



1 Vector: Product: Identifies also: Product:		Reviewed on 11/18/200
Product name: NuH:BisS2-chioroethyl)p-toluenesulfonamide Stock number: Construction: Losses Construction:	1	Identification
Stock number:       L05206         CAS Number:       Composite         Composite       Composite         Composite<		
CASE Number:         C4. Number:		
E. Sumper:         Comparison         Meanswill identified uses of the substance or mixture and uses advised against.         Meanswill identified uses (SL/2). Solenitic createach and development         Deals of the substance or mixture and uses advised against.         Meanswill identified uses (SL/2). Solenitic createach and development         Deals of the substance or mixture and uses advised against.         Meanswill identified uses (SL/2). Solenitic creations, Inc.         Werk of the substance or mixture in accordance with 20 CFR 1910 (OSHA HCS)         Constraints         Or Star (S)         Classification of the substance or mixture in accordance with 20 CFR 1910 (OSHA HCS)         Constraints         Or Star (S)         Constraints         Constraints <tr< th=""><th></th><th>CAS Number:</th></tr<>		CAS Number:
Relevant least 1: Relevant 1:		EC number:
Description of the safety data sheet       Image: Characterize Support:         The mode in the substance of the safety data sheet       Image: Characterize Support:         The mode intervent of the safety data sheet       Image: Characterize Support:         The mode intervent of the safety data sheet       Image: Characterize Support:         The mode intervent of the safety data sheet       Image: Characterize Support:         The mode intervent of the safety data sheet       Image: Characterize Support:         The mode intervent of the safety data sheet       Image: Characterize Support:         The mode intervent of the safety data sheet       Image: Characterize Support:         The mode intervent of the safety data sheet       Image: Characterize Support:         The mode intervent of the safety data sheet       Image: Characterize Support:         The mode intervent of the safety data sheet       Image: Characterize Support:         The mode intervent of the safety data sheet       Image: Characterize Support:         The mode intervent of the safety data sheet       Image: Characterize Support:         The mode intervent of the safety data sheet       Image: Characterize Support:         The mode intervent of the safety data sheet       Image: Characterize Support:         The mode intervent of the safety data sheet       Image: Characterize Support:         The safety data sheet       Image: Characterize Suppo		Relevant identified uses of the substance or mixture and uses advised against.
Manufacture/Supplier: <ul> <li></li></ul>		
The second seco		Manufacturer/Supplier:
Ward May Childs - Sodog         Ward May Childs - Sodog         The constraint is uppediate constraints in the constraints of the constrai		Thermo Fisher Scientific Chemicals, Inc.
Face Book 322-4757 minute and the second information Department: Health, Stelay and Environmental Department Energy or y deployment under Augument induces tools (Mnday-Friday, Bam-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (886) 928-0789. <b>Attack (S)</b> Identification <b>Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)</b> <b>Origonal Control</b> (Mnday-Friday, Bam-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (886) 928-0789. <b>Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)</b> <b>Origonal Control</b> (Mnday England) Instance. For 24 H 213 Causes solve age intrinsion. For 24 H 210 Causes age in intrator. For 24 H 210 Causes solve age intrator. For 24 H 210 Causes solve age intrator. For 24 H 210 Causes age in intrator. For 24 H 220 Circle (Mnday W 1980 F 0 Several minutes from 24 and (Mnday W 1980 F 0 Several minutes from 24 and (Mnday W 1980 F 0 Several minutes from 24 and (Mnday W 1980 F 0 Several minutes from 24 and (Mnday W 1980 F 0 Several minutes from 24 and (Mnday W 1980 F 0 Several minutes from 24 and (Mnday W 1980 F 0 Several minutes from 24 and (Mnday W 1980 F 0 Several minutes from 24 and (Mnday W 1980 F 0 Several minutes from 24 and (Mnday W 1980 F 0 Several minutes from 24 and (Mnday 1980 F Several Mnday 24 Several minutes from 24 and (Mnday 1980 F Several Mnday 24 Severatin 24 Causes 1980 F 0 Several Mnday 24 Several Mnday 2		Ward Hill, MA 01835-8099
www.dis.com       www.dis.com         Windmation Department Health. Safety and Environmental Department         Windmation Department Health. Safety and Environmental Department         2 Hazard(s) identification         Cassification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         Chastification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         Chastification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         Chastification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         Chastification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         Chastification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         Chastification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         Chastification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         Chastification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         Chastification of the substance or mixture in accordance with 190 Chastification and easy to do. Continue rinsing. Provide the and and keep control and the or the and mixture in accordance with local/regional/national/international regulations.         Part of Chastification of the and and keep control and on the analysis of the and and keep control and international regulations.         Part of Chastification of the analysis of the and and keep control and the analysis of		Fax: 800-322-4757
