



HEALTH AND SAFETY DATA SHEET

1. **PRODUCT:** JOHNSTONE'S PERFORMANCE Solar Reflective Paint **PAGE: 1 of 5**
REVISION: 4 **DATE: 1.11.07**
USE: A solvent-borne bituminous aluminium coating.
Application by brush or roller.

2. **HAZARDS IDENTIFICATION**
FLAMMABLE. HARMFUL. DANGEROUS FOR THE ENVIRONMENT. Also refer to section 11.

3. **COMPOSITION/INFORMATION ON INGREDIENTS**
Substances presenting a health or environmental hazard within the meaning of the CHIP Regulations or which are assigned Workplace Exposure Limits: -

Name	EC No	CAS No	Conc.Range	Symbol*	R-Phrases*
White Spirit	265-185-4	64742-82-1	25-50%	Xn.N	R10,51,53,65,66
Bitumen	265-196-4	64742-93-4	25-50%	-	-

* for full text see 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 has stopped, administer artificial respiration. Give nothing by mouth. If unconscious, place in the recovery position and seek medical advice.
Skin Contact: Remove contaminated clothing. Wash skin thoroughly with soap and water or a recognised skin cleaner. DO NOT USE SOLVENT OR THINNERS.
Eye Contact: Remove contact lenses. Irrigate copiously with clean, fresh water, holding the eyelids apart and seek medical advice.
Ingestion: If accidentally swallowed obtain immediate medical attention. Keep at rest. DO NOT induce vomiting.

5. **FIRE FIGHTING MEASURES**
Extinguishing Media:
Recommended: alcohol resistant foam, CO₂, powder, water spray/mist
Not to be used: water jet
Recommendations: Fire will produce dense black smoke containing hazardous products of combustion (see section 10). Exposure to decomposition products may be a hazard to health. Appropriate self contained breathing apparatus may be required. Cool closed containers exposed to fire with water spray. Do not allow run off from fire fighting to enter drains or watercourses.

6. **ACCIDENTAL RELEASE MEASURES**
Exclude sources of ignition and ventilate the area. Exclude non-essential personnel. Avoid breathing vapours. Refer to protective measures listed in sections 7 and 8. Contain and collect spillages with non-combustible absorbent materials e.g. sand, earth, vermiculite, diatomaceous earth and place in a suitable container for disposal in accordance with the waste regulations (see section 13). Do not allow to enter drains or water courses. Clean preferably with a detergent; avoid use of solvents. If the product enters drains or sewers, immediately contact the local water company; in case of contamination of streams, rivers or lakes, the relevant environment agency.

7. HANDLING AND STORAGE

HANDLING: Vapours are heavier than air and may spread along floors. They may form explosive mixtures with air. Prevent the creation of flammable or explosive concentrations of vapour in air and avoid vapour concentrations higher than the Exposure Limit Values. 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. Keep the container tightly closed. Exclude sources of heat, sparks and open flame. Non-sparking tools should be used. Avoid skin and eye contact. Avoid inhalation of vapour. Smoking, eating and drinking should be prohibited in storage and use areas. For Occupational Exposure Controls measures see section 8. Never use pressure to empty; the container is not a pressure vessel. Always keep in containers made of the same material as the supply container. The accumulation of contaminated rags may result in spontaneous combustion. Good housekeeping standards and regular safe removal of waste materials will minimise the risks of fire hazards. Prevent the generation and inhalation of harmful dust and fumes when preparing surfaces previously coated with lead containing paints, for further information see section 16 - 'Lead in previously painted surfaces'.

The Manual Handling Operations Regulations may apply to the handling of containers/packages of this product. To assist employers the following method of calculating the weight of any pack size is given. Take the pack size volume in litres and multiply this figure by the specific gravity value given in section 9. This will give the net weight of the product in kilograms. Allowance will then have to be made for the immediate packaging to give an approximate gross weight.

STORAGE:

Store separately from oxidising agents, strongly alkaline and strongly acidic materials.

The storage and use of this product is subject to the Dangerous Substances and Explosive Atmospheres Regulations (DSEAR).

The requirements are given in the HSE Approved Code of Practice and Guidance, Storage of Dangerous Substances: DSEAR.

Flash point above 32°C: Although the storage of these products are not subject to specific statutory requirements, the principles contained in HSE guidance note 'Storage of Flammable Liquids in Containers' should be observed. Observe the label precautions. Store between 5°C and 25°C in a dry, well ventilated place away from sources of heat, ignition and direct sunlight. No smoking. Prevent unauthorised access. Containers which are opened should be properly resealed and kept upright to prevent leakage. The principles contained in the HSE guidance note Chemical Warehousing: 'Storage of Packaged Dangerous Substances' should be observed when storing this products.

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/or solvent vapours below the relevant Exposure Limit Values, suitable respiratory protection must be worn (see 'Occupational Exposure Controls' below).

