



# MATERIAL SAFETY DATA SHEET

MANUFACTURER'S NAME  
NOROO PAINT CO.,LTD  
615 PAKDAL-DONG,MANAN-KU  
ANYANG-CITY, KYUNGGI-DO,KOREA

DATE OF PREPARATION  
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## Section 1 - PRODUCT IDENTIFICATION

PRODUCT NUMBER  
PRODUCT NAME **HIQ DR-421(S) Thinner**  
PRODUCT CLASS

HIMIS CODES  
Health -- 2  
Flammability -- 3  
Reactivity -- 0

## Section 7 - HANDLING AND STORAGE

DOL STORAGE CATEGORY-1B  
PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING  
Contents are FLAMMABLE. Keep away from heat, sparks, and open flame.  
During use and until all vapors are gone: Keep area ventilated-Do not smoke - Extinguish all flames, pilot lights, and heaters - Turn off stoves, electric tools and appliances, and any other sources of ignition. Consult NFPA Code. Use approved Bonding and Grounding procedures.  
Keep container closed when not in use.  
Transfer only to approved containers with complete and appropriate labeling.  
Do not take internally. Keep out of the reach of children.

## Section 2 - HAZARDOUS INGREDIENTS

CAS No.	HAZARDOUS INGREDIENTS	%by WT	ACGIH TLV	ISH-KOREA	UNITS	V.P. (mm Hg)
123-86-4	Butyl Acetate	10-30	150	150	PPM	8-10
64742-95-6	Light Aromatic Solvent Naphtha	15-30	300	N.A	PPM	N.A
1330-20-7	Xylene	30-40	100	100	PPM	6-16
111-15-9	Cellosolve Acetate	5-10	5	5	PPM	47
108-10-1	Isobutyl Methyl Ketone	5-15	50	50	PPM	16

OTHER PRECAUTIONS  
This product must be mixed with other components before use. Before opening the packages, READ AND FOLLOW WARNING LABELS ON ALL COMPONENTS.  
Intentional misuse by deliberately concentrating and inhaling the contents can be harmful or fatal.

## Section 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

Section 3 - HAZARDS IDENTIFICATION  
ROUTES OF EXPOSURE  
Exposure may be by INHALATION and/or SKIN or EYE contact, depending on conditions of use.  
To minimize exposure, follow recommendations for proper use, ventilation, and personal protective equipment.  
ACUTE Health Hazards  
EFFECTS OF OVEREXPOSURE  
Irritation of eyes, skin and respiratory system. May cause nervous system depression. Extreme overexposure may result in unconsciousness and possibly death.  
SIGNS AND SYMPTOMS OF OVEREXPOSURE  
Redness and itching or burning sensation may indicate eye or excessive skin exposure.  
Headache, dizziness, nausea, and loss of coordination are indications of excessive exposure to vapors or spray mists.  
MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE  
May cause allergic respiratory and/or skin reaction in susceptible persons or sensitization. This effect may be delayed several hours after exposure sensitization.  
This effect may be delayed several hours after exposure.  
Symptoms may not be immediately apparent. Obtain medical attention.  
SPECIAL FIRE FIGHTING PROCEDURES  
Full protective equipment including self-contained breathing apparatus should be used. Water spray may be ineffective. If water is used, fog nozzles are preferable. Water may be used to cool closed containers to prevent pressure build-up and possible autoignition or explosion when exposed to extreme heat.

PRECAUTIONS TO BE TAKEN IN USE  
NO PERSON SHOULD USE THIS PRODUCT, OR BE IN AREA WHERE IT IS BEING USED, IF THEY HAVE CHRONIC(LONG-TERM) LUNG OR BREATHING PROBLEMS OR IF THEY EVER HAD A REACTION TO ISOCYANATES.