Emergency telephone number: During normal business hours, call Carechem 24 at (866) 928-0789. 21 Azard(s) identification Casellication of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS) ORIGIT Stim Int 2. H315 Causes skin initialion. Stron Trs 2. H335 May cause respiratory inflation. Stron Trs 2. H335 May cause respiratory inflation. Stron Trs 2. H335 May cause respiratory inflation. Stron Trs 2. H335 May cause respiratory inflation. Haards not otherwise disastified bio information known. Label elements Generating and the substance of the substanc		www.alfa.com
During marinel business hours (Manday-Friday, Bam-Tpm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (860) 928-0789. 2 Hazard(s) Identification Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS) Constitution of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS) She Init 2, H315 Causes shi initiation. Egy Init 2, H315 Causes shi initiation. Education of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictorgams  € GFI Soft GHS07  GHS07  GHS07  Sinn Init 2, H315 Causes shi initiation. Education of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictorgams  € GFI Soft GHS07  Sinn Init 2, H315 Causes shi initiation. Education of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictorgams  € GHS07  Sinn Init 2, H315 Causes shi initiation. H335 Abust sheements H315 Causes Shi initiation Abust and keep contaction. H335 Abust sheements H315 Causes Shi initiation Abust and keep contaction. H335 Abust sheements H315 Causes Shi initiation Abust and a labeled in accordance with local/regional/national/international regulations. H335 H315 H215 H315 H315 H315 H315 H315 H315 H315 H3		Emergency telephone number:
Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)         Win Mit 2       H315 Causes serious eye irritation.         Eye Init 2A H315 Causes serious eye irritation.         STOT SE3 H335 May causes respiratory irritation.         Hate of the enders         GHS07         Statute it is a serious eye irritation.         Hate of the enders         GHS07         Statute it is a serious eye irritation.         Hate of the enders         GHS07         Statute it is a serious eye irritation.         Hate of the enders         GHS07         Statute it is a serious eye irritation.         Hate of the enders         Hate of the enders         Hate of the enders         Hate of the enders         Statute it is a serious eye irritation.         Hate of the enders		During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.
Skin Imit 2. H315 Causes skin initiation.         Syn Imit 2. Hand Causes skin initiation.         Hand Causes respiration.         Post Past Hand Causing other toxic electronic developments container in accordance with local/regional/national/international regulations.         WHMS Calestratication         Causes Station system         Histanal causing other toxic elects) = 1	2	
Skin Inti 2       H315 Causes serious eye initiation.         Stor Star 3435 May causes respiratory initiation.       Material and otherwise classified the information known.         Stor Star 3435 May causes serious eye initiation.       Material information known.         Stor Star 345 May cause series into the information known.       Stor Star 345 May cause in the information known.         Stor Stor 345 May cause in the information known.       Stor 345 May cause in the information known.         Stor 345 May cause information information known.       Stor 345 May cause information known.         Stor 345 May cause information information known.       Stor 345 May cause information known.         Material Stor 345 May cause information known.       Stor 345 May cause information known.         Material Stor 345 May cause information known.       Stor 345 May cause information known.         Material Stor 345 May cause information known.       Stor 345 May cause information known.         Material Stor 345 May cause information known.       Stor 345 May cause information and information known.         Proceedings:       Stor 345 May cause information and information known.         Proceedings:       Stor 345 May cause information information in accordance with local/regional/national/international regulations.         Participant Material Stormatification System.       Stormatification system.         Participant Material Stormatification System.       Stor 345 May cause stormatificatio		Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)
Eve Infl 2A H319 Causes serious eye imitation. Nazards not otherwise classified No. information known. Label elements GNS label elements GNS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Mear of pictograms		GHS07
STOTSES 1 H335 May cause respiratory initiation.         Label elements         GHS label elements		
Label elements GHS table elements GHS table elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Weights GHSOT Signal word Warning Hazard statements Path Causes serious eye inflation. Hase Causes inflation eyestem. Hase Causes eyestem. Hase Causes eyestem. Hase Causes inflation eyestem. Hase Causes eyestem. Hase eyestem. Hase eyestem.		
GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)         Heard pictograms         GHS07         Signal word Warning         Heard pictograms         Hased pictograms         Product as skin in appointents         High Causes skin in appointents         High Causes respiratory intation.         High Causes respiratory intation.         High Causes respiratory intertion.         Product Park and breaching download protection/face protection.         Product First Causes respiratory intertion.         Park Park and breaching download protection of face protection.         Product Park and Pin Park and		Hazards not otherwise classified No information known.
Windowski         Server Line         Big Server Line         Hard Scause Skin infration.         Procentions with description of the skin infration.         Hard Scause Skin infration.         Pack-PS31+P338 IF IN EVES. Rhise causions with water and keep contoctable for breathing.         Pack-PS31+P339 IF IN EVES. Rhise causions with water and keep contoctable for breathing.         Pack-PS31+P330 IF IN EVES. Rhise causions with water and keep contoctable for breathing.         Pack-PS31+P330 IF IN EVES. Rhise causions of the skin and keep contoctable for breathing.         Pack-PS31+P330 IF IN EVES. Rhise causions of the skin and keep contoctable for breathing.         Pack-PS31+P330 IF IN EVES. Rhise causions of the skin and keep contoctable for breathing.         Pack-PS31+P331 IF IN EVES. Rhise causions of the skin and keep contoctable for breathing.         Pack-PS31+P331 IF IN EVES. Rhise causions of the skin and keep contoctable for breathing.         Pack-PS31         Pack-PS31         Pack-PS31         Pheskin (acute effects) = 1      <		GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS)
Signal word Warning Hazard statements H315 Causes Skin Irritation. H315 May cause respiratory initiation. Precautionary statements Precautionary statements Precautionary statements Precautionary statements Precautionary statements Precautionary statements Precaution guess protective glowsprotective clothing/eye protection/face protection. Precautionary statements Precaution guess protective glowsprotective clothing/eye protection/face protection. Precautionary statements Precaution guess protective glowsprotective clothing/eye protection/face protection. Precaution guess precision glowsprotective glowsprotective clothing/eye protection/face protection. Precaution guess precision glowsprotective glowsprotective clothing/eye protection/face protection. Precaution guess precision glowsprotective glowsprotective clothing/eye protection/face protection. Precaution guess of contents/scontainer in accordance with local/regional/national/international regulations. WHMIS classification D2B - Toxic material causing other toxic effects WHMIS classification system HMIS ratings (scale 0-4) (Haardous Materials Identification System) Haiting (scale 0-4) (Heathin (acute effects) = 1 Flearmsbillity = 1 Flearmsbilli		$\wedge$
Signal word Warning Hazard statements H315 Causes Skin Irritation. H315 May cause respiratory initiation. Precautionary statements Precautionary statements Precautionary statements Precautionary statements Precautionary statements Precautionary statements Precaution guess protective glowsprotective clothing/eye protection/face protection. Precautionary statements Precaution guess protective glowsprotective clothing/eye protection/face protection. Precautionary statements Precaution guess protective glowsprotective clothing/eye protection/face protection. Precaution guess precision glowsprotective glowsprotective clothing/eye protection/face protection. Precaution guess precision glowsprotective glowsprotective clothing/eye protection/face protection. Precaution guess precision glowsprotective glowsprotective clothing/eye protection/face protection. Precaution guess of contents/scontainer in accordance with local/regional/national/international regulations. WHMIS classification D2B - Toxic material causing other toxic effects WHMIS classification system HMIS ratings (scale 0-4) (Haardous Materials Identification System) Haiting (scale 0-4) (Heathin (acute effects) = 1 Flearmsbillity = 1 Flearmsbilli		
