1. IDENTIFICATION OF SU	BSTANCE AND SUPPLIER			
Name On Label Product Number Supplier	(R,R)-(-)-2,3-Butanediol 15779 Johnson Matthey Catalog Company Inc.			
	30 Bond Street, Ward Hill, Massachusetts, 01835-8099 Emergency Telephone Number: (978) 521-6300; CHEMTREC: (800) 424-9300			
Alternative Names	D-(-)-2,3-Butanediol			
2. COMPOSITION AND INF	ORMATION ON COMPONENTS			
Name Minor Impurities CAS No.	(R,R)-(-)-2,3-Butanediol Not determined 24347-58-8 EINECS No. 2461869 EEC No.			
3. HAZARDS IDENTIFICAT	ION			
Designation	HARMFUL			
Risk Phrases	R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.			
4. FIRST AID MEASURES				
Inhalation Eye Contact	Remove to fresh air. Seek medical advice if symptoms persist. Flush with copious amounts of water for at least 15 minutes. If symptoms arise, seek medical advice.			
Skin Contact	Remove contaminated clothing. Wash affected area with soap and water. Rinse thoroughly. If unusual symptoms are observed, seek medical advice. Show the physician the container details.			
Ingestion	Rinse out mouth and drink lots of water. In case of unusual symptoms, seek medical attention and show physician the container details.			
5. FIRE FIGHTING MEASU	RES			
Extinguishing Medium	Use fire fighting measures which suit the environment and take into account other materials which may be involved. In general, water-based extinguishers should not be used for fires involving organic materials. Use carbon dioxide or dry powder.			
Protective Equipment	Wear self-contained breathing apparatus and protective clothing.			
Hazardous Products of Co	mbustion may include: carbon monoxide, carbon dioxide.			
6. ACCIDENTAL RELEASE	MEASURES			
Personal Protection	Avoid inhalation or contact of spilled material with skin or clothing. Wear protective equipment including rubber gloves, and eye protection. Keep unprotected persons away. Take precautions to ensure product does not contaminate the ground or enter the drainage syste Mix with vermiculite or proprietary absorbent material and transfer to sealed containers for dispose			
Environmental Protection Collection				
7. HANDLING AND STORA	GE			
Handling	Chemicals should be used only by those trained in handling potentially hazardous materials. Rubbe gloves, eye protection and protective clothing should be worn. Operations should be carried out in an efficient fume hood or equivalent system.			
Storage	Store in tightly sealed containers in a cool place. Product is hygroscopic. Take precautions to avoid contact with atmospheric moisture.			
8. EXPOSURE CONTROLS	AND PERSONAL PROTECTION			
Respiratory Eye Hands and Body	Avoid inhalation of product. Handle in an efficient fume hood or equivalent system. Avoid eye contact. Wear safety spectacles or goggles. Avoid skin contact. Wear rubber gloves and protective clothing.			
	איטוע טאווי טטוונטטו. איפמו דעטטבו צוטיבס מוע דוטנטנויב טטנווווא.			

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15779 continued.

9. PHYSICAL AND CHEM	IICAL PROPERTIES			
Appearance Physical Constants Molecular formula Water solubility Flash Point	Viscous colorless liquid b.p. 76-78°/10mm C ₄ H ₁₀ O ₂ 85°	Formula Wt. Density	90.12 0.987	
10. STABILITY AND REA	CTIVITY			
Specific Hazard				
Incompatibilities Decomposition	Strong oxidising agents. Acid chlorides. Acid anhydrides. Chloroformates. Reducing agents. Hazardous products of decomposition may include: carbon monoxide, carbon dioxide.			
11. TOXICOLOGICAL INF	ORMATION			
RTECS No.	Not listed			
Acute Toxicity	LD ₅₀ : No data reported Harmful by inhalation, in contact with skin and if swallowed.			
Special Note	Symptoms of exposure may include headache, nausea and vomiting. Symptoms of exposure may include gastrointestinal disturbances.			
12. ECOLOGICAL EFFEC	TS			
General	Take care to prevent chemicals from entering the ground, water courses or drainage systems.			
13. DISPOSAL CONSIDE	RATIONS			
Disposal	Disposal should be via an approved contractor and should take full account of local regulations.			
14. TRANSPORT INFORM	ATION			
UN Number	1992			
Land Transport Maritime Transport Air Transport	ADR/RIC Code/Class 6.1 IMDG Code/Class 6.1 IATA Code/Class 6.1	Packing Group III Packing Group III Packing Group III		
15. REGULATORY INFOR	RMATION			
CAS No. 24347-58-8	EINECS No. 2461869 EE	C No. UN No.	1992 RTECS No. Not listed	
Hazard Indication	HARMFUL			
Risk & Safety Phrases	Harmful by inhalation, in contact with skin and if swallowed. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable gloves and eye/face protection.			
TSCA	Not listed. For research and development use only.			
16. OTHER INFORMATIO	N			
possibly hazardous produc	cts may arise from reactions betw and shall not constitute a guara	ween chemicals. The infor	not be fully understood and that new, mation given in this data sheet is based uct features and shall not establish a	
Date of Last Review:	3rd August 1998	Date Printed	18th Sentember 1998	

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