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1 Identification Product identifier	
Product name: 3,5-Dimethylphenylhydrazine hydrochloride	
Stock number: A11336 CAS Number: 60481-36-9 Relevant identified uses of the substance or mixture and uses advised against.	
Relevant identified uses of the substance or mixture and uses advised against. Identified use: SU24 Scientific research and development Details of the supplier of the safety data sheet	
Details of the supplier of the safety data sheet Manufacturer/Supplier: Alfa Aesar	
Thermo Fisher Scientific Chemicals, Inc. 30 Bond Street	
Ward Hill, MA 01835-8099 Tel: 800-343-0660 Fax: 800-322-4757	
Email: tech@alfa.com www.alfa.com	
Information Department: Health, Safety and Environmental Department Emergency telephone number: During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0	1790
	<i>)</i> 769.
2 Hazard(s) identification Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)	
GHS06 Skull and crossbones	
Acute Tox. 3 H301 Toxic if swallowed.	
GHS07	
Skin Irrit. 2 H315 Causes skin irritation.	
Eye Irrit. 2A H319 Causes serious eye irritation. STOT SE 3 H335 May cause respiratory irritation. Hazards not otherwise classified No information known.	
Label elements	
GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictograms	
GHS06	
Signal word Danger Hazard statements	
H301 Toxic if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation.	
H335 May cause respiratory irritation. Precautionary statements	
P261 Avoid breathing dust/tume/gas/mist/vapours/sprav	
P280 Wear protective gloves/protective clothing/eve protection/face protection. P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor/ P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P405 Store locked up.	g.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations. WHMIS classification	
D1B - Toxic material causing immediate and serious toxic effects D2B - Toxic material causing other toxic effects	
Classification system	
HMIS ratings (scale 0-4) (Hazardous Materials Identification System)	
HEALTH I Health (acute effects) = 1 FRE I Flammability = 1	
REACTIVITY I Physical Hazard = 1 Other hazards	
Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable.	
3 Composition/information on ingredients	
Chemical characterization: Substances CAS# Description:	
60481-36-9 3,5-Dimethylphenylhydrazine hydrochloride	
4 First-aid measures	
Description of first aid measures After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm.	
	(Contd. on page 2) USA

Safety Data Sheet per OSHA HazCom 2012

Product name: 3,5-Dimethylphenylhydrazine hydrochloride

	yurazine nyurocinonue		
Cool immediate medical estrice		(Contd. of page 1)	
Seek immediate medical advice. After skin contact			
Immediately wash with water and soap a	and rinse thoroughly.		
Seek immédiate medical advice. After eve contact Rinse opened eve for	r several minutes under running water. Then consult a doctor.		
After swallowing Seek medical treatme	ent.		
Information for doctor Most important symptoms and effects	s, both acute and delayed No further relevant information available.		
Indication of any immediate medical a	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 subs If this product is involved in a fire, the for	stance or mixture Ilowing can be released:		
Carbon monoxide and carbon dioxide	······································		
Hydrogen chloride (HCl) Nitrogen oxides (NOx)			
Advice for firefighters			
Protective equipment: Wear self-contained respirator.			
Wear fully protective impervious suit.			
6 Accidental release measures			
Personal precautions, protective equi	ipment and emergency procedures		
Personal precautions, protective equi Wear protective equipment. Keep unpro Ensure adequate ventilation	tected persons away.		
Environmental precautions: Do not all	low material to be released to the environment without proper governmental permits. It and cleaning up:		
Methods and material for containmen Dispose of contaminated material as wa	it and cleaning up: Iste according to section 1.3		
Ensure adequate ventilation.			
Prevention of secondary hazards: No Reference to other sections	special measures required.		
See Section 7 for information on safe ha See Section 8 for information on person	andling		
See Section 13 for disposal information.			
7 Handling and storage			
Handling			
Precautions for safe handling			
Keep container tightly sealed. Store in cool, dry place in tightly closed	containers		
Ensure good ventilation at the workplace	e.		
	explosions and fires: No information known.		
Conditions for safe storage, including any incompatibilities Storage			
Requirements to be met by storeroon	ns and receptacles: No special requirements.		
Information about storage in one common storage facility: Store away from oxidizing agents. Further information about storage conditions:			
Keep container tightly sealed. Store in cool, dry conditions in well seale			
Specific end use(s) No further relevant			
8 Exposure controls/personal prote	action		
Additional information about design of			
Properly operating chemical fume hood	designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.		
Control parameters			
Additional information: No data	quire monitoring at the workplace: Not required.		
Exposure controls			
Personal protective equipment			
General protective and hygienic meas The usual precautionary measures for h	andling chemicals should be followed.		
Keep away from foodstuffs, beverages a Remove all soiled and contaminated clo	and feed. thing immediately		
Wash hands hefore breaks and at the e	nd of work		
Avoid contact with the eyes and skin. Maintain an ergonomically appropriate w	vorking environment. pirator when high concentrations are present.		
Breathing equipment: Use suitable res Protection of hands:	pirator when high concentrations are present.		
Impervious gloves			
Check protective gloves prior to each us The selection of suitable gloves not only	se for their proper condition. / depends on the material, but also on quality. Quality will vary from manufacturer to manufacturer.		
Eye protection: Safety glasses Body protection: Protective work clothi			
Doug protection. Frotective work Cloth	ייש. ער גער גער גער גער גער גער גער גער גער ג		
9 Physical and chemical properties			
Information on basic physical and chemical properties			
General Information Appearance:			
Form: Color:	Powder Off-white		
Odor:	Ödorless		
Odor threshold:	Not determined.		
pH-value: Change in condition	Not applicable.		
Melting point/Melting range:	180 °C (356 °F) (decomposes)		
		(Contd. on page 3)	
		USA	