Hazard statements' H315 Gausse serious eye irritation. H319 Gausse serious eye irritation. H315 Gausse serious eye irritation. H315 Gausse serious eye irritation. H326 May cause respiration dustflume/gas/mist/vapours/spray. P280 Wear protective gloces/protective clocking/eye protection/face protection. P305 FV551+P338 IF IN EYES. Kinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304-P340 IF INI-HLED: Remove person to fresh air and keep comfortable for breathing. P405 Store locked up. P405 Store locked up. P406 Dispose of contents/container in accordance with local/regional/national/international regulations. WHMIS classification D28 - Toxic material causing other toxic effects Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System) Halt focuse effects) = 1 Femmability = 1 Health (acute effects) = 1 Femmability = 1 Health (acute effects) = 1 Femmability = 0 Store locaractis Results of PB1 and vPvB assessment Results of PB1 and vPvB a		
H319 Causes serious eye iritation. H325 May cause respiratory iritation. Precautionary statements P261 A void breakting dustfume/gas/mist/vapours/spray. P261 D lispose of contents/container in accordance with local/regional/national/international regulations. WHMIS classification D28 - Toxic material causing other toxic effects Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System) Health (acute effects) = 1 Pammability = 1 Physical Hazard = 1 Physical Hazard = 1 Physical Hazard = 1 Store locker/spice/spic		Hazard statements T
H335 May cause respiratory initiation. Precautionary statements P261 Avoid breathing dust/imme/gas/mist/vapours/spray. P280 Avoid breathing dust/imme/gas/mist/vapours/spray. P280 Avoid breathing dust/imme/gas/mist/vapours/spray. P280 Bvore of contents of the share and the seq com/initials for breathing. P260 Bvore of contents/container in accordance with local/regional/national/international regulations. WHMIS classification D28 - Toxic material causing other toxic effects WHMIS ratings (scale 0-4) (frazerdous Materials Identification System) Health (acute effects) = 1 Health (acute effects) = 1 He		
P261       Avoid breathing dust/fume/gas/mist/spray.         P260       Avoid breathing dust/fume/gas/mist/spray.         P260       P304-P338 IF IN EYES; Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.         P304-P331-P338 IF IN EYES; Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.         P304-P351-P338 IF IN EYES; Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.         P304-P351-P338 IF IN EYES; Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.         P304-P351-P338 IF IN EYES; Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.         P304-P351-P338 IF IN EYES; Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.         P304-P351-P338 IF IN EYES; Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.         P304-P351-P338 IF IN EYES; Rinse cautiously with water for several minutes. Remove person to the field state of contents/container in accordance with local/regional/national/international regulations.         WHMIS classification system       High         P304-P336 IF IN EYES;       If internation System         HMMIS ratings (scale 0-4)       Health (acute effects) = 1         Flammability = 1       Physical Hazard =		H335 May cause respiratory irritation.
P305+P331+P338 IF IN EYES: Rinse cauliously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P305 Store locked up. P405 Store locked up. P406 Store locked up. P407 Store locked up. P408 Store locked up. P409 Store material causing other toxic effects P409 Store material causing other toxic effects = 1 P409 Store material causing other toxic effects = 1 P409 Store material cause store material causes P409 Store material cause store material causes P409 Store material cause store st		P261 Avoid breathing dust/fume/gas/mist/vapours/sprav.