Use only with adequate ventilation. Avoid breathing vapor and spray mist. Avoid contact with skin and eyes. Wash hands after using.  
This coating may contain materials classified as nuisance particulates (1stid "as Dust" in Section II) which may be present at hazardous levels only during sanding or abrading of the dried film.  
If no specific dusts are listed in Section II, the applicable limits for nuisance dusts are ACGIH TLV 10 mg./m3(total dust), OSHA PEL 15 mg./m3(total dust), 5mg./m3(respirable fraction)

VENTILATION  
Local exhaust preferable. General exhaust acceptable if the exposure to materials in Section II is maintained below applicable exposure limits.

RESPIRATORY PROTECTION  
Where overspray is present, a positive pressure air supplied respirator (TC19C NIOSH/MSHA approved) should be worn. If unavailable, a properly protection against materials in Section II may be effective. Follow respirator manufacturer's directions for use.  
Wear the respirator for the whole time of spraying and until all vapors and mists are gone.  
NO PERSONS SHOULD BE ALLOWED IN THE AREA WHERE THIS PRODUCT IS BEING USED UNLESS EQUIPPED WITH THE SAME RESPIRATOR PROTECTION RECOMMENDED FOR THE PAINTERS.  
When Sanding or abrading the dried film, wear a dust/mist respirator approved by NIOSH/MSHA for dust which may be generated from this product, underlying paint, or the abrasive.

PROTECTIVE GLOVES  
Wear gloves which are recommended by glove supplier for protection against materials in Section II.

EYE PROTECTION  
Wear safety spectacles with unperforated sideshields.

OTHER PROTECTIVE EQUIPMENT  
Use barrier cream on exposed skin.

## Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PRODUCT WEIGHT -- N.A  
EVAPORATION RATE -- Slow than ether  
SPECIFIC GRAVITY -- 0.88-0.89  
VAPOR DENSITY -- Heavier than air  
BOILING POINT -- 125-175°C  
MELTING POINT -- N.A  
VOLATILE VOLUME -- 100%  
SOLUBILITY IN WATER -- N.A

## Section 10 - STABILITY AND REACTIVITY

STABILITY -- stable  
OTHER PRECAUTIONS  
INCOMPATIBILITY None known  
HAZARDOUS DECOMPOSITION PRODUCTS --By fire:Carbon dioxide, Carbon Monoxide  
HAZARDOUS POLYMERIZATION --Will not Occur can be harmful or fatal.

## Section 11 - TOXICOLOGICAL INFORMATION

CHRONIC Health Hazards  
No ingredient in this product is an IARC,NTP or OSHA listed carcinogen.  
Prolonged overexposure to solvent ingredients in Section II may cause adverse effects to the liver, urinary, blood forming, cardiovascular and reproductive systems.  
Persons sensitive to isocyanates will experience increased allergic reaction on repeated exposure.  
No Information Available

## Section 12 - ECOLOGICAL INFORMATION

No Information Available

## Section 13 - DISPOSAL CONSIDERATIONS

Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act(RCRA) 40 CFR 261.  
Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.  
Incinerate in approved facility. Do not incinerate closed container.  
Dispose of in accordance with Federal, State, and Local regulations regarding pollution.

## Section 14 - TRANSPORT INFORMATION

No Information Available

## Section 15 - REGULATORY INFORMATION

TSCA Status  
In compliance with TSCA Inventory requirements for commercial purposes.

## Section 16 - ADDITIONAL INFORMATION

The above information pertains to this product as currently formulated, and is based on the information available at this time.Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control,we make no warranties, express or implied, and assume no liability in connection with any use of this information. hazards of the product. Since conditions of use are outside our control,we make no warranties, express or implied, and assume no liability in connection with any use of this information.

## Section 6 - ACCIDENTAL RELEASE MEASURE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED  
Remove all sources of ignition. Ventilate and remove with inert absorbent.

WASTE DISPOSAL METHOD  
Waste from this product may be hazardous as defined under the Resource Conservation and Recovery Act(RCRA) 40 CFR 261.  
Waste must be tested for ignitability to determine the applicable EPA hazardous waste numbers.  
Incinerate in approved facility. Do not incinerate closed container.  
Dispose of in accordance with Federal, State, and Local regulations regarding pollution.