





## Product name: Isoquinoline-5-carboxaldehyde (Contd. of page 1) Information for doctor Most important symptoms and effects, both acute and delayed No further relevant information available. Indication of any immediate medical attention and special treatment needed No further relevant information available. 5 Fire-fighting measures Extinguishing media Suitable extinguishing agents Carbon dioxide, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam. Special hazards arising from the substance or mixture If this product is involved in a fire, the following can be released: Carbon monoxide and carbon dioxide Nitrogen oxides (NOx) Advice for firefighters Protective equipment: Wear self-contained respirator. Wear fully protective impervious suit. 6 Accidental release measures Personal precautions, protective equipment and emergency procedures Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation Environmental precautions: Do not allow material to be released to the environment without proper governmental permits. Methods and material for containment and cleaning up: Ensure adequate ventilation. Prevention of secondary hazards: No special measures required. Reference to other sections See Section 7 for information on safe handling See Section 8 for information on personal protection equipment. See Section 13 for disposal information. 7 Handling and storage Handling Precautions for safe handling Handle under dry protective gas. Keep container tightly sealed. Store in cool, dry place in tightly closed containers. Ensure good ventilation at the workplace. Information about protection against explosions and fires: No information known. Conditions for safe storage, including any incompatibilities Storage Requirements to be met by storerooms and receptacles: No special requirements. Information about storage in one common storage facility: Store away from oxidizing agents. Store away from air Further information about storage conditions: Store under dry inert gas. This product is air sensitive. Keep container tightly sealed. Store in cool, dry conditions in well sealed containers. Specific end use(s) No further relevant information available. 8 Exposure controls/personal protection Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute. Control parameters Components with limit values that require monitoring at the workplace: Not required. Additional information: No data Exposure controls Personal protective equipment General protective and hygienic measures The usual precautionary measures for handling chemicals should be followed. Keep away from foodstuffs, beverages and feed. Remove all soiled and contaminated clothing immediately. Wash hands before breaks and at the end of work. Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin. Maintain an ergonomically appropriate working environment. **Breathing equipment:** Use suitable respirator when high concentrations are present. **Protection of hands:** Impervious gloves Check protective gloves prior to each use for their proper condition. The selection of suitable gloves not only depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer. **Prenetration time of glove material (in minutes)** Not determined **Eye protection:** Safety glasses **Body protection:** Protective work clothing. 9 Physical and chemical properties Information on basic physical and chemical properties General Information Appearance: Form: Powder Color: Yellow Not determined Odor: Odor threshold: Not determined pH-value: Not applicable. Change in condition Melting point/Melting range: Boiling point/Boiling range: 113-116 °C (235-241 °F) Not determined Sublimation temperature / start: Not determined (Contd. on page 3)

## Product name: Isoquinoline-5-carboxaldehvde

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Product name: Isoquinoline-5-carbo	»xaldehyde	
		(Contd. of page 2)
Flash point: Flammability (solid, gaseous)	Not applicable Not determined.	
Ignition temperature:	Not determined	
Decomposition temperature: Auto igniting:	Not determined Not determined.	
Danger of explosion: Explosion limits:	Product does not present an explosion hazard.	
Lower:	Not determined	
Upper: Vapor pressure:	Not determined Not applicable.	
Density: Relative density	Not de'termined Not determined.	
Vapor density Evaporation rate	Not applicable. Not applicable.	
Solubility in / Miscibility with Water:	Insoluble	
Partition coefficient (n-octanol/water):		
Viscosity: dynamic:	Not applicable.	
kinematic: Other information	Not applicable. No further relevant information available.	
10 Stability and reactivity		
Reactivity No information known. Chemical stability Stable under recomm	imended storage conditions.	
Thermal decomposition / conditions to Possibility of hazardous reactions No	to be avoided: Decomposition will not occur if used and stored according to specifications.	
Conditions to avoid No further relevant		
Incompatible materials: Oxidizing agents		
Air Hazardous decomposition products:		
Carbon monoxide and carbon dioxide Nitrogen oxides		
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11 Toxicological information Information on toxicological effects		
Acute toxicity: No effects known.		
LD/LC50 values that are relevant for c Skin irritation or corrosion: Causes sk	kin irritation.	