P405       Store locked up.         P501       Dispose of contents/container in accordance with local/regional/national/international regulations.         WHMIS classification       Dispose of contents/container in accordance with local/regional/national/international regulations.         WHMIS classification       Store locked up.         Classification system       Health (acute effects) = 1         HMIS relaxed up.       Health (acute effects) = 1         Flammability = 1       Physical Hazard = 1         Other hazards       Results of PBT and vPvB assessment         PBT: Not applicable.       Ptysical characterization: Substances         CASS Description:       Substances         CASS Concentry)       Cherical characterization: Substances         CASS Part Control (specific)       Enumber: 255-677-7         4 First-aid measures       Description of first aid measures         After shinalation       Supply fresh air. If required, provide artificial respiration. Keep patient warm.         Seek inmediate mediate advice.       After shinalation		P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing
WHMIS classification       D2B - Toxic material causing other toxic effects         D2B - Toxic material causing other toxic effects         Classification system         HMIS ratings (scale 0-4)         (Hazardous Materials Identification System)         Health (acute effects) = 1         Flarmability = 1         Possibility = 1         Privical Hazards         Results of PBT and vPvB assessment         PBT: Not applicable.         3 Composition/information on ingredients         Cherk hazardsrearce         CASE Description:         42137-88-2 N.N-Bis(2-chloroethyl)-p-toluenesulfonamide         Identification number(s):         Ec number: 255-677-7         4 First-aid measures         Description of first aid measures         After inhalation         Supply Irsh ai: If required, provide artificial respiration. Keep patient warm.         Seek Immediate medical advice.         After skin contact         Immediate wash with water and soap and rinse thoroughly.		P405 Store locked up.
Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System) Health (acute effects) = 1 Femmability = 1 Physical Hazard = 1 Other hazards Results of PBT and VPVB assessment PBT: Not applicable. 3 Composition/Information on ingredients Chemical characterization: Substances CAS# Description: 42137-88-2 N,N-Bis(2-chloroethyl)-p-toluenesulfonamide Identification number(s): EC number: 255-677-7 5 First-aid measures After inhalation Supply Iresh air. If required, provide artificial respiration. Keep patient warm. Seek Immediate medical advice. After skin contact Immediate medical advice.		WHMIS classification
HMIS ratings (scale 0-4) (Hazardous Materials Identification System)         Health (acute effects) = 1 Flammability = 1 Physical Hazards         Results of PBT and vPvB assessment PBT: Not applicable.         3 Composition/information on ingredients         Chemical characterization: Substances CAS# Description: 42137-88-2 N/N-Bis(2-chloroethyl)-p-toluenesulfonamide Identification number(s): EC number: 255-677-7         4 First-aid measures         Description of first aid measures After inhalation Supply fresh air. If reguired, provide artificial respiration. Keep patient warm. Seek Immediate medical advice. After skin contact Immediately wash with water and soap and rinse thoroughly.		
HMIS ratings (scale 0-4) (Hazardous Materials Identification System)         Health (acute effects) = 1 Flammability = 1 Physical Hazards         Results of PBT and vPvB assessment PBT: Not applicable.         3 Composition/information on ingredients         Chemical characterization: Substances CAS# Description: 42137-88-2 N/N-Bis(2-chloroethyl)-p-toluenesulfonamide Identification number(s): EC number: 255-6777         4 First-aid measures         Description of first aid measures After inhalation Supply fresh air. If reguired, provide artificial respiration. Keep patient warm. Seek Immediate medical advice. After skin contact Immediately wash with water and soap and rinse thoroughly.		$\cup$
(Hazardouš Materials Identification System)         Image: Description         Health (acute effects) = 1         Flammability = 1         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:         42137-88-2 N,N-Bis(2-chloroethyl)-p-toluenesulfonamide         Identification number(s):         EC number: 255-677-7 <b>4 First-aid measures Description of first aid measures After inhalation</b> Supply fresh air. If required, provide artificial respiration. Keep patient warm.   Seek Immediate medical advice. <b>After skin contact Immediately wask with water and soap and rinse thoroughly.</b>		
Rescutive_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:       42 137-88-2 N.N.Bis(2-chloroethyl)-p-toluenesulfonamide         Identification number(s):       EC number: 255-677-7         4 First-aid measures       Description of first aid measures         After inhalation       Supply fresh air. If required, provide artificial respiration. Keep patient warm.         Seek immediate medical advice.       After skin contact         Immediately wash with water and soap and rinse thoroughly.		(Hazardouš Materials Identification System)
