale, rust, paint coatings and foreign matter.. Notes : 1. The term “Foreign matter” may include water-soluble Salts and welding residues. These contaminants cannot be completely removed from the surface by dry blast-cleaning, wet blast-cleaning, should be used. 2. Mill scale, rust or paint coating is considered to be poorly adhering, if it can be removed by lifting with a blunt putty knife.
St3	Very thorough hand and power tool cleaning. As for St2, but the surface shall be treated much more thoroughly to give a metallic sheet arising from the metallic substrate.
St2	Thorough hand and power tool cleaning. When viewed without magnification, the surfaces shall be free from visible oil, grease and dirt and from poorly adhering mill scale, rust, paint coatings and foreign matter.

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COMPARISSION OF SURFACE PREPARARTIO N METHODS – INTERNATIONAL STANDARDS

SR.NO.	SYSTEM	SSPC (STEEL STRUCTURE PAINTING COUNCIL)	NACE (NATIONAL ASSOCIATION OF CORROSION ENNG.)	ISO (SEWDISH STANDARD)	BS 423267 (BRITISH STANDARD)
1	Solvent Cleaning	SSPC-SP1	-	-	-
2	Hand Tool Cleaning	SSPC-SP2	-	St-2	-
3	Power Tool Cleaning	SSPC-SP3	-	-	-
4	Flame Cleaning	SSPC-SP4		-	-
5	White Metal Blasting	SSPC-SP5	NACE1	Sa-3	1st Quality
6	Commercial Blasting	SSPC-SP6	NACE3	Sa-2	3rd Quality
7	Brush Off Blasting	SSPC-SP7	NACE-4	Sa-1	-
8	Pickling	SSPC-SP8	-	-	-
9	Weathering and Blasting	SSPC-SP9	-	-	-
10	Near White Metal Blasting	SSPC-SP10	NACE2	Sa21/2	2nd Quality