

Novo Nordisk A/S	<b>DIRECTIONS FOR USE / MATERIAL SAFETY DATA SHEET</b> according to 91/155/EEC		
	<b>Novolin<sup>®</sup>R</b> (regular, human insulin injection [recombinant DNA origin])		

Trade name	Novolin <sup>®</sup> R	CAS-no.	11061-68-0 (active substance)
Chemical name	Aqueous solution for injection containing Insulin human, recombinant.	EC-no.	
Novo Nordisk item no.			
Company	Novo Nordisk Inc. 100 College Road West, Princeton, New Jersey 08540 USA		
Emergency telephone no.			
<b>COMPOSITION / INFORMATION ON CONTENTS</b>			<b>2</b>
Hazardous ingredients	Concentration	Classification	
108-39-4 m-Cresol	0,30 % (w/v)	T;R24/25 C;R34	
<b>HAZARDS IDENTIFICATIONS</b>			<b>3</b>
Potential Health Effects	Inhalation of aerosols may result in a mild temporary decrease of the blood sugar level (hypoglycaemia). Skin and eye contact may cause mild irritation. Exposure to Novolin <sup>®</sup> R is not known to cause adverse health effects.		
Inflammatory Properties	Novolin <sup>®</sup> R is not combustible.		
<b>FIRST AID MEASURES</b>			<b>4</b>
After swallowing	Rinse out mouth thoroughly with water and give plenty of water to drink. Do <b>NOT</b> provoke vomiting. Seek medical advice if symptoms persist.		
Skin contact	Remove contaminated clothes and wash contaminated skin thoroughly with plenty of water for at least 15 minutes. Seek medical advice if symptoms persist.		
Eyes	Rinse the eye immediately with plenty of water for at least 15 minutes with the eyelid held wide open. Seek medical advice if symptoms persist.		
Inhalation	Go outside to breathe fresh air.		
<b>PRECAUTIONS IN CASE OF FIRE</b>			<b>5</b>
No special precaution.			Continued

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<b>ACCIDENTAL RELEASE MEASURES</b>	<b>6</b>
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Use personal protection means when removing the spillage. (See item 8). Absorbed by means of absorbing material (e.g. sand or vermiculite) and sent to proper destruction facilities. (See item 13). Clean up affected area.

<b>HANDLING AND STORAGE</b>	<b>7</b>
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Novolin® R must be kept in tightly closed original packings. Refrigerator: 2 to 8°C (36 to 46°F).

<b>EXPOSURE CONTROL / PERSONAL PROTECTION MEANS</b>	<b>8</b>
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Limit value		Smell limit	-
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Avoid contact with eyes and skin. Use protection gloves (e.g. Nitrilrubber (Solvex)). There must be easy access to plentiful water supply, emergency- or hand shower/eye rinsing bottle.

<b>PHYSICAL AND CHEMICAL CHARACTERISTICS</b>	<b>9</b>
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Appearance	Colourless liquid with a smell of cresol	pH	App. 7,4 (at 20° C)
Chemical formula	C <sub>257</sub> H <sub>383</sub> N <sub>65</sub> O <sub>77</sub> S <sub>6</sub>	Molecular weight	5808 Dalton
Density	1,005 (at 25°C)	Freezing point	No information
Boiling point	100°C	Flash point	Not applicable
Log P octanol/water	Not applicable	Vapour pressure	No information

<b>STABILITY AND REACTIVE POWER</b>	<b>10</b>
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Novolin® R is stable under normal circumstances.

<b>TOXICOLOGICAL DATA</b>	<b>11</b>
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LD <sub>50</sub> -value, oral (rat)		LD <sub>50</sub> -value, dermal (rat)	-
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Effects on long-term:	No	Under suspicion	Yes	Contradictory information	None
Carcinogenic	X				
Allergy (contact allergy)					X
Allergy (inhalation allergy)					X
Teratogenetic	X				
Nerve damaging	X				

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<b>ENVIRONMENT INFORMATION</b>	<b>12</b>
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Do not allow to enter waters, waste water, or soil.

<b>DISPOSAL CONSIDERATIONS</b>	<b>13</b>
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This material and its container must be disposed of as hazardous waste.  
Spillage and waste are to be collected in proper receptacles and disposed at an approved site according to existence of local regulations regarding disposal.

<b>INFORMATION ON TRANSPORT</b>	<b>14</b>
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<b>UN.no</b>	-	<b>Shipping name</b>	-
<b>ADR</b>	Not dangerous goods	<b>IMDG</b>	Not dangerous goods
<b>RID</b>	Not dangerous goods	<b>IATA</b>	Not dangerous goods

<b>REGULATORY INFORMATION</b>	<b>15</b>
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<b>Class of risks</b>	Not classified	<b>Symbol:</b>			
<b>R-phrases:</b>	No R-phrases				
<b>S-phrases:</b>	No S-phrases				

No special regulations.

<b>OTHER INFORMATION</b>	<b>16</b>
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No demand for special education, but persons handling Novolin<sup>®</sup> R must be familiar with the instructions mentioned in these Material Safety Data.