Rescutive_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:       42 137-88-2 N.N.Bis(2-chloroethyl)-p-toluenesulfonamide         Identification number(s):       EC number: 255-677-7         4 First-aid measures       Description of first aid measures         After inhalation       Supply fresh air. If required, provide artificial respiration. Keep patient warm.         Seek immediate medical advice.       After skin contact         Immediately wash with water and soap and rinse thoroughly.		HEALTH $\blacksquare$ Health (acute effects) = 1 FIRE $\blacksquare$ $\blacksquare$ $Elammability = 1$
Results of PBT and vPvB assessment PBT: Not applicable. vvvB: Not applicable.         3 Composition/information on ingredients Chemical characterization: Substances CAS# Description: 42:137-88-2 N,N-Bis(2-chloroethyl)-p-toluenesulfonamide Identification number(s): EC number: 255-677-7         4 First-aid measures Description of first aid measures After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice. After skin contact Immediately wash with water and soap and rinse thoroughly.		REACTIVITY 1 Physical Hazard = 1
PBT: Not applicable.         vPvB: Not applicable.         3 Composition/information on ingredients         Chemical characterization: Substances         CAS# Description:         42137-88-2 N.N-Bis(2-chloroethyl)-p-toluenesulfonamide         Identification number(s):         EC number: 255-677-7         4 First-aid measures         Description of first aid measures         After inhalation         Supply fresh air. If required, provide artificial respiration. Keep patient warm.         Seek immediate medical advice.         After skin contact         Immediately wash with water and soap and rinse thoroughly.		
3 Composition/information on ingredients Chemical characterization: Substances CAS# Description: 42137-88-2 N,N-Bis(2-chloroethyl)-p-toluenesulfonamide Identification number(s): EC number: 255-677-7 4 First-aid measures Description of first aid measures After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice. After skin contact Immediately wash with water and soap and rinse thoroughly.		PBT: Not applicable.
Chemical characterization: Substances CAS# Description: 42137-88-2 N,N-Bis(2-chloroethyl)-p-toluenesulfonamide Identification number(s): EC number: 255-677-7 4 First-aid measures Description of first aid measures After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice. After skin contact Immediately wash with water and soap and rinse thoroughly.	~	
CAS# Description: 42137-88-2 N,N-Bis(2-chloroethyl)-p-toluenesulfonamide Identification number(s): EC number: 255-677-7 4 First-aid measures Description of first aid measures After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice. After skin contact Immediately wash with water and soap and rinse thoroughly.	J	•
Identification number(s): EC number: 255-677-7 4 First-aid measures Description of first aid measures After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice. After skin contact Immediately wash with water and soap and rinse thoroughly.		CAS# Description:
4 First-aid measures Description of first aid measures After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice. After skin contact Immediately wash with water and soap and rinse thoroughly.		Identification number(s): Compare 25-677-7
Description of first aid measures After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice. After skin contact Immediately wash with water and soap and rinse thoroughly.		
After inhalation Supply fresh air. If required, provide artificial respiration. Keep patient warm. Seek immediate medical advice. After skin contact Immediately wash with water and soap and rinse thoroughly.	4	
After skin contact Immediately wash with water and soap and rinse thoroughly.		After inhalation
Immediately wash with water and soap and rinse thoroughly.		
(Contd. on page 2) USA		Immediately wash with water and soap and rinse thoroughly.
		(Contd. on page ) USA

## Product name: N,N-Bis(2-chloroethyl)-p-toluenesulfonamide

(Contd. of page 1) Seek immediate medical advice. After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor. After swallowing Seek medical treatment. 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 freatment 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) Hurdrogen obligite (NOL) Hydrogen chloride (HCl) Sulfur oxides (SOx) 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 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. Further information about storage conditions: 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. 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. Penetration 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: Crystalline powder Color: Cream Odor: Odor threshold: Not determined Not determined. pH-value: Not applicable.