Product name: 3,5-Dimethylphenylhydrazine hydrochloride

Boiling point/Boiling range: Sublimation temperature / start:		(Contd. of page 2	
	Not determined	· · · ·	
Flash point:	Not determined Not applicable		
Flammability (solid, gaseous) Ignition temperature:	Not determined. Not determined		
Decomposition temperature:	Not determined		
Auto igniting: Danger of explosion:	Not determined. Product does not present an explosion hazard.		
Explosion limits: Lower:	Not determined		
Upper:	Not determined		
Vapor pressure: Density:	Not applicable. Not determined		
Relative density Vapor density	Not determined. Not applicable.		
Evaporation rate Solubility in / Miscibility with	Not applicable.		
Water: Soluble Partition coefficient (n-octanol/water): Not determined.			
Viscosity: dynamic:	Not applicable.		
kinematic:	Not applicable. No further relevant information available.		
Other information			
0 Stability and reactivity Reactivity No information known. Chemical stability Stable under recommended storage conditions. Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications. Possibility of hazardous reactions No dangerous reactions known Conditions to avoid No further relevant information available. Incompatible materials: Oxidizing agents Hazardous decomposition products: Carbon monoxide and carbon dioxide Hydrogen chloride (HCI) Nitrogen oxides			
Reproductive toxicity: No effects know Specific target organ system toxicity	skin irritation. erious eye irritation. nown. nown. a on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. wn. • • • • reneated exposure: No effects known		
Specific target organ system toxicity Aspiration hazard: No effects known. Subacute to chronic toxicity: No effect	- single exposure: May cause respiratory irritation.		
Specific target organ system toxicity Aspiration hazard: No effects known. Subacute to chronic toxicity: No effect Additional toxicological information: 12 Ecological information Toxicity Aquatic toxicity: No further relevant in Persistence and degradability No furth Bioaccumulative potential No further Mobility in soil No further relevant info Additional ecological information: General notes: Do not allow material to be released to Do not allow material to be released to Do not allow material to be released to Do not allow and product or large Avoid transfer into the environment. Results of PBT and vPvB assessment PBT: Not applicable. VPvB: Not applicable.	 <i>c</i> single exposure: May cause respiratory irritation. <i>c</i> ts known. <i>c</i> To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. <i>c</i> formation available. <i>c</i> the relevant information available. <i>c</i> relevant information available. 		
Specific target organ system toxicity Aspiration hazard: No effects known. Subacute to chronic toxicity: No effect Additional toxicological information: 12 Ecological information Toxicity Aquatic toxicity: No further relevant in Persistence and degradability No further Bioaccumulative potential No further Mobility in soil No further relevant info Additional ecological information: General notes: Do not allow material to be released to Do not allow material to be released to Do not allow material to be released to Do not allow and product or large Avoid transfer into the environment. Results of PBT and vPvB assessment PBT: Not applicable. Other adverse effects No further relev 13 Disposal considerations Waste treatment methods	 <i>r</i> - single exposure: May cause respiratory irritation. cts known. To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 		
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Specific target organ system toxicity Aspiration hazard: No effects known. Subacute to chronic toxicity: No effect Additional toxicological information: 12 Ecological information Toxicity Aquatic toxicity: No further relevant in Persistence and degradability No furth Bioaccumulative potential No further Mobility in soil No further relevant info Additional ecological information: General notes: Do not allow material to be released to Do not allow undiluted product or large Avoid transfer into the environment. Results of PBT and vPvB assessment PBT: Not applicable. Other adverse effects No further relev 13 Disposal considerations Waste treatment methods Recommendation Consult state, local Uncleaned packagings: Recommendation: Disposal must be n Recommended cleansing agent: Wat	 <i>r</i> - single exposure: May cause respiratory irritation. cts known. To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. 		
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Product name: 3,5-Dimethylphenylhydrazine hydrochloride