EXPOSURE LIMIT VALUES:

Substance	Exposure Limit Values		15 min STEL (2)		Notations
	8 hr LTEL (1)		ppm	mg m ⁻³	
White Spirit	100(SUP)	600(SUP)	-	-	-

(1) Long-Term Exposure Limit - 8 hour Time Weighted Average

(2) Short-Term Exposure Limit - 15 minute reference period

(W) Workplace Exposure Limit (WEL)

(SUP) Recommended by suppliers

(A) Allocated limits by analogy with similar materials

WEL's are taken from current version of EH40, except those marked (SUP) which are assigned by supplier of the substance

OCCUPATIONAL EXPOSURE CONTROLS: All Personal Protective Equipment, including Respiratory Protective Equipment, used to control exposure to hazardous substances must be selected and maintained to meet the requirements of the COSHH Regulations.

RESPIRATORY PROTECTION: If exposure of the applicator or the people nearby cannot be controlled to below the Exposure Limit Values and engineering controls and methods cannot reasonably be improved, suitable respiratory protective equipment should be used. Dry sanding flame cutting and/or welding of the dry paint film will give rise to dust and/or hazardous fumes.

HAND PROTECTION: When skin exposure may occur, advice should be sought from glove suppliers on appropriate types and usage times for this product. The instructions and information provided by the glove supplier on use, storage, maintenance and replacement must be followed. Barrier creams may help to protect exposed areas of skin but are not substitutes for full physical protection. They should not be applied once exposure has occurred.

EYE PROTECTION: Eye protection designed to protect against liquid splashes should be worn.

SKIN PROTECTION: Cotton or cotton/synthetic overalls or coveralls are normally suitable. Grossly contaminated clothing should be removed and the skin washed with soap and water or a recognised skin cleaner. Regular skin inspection of users of this product is recommended. ALWAYS WASH YOUR HANDS BEFORE EATING, SMOKING OR USING THE TOILET.

9. PHYSICAL AND CHEMICAL PROPERTIES

physical state	pigmented viscous liquid	
flash point	40°C	BS2000. Part 170
viscosity	60-70 secs	6 mm ISO 2431-1984 (23°C)
specific gravity	0.90-0.93 @ 20°C	
vapour density	Denser than air	
lower explosive limit	0.6 %v/v @ 20°C	
solubility in water	immiscible	
boiling point	145°C (initial)	
VOC Directive 2004/42/CE	Class A.i. Max VOC 500g/l	

10. STABILITY AND REACTIVITY

Stable under the recommended storage and handling conditions (see section 7). In a fire, hazardous decomposition products such as smoke, carbon monoxide, carbon dioxide and oxides of nitrogen may be produced. Keep away from oxidising agents and strongly alkaline and strongly acidic materials to prevent the possibility of an exothermic reaction.

11. TOXICOLOGICAL INFORMATION

There is no data available on the product itself. The product has been assessed following the conventional method in CHIP and is classified for toxicological hazards accordingly. This takes into account, where known, delayed and immediate effects and chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact. See sections 2 and 15 for details of the resulting hazard classification.

Exposure to organic solvent vapours in excess of the stated Exposure Limit may result in adverse health effects such as irritation of the mucous membrane and respiratory system and adverse effects on the renal and central nervous system. Symptoms include headache, dizziness, fatigue, muscular weakness, drowsiness and in extreme cases, loss of consciousness. Repeated or prolonged skin contact with pitches and tars may cause skin warts. One type of wart is a cancer which if identified early can be treated and cured. Employees exposed to such risk should be issued with HSE cards MS(B)4 'Skin cancer caused by Pitch and Tar'. High standards of skin care and personal hygiene should be observed. Splashes in the eye may cause irritation and reversible local damage. Ingestion may result in the following effects: sore throat, abdominal pain, drowsiness, nausea, vomiting and diarrhoea. Other effects may be as described for exposure to vapours. The product has been assessed following the conventional method in CHIP and is classified for toxicological hazards accordingly. This takes into account, where known, delayed and immediate effects and chronic effects of components from short-term and long-term exposure by oral, inhalation and dermal routes of exposure and eye contact. See sections 3 and 15 for details of the resulting hazard classification.

12. ECOLOGICAL INFORMATION

There is no data available on the product itself. The product should not be allowed to enter drains or water courses or be deposited where it can affect ground or surface waters. The requirements of regulations made under the Pollution Prevention and Control Act may apply to the use of this product. The product has been assessed following the conventional method in CHIP and is classified for ecological hazards accordingly, see sections 2 and 15 for details. See also sections 5, 6 and 13.

Substance classified As DfE(1)	Mobility(2)	Persistence and Biodegradability(2)	Other adverse Effects
White Spirit	Immiscible in water – will spread on surface possibly affecting oxygen transfer. Likely to evaporate readily	OECD - Readily biodegradable	LC50 1-10 mg/l

(1) All substances listed in Section 3 and classified as dangerous for the environment (DfE).

(2) Information taken from suppliers' safety data sheet and relevant to impacts in the accidental release in storage, handling, use and disposal.

13. DISPOSAL CONSIDERATIONS

Do not allow into drains or water courses or dispose of where ground or surface waters may be affected. The classification of this product, when disposed of as waste is 08 01 11. If this product is mixed with other wastes, this code may no longer apply. If mixed with other wastes, the appropriate code should be assigned. For further information contact your local waste authority.

