

CRAY VALLEY

SAFETY DATA SHEET

VERSION OF: 02 July 2003

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1. CHEMICAL PRODUCT AND COMPANY INFORMATION

PRODUCT NAME ENCORE 2050

SDS NUMBER STU0171

INTENDED USE AREA
PRODUCTION OF FIBRE REINFORCED COMPOSITES

SUPPLIER OR COMPANY NAME
CRAY VALLEY LTD.

FULL ADDRESS
LAPORTE ROAD,
STALLINGBOROUGH,
NORTH EAST LINCOLNSHIRE,
DN41 8DR. UNITED KINGDOM

TELEPHONE
++ 44 (0) 1469 551035

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++ 44 (0) 1469 571007

EMERGENCY TELEPHONE NUMBER
++ 44 (0) 1469 572464

2. COMPOSITION / INFORMATION ON INGREDIENTS

PREPARATION
CHEMICAL NAME OR GENERIC NAME
Unsaturated Polyester Resin in Styrene

COMPONENTS OR IMPURITIES CONTRIBUTING TO HAZARDS

Styrene

Symbols	Risk Phrases	EINECS No	CAS No
Xn	R10, R20, R36/R38	202-851-5	100-42-5
	Typical Concentration Range	40 – 45 %	

Cobalt Octoate

Symbols	Risk Phrases	EINECS No	CAS No
Xi	R38, R43	205-250-6	136-52-7
	Typical Concentration Range	0.05-0.2%	

See section 16 for explanation to R-phrases

STRUCTURAL RESINS DEPARTMENT, LAPORTE ROAD, STALLINGBOROUGH, NORTH EAST LINCOLNSHIRE, DN37 8DR, ENGLAND.
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3. HAZARDS IDENTIFICATION

SPECIFIC HAZARDS

Harmful by inhalation. Irritating to eyes and skin. May produce an allergic reaction

PHYSICAL AND CHEMICAL HAZARDS

Flammable

The mixture of product vapour and air could be explosive

Strongly exothermic polymerisation may be initiated by heat, peroxides or other free radical generators.

4. FIRST AID MEASURES

INHALATION

Remove patient from affected area and make rest.

Give oxygen in case of breathing difficulty.

Call emergency medical care.

SKIN CONTACT

Wash thoroughly with soap and water. Remove all contaminated clothing.

EYE CONTACT

Wash immediately (15 mn) with water, opening eyelids.

Call emergency medical care.

INGESTION

DO NOT induce vomiting, seek immediate medical advice.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA SUITABLE

Carbon dioxide / Foam / Powder / sand / Pulverised water

NOT SUITABLE

Water jet.

PROTECTION OF FIRE FIGHTERS

Wear individual breathing apparatus

SPECIFIC HAZARDS

Formation of toxic products on combustion including carbon monoxide

SPECIFIC METHODS

Cool the container with sprayed water to avoid polymerisation

Eliminate all sources of combustion

OTHERS

Treat as hydrocarbon fire

Limit spreading of extinguishing fluids

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS

Wear protective equipment: Gloves-Goggles-Boots

Avoid inhaling vapours: Wear self-contained breathing apparatus

ENVIRONMENTAL PRECAUTIONS

Do not discharge into sewers / Do not allow entry to the environment

If the product contaminates water-courses, inform the Environment Agency

METHODS OF CLEANING UP

RECOVERY

Spread sand

Collect the product in a container pending future destruction

DISPOSAL

Burn in an approved installation

INCOMPATIBLE MATERIALS

Wood, sawdust

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7. HANDLING AND STORAGE

HANDLING

Do not store beyond shelf life

PREVENTION OF WORKER EXPOSURE

Efficient ventilation is required in the working area. Collect emissions at source

NO SMOKING

PREVENTION OF FIRE AND EXPLOSION

Take precautionary measures against static discharges

Close containers after use.

STORAGE

Stable under normal storage conditions.

STORAGE CONDITION SUITABLE

Keep container tightly closed in a cool, well ventilated location

Keep at temperature not exceeding 30°C.

STORAGE CONDITION TO AVOID

Keep container out of sunlight.

Keep away from heat.

Keep away from sources of ignition - NO SMOKING.

INCOMPATIBLE MATERIALS

Keep container away from oxidising materials.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

OCCUPATIONAL EXPOSURE LIMITS (MEL - TWA MEL - STEL)

Styrene (UK HSE EH 40 - 2002)

8 hours (MEL – TWA)

100 ppm 430 mg³/m

Short Period - 15 mn (MEL – TWA)

250 ppm 1080 mg³/m

PERSONAL PROTECTIVE EQUIPMENT (Ref. CEN Dir. 89/686)

RESPIRATORY PROTECTIVE EQUIPMENT

Do not breathe vapours

In case of insufficient ventilation, wear suitable respiratory equipment. Air-fed face mask recommended

HAND PROTECTION

Wear solvent-proof gloves. Neoprene gloves recommended

EYE PROTECTION

Wear a face-shield or chemical goggles. Contact lenses should not be worn.