Eye irritation or corrosion: Causes ser Sensitization: No sensitizing effects kno	erious eye irritation.	
Germ cell mutagenicity: No effects kno	iown.	
Reproductive toxicity: No effects know	a on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.	
Specific target organ system toxicity -	r <b>- repeated exposure:</b> No effects known. r <b>- single exposure:</b> May cause respiratory irritation.	
Aspiration hazard: No effects known. Subacute to chronic toxicity: No effect		
Additional toxicological information:	To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.	
12 Ecological information		
Toxicity		
Aquatic toxicity: No further relevant info Persistence and degradability No furth Bioaccumulative potential No further re	ormation available. her relevant information available.	
Bioaccumulative potential No further re Mobility in soil No further relevant inform	relevant information available.	
Additional ecological information: General notes:		
Do not allow material to be released to the	the environment without proper governmental permits.	
Avoid transfer into the environment. Results of PBT and vPvB assessment	ıt	
<b>PBT:</b> Not applicable. <b>vPvB:</b> Not applicable.		
vPvB: Not applicable. Other adverse effects No further releva	ant information available.	
13 Disposal considerations		
Waste treatment methods	the first fragment of the soul	
Uncleaned packagings:	or national regulations to ensure proper disposal.	
Recommendation: Disposal must be ma	ade according to official regulations.	
<b>14 Transport information</b> Not a hazardous material for transportati	Ø	
UN-Number	lon.	
DOT, IMDG, IATA	None	
UN proper shipping name DOT, IMDG, IATA	None	
Transport hazard class(es)		
DOT, ADR, IMDG, IATA	Mana	
Class Packing group	None	
Packing group DOT, IMDG, IATA	None	
		(Contd. on page 4)

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(Cond. of page 3 Priviounness is not user Not applicable. Not applicable. Mot applicable. Transport in bulk according to Annex II of MARPOLT378 and the IBC Code Not applicable. Transport in bulk according to Annex II of MARPOLT378 and the IBC Code Not applicable. Transport in bulk according to Annex II of MARPOLT378 and the IBC Code Not applicable. Transport in bulk according to Annex II of MARPOLT378 and the IBC Code Not applicable. Transport in bulk according to Annex II of MARPOLT378 and the IBC Code Not applicable. Transport Additional information: Not dangerous according to the above specifications. DOT No Step Polyton Additional Information Safety, health and environmental regulations/Regislation specific for the substance or mixture GetStor Sequence and accordance with 29 CFR 1910 (OSHA HCS) Heard pictograms West protection is of despited and labeled in accordance with 29 CFR 1910 (OSHA HCS) Heard pictograms Vore GetStor Sequence and the product is of despited and labeled in accordance with 29 CFR 1910 (OSHA HCS) Heard pictograms Vore GetStor Sequence and the product is of despited and labeled in accordance with 29 CFR 1910 (OSHA HCS) Heard pictograms Vore GetStor Sequence and the product is of despited and labeled in accordance with 29 CFR 1910 (OSHA HCS) Heard pictograms You of the product is of despited and labeled in accordance with 29 CFR 1910 (OSHA HCS) Heard pictograms You of the product is despited and labeled in accordance with 29 CFR 1910 (OSHA HCS) Heard pictograms You of West protective gives/Pictograms/International The product I accordance with 29 CFR 1910 (OSHA HCS) Heard pictograms You of West protective gives/Pictograms/International The Pictogram II Note (International International International International The Pictogram II Note (International International International regulations. The product I act listed I	Product name: Isoquinoline-5-carboxaldehyde			
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Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.     Data     Off     Marine Politutant (DOT):   Not     Seguilatory information     Safety, health and environmental regulations/legislation specific for the substance or mixture GHS fabel elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Heard photograms     Image: Comparison of the information     Safety, health and environmental regulations/legislation specific for the substance or mixture GHS fabel elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Heard photograms     Image: Comparison of the information     Strep: Logards     View of Warning Heard photograms     Hast Could breaking dustrum-logar/mixturapours/spray.     View of Warning Heard photograms     Veal   Declevel glows/prodective clothing/eye protection/lace protection.     Peak   Wear protective glows/prodective clothing/eye protection/lace protection.     Peak   Store locked up.     Paol   Store locked up.     Paol   Store locked up.     Point   Store				