14. TRANSPORT INFORMATION

Transport within users 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.

Onwards transport subsequent to purchase: - Transport to be in accordance with ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air.

Proper shipping name:	Paint	Technical name 1:	-
UN number:	1263	Technical name 2:	-
Hazard class:	3	Marine Pollutant:	Yes
Packing Group:	III	Emergency Schedule Number:	F-E, S-E
Sub-hazard class:	-	Flashpoint:	40°C

15. REGULATORY INFORMATION

The product is classified and labelled in accordance with the CHIP Regulations as follows:-

Classification: FLAMMABLE.HARMFUL.DANGEROUS FOR THE ENVIRONMENT

Symbol: Xn.N

Names: White Spirit and Bitumen

R Phrases:

R10 Flammable
R68/21 Harmful: possible risk of irreversible effects in contact with skin
R51 Toxic to aquatic organisms
R53 May cause long term adverse effects in the aquatic environment

S Phrases:

S2 Keep out of the reach of children
S16 Keep away from sources of ignition - No smoking
S24/25 Avoid contact with skin and eyes
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S28 After contact with skin, wash immediately with plenty of soap and water or a recognised skin cleaner – DO NOT USE SOLVENT OR THINNERS
S36/37 Wear suitable protective clothing and gloves
S38 When applying to large interior surfaces or in confined spaces, wear a suitable cartridge respirator or air fed respiratory protective equipment
S46 If swallowed seek medical advice immediately and show this container or label
S51 Ensure maximum ventilation during application and drying
S61 Avoid release to the environment

The information contained in this safety data sheet does not constitute the user's own assessment of workplace risks as required by other health and safety legislation. The provisions of the Health and Safety at Work etc. Act and the Control of Substances Hazardous to Health Regulations apply to the use of this product at work.

16. OTHER INFORMATION

Symbols and text of the R phrases in section 3: -

RISK PHRASES

R10 Flammable
R51 Toxic to aquatic organisms
R53 May cause long term adverse effects in the aquatic environment
R65 Harmful: may cause lung damage if swallowed
R66 Repeated exposure may cause skin dryness or cracking

WARNING SYMBOLS

Xn Harmful
N Dangerous for the Environment

LEAD IN PREVIOUSLY PAINTED SURFACES

When surfaces are to be prepared for painting, account must be taken of the age of the property and the possibility that lead pigmented paint might be present. There is a possibility that ingestion or inhalation of scrapings or dust arising from the preparation work could cause adverse health effects.

As a working rule you should assume that this will be the case if the age of the property is pre 1960. Where possible wet flatting or chemical stripping methods should be used with surfaces of this type to avoid the creation of dust. When dry flatting cannot be avoided, and effective local exhaust ventilation is not available, it is recommended that a dust respirator is worn, that is approved for use with lead dusts, and its type selected on the basis of the occupational hygiene (COSHH) assessment, taking into account the occupational hygiene exposure standard for lead in air. Furthermore, steps should be taken to ensure containment of the dusts created, and that all practicable measures are taken to clean up thoroughly all deposits of dusts in and around the affected area. Extra precautions will need to be taken when burning off old lead based paints as fumes containing lead will be produced. It is recommended that a respirator, approved for use with particulate fumes of lead is selected on the basis of the occupational hygiene (COSHH) assessment.

The Code of Practice for the Control of Lead at Works (reference ISBN 07176 1506 5 1998) should be consulted for advice on protective clothing and personal hygiene precautions.

Care should be taken to exclude visitors, members of the household and especially children from the affected area, during the actual work and the subsequent clean up operations. All scrapings, dust, etc. should be disposed of by the professional painting contractor as Hazardous Waste, with the relevant documentation under the Hazardous Waste Regulations, The Environmental Protection (Duty of Care) Regulations, The Controlled Waste (Registration of Carriers and Seizure of Vehicles) Regulations and the Waste Management Licensing Regulations.

The information contained in the Health and Safety Data Sheet is provided in accordance with the requirements of the CHIP Regulations. The product should not be used for purposes other than those shown in section 1 without first referring to the supplier and obtaining written handling instructions. As the specific conditions of use of the product are outside the suppliers control, the user is responsible for ensuring that the requirements of relevant legislation are complied with. This information contained in the safety data sheet is based on present knowledge and current national legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications.

Further information and advice can be found in: -

The Control of Substances Hazardous to Health Regulations 2002 (SI2002:2677) and amendments
COSHH Essentials: easy steps to control chemicals (HSG193). Details of Control Guidance Sheets, which may be relevant to the particular conditions of use, can also be found in this publication.
Dangerous Substances and Explosive Atmospheres Regulations 2002 (SI 1992:2793)
ACoP - Dangerous Substances and Explosive Atmospheres Regulations 2002 (L138)
The Manual Handling Regulations 1992 (SI 1992:2793)
Chemical Warehousing: The Storage of Packaged Dangerous Substances (HSG51)
The Environmental Protection (Duty of Care) Regulations 1992 (SI 1992:2839)
A Guide to Working with Solvents (INDG 272)
HSE website www.hse.gov.uk