

Technical Data Sheet JBlast, Stonegrit, SC

Trade Names: JBlast, Stonegrit,
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SECTION 1 Chemical Analysis

JBlast, Stonegrit and SC are produced from mineral slags which are the by-product for furnace operations. Selected material is processed, graded then marketed as an abrasive grit mainly for use in conjunction with open nozzle blast cleaning equipment. The metals and oxides in JBlast form complex silicates, aluminates and oxides which as such do not constitute a hazard to health and safety.

Chemical Analysis	Iron Silicate	Calcium Silicate	Calcium Silicate
	Standard, Supa, Supafine, Special	Stonegrit Coarse	S.C.
	% Range	% Range	% Range
Iron Oxide (FeO)	25 - 55	1 - 5	0 - 10
Silica (SiO ₂)	20 - 32	45 - 55	35 - 45
Aluminium Oxide (Al ₂ O ₃)	8 - 12	10 - 20	10 - 15
Calcium Oxide (CaO)	4 - 15	25 - 40	35 - 45
Zinc Oxide (ZnO)	0 - 12	0 - 0.15	0 - 0.15
Copper Oxide (CuO)	0 - 1.5	0 - 0.15	0 - 0.15
Tin Oxide (SnO)	0 - 0.8	0 - 0.15	0 - 0.15
Nickel Oxide (NiO)	0 - 0.6	0 - 0.15	0 - 0.15
Lead Oxide (PbO)	0 - 0.7	0 - 0.15	0 - 0.15
Magnesium Oxide (MgO)	0 - 3.0	2 - 4	6 - 10
Manganese Oxide (MnO)	0 - 1.0	0 - 1	0 - 10
Free Silica	< 0.1	< 0.1	< 0.1
Properties			
Typical Conductivity (ms/m)	12	15	10
Chloride Content (ppm)	< 7	< 7	< 7
Hardness (mohs)	7 - 8	6 - 7	5 - 6
Bulk Density (Kg/dm ³)	1.75	1.45	1.35
Specific Gravity (Kg/dm ³)	3.7	3.1	2.8

SECTION 2 Current Legislation

The use of materials likely to cause silicosis, such as natural silica sand and ground quartz type rocks, is restricted or completely banned in most industrial countries. The risk of contracting silicosis by inhaling the respirable dust produced from these materials in blast cleaning is high and silica sand is prohibited in:

U.K. -The Control of Substances Hazardous to Health Regulations 1999. Statutory Instrument Number 437.

Belgium -Royal Decree, 22.10.64

Netherlands - Zandstraal besluit, Stb 434

France - Decree 558, 6.6.69

Germany - Order on Hazardous Working Materials (T.RgS503).

SECTION 3 Physical Properties

–Non-flammable, non-hygroscopic angular grit. For more detailed information, see safety data sheets SDS31 for JBlast Iron Silicate, SDS 32 for JBlast Aluminium Silicate, SDS 33 for Stonegrit, SDS 34 for SC.

SECTION 4 Special Precautions

Special Precautions -In use, protection is required to meet threshold limit values for general dusts of 10 mg/m³ (for total inhalable dust) and 5 mg/m³ (respirable dust). Please also note the OELs for amorphous silicon dioxide dust of 6mg (inhalable) and 2.4 mg/m³ (respirable). The user must establish any hazards present in the surface coatings being removed, which may reduce the occupational exposure limit (O.E.L.). The Petroleum section of the National Safety Council carried out research and concluded that the sparks generated when grit blasting are not capable of igniting inflammable atmospheres providing special precautions are taken. These results were later confirmed by a leading U.K. Oil Company. Refer to our Technical Dept. for copies of reports.

SECTION 5 Disposal

The abrasive must be disposed of in accordance with national legislation (See Section 16) and local regulations. The material as supplied is classed as a non-hazardous inert solid waste. Spent abrasive used as a blasting medium must be disposed of under classification 12 01 16 (waste blasting material containing dangerous substances) or 12 01 17 (waste blasting material other than those mentioned in 12 01 16). The waste producer must determine if hazardous substances in the coating being removed are likely to cause the waste to be hazardous.

SECTION 6 Handling and Storage

Load per pallet should not exceed 2 tonnes and the pallets should not be stacked more than two high. Material should be kept dry.

SECTION 7: Grading and typical profiles

Grade	Grain Size mm	Avg max profile on mild steel # Rmax in microns	Cleanliness standard attainable on mild steel*	Typical applications
STANDARD	2.5 - 1.4	100 - 150 Coarse #	Sa - 2 ½ (near white metal)	Penetration and removal of high build coatings on steel
SUPA	1.5 - 0.2	75 - 100 Medium #	Sa - 3 (white metal)	General steel fabrications, steel bridges, ship storage tanks and plant refurbishment. Provides ideal profile for most coatings
SUPAFINE	0.7 - 0.2	25 - 50 Fine #	Sa - 3	Removal of low film thickness coatings / light corrosion where a low surface profile is specified.
SPECIAL	0.2 - 0.15	N/A	Sa - 3	Surface preparation resulting in a minimal surface etch, e.g. cleaning turbine blades
STONEGRIT COARSE	2.5 - 1.4	100 - 150	Sa - 2 ½	As Standard grade on steel Removal of heavy coatings on stone facings. Aggregate exposure in concrete
STONEGRIT FINE	1.5 - 0.2	50 - 75	Sa - 3	As Supa grade on steel General cleaning of stone, preparation of stainless steel prior to coating.
STONEGRIT EXTRAFINE	0.7 - 0.2	25 - 50	Sa - 3	As Supafine grade on steel Cleaning of soft stonework and brick, provides uniform finish to uncoated aluminium and stainless steel. Removal of gel coat and paint surfaces from G.R.P. boats
S.C.	0.6 - 0.1	N/A	N/A	Cleaning of ornate buildings, preserving detailed features. Also suitable for cleaning wood, minimising grain damage.

Equivalent to International Standard ISO 8503-1 (1988) and BS 7079 Part C1 (1989) Surface Roughness category as determined by the comparator gauge

* Indications of average maximum profile, R max, and cleanliness are based on test results obtained under controlled conditions on new mild steel plate with intact mill scale. Because of the large number of variables encountered in site conditions the user must satisfy himself as to the suitability of the abrasive for his particular purpose.

Standards - All our abrasives conform to the relevant part (i.e. non-metallic type) of International Standards Organisation specifications ISO 11126 and British Standard specification BS 7079 part F excepting that our particle size ranges for some grades differ from the ranges quoted in the standard.

Further Technical Advice -Operator Training - Technical Information - Site Assistance - Site Demonstrations - Equipment selection – Contact Hodge Clemco Ltd on 0114 254 8811 or visit our web site www.hodgeclemco.co.uk