rioduce name: 0,0 Dimetriyiphenryinyarazine riyaroomonae			
	(Contd. of page 3)		
Packing group DOT, IMDG, IATA	None		
Environmental hazards:	Not applicable.		
Special precautions for user	Not applicable.		
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.			
Transport/Additional information:	Not dangerous according to the above specifications.		
DOT			
Marine Pollutant (DOT):	No		
15 Regulatory information			
Safety, health and environmental regulations/legislation specific for t	the substance or mixture		
GHS label elements The product is classified and labeled in accordance Hazard pictograms	with 29 CFR 1910 (OSHA HCS)		
GHS06			
Signal word Danger			
Hazard statements H301 Toxic if swallowed.			
H315 Causes skin irritation.			
H319 Causes serious eye irritation. H335 May cause respiratory irritation.			
H335 May cause respiratory irritation. Precautionary statements			
P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protective	on/face protection.		
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER	R/ doctor/		
P405 Store locked up.	nutes. Remove contact lenses, if present and easy to do. Continue rinsing.		
P501 Dispose of contents/container in accordance with local	/regional/national/international regulations.		
National regulations This product is not listed in the U.S. Environmental Protection Agency Tox	kic Substances Control Act Chemical Substance Inventory. Use of this product is restricted by under the supervision of a technically qualified individual as defined by TSCA. This		
to research and development only. This product must be used by or direct product must not be used for commercial purposes or in formulations for c	ly under the supervision of a technically qualified individual as defined by TSCA. This		
SARA Section 313 (specific toxic chemical listings) Substance is not li California Proposition 65	isted.		
Prop 65 - Chemicals known to cause cancer Substance is not listed			
Prop 65 - Developmental toxicity Substance is not listed.			
Prop 65 - Developmental toxicity, female Substance is not listed. Prop 65 - Developmental toxicity, male Substance is not listed.			
Prop 65 - Developmental toxicity, male Substance is not listed. Information about limitation of use: For use only by technically qualified	1 individuals.		
Substance of Verv High Concern (SVHC) according to the REACH Re	gulations (EC) No. 1907/2006. Substance is not listed. of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the		
The conditions of restrictions according to Article 67 and Annex XVII	of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the		
market and use must be observed. Substance is not listed.			
Annex XIV of the REACH Regulations (requiring Authorisation for use Chemical safety assessment: A Chemical Safety Assessment has not be	e) Substance is not listed.		
Chemical salety assessment. A Chemical Salety Assessment has not be	een cameu ou.		
16 Other information	motion asthered by them, and about disclosed and independent independent of anitability of this		
information to ensure proper use and protect the health and safety of employers	mation gathered by them, and should make independent judgement of suitability of this loyees. This information is furnished without warranty, and any use of the product not in any other product or process, is the responsibility of the user.		
	any other product or process, is the responsibility of the user.		
Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/24/2015 / -			
Abbreviations and acronyms:			
RID: Reglement international concernant le transport des marchandises dangereuses par chemin (IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA) ICAO: International Civil Aviation Organization ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO) IMDG: International Maritime Code for Dangerous Goods	de ter (Regulations Concerning the International Transport of Dangerous Goods by Rail)		
ICAO: International Civil Avlation Organization ICAO-TI: Technical Instructions by the "International Civil Avlation Organization" (ICAO)			
DOT: US Department of Transportation			
ALA. International AME Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) HMS: Hazardous Materials Identification System (USA)			
IMDE: International Maittime Code for Dangerous Goods DOT: US Department of Transportation IATA: International Air Transport Association CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Identification System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) LC50: Lethal concentration, 50 percent LD50: Lethal cose, 50 percent Verwer Servistent and very Binaccumulative			
Loso, Lethal dose, 50 percent LD50: Lethal dose, 50 percent VPUP: von Porsistent and von Picacoumulative			
ACGIH: American Conference of Governmental Industrial Hygienists (USA)			
LDSD: Lettinal tools, 30 per Centr vPVB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) NTP: National Toxicology Program (USA) IARC: International Agency for Research on Cancer			

IARC: International Agency for Research on Cancer EPA: Environmental Protection Agency (USA)

USA -