SKIN AND BODY PROTECTION

Wear impermeable apron.

SPECIFIC HYGIENE MEASURES

When using do not eat, drink or smoke

Remove working clothes after work

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

PHYSICAL STATE

liquid

COLOUR

green

ODOUR

Aromatic

SPECIFIC TEMPERATURES

BOILING POINT OR RANGE

ε145°C

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RISK OF FIRE OR EXPLOSION

FLASH POINT

31 °C (EN 22719)

AUTO IGNITION TEMPERATURE(*)

490°C

EXPLOSIVE OR FLAMMABLE LIMITS IN AIR / %(*)

Lower : 1.1

Upper : 6.1

VAPOUR PRESSURE(*)

6.52 hPa at 20°C

DENSITY

RELATIVE DENSITY (WATER)

1.05 - 1.2 (Typical Values)

SOLUBILITY

IN WATER

Insoluble in water.

IN ORGANIC SOLVENTS

Soluble in aromatic solvents.

Soluble in aliphatic solvents.

TYPICAL VISCOSITY 2.3 - 2.7 dPa.s@25 C

(*) these values are referred to the used solvent and not to the preparation.

10. STABILITY AND REACTIVITY

STABILITY

Stable under normal storage conditions.

CONDITIONS TO AVOID

Light / Heat / Sources of ignition

HAZARDOUS REACTIONS WITH

Exothermic polymerisation may occur with strong oxidising agents / peroxides

11. TOXICOLOGICAL INFORMATION

SENSITISATION

May produce an allergic reaction due to cobalt octoate.

SKIN IRRITATION

Irritating to the skin.

EYE IRRITATION

Irritating to the eyes.

INHALATION

Harmful by inhalation

Specific symptoms include headaches, dizziness, tiredness

12. ECOLOGICAL INFORMATION

PERSISTENCE / DEGRADABILITY

Styrene is readily biodegradable.

POSSIBLE ENVIRONMENTAL IMPACT / ECOTOXICITY

Do not discharge into drains or the environment, dispose at an authorised waste collection point

13. DISPOSAL CONSIDERATIONS

MEASURES FOR DISPOSAL

Incineration in approved installation for liquid resin

Crushing then incineration when high solid proportion

This material and its container must be disposed of as hazardous waste

DESTROYING PROCEDURE OF CONTAMINATED PACKAGING

Cleaned packaging may be recycled.

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Contaminated packaging must be disposed of as hazardous waste

14. TRANSPORT INFORMATION

INTERNATIONAL REGULATION

SEA (IMDG)

	Proper shipping name	Resin Solution, Flammable
	UN	1866
No	IMDG Class	3
	IMDG Packing group	III
	EMS No	3 - 05
	MFAG	310
	Marine Pollutant (P or PP)	no

AIR (ICAO / IATA)

	UN / ID No	1866
	Proper shipping name	Resin Solution, Flammable
	IATA/ ICAO Class	3
	IATA/ICAO packing group	III

ROAD (RID/ADR, RTMDR/RTMDF)

	Transport name	Resin Solution, Flammable
	UN No	1866
	ADR Class	3
	ADR packing group	III
	Hazard No (ADR)	30
	ADR LABEL No	3
	HAZCHEM CODE	3Y
	CEPIC TEC(R) No	664B

RAIL TRANSPORT

	RID Class No	3
	RID Packing group	III

15. REGULATORY INFORMATION

EU LABELLING

R Phrases

R10	
R20/22	Flammable Harmful by Inhalation
R36/38	Irritating to eyes and skin

S Phrases

S23	Do not breathe vapours
S36/37/39	Wear suitable protective clothing, gloves and eye protection

Symbols

Xn	
Harmful	
Contains Styrene	
Contains cobalt octoate. May produce an allergic reaction	

UK / EU REGULATION

Chemicals Hazard Information & Packaging for Supply (1993, 1994, 2002)
Dangerous Substances Directive 2001/59 (28th Adaptation)
Dangerous Preparations Directive 1999/45, 2001/60

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16. OTHER INFORMATION

In accordance with the requirements of Directive 2001/58/EC, the full text of risk phrases (R) referred to in chapter 2 is stated here.

R10	Flammable
R20	Harmful by inhalation
R36/38	Irritating to eyes and skin
R43	May cause sensitisation by skin contact

Safety Data sheet conforms with EU SDS Directives 91/155, 93/112, 2001/58.

REMARK

The information included in this Safety Data Sheet is accurate to the best of our knowledge at the time of compilation.

Further information pertaining to the use of this material may be obtained from the Technical Data Sheet, Applications Manual or alternatively from Cray Valley (Stallingborough) Technical Service Department.