Transport/Additional information:     Not dangerous according to the above specifications.       DOT     No       Marine Pollutant (DDT):     No       5 Regulatory information     Skipt, health and environmental regulations/legislation specific for the substance or mixture       Skipt, health and environmental regulations/legislation specific for the substance or mixture     Skipt, health and environmental regulations/legislation specific for the substance or mixture       Skipt, health and environmental regulations/legislation specific for the substance or mixture     Skipt, health and environmental regulations/legislation specific for the substance or mixture       Skipt, health and environmental regulations/legislation specific for the substance or mixture     Skipt, health and environmental regulations/legislation specific for the substance or mixture       Skipt, health and environmental regulations/legislation specific for the substance or mixture     Skipt, health and environmental regulations/legislation specific for the substance or mixture       Skipt, health and environmental regulations/legislation specific for the substance protection.     Protection for the substance or the second minutes. Remove contact lenses, if present and easy to do. Continue rinsing.       P304-P304     Fill VEXS. Finise caulously with water for several minutes. Remove present and easy to do. Continue rinsing.       P304-P304     Fill VEXS. Finise caulously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. <th></th> <td></td>				
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Main     No       57 Regulatory information     Steps, health and environmental regulations/Regislation specific for the substance or mixture heard pictograms       6 Steps, health and environmental regulations/Regislation specific for the substance or mixture product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)       6 HS07       6 HS07       5 Steps, health and environmental regulations/Regislation specific for the substance or mixture product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)       6 HS07       5 Steps, health and environmental regulations/Regislation accordance with 29 CFR 1910 (OSHA HCS)       7 Hint All Causes serious eye initation.       7 Hint All Causes serious eye initation.       7 Hint All Causes Stant Train due for thereiting dust/time/gas/mist/vapours/spray.       7 Bioth P351 H 233 Bir IN EYES. Resis caudously with water for several minutes. Kenrove contact lenses, if present and easy to do. Continue rinsing.       7 Bioth P361 IF IN EYES. Resis caudously with water for several minutes. Kenrove contact lenses, if present and easy to do. Continue rinsing.       7 Bioth P361 IF IN EYES. Resis caudously with water for several minutes. Kenrove contact lenses, if present and easy to do. Continue rinsing.       7 Bioth P361 IF IN EYES. Resis caudously with water for several minutes. Kenrove contact lenses, if present and easy to do. Continue rinsing.       7 Bioth P361 IF IN EYES. Resis caudouslow with oaset loss for loss betance is not listed. <th>•</th> <td>Not dangerous according to the above specifications.</td>	•	Not dangerous according to the above specifications.		
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WHMIS: Workplace Hazardous Materials Information System (Canada) LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent VPVB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hvaienists (USA)	Safety, health and environmental regulations/legislation spec GHS label elements The product is classified and labeled in acc Hazard pictograms GHS07 Signal word Warning Hazard statements H315 Causes skin irritation. H319 Causes serious eye irritation. H325 May cause respiratory irritation. H326 Causes Statements P261 Avoid breathing dust/fume/gas/mist/vapours/s P280 Wear protective gloves/protective clothing/ey P305+P351+P338 IF IN EYES: Rinse cautiously with water for s P304+P340 IF INHALED: Remove person to fresh air and P405 Store locked up. P501 Dispose of contents/container in accordance National regulations This product is not listed in the U.S. Environmental Protection Act to research and development only. This product must be used for commercial purposes or in formulat SARA Section 313 (specific toxic chemical listings) Substance California Proposition 65 Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, female Substance is not listed. Annex XIV of the REACH Regulations (requiring Authorisatic Information to ensure proper use and protect the health and safe conformance with this Material Safety Data Sheet, or in combina Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/24/2015 / -	/spray. //spray. //spray. //several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. d keep comfortable for breathing. /with local/regional/national/international regulations. gency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted y or directly under the supervision of a technically qualified individual as defined by TSCA. This ations for commercial purposes. to e is not listed. tt listed. ted. d. Iy qualified individuals. <b>EEACH Regulations (EC) No. 1907/2006.</b> Substance is not listed. <b>mnex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the ion for use)</b> Substance is not listed. thas not been carried out.		
	OSFA: Occupational Safety and Health Administration (USA) NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)	- USA		