Change in condition Melting point/Melting range: Boiling point/Boiling range: 45-47 °C (113-117 °F) Not determined Sublimation temperature / start: Not determined

(Contd. on page 3)

## Product name: N,N-Bis(2-chloroethyl)-p-toluenesulfonamide

Product name: N,N-BIS(2-Chloroeth	// p	(Contd of page 2		
Flash point:	Not applicable Not determined.	(Contd. of page 2		
Flammability (solid, gaseous) 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. Not determined			
Density: Relative density	Not determined 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 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 Nitrogen oxides Hydrogen chloride (HCI) Sulfur oxides (SOx)				
Information on toxicological effects Acute toxicity: No effects known. LD/LC50 values that are relevant for classification: No data Skin irritation or corrosion: Causes skin irritation. Eye irritation or corrosion: Causes serious eye irritation. Germ cell mutagenicity: No effects known. Germ cell mutagenicity: No effects known. Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH. Reproductive toxicity: No effects known. Specific target organ system toxicity - repeated exposure: No effects known. Specific target organ system toxicity - single exposure: May cause respiratory irritation. Aspiration hazard: No effects known. Subacute to chronic toxicity: No effects known. Subacute to chronic toxicity: No effects known.				
12 Ecological information Toxicity Aquatic toxicity: No further relevant information available. Persistence and degradability No further relevant information available. Bioaccumulative potential No further relevant information available. Mobility in soil No further relevant information available. Additional ecological information: General notes: Do not allow material to be released to the environment without proper governmental permits. Avoid transfer into the environment. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. Other adverse effects No further relevant information available.				
13 Disposal considerations Waste treatment methods Recommendation Consult state, local or national regulations to ensure proper disposal. Uncleaned packagings: Recommendation: Disposal must be made according to official regulations.				
<b>14 Transport information</b> Not a hazardous material for transporta	tion.			
UN-Number DOT, IMDG, IATA	None			
UN proper shipping name DOT, IMDG, IATA	None			
Transport hazard class(es) DOT, ADR, IMDG, IATA				
Class	None			
Packing group DOT, IMDG, IATA	None			
		(Contd. on page 4		

## Product name: N,N-Bis(2-chloroethyl)-p-toluenesulfonamide (Contd. of page 3) 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 the substance or mixture GHS label elements The product is classified and labeled in accordance with 29 CFR 1910 (OSHA HCS) Hazard pictograms ! GHS07 Signal word Warning Hazard statements H315 Causes skin irritation. H319 Causes serious eye irritation. H335 May cause respiratory irritation. Precautionary statements Precationary statements P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P405 Store locked up. P504 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 Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. This product must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes. SARA Section 313 (specific toxic chemical listings) Substance is not listed. California Proposition 65 Prop 65 - Chemicals known to cause cancer 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, male Substance is not listed. Information about limitation of use: For use only by technically qualified individuals. Other regulations, limitations and prohibitive regulations Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed. 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. National regulations market and use must be observed. Substance is not listed. Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed. Chemical safety assessment: A Chemical Safety Assessment has not been carried out. 16 Other information Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user. Conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility or use 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 de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail) 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 Civil Aviation Organization ICAO-TI: Technical Instructions by the "International Substances DOT: US Department of Transport Association EINECS: European Inventory of Existing Commercial Chemical Substances CAS: Chemical Abstracts Service (division of the American Chemical Society) HMIS: Hazardous Materials Information System (USA) WHMIS: Workplace Hazardous Materials Information System (Canada) LC50: Lethal dose, 50 percent UD50: Lethal dose, 50 percent VPWB: very Persistent and very Bioaccumulative ACGIH: American Conference of Governmental Industrial Hygienists (USA) OSHA: Occupational Safety and Health Administration (USA) ITP: National Travicology Program (USA) USA